

**KROC COMMUNITY CENTER
ENVIRONMENTAL IMPACT REPORT**

(SCH No. 2008071085)

**VOLUME III
FINAL ENVIRONMENTAL IMPACT REPORT**

PREPARED FOR:



**CITY OF LONG BEACH
DEPARTMENT OF DEVELOPMENT SERVICES
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TABLE OF CONTENTS

VOLUME I

SECTIONS	PAGE
ES EXECUTIVE SUMMARY	ES-1
ES.1 Existing Facilities	ES-1
ES.2 Proposed Project	ES-2
ES.2.1 Chapel / Auditorium Building	ES-2
ES.2.2 Administration/Education Building.....	ES-2
ES.2.3 Recreation Center	ES-2
ES.2.4 Outdoor Recreation	ES-2
ES.2.5 Recreation "Soccer" Field	ES-2
ES.2.6 Landscaping	ES-2
ES.3 Issues to be Resolved	ES-3
ES.4 Summary of Impacts.....	ES-3
ES.5 Project Alternatives	ES-19
1.0 INTRODUCTION.....	1-1
1.1 Purpose and Scope of the EIR	1-1
1.1.1 Intent of CEQA	1-1
1.1.2 Environmental Review Process	1-2
1.2 Organization and Content	1-4
2.0 PROJECT DESCRIPTION	2-1
2.1 Proposed Project Location	2-1
2.2 Existing Conditions	2-1
2.2.1 Local Demographics	2-1
2.2.2 Site Acquisition.....	2-2
2.2.3 Existing Uses of the Site	2-2
2.2.4 Existing Site Facilities.....	2-3
2.2.5 General Plan Land Use Designation.....	2-4
2.2.6 Zoning.....	2-4
2.3 Environmental Contamination	2-5
2.4 Statement of Objections.....	2-6
2.4.1 Objectives	2-6
2.5 Site Suitability.....	2-7
2.6 Proposed Project	2-7
2.6.1 Project Elements	2-8
2.6.2 Leadership in Energy and Environmental Design Elements	2-9
2.6.3 Construction Scenario	2-9
2.6.3.1 Phase I: Demolition	2-11
2.6.3.2 Phase II: Earthwork	2-12
2.6.3.3 Phase III: Drainage Improvements.....	2-13
2.6.3.4 Phase IV: Construction.....	2-14

2.6.4	Facility Access, Parking, and Circulation	2-15
2.6.4.1	Access	2-15
2.6.4.2	Parking and On-site Circulation	2-16
2.6.4.3	Off-site Circulation	2-16
2.7	Intended Uses of the EIR.....	2-16
2.8	Related Projects.....	2-17
2.9	Project Alternatives.....	2-19
3.0	EXISTING CONDITIONS, IMPACTS, MITIGATION, AND LEVEL OF SIGNIFICANCE AFTER MITIGATION.....	3-1
3.1	Aesthetics	3.1-1
3.1.1	Regulatory Framework	3.1-1
3.1.2	Existing Conditions	3.1-3
3.1.3	Significance Threshold.....	3.1-5
3.1.4	Impact Analysis.....	3.1-5
3.1.5	Mitigation Measures.....	3.1-7
3.1.6	Level of Significance after Mitigation.....	3.1-7
3.2	Air Quality	3.2-1
3.2.1	Regulatory Framework	3.2-2
3.2.2	Existing Conditions	3.2-12
3.2.3	Significance Thresholds.....	3.2-19
3.2.4	Impact Analysis.....	3.2-22
3.2.4.1	Construction Impacts	3.2-28
3.2.4.2	Operational Impacts	3.2-30
3.2.4.3	Cumulative Impacts	3.2-31
3.2.5	Mitigation Measures.....	3.2-34
3.2.6	Level of Significance after Mitigation.....	3.2-37
3.3	Biological Resources.....	3.3-1
3.3.1	Regulatory Framework	3.3-2
3.3.2	Existing Conditions	3.3-5
3.3.3	Significance Thresholds.....	3.3-21
3.3.4	Impact Analysis.....	3.3-21
3.4	Cultural Resources.....	3.4-1
3.4.1	Regulatory Framework	3.4-1
3.4.2	Existing Conditions	3.4-7
3.4.2.1	Paleontological Resources	3.4-7
3.4.2.2	Archaeological Resources.....	3.4-8
3.4.2.3	Historical Resources	3.4-9
3.4.2.4	Human Remains.....	3.4-16
3.4.3	Impact Analysis.....	3.4-16
3.4.3.1	Paleontological Resources	3.4-16
3.4.3.2	Archaeological Resources.....	3.4-16
3.4.3.3	Historical Resources	3.4-17
3.4.3.4	Human Remains.....	3.4-18
3.4.4	Mitigation Measures.....	3.4-18
3.4.5	Level of Significance after Mitigation.....	3.4-21

3.5	Geology and Soils	3.5-1
3.5.1	Regulatory Framework	3.5-1
3.5.2	Existing Conditions	3.5-6
3.5.3	Significance Thresholds.....	3.5-14
3.5.4	Impact Analysis.....	3.5-14
3.5.5	Mitigation Measures.....	3.5-17
3.5.6	Level of Significance after Mitigation.....	3.5-17
3.6	Hazards and Hazardous Materials.....	3.6-1
3.6.1	Regulatory Framework	3.6-1
3.6.2	Existing Conditions	3.6-4
3.6.3	Significance Thresholds	3.6-7
3.6.4	Impact Analysis.....	3.6-7
3.6.5	Mitigation Measures.....	3.6-10
3.6.6	Level of Significance after Mitigation.....	3.6-11
3.7	Hydrology and Water Quality.....	3.7-1
3.7.1	Regulatory Framework	3.7-1
3.7.2	Existing Conditions	3.7-5
3.7.3	Significance Thresholds.....	3.7-10
3.7.4	Impact Analysis.....	3.7-11
3.7.5	Mitigation Measures.....	3.7-13
3.7.6	Level of Significance after Mitigation.....	3.7-15
3.8	National Pollutant Discharge Elimination System (NPDES).....	3.8-1
3.8.1	Regulatory Framework	3.8-1
3.8.2	Existing Conditions	3.8-6
3.8.3	Significance Thresholds.....	3.8-8
3.8.4	Impact Analysis.....	3.8-8
3.8.5	Mitigation Measure	3.8-10
3.8.6	Level of Significance after Mitigation.....	3.8-10
3.9	Land Use and Planning.....	3.9-1
3.9.1	Regulatory Framework	3.9-1
3.9.2	Existing Conditions	3.9-3
3.9.3	Significance Thresholds.....	3.9-4
3.9.4	Impact Analysis.....	3.9-5
3.9.5	Mitigation Measure	3.9-7
3.9.6	Level of Significance after Mitigation.....	3.9-7
3.10	Noise.....	3.10-1
3.10.1	Regulatory Framework	3.10-1
3.10.2	Existing Conditions	3.10-10
3.10.3	Significance Thresholds	3.10-13
3.10.4	Impact Analysis.....	3.10-13
3.10.5	Mitigation Measures.....	3.10-23
3.10.6	Level of Significance after Mitigation.....	3.10-24

3.11	Recreation	3.11-1
3.11.1	Regulatory Framework	3.11-1
3.11.2	Existing Conditions	3.11-3
3.11.3	Significance Thresholds	3.11-4
3.11.4	Impact Analysis.....	3.11-4
3.11.5	Mitigation Measure	3.11-7
3.11.6	Level of Significance after Mitigation	3.11-8
3.12	Transportation and Traffic	3.12-1
3.12.1	Regulatory Framework	3.12-1
3.12.2	Existing Conditions.....	3.12-3
3.12.3	Significance Thresholds.....	3.12-11
3.12.4	Impact Analysis	3.12-11
3.12.5	Mitigation Measures	3.12-22
3.12.6	Level of Significance after Mitigation	3.12-23
3.13	Utilities and Service Systems.....	3.13-1
3.13.1	Regulatory Framework	3.13-1
3.13.2	Existing Conditions.....	3.13-6
3.13.3	Significance Thresholds.....	3.13-10
3.13.4	Impact Analysis	3.13-11
3.13.5	Mitigation Measures	3.13-13
3.13.6	Level of Significance after Mitigation	3.13-14
4.0	ALTERNATIVES TO THE PROPOSED PROJECT	4-1
4.1	No Project Alternative	4-3
4.1.1	Alternative Components.....	4-3
4.1.2	Objectives and Feasibility	4-3
4.1.3	Construction Scenario	4-4
4.1.4	Comparative Impacts	4-4
4.2	Alternative 1: Reduced Site Alternative	4-9
4.2.1	Alternative Components.....	4-9
4.2.2	Objectives and Feasibility	4-9
4.2.3	Construction Scenario	4-9
4.2.4	Comparative Impacts	4-9
4.3	Alternative 2: Alternate Site Alteration (Former Sports Park Site).....	4-13
4.3.1	Alternative Components.....	4-13
4.3.2	Objectives and Feasibility	4-13
4.3.3	Construction Scenario	4-13
4.3.4	Comparative Impacts	4-13
4.4	Alternative 3: Enhance Existing Facilities Alternative	4-20
4.4.1	Alternative Components.....	4-20
4.4.2	Objectives and Feasibility	4-21
4.4.3	Construction Scenario	4-21
4.4.4	Comparative Impacts	4-21
5.0	UNAVOIDABLE IMPACTS	5-1

6.0	SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES RELATED TO IMPLEMENTATION OF THE PROPOSED PROJECT	6-1
7.0	GROWTH-INDUCING IMPACTS.....	7-1
8.0	ORGANIZATIONS AND PERSONS CONSULTED	8-1
8.1	Public Agencies.....	8-1
8.1.1	State	8-1
8.1.2	County of Los Angeles.....	8-1
8.1.3	City of Long Beach	8-1
8.2	Private Organizations	8-1
9.0	REPORT PREPARATION PERSONNEL	9-1
9.1	City of Long Beach	9-1
9.2	The Salvation Army	9-1
9.3	Sapphos Environmental, Inc.....	9-1
9.4	Subconsultants.....	9-2
10.0	REFERENCES	10-1
11.0	DISTRIBUTION LIST	11-1
11.1	Public Agencies	11-2
11.1.1	State Agencies.....	11-2
11.1.2	Regional Agencies	11-3
11.1.3	County Agencies.....	11-3
11.1.4	Local Agencies.....	11-4
11.2	Private Organizations	11-5
11.3	Property Owners and Residents within a 0.25-mile Radius.....	11-6

FIGURES

FOLLOWS PAGE

2.1-1	Regional Vicinity Map	2-1
2.1-2	Topographic Map.....	2-1
2.1-3	Local Vicinity	2-1
2.1-4	Aerial Photograph.....	2-1
2.2.4-1	Neighboring Land Uses	2-3
2.6.1-1	Site Plan	2-8
3.1.2-1	Hamilton Bowl / Chittick Field Existing Site Photographs	3.1-4
3.2.1-1	California Climate Change Emissions and Targets	3.2-6
3.2.1-2	The Greenhouse Effect	3.2-7
3.2.2-1	Air Quality Monitoring Stations	3.2-14
3.2.2-2	Possible Snowpack Losses	3.2-15
3.2.2-3	Nearest Sensitive Receptors to Project Location	3.2-18
3.3.2-1	Plant Community Map.....	3.3-6
3.6.2-1	Airports Located in the Proposed Project Vicinity	3.6-6
3.9.2-1	Existing Land Uses.....	3.9-4
3.10.2-1	Noise Monitoring Locations.....	3.10-10
3.12.2-1	Transit Stops and Bike Lanes Near the Proposed Project	3.12-9

TABLES**PAGE**

ES.4-1	Summary of Significant Impacts	ES-4
2.2.4-1	Existing Conditions: Gross Floor Areas	2-4
2.6.3.1-1	Anticipated Construction Equipment	2-12
2.6.3.2-1	Anticipated Construction Equipment	2-13
2.6.3.3-1	Anticipated Construction Equipment	2-14
2.6.3.4-1	Anticipated Construction Equipment	2-15
2.7-1	Permit Requirements	2-17
2.8-1	List of Related Projects.....	2-18
3.2.1-1	Ambient Air Quality Standards	3.2-4
3.2.1-2	California Climate Change Emission Baseline	3.2-7
3.2.2-1	Summary of 2005–2007 Ambient Air Quality Data in the Proposed Project Vicinity	3.2-15
3.2.2-2	Characterization of GHG Emissions Baseline Conditions for the County of Los Angeles.....	3.2-18
3.2.3-1	SCAQMD Daily Construction Emission Thresholds of Significance.....	3.2-21
3.2.3-2	SCAQMD Daily Operational Emission Thresholds of Significance	3.2-21
3.2.4-1	URBEMIS 2007 and EMFAC 2007 Emissions Models Input Parameters for Mobile Source and Operational Emissions.....	3.2-23
3.2.4-2	Anticipated Demolition Equipment.....	3.2-25
3.2.4-3	Anticipated Mass Grading Equipment.....	3.2-25
3.2.4-4	Anticipated Construction Equipment – 1	3.2-26
3.2.4-5	Anticipated Construction Equipment – 2	3.2-26
3.2.4.1-1	Estimated Daily Construction Emissions.....	3.2-29
3.2.4.2-1	Estimated Daily Operational Emissions.....	3.2-30
3.3.2-1	Listed Species with the Potential to Occur in the Region of the Proposed Project Site.....	3.3-8
3.3.2-2	Sensitive Species with the Potential to Occur in the Region of the Proposed Project Site.....	3.3-12
3.3.2-3	Locally Important Species with the Potential to Occur in the Region of the Proposed Project Site.....	3.3-15
3.3.4-1	Foodplants for Lepidopteran Species	3.2-22
3.5.2-1	Modified Mercalli Intensity Scale.....	3.5-8
3.5.2-2	List of Recorded Earthquakes with Magnitude of Greater than 6.0 within 100 Kilometers of the Proposed Project Site	3.5-9
3.6.2-1	Small Quantity Hazardous Waste Generators	3.6-5
3.6.2-2	Hazardous Waste and Leaking Underground Storage Tank Sites.....	3.6-5
3.10.1-1	A-Weighted Sound Levels.....	3.10-2
3.10.1-2	Typical Levels of Ground-borne Vibration	3.10-3
3.10.1-3	Land Use Compatibility for Community Noise Environments.....	3.10-5
3.10.1-4	Exterior Noise Limits	3.10-7
3.10.2-1	Noise Monitoring Locations.....	3.10-10
3.10.4-1	Maximum Noise Levels of Common Construction Machines	3.10-14
3.10.4-2	Outdoor Construction Noise Levels.....	3.10-14
3.10.4-3	Construction Noise Levels at Sensitive Receptors.....	3.10-15
3.10.4-4	2008 and 2010 Estimated Community Noise Equivalent Level – Weekday.....	3.10-16
3.10.4-5	2008 and 2010 Estimated Community Noise Equivalent Level – Weekend.....	3.10-16
3.10.4-6	Outdoor Activity Noise Impact.....	3.10-18
3.10.4-7	Parking Activity Noise Impact.....	3.10-19

3.10.4-8	Vibration Velocities for Construction Equipment	3.10-20
3.10.4-9	2008 and 2010 Estimated Cumulative Community Noise Equivalent Level – Weekday.....	3.10-22
3.10.4-10	2008 and 2010 Estimated Cumulative Community Noise Equivalent Level – Weekend	3.10-23
3.10.6-1	Construction Noise Impact – Mitigated.....	3.10-25
3.12.2-1	Level of Service Definitions for Signalized Intersections.....	3.12-6
3.12.2-2	Level of Service Criteria for Unsignalized Intersections	3.12-6
3.12.2-3	Existing Levels of Service (LOS) at Key Intersections	3.12-8
3.12.4-1	Project Traffic Generation Forecast	3.12-14
3.12.4-2	Peak-hour Project Driveway Level of Service Summary	3.12-15
3.12.4-3	Year 2010 Intersection Capacity Analysis Summary	3.12-16
3.12.4-4	Year 2010 HCM/LOS Intersection Capacity Analysis Summary for State Facilities	3.12-19
3.13.2-1	Solid Waste Facilities in the South Bay / Long Beach Area	3.13-9
4-1	Summary of Proposed Project and Alternatives’ Ability to Attain Project Objectives.....	4-2

VOLUME II

TECHNICAL APPENDICES

Appendix A	Initial Study and Comment Letters
Appendix B	Air Quality Technical Impact Report
Appendix C	Cultural Resources Technical Report
Appendix D	Human Health Screening Evaluation
Appendix E	Noise and Vibration Impact Report
Appendix F	Traffic Impact Analysis

VOLUME III

SECTIONS	PAGE
12.0 CLARIFICATIONS AND REVISIONS TO THE DRAFT ENVIRONMENTAL IMPACT REPORT	12-1
13.0 RESPONSE TO COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT	13-1
13.1 Summary Distribution List/Respondents	13-1
13.1.1 Federal Agencies	13-1
13.1.2 State Agencies	13-1
13.1.3 Regional Agencies	13-1
13.1.4 County Agencies	13-2
13.1.5 Local Agencies	13-2
13.1.6 Private Organizations	13-2
13.1.7 Individuals.....	13-2
13.2 Letters of Comment and Responses.....	13-3
13.2.1 Federal Agencies	13-4
13.2.2 State Agencies	13-5
13.2.3 Regional Agencies	13-7
13.2.4 County Agency.....	13-9
13.2.5 Local Agencies	13-14
13.2.6 Private Organizations	13-37
13.2.7 Individuals.....	13-38

REVISED AND NEW FIGURES	FOLLOWS PAGE
R2.1-4 Aerial Photography.....	12-21
R2.2.4-1 Surrounding Land Uses	12-22
R2.6.1-1 Site Plan	12-23
2.6.3-1 Kroc Community Center Grading Plan.....	12-23

REVISED TABLES	PAGE
R.ES.4-1 Summary of Significant Impacts	12-3
R.2.7-1 Permit Requirements	12-26
R.4-1 Summary of Proposed Project and Alternatives' Ability to Attain Project Objectives	12-38

NEW TECHNICAL APPENDICES

New technical appendices have been added in response to public comments:

Appendix G	Parking Summary for Kroc Community Center
Appendix H	Draft Parking Management Plan
Appendix I	Draft Year 2010 Alternative Intersection Capacity Analysis

SECTION 12.0
CLARIFICATIONS AND REVISIONS TO THE
DRAFT ENVIRONMENTAL IMPACT REPORT

Note to reader:

Section 12.0 consists of clarifications and revisions to the Draft Environmental Impact Report (EIR), which have resulted from responses to comments received from agencies and the public. All clarifications and revisions to the Draft EIR were made to increase the understanding of the EIR. The Draft EIR was released for a 45-day public review period between March 27, 2009, and May 11, 2009. The City of Long Beach received eight letters of comment on the Draft EIR.

SECTION ES
EXECUTIVE SUMMARY

ES.1 EXISTING FACILITIES

Page ES-1 Please replace the first paragraph of this subsection:

The proposed project site consists of approximately 19 acres of undeveloped parcels of land that have also been intermittently used for recreation by the City pursuant to a lease agreement with the County of Los Angeles. The 19-acre proposed project site is owned by the Los Angeles County Flood Control District (LACFCD). The City has entered into a grant lease with the LACFCD. Authorized uses under the existing lease agreement No. 76300, between the LACFCD and the City, include “publicly-owned recreational improvements consisting specifically of baseball fields, soccer fields, a dirt parking lot, and restroom structures.” Any other use is strictly prohibited. The lease would need to be amended to allow the proposed uses. In addition, the City has proposed to purchase the site that would no longer be needed by the LACFCD for flood control purposes as a result of the proposed project, subject to the approval of the County of Los Angeles Board of Supervisors.

Page ES-1 In the second paragraph of this subsection, please replace the second sentence:

This site also serves as a flood control detention basin, as a National Pollution Discharge Elimination System (NPDES) compliance site for the City of Signal Hill and the City, and as a general recreational area for seasonal sports and picnicking by the surrounding community.

ES.2 PROPOSED PROJECT

Page ES-2 Please insert the following sentence to the end of the first paragraph of this subsection:

The proposed project would provide approximately 1,100 parking spaces in a surface parking lot and in a two-level parking structure.

ES.2.4 Outdoor Recreation

Page ES-2 In this subsection, please insert the following sentence to the end of the paragraph:

In an effort to be consistent with Long Beach Water Department goals for water conservation, pools shall be required to be covered when not in use for extended periods of time, pools shall be equipped with a high-quality system for filtering pool water, and hot water lines shall be fitted with water recirculation systems.

ES.4 SUMMARY OF IMPACTS

Page ES-4 Mitigation measures Air-1, Air-4, Air-6, Hydrology-1, Hydrology-2, Hydrology-3, Noise-3, Noise-6, Transportation-1, Transportation-2, and Utilities-2 have been updated. For the reader’s convenience, please replace Table ES.4-1, *Summary of Significant Impacts*, with revised Table R.ES.4-1, *Summary of Significant Impacts*:

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS**

Impact	Mitigation Measure	Level of Significance After Mitigation
Aesthetics		
<p>Implementation of the proposed project would be expected to result in significant impacts to aesthetics in relation to the substantial degradation of the existing visual character of the site and its surroundings.</p>	<p>Measure Cultural-2</p> <p>Impacts related to the loss of an historical resource, the Low-flow Pump Station, shall be reduced through archival documentation of as-found conditions. Prior to issuance of demolition permits, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that documentation of the Low-flow Pump Station is completed by the applicant in the form of a Historic American Buildings Survey that shall comply with the <i>Secretary of the Interior’s Standards for Architectural and Engineering Documentation</i>. The documentation shall include large-format photographic recordation; a detailed historic narrative report including description, history, and statement of significance; measured architectural drawings (as built and/or current conditions); and a compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Secretary of the Interior’s Professional Qualification Standards for History and/or Architectural History. The original archival-quality documentation shall be offered as donated material to the National Park Service Heritage Documentation Program, Historic American Buildings Survey, for inclusion in the Library of Congress. Archival copies of the documentation also would be submitted to the Long Beach Public Library; the Historical Society of Long Beach; California State University, Long Beach; the Office of Historic Preservation; and the South Central Coastal Information Center where it would be available to local researchers.</p> <p>Completion of this mitigation measure shall be monitored and enforced by the City of Long Beach Department of Development Services.</p>	<p>Implementation of mitigation measure Cultural-2 would be expected to reduce significant direct, indirect, and cumulative impacts to aesthetics to the maximum extent feasible, in terms of a historical resource scheduled for demolition. However, the demolition of this historical resource would still remain a significant adverse impact.</p>
Air Quality		
<p>Implementation of the proposed project would result in significant impacts to air quality related to maximum daily PM₁₀ emissions, PM_{2.5} emissions, NO_x</p>	<p>Measure Air-1</p> <p>Water or a stabilizing agent that will not cause or contribute to water pollution shall be applied to exposed surfaces in sufficient quantity two times a day to prevent generation of dust plumes. Soil moistening shall be required to treat exposed soil during construction of each</p>	<p>Implementation of air quality mitigation measures Air-1 through Air-7 would ensure that maximum daily PM₁₀ emissions would be reduced by approximately 22 percent and PM_{2.5} emissions would be</p>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
<p>emissions, and fugitive dust impact.</p>	<p>element of the project to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in criteria pollutants. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications submitted for review include the requirement for the construction contractor to ensure that soil shall be moistened not more than 15 minutes prior to the daily commencement of soil-moving activities and three times a day, or four times a day under windy conditions, in order to maintain a soil moisture content of 12 percent. The applicant shall demonstrate compliance with this measure through the submission of weekly monitoring reports to the City of Long Beach Department of Development Services. At a minimum, active operations shall utilize one or more of the applicable best available control measures to minimize fugitive dust emissions from each fugitive dust source type that is part of the active operation.</p> <p>Measure Air-2</p> <p>Moistening or covering of excavated soil piles shall be required to treat grading areas during construction of the project to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in critical pollutants. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications for each phase of the project include the requirement for the construction contractor to ensure that excavated soil piles are watered hourly for the duration of construction or covered with temporary coverings.</p> <p>Measure Air-3</p> <p>Discontinuing construction activities that occur on unpaved surfaces during windy conditions shall be required to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in critical pollutants. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications for each phase of the project include the requirement for the construction contractor to cease construction activities that occur on unpaved surfaces during periods when winds exceed 25 miles per hour.</p>	<p>reduced by approximately 6 percent, a much less significant fugitive dust impact. Therefore, with the incorporation of these mitigation measures, fugitive dust emissions associated with the project would be maintained below the level of significance for the threshold level. NO_x emissions would be expected to be significant during construction, but reduced to below the level of significance through the incorporation of mitigation measures Air-8 through Air-10.</p>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>Measure Air-4</p> <p>A wheel washing system shall be installed and used to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site. Washing of wheels leaving the construction site during construction of each phase of the project shall be required to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in criteria pollutants. Water used for wheel washing will be filtered to remove fine sediment before release to the storm drain system. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications for each phase of the project include the requirement for the construction contractor to clean adjacent streets of tracked dirt at the end of each workday or install on-site wheel-washing facilities.</p> <p>Measure Air-5</p> <p>Track out shall not extend 25 feet or more from an active operation, and track out shall be removed at the conclusion of each workday. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications for each phase of the project include the requirement for the construction contractor to ensure that the track out shall not extend 25 feet or more from an active operation and that it would be removed at the conclusion of each workday.</p> <p>Measure Air-6</p> <p>All trucks hauling soil, sand, and other loose materials on site or through neighboring streets shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions). All transport of soils to and from the project site for each phase of the project shall be conducted in a manner that avoids fugitive dust emissions, ensures compliance with current air quality standards, and avoids contributions to cumulative increases in criteria pollutants. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications for each phase of the project include the requirement for the construction contractor to cover all loads of dirt leaving the site or to leave sufficient freeboard capacity in the truck to prevent fugitive dust emissions en route to the disposal site.</p>	

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>Measure Air-7</p> <p>Traffic speeds on unpaved roads shall be limited to 15 miles per hour. Prior to issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications for each phase of the project include the requirement for the construction contractor to ensure a traffic speed limited to 15 miles per hour.</p> <p>Measure Air-8</p> <p>Heavy-equipment operations shall be suspended during first- and second-stage smog alerts. Prior to issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications for each phase of the project include the requirement for the construction contractor to ensure heavy equipment operations be suspended during first and second stage smog alerts.</p> <p>Measure Air-9</p> <p>In order to mitigate the air quality impact caused by NO_x emissions from construction equipment, all construction equipment not expected to be used for a period in excess of 5 minutes shall be turned off as a means of reducing NO_x emissions to the maximum extent practicable. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications require the construction contractor to shut off engines when not in use. Specifications shall require the construction contractor to certify monthly to the Department of Development Services that construction equipment is being maintained in peak operating condition.</p> <p>Measure Air-10</p> <p>In order to mitigate the air quality impact caused by NO_x emissions from construction equipment, all off-road diesel construction equipment shall use particulate filters. The applicant shall also ensure that cooled, exhaust gas recirculation devices are installed on all off-road diesel equipment where feasible. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications require the construction contractor to use particulate filters on all off-road diesel equipment and install cooled, exhaust gas recirculation devices on all off-road diesel equipment where feasible.</p>	

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
Biological Resources		
The analysis undertaken for this EIR determined that no significant impacts related to biological resources would arise from implementation of the proposed project. Therefore, no mitigation measures are required.		
Cultural Resources		
Implementation of the proposed project would result in significant impacts to cultural resources related to an adverse change in the significance of a paleontological resource, a historic period archaeological resource, historical resources, and to resources related to human remains.	<p>Measure Cultural-1</p> <p>The impacts to cultural resources related directly or indirectly to the destruction of a unique paleontological resource from the project shall be reduced to below the level of significance through the salvage and disposition of paleontological resources that result from all earthmoving activities involving disturbances of the older Quaternary terrace deposits. Ground-disturbing activities include, but are not limited to, drilling, excavation, trenching, and grading. If paleontological resources are encountered during ground-disturbing activities, the applicant, under the direction of the City of Long Beach Department of Development Services, shall be required to and be responsible for salvage and recovery of those resources consistent with standards for such recovery established by the Society of Vertebrate Paleontology:¹</p> <p>Because the precise depth of strata considered highly sensitive for paleontological resources is unknown, the applicant, under the direction of the City of Long Beach Department of Development Services, shall be responsible for and shall ensure implementation of construction monitoring by a qualified paleontological monitor during all earthmoving activities that involve disturbance of native soil (i.e., soil that has not been artificially introduced and has not accumulated through Hamilton Bowl's function as a flood control basin). The paleontological monitor shall coordinate a pre-construction briefing to provide information regarding the protection of paleontological resources. Construction personnel shall be trained in procedures to be followed in the event that a fossil site or fossil occurrence is encountered during construction. An information package shall be provided for construction personnel not present at the initial pre-construction briefing.</p>	<p>Implementation of mitigation measures Cultural-1 and Cultural-3 would reduce impacts to cultural resources related to an adverse change in the significance of paleontological resources and human remains to below the level of significance.</p> <p>Implementation of mitigation measures Cultural-2 would reduce significant direct and cumulative impacts to historical resources scheduled for demolition to the maximum extent feasible. However, the demolition of this historical resource would still remain a significant adverse impact.</p>

¹ Society of Vertebrate Paleontology. Accessed 11 December 2008. "Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines." Available at: <http://www.vertpaleo.org/society/polstatconformimpactmigig.cfm>

² Society of Vertebrate Paleontology. Accessed 11 December 2008. "Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines." Available at: <http://www.vertpaleo.org/society/polstatconformimpactmigig.cfm>

³ Society of Vertebrate Paleontology. Accessed 11 December 2008. "Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standard Guidelines." Available at: <http://www.vertpaleo.org/society/polstatconformimpactmigig.cfm>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>Should a potentially unique paleontological resource be encountered, a qualified paleontologist shall be contacted and retained by the City of Long Beach. The Society for Vertebrate Paleontology defines a qualified paleontologist as</p> <p>“A practicing scientist who is recognized in the paleontologic community and is proficient in vertebrate paleontology, as demonstrated by:</p> <ol style="list-style-type: none"> 1. Institutional affiliations or appropriate credentials, 2. Ability to recognize and recover vertebrate fossils in the field, 3. Local geological and biostratigraphic expertise, 4. Proficiency in identifying vertebrate fossils, and 5. Publications in scientific journals.”² <p>If fossil localities are discovered, the paleontologist shall proceed according to guidelines offered by the Society for Vertebrate Paleontology.³ This includes the controlled collection of fossil and geologic samples for processing, screen washing to recover small specimens (if applicable), and specimen preparation to a point of stabilization and identification.</p> <p>All significant specimens collected shall be appropriately prepared, identified, and catalogued prior to their placement in a permanent accredited repository, such as the Natural History Museum of Los Angeles County. The qualified paleontologist shall be required to secure a written agreement with a recognized repository, regarding the final disposition, permanent storage, and maintenance of any significant fossil remains and associated specimen data and corresponding geologic and geographic site data that might be recovered as a result of the specified monitoring program. The written agreement shall specify the level of treatment (e.g., preparation, identification, curation, and cataloguing) required before the fossil collection would be accepted for storage. In addition, a technical report shall be completed. If the fossil collection is unable to be placed in an accredited repository, the collection may be donated by the City of Long Beach Department of Development Services to local schools for educational purposes.</p> <p>Daily logs shall be kept by the qualified paleontological monitor during all monitoring activities. The daily monitoring log shall be keyed to a location map to indicate the area monitored, the date, and the assigned personnel. In addition, this log shall include information of the type of rock encountered, fossil specimens</p>	

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>recovered, and associated specimen data. Within 90 days of the completion of any salvage operation or monitoring activities, a mitigation report shall be submitted to the Historic Preservation Office / Officer for the City of Long Beach with an appended, itemized inventory of the specimens. The report and inventory, when submitted to the City of Long Beach Department of Development Services, will signify the completion of the program to mitigate impacts to paleontological resources.</p> <p>Completion of this mitigation measure shall be monitored and enforced by the City of Long Beach Department of Development Services.</p> <p>Measure Cultural-2</p> <p>Impacts related to the loss of an historical resource, the Low-flow Pump Station, shall be reduced through archival documentation of as-found conditions. Prior to issuance of demolition permits, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that documentation of the Low-flow Pump Station is completed by the applicant in the form of a Historic American Buildings Survey that shall comply with the <i>Secretary of the Interior's Standards for Architectural and Engineering Documentation</i>. The documentation shall include large-format photographic recordation; a detailed historic narrative report including description, history, and statement of significance; measured architectural drawings (as built and/or current conditions); and a compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History. The original archival-quality documentation shall be offered as donated material to the National Park Service Heritage Documentation Program, Historic American Buildings Survey, for inclusion in the Library of Congress. Archival copies of the documentation also would be submitted to the Long Beach Public Library; the Historical Society of Long Beach; California State University, Long Beach; the Office of Historic Preservation; and the South Central Coastal Information Center where it would be available to local researchers.</p> <p>Completion of this mitigation measure shall be monitored and enforced by the City of Long Beach Department of Development Services.</p> <p>Measure Cultural-3</p> <p>Although the discovery of human remains is not anticipated during ground-disturbing activities for the project, a process has been delineated by the State of</p>	

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>California for addressing the unanticipated discovery of human remains:</p> <p>Unanticipated Discovery of Human Remains (Public Resources Code 5097): The Los Angeles County Coroner shall be notified within 24 hours of the discovery of human remains. Upon discovery of human remains, there shall be no further excavation or disturbance of the site or any of that area reasonably suspected to overlie adjacent human remains until the following conditions are met:</p> <ul style="list-style-type: none"> • The Los Angeles County Coroner has determined that no investigation of the cause of death is required, and • If the remains are of Native American origin, the descendants from the deceased Native Americans have made a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. 	
Geology and Soils		
<p>Implementation of the proposed project would be expected to result in potentially significant impacts related to surface fault rupture of a known earthquake fault and strong seismic ground shaking.</p>	<p>Measure Geology-1</p> <p>Exposure of people or property to potentially adverse effects, including the risk of loss or injury, involving surface fault rupture from the operation of the project, shall be minimized through the applicant's compliance with the City of Long Beach General Plan, California Building Code, Long Beach Municipal Code, and Uniform Building Code.</p> <p>Measure Geology-2</p> <p>Exposure of people or property to potentially adverse effects, including the risk of loss or injury, involving seismic ground shaking from the operation of the project, shall be minimized through conformance with California Geological Survey's Guidelines for Evaluating and Mitigating Seismic Hazards in California and all applicable City of Long Beach codes and regulations related to seismic activity. The applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the site-specific geotechnical investigations for the project are incorporated into the project plans and specifications. The City of Long Beach Department of Development Services shall review and ensure that all recommendations of the</p>	<p>Implementation of mitigation measures Geology-1 through Geology-3 and adherence to the standards of the California Building Code, Uniform Building Code, and City General Plan would reduce impacts associated with seismic hazards to the maximum extent practicable, to below the level of significance. Structural failure due to a possible surface rupture of a known earthquake or as a result of ground shaking would be reduced to below the level of significance by implementing the most recent industry standards for structural designs.</p>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>site-specific geotechnical recommendations are incorporated into the final plans and specifications.</p> <p>Measure Geology-3</p> <p>The applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that best management practices implemented for the project are consistent with the National Pollution Discharge Elimination System Permit No. CAS 004003 to avoid soil erosion during construction of the project. Prior to approval of final plans and specifications, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the requirement to comply with National Pollution Discharge Elimination System Permit No. CAS 004003 is included in the specifications. The City of Long Beach Department of Development Services shall monitor construction to ensure compliance with National Pollution Discharge Elimination System Permit No. CAS 004003.</p>	
Hazards and Hazardous Materials		
<p>Implementation of the proposed project would be expected to result in hazards and hazardous materials impacts related to routine transport, use, or disposal of hazardous materials and to safety hazards for people working or residing in the proposed project area in the vicinity of an airport land use plan, a public airport, or a public-use airport.</p>	<p>Measure Hazards-1</p> <p>To reduce impacts related to routine transport, use, or disposal of hazardous materials hazardous materials during construction, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that all contractors transport, store, and handle construction-required hazardous materials in a manner consistent with relevant regulations and guidelines, including those recommended by the California Department of Transportation; the California Regional Water Quality Control Board, Los Angeles Region; the Los Angeles County Municipal Storm Water Permit (National Pollutant Discharge Elimination System Permit No. CAS004003, Board Order No. 99-060; County of Los Angeles MS4 Permit); and the County of Los Angeles Fire Department. These agencies shall regulate through the permitting process the monitoring and enforcement of this mitigation measure as required by law. Standard personal protective equipment shall be worn during construction operations where warranted.</p> <p>Measure Hazards-2</p> <p>To reduce impacts related to routine transport, use, or disposal of hazardous materials during construction, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that all contractors immediately control the source of any unauthorized release of hazardous materials using appropriate release containment measures, and remediate any unauthorized release using the methodologies mandated by the City of Long Beach throughout the</p>	<p>Implementation of mitigation measures Hazards-1 through Hazards-4 would reduce significant impacts related to hazards and hazardous materials below the level of significance.</p>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>construction period. The City of Long Beach shall monitor and enforce regulations pertaining to the containment, disposal, and unauthorized release of hazardous materials. Engineering and administrative controls shall be utilized to reduce the potential of accidental releases from hazardous materials during the construction phase.</p> <p>Measure Hazards-3</p> <p>To reduce impacts related to routine transport, use, or disposal of hazardous materials, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that all contractors are adhering to the appropriate regulations established by the South Coast Air Quality Management District, the Department of Toxic Substances Control, and other relevant guidelines regarding the release of hazardous emissions into the atmosphere and the off-site disposal of contaminated soils throughout the construction period. Engineering and administrative controls shall be utilized to reduce the potential of accidental releases from hazardous materials during the construction phase as well as during normal working hours.</p> <p>Measure Hazards-4</p> <p>The applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that all contractors adhere to all federal, state, and local requirements in a manner consistent with relevant public safety regulations and guidelines. Engineering and administrative controls and reporting procedures shall be used to reduce the potential of accidental releases.</p>	
Hydrology and Water Quality		
<p>Implementation of the proposed project would be expected to result in significant impacts in relation to surface water quality.</p>	<p>Measure Hydrology-1</p> <p>In order to mitigate impacts related to surface water quality caused by construction at the project site to below the level of significance, the City of Long Beach Department of Development Services shall require the construction contractor to implement best management practices consistent with National Pollutant Discharge Elimination System Permit No. CAS 004003 prior to completion of final plans and specifications. The construction contractor for each construction phase shall be required to submit a Storm Water Pollution Prevention Plan to the City of Long Beach for review and approval at least 30 days prior to the anticipated need for a grading permit. The applicant shall complete a water quality assessment prior to the issuance of permits. The City of Long Beach Department of Development Services shall monitor construction to ensure compliance with National Pollutant Discharge Elimination System Permit No. CAS 004003. Such compliance measures would, at a</p>	<p>Implementation of mitigation measures Hydrology-1 through Hydrology-3 would reduce significant hydrology and water quality impacts related to surface water quality during construction to below the level of significance.</p>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>minimum, include preparation and implementation of a local Storm Water Quality Management Plan and a wet Season Erosion Control Plan (for work between October 15 and April 15). These plans shall incorporate all applicable best management practices described in the California Storm Water Best Management Practice Handbook, Construction Activity into the construction phase of the project. Prior to construction, temporary measures must be implemented in order to prevent transport of pollutants of concern from the construction site to the storm drainage system. The best management practices should apply to both the actual work areas as well as contractor staging areas. Selection of construction-related best management practices would be in accordance with the requirements of the City of Long Beach Department of Development Services. The City of Long Beach Department of Development Services shall ensure compliance throughout the duration of the project.</p> <p>Measure Hydrology-2</p> <p>In order to mitigate impacts related to surface water quality caused by construction at the project site, prior to the issuance of permits for all phases of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications require the construction contractor to prepare a Standard Urban Storm Water Mitigation Plan for construction activities and implement best management practices for construction, construction material handling, and waste handling activities, which include the following:</p> <ul style="list-style-type: none"> • Schedule excavation, grading, and paving activities for dry weather periods. • Control the amount of runoff crossing the construction site by means of berms and drainage ditches to divert water flow around the site. • Identify potential pollution sources from materials and wastes that will be used, stored, or disposed of on the job site. • Inform contractors and subcontractors about the clean storm water requirements and enforce their responsibilities in pollution prevention. <p>The construction contractor shall incorporate Standard Urban Storm Water Mitigation Plan requirements and best management practices to mitigate storm water runoff, which include the following:</p> <ul style="list-style-type: none"> • The incorporation of bio-retention facilities located within the project area. 	

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<ul style="list-style-type: none"> • The incorporation of catch basin filtration systems. • The use of porous pavements to reduce runoff volume. <p>Measure Hydrology-3</p> <p>In order to mitigate impacts related to surface water quality caused by construction at the project site, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the construction contractor is undertaking daily street sweeping and trash removal throughout the construction of the project to avoid degradation of water quality.</p>	
NPDES		
<p>Implementation of the proposed project would result in significant impacts related to NPDES, which would result in an impact from loss of pervious surfaces, to total increase in vehicular trips on roadways and driveways, and the associated increase in parking surrounding the project site would be expected to contribute additional pollutants to storm water runoff.</p>	<p>Measure NPDES-1</p> <p>The applicant shall be required to demonstrate that the construction contractor is implementing best management practices consistent with National Pollutant Discharge Elimination System Permit No. CAS 004003 to reduce transport of pollutants of concern from the construction site to the storm drainage and waterway system for each construction phase of the project as well as during the operation of the project. Prior to the issuance of permits for each construction phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that final plans and specifications require compliance with National Pollutant Discharge Elimination System Permit No. CAS 004003 throughout the life of the project. The construction contractor for each construction phase shall be required to submit a Standard Urban Storm Water Management Plan to the City of Long Beach Department of Development Services for review and approval at least 30 days prior to the anticipated need for a grading permit. The City of Long Beach Department of Development Services shall monitor construction to ensure compliance with National Pollutant Discharge Elimination System Permit No. CAS 004003. The City of Long Beach Department of Development Services shall ensure National Pollutant Discharge Elimination System compliance throughout the duration of the project.</p>	<p>Implementation of mitigation measure NPDES-1 would be expected to reduce potential impacts to NPDES to below the level of significance.</p>
Land Use and Planning		
<p>Implementation of the proposed project would result in significant impacts to land use and planning related to a substantial adverse change in the significance of a potential historic resource.</p>	<p>Measure Cultural-2</p> <p>Impacts related to the loss of an historical resource, the Low-flow Pump Station, shall be reduced through archival documentation of as-found conditions. Prior to issuance of demolition permits, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that documentation of the Low-flow Pump Station is completed by the applicant in the</p>	<p>Implementation of mitigation measure Cultural-2 would be expected to reduce anticipated significant impacts to land use and planning resulting from construction of the site to the maximum extent feasible; however, demolition of the historical</p>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>form of a Historic American Buildings Survey that shall comply with the <i>Secretary of the Interior's Standards for Architectural and Engineering Documentation</i>. The documentation shall include large-format photographic recordation; a detailed historic narrative report including description, history, and statement of significance; measured architectural drawings (as built and/or current conditions); and a compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History. The original archival-quality documentation shall be offered as donated material to the National Park Service Heritage Documentation Program, Historic American Buildings Survey, for inclusion in the Library of Congress. Archival copies of the documentation also would be submitted to the Long Beach Public Library; the Historical Society of Long Beach; California State University, Long Beach; the Office of Historic Preservation; and the South Central Coastal Information Center where it would be available to local researchers.</p> <p>Completion of this mitigation measure shall be monitored and enforced by the City of Long Beach Department of Development Services.</p>	<p>resource remains a significant impact to land use and planning due to its conflict with the City General Plan.</p>
Noise		
<p>Implementation of the proposed project would be anticipated to result in a significant impact in terms of exposure of persons to or generation of construction related noise levels in excess of applicable standards.</p> <p>Implementation of the proposed project would result in significant impacts in terms of a substantial temporary increase in ambient noise levels in the project vicinity above those existing without the project.</p> <p>Implementation of the proposed project would result in significant impacts in terms of a permanent increase in ambient noise levels in</p>	<p>Measure Noise-1</p> <p>All construction equipment shall be equipped with mufflers and other suitable noise attenuation devices.</p> <p>Measure Noise-2</p> <p>The applicant shall require that grading and construction contractors use equipment with rubber tires rather than tracks to the extent possible, to minimize the impacts of excavation and grading noise upon the adjacent neighborhood.</p> <p>Measure Noise-3</p> <p>A 10-foot sound attenuation blanket shall be installed along the eastern portion of the property line such that the line of sight is blocked from construction activity to the residential land uses, which would include the area for the proposed 6-8 Middle School scheduled to open in 2011 northeast of the project. The blankets shall remain in place as long as construction activity utilizing heavy duty equipment is located within 200 feet of the property line.</p>	<p>Implementation of mitigation measure Noise-1 would reduce noise levels by approximately 3 dBA. Implementation of mitigation measures Noise-3 through Noise-6 would reduce noise levels by at least 10 dBA. Implementation of mitigation measures Noise-2 and Noise-7 would further assist in attenuating construction noise levels. While implementation of mitigation measures Noise-1 through Noise-7 would reduce construction generated noise levels, noise levels would still exceed the 5-dBA significance threshold at multiple receptors. Therefore, construction-generated noise would still remain a significant adverse and unavoidable impact.</p> <p>Implementation of mitigation measure Noise-8 would</p>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
<p>the project vicinity above those existing without the project.</p> <p>Implementation of the proposed project would be anticipated to result in a significant impact in terms of exposure of persons to or generation of outdoor activity related noise levels in excess of applicable standards.</p> <p>The proposed project would be anticipated to result in a significant impact in terms of exposure of persons to or generation of parking related noise levels in excess of applicable standards.</p>	<p>Measure Noise-4</p> <p>A 10-foot sound attenuation blanket shall be installed along the northwestern portion of the property line such that the line of sight is blocked from construction activity to the single-family residence. The blankets shall remain in place as long as construction activity utilizing heavy duty equipment is located within 130 feet of the property line.</p> <p>Measure Noise-5</p> <p>A 10-foot sound attenuation blanket shall be installed along the southern portion of the property line such that the line of sight is blocked from construction activity to the multi-family residence. The blankets shall remain in place as long as construction activity utilizing heavy duty equipment is located within 100 feet of the property line.</p> <p>Measure Noise-6</p> <p>A 10-foot sound attenuation blanket shall be installed along the northern portion of the property line such that the line of sight is blocked from construction activity to the Alvarado (Juan Bautista) Elementary School and the new 6-8 Middle School if it is in operation during construction activities. The blankets shall remain in place as long as construction activity utilizing heavy duty equipment is located within 50 feet of the property line.</p> <p>Measure Noise-7</p> <p>A noise disturbance coordinator shall be established. The disturbance coordinator shall be responsible for responding to any local complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall be required to implement reasonable.</p> <p>Measure Noise-8</p> <p>A 6-foot-high solid wall shall be constructed along the eastern portion of the outdoor aquatics area such that the line of sight is blocked from the swimming pools to residential land uses.</p> <p>Measure Noise-9</p> <p>A 6-foot-high solid wall shall be constructed along the eastern property line of the project site such that the line of sight is blocked from the parking lot to residential land uses.</p>	<p>reduce outdoor activity noise levels at the single- and multi-family residential uses to the east of the site by approximately 5 dBA. With the implementation of this mitigation measure, these residential uses would only experience a 4.7 dBA increase from outdoor activity over the existing ambient noise level. This level would not exceed the 5-dBA threshold for operational noise. Therefore, implementation of mitigation measure Noise-8 would reduce significant impacts related to outdoor activity generated noise to below the level of significance.</p> <p>Implementation of mitigation measure Noise-9 would reduce outdoor activity noise levels at the single- and multi-family residential uses to the east of the site by approximately 5 dBA. With the implementation of this mitigation measure, these residential uses would only experience a 4.1-dBA increase from parking activity over the existing ambient noise level. This level would not exceed the 5-dBA threshold for operational noise. Therefore, implementation of mitigation measure Noise-9 would reduce significant impacts related to parking activity generated noise to below the level of significance.</p>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
Recreation		
<p>Implementation of the proposed project would have the potential to result in indirect significant impacts to recreation constituting a significant adverse effect on the environment.</p>	<p>Measure Cultural-2</p> <p>Impacts related to the loss of an historical resource, the Low-flow Pump Station, shall be reduced through archival documentation of as-found conditions. Prior to issuance of demolition permits, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that documentation of the Low-flow Pump Station is completed by the applicant in the form of a Historic American Buildings Survey that shall comply with the <i>Secretary of the Interior's Standards for Architectural and Engineering Documentation</i>. The documentation shall include large-format photographic recordation; a detailed historic narrative report including description, history, and statement of significance; measured architectural drawings (as built and/or current conditions); and a compilation of historic research. The documentation shall be completed by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualification Standards for History and/or Architectural History. The original archival-quality documentation shall be offered as donated material to the National Park Service Heritage Documentation Program, Historic American Buildings Survey, for inclusion in the Library of Congress. Archival copies of the documentation also would be submitted to the Long Beach Public Library; the Historical Society of Long Beach; California State University, Long Beach; the Office of Historic Preservation; and the South Central Coastal Information Center where it would be available to local researchers.</p> <p>Completion of this mitigation measure shall be monitored and enforced by the City of Long Beach Department of Development Services.</p>	<p>Implementation of mitigation measure Cultural-2 would be expected to reduce significant direct, indirect, and cumulative impacts to recreation to the maximum extent feasible, in terms of a historical resource scheduled for demolition. However, the demolition of this historical resource would still remain a significant adverse impact.</p>
Transportation and Traffic		
<p>Implementation of the proposed project would result in significant traffic and transportation impacts related to site access, related to increasing hazards due to a design feature or incompatible uses, and related to cumulative transportation and traffic related impacts.</p>	<p>Measure Transportation-1</p> <p>In order to mitigate the impact related to substantially increasing hazards due to a design feature or incompatible uses, the project applicant shall install a traffic signal at the intersection of Rose Avenue and East Pacific Coast Highway. The installation of a traffic signal at this key intersection, and associated signing and striping modifications inclusive of crosswalks to facilitate pedestrian access to the site, is subject to the approval of the City of Long Beach and the California Department of Transportation.</p> <p>Measure Transportation-2</p> <p>To ensure that impacts to the surrounding street system are minimized, it is recommended that the construction</p>	<p>Implementation of mitigation measure Transportation-1 would reduce significant impacts related to traffic, intersection capacity, and level of service to below the level of significance. Impacts to traffic caused by increased construction related traffic in the vicinity of the site would be reduced to below the level of significance with the implementation of mitigation measure Transportation-2.</p>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>management plan for the project be developed in coordination with the City of Long Beach and, at a minimum, address the following:</p> <ul style="list-style-type: none"> • Address traffic control for any street closure, detour, or other disruption to traffic circulation. • Identify the routes that construction vehicles shall utilize for the delivery of construction materials (i.e., lumber, tiles, piping, windows, etc.) and to access the site, traffic controls and detours, and construction phasing plan for the project. • Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets. • Require the applicant to keep all haul routes clean and free of debris including but not limited to gravel and dirt as a result of its operations. The applicant shall clean adjacent streets, as directed by the City Engineer (or representative of the City Engineer), of any material which may have been spilled, tracked, or blown onto adjacent streets or areas. • Limit hauling or transport of oversize loads to between the hours of 9:00 a.m. and 3:00 p.m. only, Monday through Friday, unless approved otherwise by the City Engineer. No hauling or transport shall be allowed during nighttime hours, weekends, or federal holidays. • Prohibit use of local streets. • Ensure that haul trucks entering or exiting public streets shall at all times yield to public traffic. • Ensure that, if hauling operations cause any damage to existing pavement, street, curb, and/or gutter along the haul route, the applicant shall be fully responsible for repairs. The repairs shall be completed to the satisfaction of the City Engineer. • Keep all constructed-related parking and staging of vehicles on site and out of the adjacent public roadways. • Ensure that the plan shall meet standards established in the current California Manual on Uniform Traffic Control Device as well as City of Long Beach requirements. • Limit hauling or transport of oversize loads to between the hours of 9:00 a.m. and 3:00 p.m. only, Monday through Friday, unless approved otherwise by the City Engineer. No hauling or transport shall be allowed during nighttime hours, weekends, or federal holidays. 	

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
Utilities and Service Systems		
<p>Implementation of the proposed project has the potential to impact the wastewater treatment requirements of the Regional Water Quality Control Board, related to insufficient water supplies, and related to solid waste.</p>	<p>Measure Utilities-1</p> <p>The City of Long Beach shall require the construction contractor to comply with the California Department of Transportation construction site best management practices, as identified in the Storm Water Quality Handbook Best Management Practices Manual, when installing or repairing wastewater treatment facilities. The City of Long Beach Department of Development Services shall require the construction contractor to implement best management practices consistent with National Pollutant Discharge Elimination System Permit No. CAS 004003 to reduce transport of pollutants of concern from the construction site to the storm drainage and waterway system for each construction phase of the project, as well as during operation of the project. The construction contractor for each phase of the project shall be required to submit a Standard Urban Storm Water Management Plan to the City of Long Beach for review and approval at least 30 days prior to the anticipated need for a grading permit. The Department of Development Services shall monitor construction to ensure compliance with National Pollutant Discharge Elimination System Permit No. CAS 004003.</p> <p>Measure Utilities-2</p> <p>The City of Long Beach has incorporated Leadership in Energy and Environmental Design elements into the project that would reduce the potable water demand at the site and increase the efficiency of the water used for the project. This would include water conservation requirements for the proposed project, namely the installation of high-efficiency toilets (HET) in which the applicant may receive a \$30 rebate per HET installed; the installation of ultra-low flush or zero-water urinals; and compliance with the State of California Model Landscape Ordinance, which only allows for the use of water-efficient irrigation equipment, has strict limits on the use of turf grass, and places strict limits on the expected quantity of water required per square foot of landscape. The applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that consultation with the County of Los Angeles and Long Beach Water Department is conducted to incorporate other best management practices to address the increase in water demand, with the potential of implementing ordinances and regulations that would promote the efficient use of water at the project site. Degradation of water quality during construction of the project shall be reduced to below the level of significance through the requirement to conduct a detailed hydrology study based on the final site plans and to implement the recommendations, or comparable measures, into the</p>	<p>Implementation of mitigation measures Utilities-1 through Utilities-3 would reduce significant impacts to utilities and service systems to below the level of significance.</p>

**TABLE R.ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>plans and specifications for each project element prior to final approval by the City of Long Beach Department of Development Services. A Senate Bill 610 water supply assessment or comparable study shall be prepared by a certified civil engineer, and a draft report, including recommendations, shall be submitted to the Department of Development Services for review. The Department of Development Services shall provide comments, if any, within 14 days of receiving the draft hydrology study. A Senate Bill 610 water supply assessment or comparable study shall be prepared by the retail water supplier. The Long Beach Water Department has determined that a water assessment is not required for this project.</p> <p>Measure Utilities-3</p> <p>The applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that at least 50 percent of the construction solid waste from the project is being diverted to comply with applicable federal, state, and local statutes related to solid waste and reduce direct and cumulative impacts from construction to below the level of significance. To ensure conformance with the Solid Waste Management Act of 1989, the City of Long Beach shall further require the construction contractor to manage the solid waste generated during construction of each element of the project by diverting at least 50 percent of it from disposal in landfills, particularly Class III landfills, through source reduction, reuse, and recycling of construction and demolition debris. The construction contractor shall submit a construction Solid Waste Management Plan to the City of Long Beach prior to construction of the project. The construction contractor shall demonstrate compliance with the Solid Waste Management Plan through the submission of monthly reports during demolition activities that estimate the total solid waste generated and diversion of 50 percent of the solid waste.</p>	

SECTION 2.0
PROJECT DESCRIPTION

2.1 PROPOSED PROJECT LOCATION

Page 2-1 Please replace Figure 2.1-4, *Aerial Photograph*, with Figure R.2.1-4, *Aerial Photograph*, which has been revised to reflect the City of Signal Hill zoning map boundaries that place the City boundaries north of the bins.

2.2 EXISTING CONDITIONS

Page 2-1 Please replace the only paragraph of this subsection:

The proposed project site consists of approximately 19 acres of undeveloped parcels of land that have also been intermittently used for recreation by the City pursuant to a lease agreement with the County of Los Angeles. The 19-acre proposed project site is owned by the Los Angeles County Flood Control District (LACFCD). The City has entered into a grant lease with the LACFCD. Authorized uses under the existing lease agreement No. 76300, between the LACFCD and the City, include “publicly-owned recreational improvements consisting specifically of baseball fields, soccer fields, a dirt parking lot, and restroom structures.” Any other use is strictly prohibited. The lease would need to be amended to allow the proposed uses. In addition, the City has proposed to purchase the site that would no longer be needed by the LACFCD for flood control purposes as a result of the proposed project, subject to the approval of the County of Los Angeles Board of Supervisors.

2.2.1 Local Demographics

Page 2-2 Please insert the following paragraph after the first paragraph of this page:

According to the 2000 U.S. Census, the population for the neighboring City of Signal Hill was 10,951.⁴ Unlike the community described above, approximately 72 percent of the population is employed and roughly 79 percent of the population above the age of 25 years has a high school diploma.⁵ Signal Hill ethnic statistics include approximately 45.5 percent Caucasian, 29 percent Hispanic, 16.5 percent Asian, and 13 percent African American residents. The average household size for this community is roughly 2.56 persons, and the average family size is approximately 3.34 persons.⁶

2.2.2 Site Acquisition

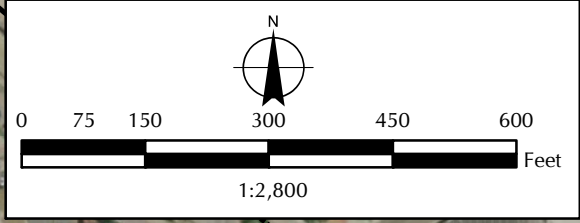
Page 2-2 Please replace the first two sentences in this subsection:

The proposed project would be located on land that is owned by the LACFCD. The Hamilton Bowl / Chittick Field site is currently owned and operated by the LACFCD.

⁴ U.S. Census 2000. November 2007. Web site. “Population Finder.” Available at: <http://factfinder.census.gov/>

⁵ U.S. Census 2000. November 2007. Web site. “Population Finder.” Available at: <http://factfinder.census.gov/>

⁶ U.S. Census 2000. November 2007. Web site. “Population Finder.” Available at: <http://factfinder.census.gov/>



LEGEND



-  Proposed Project
-  City Boundary



FIGURE R.2.1-4
Aerial Photograph

2.2.3 Existing Uses of the Site

Page 2-2 Please replace the second sentence in this subsection:

This site also serves as a flood control detention basin, as a National Pollution Discharge Elimination System (NPDES) compliance site for the City of Signal Hill and the City, and as a general recreational area for seasonal sports and picnicking by the surrounding community.

Page 2-3 Please replace the fifth complete sentence on this page:

Approximately 34 percent of Signal Hill's runoff drains into the Hamilton Bowl Detention Basin.

2.2.4 Existing Site Facilities

Page 2-3 Please replace the first sentence in this subsection:

The roughly 19-acre loosely trapezoid-shaped land parcel is bounded by light industrial land use to the north, residential uses to the east, commercial uses to the immediate south, and a small two-way street (Walnut Avenue) to the west along with an institutional use immediately west of Walnut Avenue.

Page 2-3 Please replace Figure 2.2.4-1, *Neighboring Land Uses*, with Figure R.2.2.4-1, *Surrounding Land Uses*, which has been revised to illustrate that the land use of the property northeast of the proposed project site is light industrial.

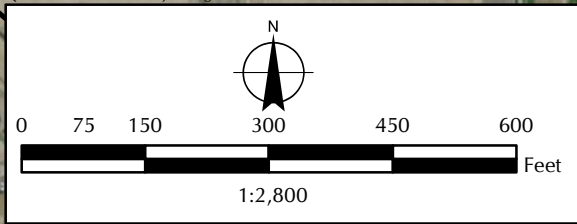
Page 2-3 In the last paragraph of this page, please replace the second sentence:

There is a privately owned single-family residence (caretaker's house) located near the northwest corner and outside of the proposed project site.

2.4 STATEMENT OF OBJECTIVES

Page 2-6 Please insert the following as the first paragraph in this subsection:

The Salvation Army has set forth a purpose of the Kroc Community Centers to provide opportunities that facilitate positive, life-changing experiences through art, athletics, personal development, spiritual discovery, and community service. The first Kroc Community Center opened in San Diego, California, in June 2002. Since then, additional centers have opened in San Francisco, California; in Atlanta, Georgia; and most recently in Coeur d'Alene, Idaho on May 11, 2009. Other centers scheduled for opening include Salem, Oregon (2009); Omaha, Nebraska (2009); and Grand Rapids, Michigan (2010). Cities such as Memphis, Tennessee; Chicago, Illinois; Boston, Massachusetts; and Augusta, Georgia are attempting to break ground through their capital campaigning efforts for construction of their respective centers. The existing centers have been built with the intention to be easily accessible, within reach of various economic groups, with particular outreach to underserved families.



LEGEND

- Project Boundary
- City Boundary

Surrounding Land Uses

- Commercial
- Light Industrial
- Institutional
- Residential



FIGURE R.2.2.4-1
Surrounding Land Uses

2.6 PROPOSED PROJECT

2.6.1 Project Elements

Page 2-8 Please replace Figure 2.6.1-1, *Site Plan*, with Figure R.2.6.1-1, *Site Plan*, which has been revised to more clearly indicate ingress and egress.

Page 2-8 Please insert the following sentence to the end of the bulleted paragraph that describes outdoor recreation:

In an effort to be consistent with Long Beach Water Department goals for water conservation, pools shall be required to be covered when not in use for extended periods of time, pools shall be equipped with a high-quality system for filtering pool water, and hot water lines shall be fitted with water recirculation systems.

2.6.2 Leadership in Energy and Environmental Design Elements

Page 2-9 In the first sentence of the second paragraph in this subsection, please insert an open double quotation mark immediately after the following phrase:

According to the interim Green Building Requirements for Private Development in the City,...

2.6.3 Construction Scenario

Page 2-9 In the last sentence of the first paragraph in this subsection, please replace "886,065" with "885,795."

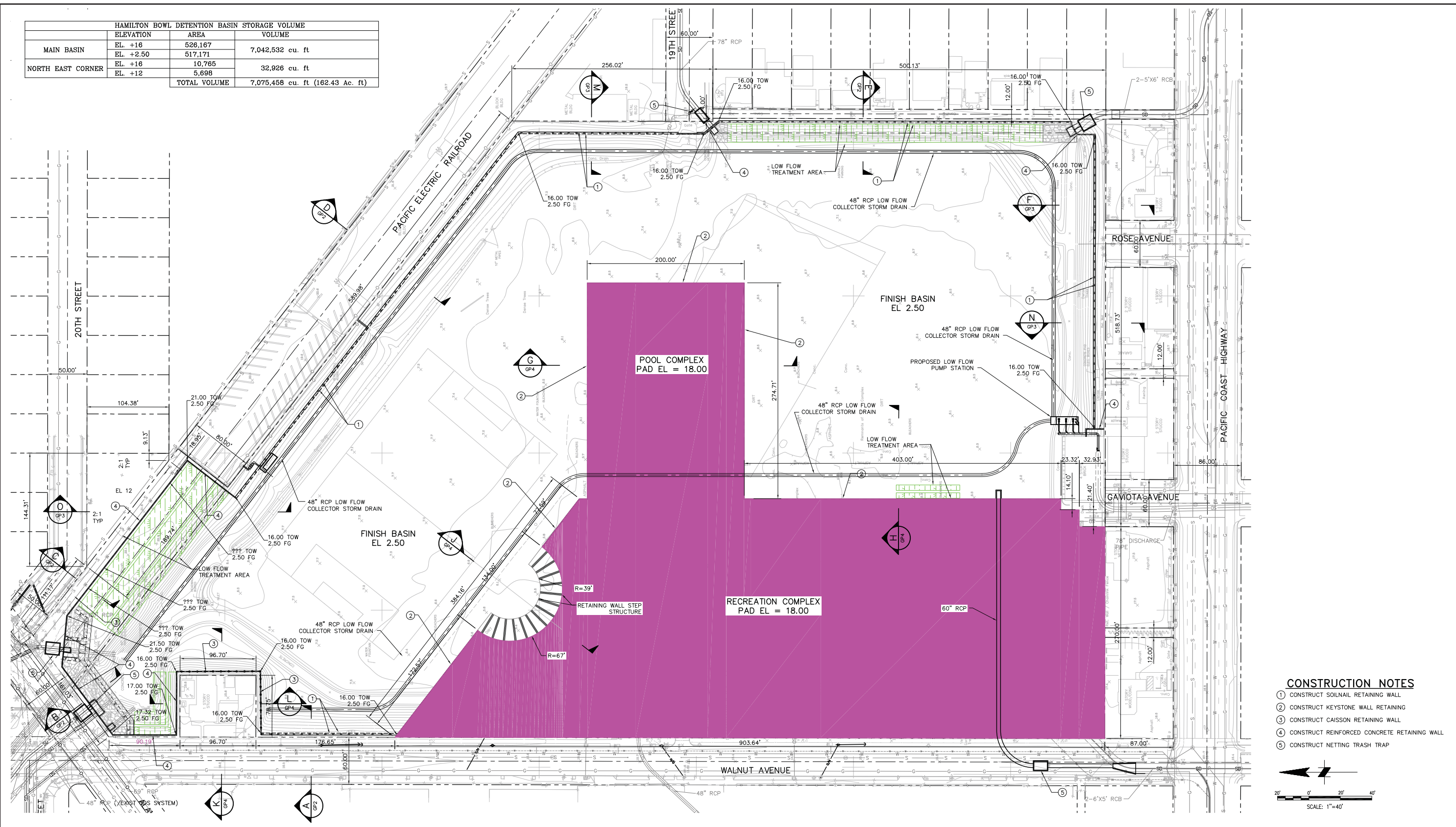
Page 2-10 Please insert the following after the first paragraph on this page:

As specified in a letter from the City of Long Beach to the City of Signal Hill,⁷ the applicant shall be required to complete construction, grading, and improvements to the flood control and water quality control facilities related to the Hamilton Bowl Detention Basin in a manner that ensures that there is no net loss or compromise of the existing flood detention capacity or water quality during construction or operation of the proposed (Figure 2.6.3-1, *Kroc Community Center Grading Plan*):

1. Construction of the new Low-flow Pump Station located just northeast of the existing Hamilton Bowl Pump Station
2. Construction of the site's proposed perimeter crib and caisson walls
3. Construction of the relocated Fresh Creek Technologies Trash Net Systems on all incoming storm drains to the Hamilton Bowl Detention Basin; the newly constructed trash net systems would be located in adjoining streets to the proposed project site

⁷ Christoffels, Mark. 23 March 2009. *Storm Water Quality and Storage/Operational Concerns Regarding the Proposed Kroc Community Center Site in Hamilton Bowl*. Long Beach, CA.

HAMILTON BOWL DETENTION BASIN STORAGE VOLUME			
	ELEVATION	AREA	VOLUME
MAIN BASIN	EL. +16	526,167	7,042,532 cu. ft
	EL. +2.50	517,171	
NORTH EAST CORNER	EL. +16	10,765	32,926 cu. ft
	EL. +12	5,698	
TOTAL VOLUME			7,075,458 cu. ft (162.43 Ac. ft)



- CONSTRUCTION NOTES**
- ① CONSTRUCT SOILNAI RETAINING WALL
 - ② CONSTRUCT KEYSTONE WALL RETAINING
 - ③ CONSTRUCT CAISSON RETAINING WALL
 - ④ CONSTRUCT REINFORCED CONCRETE RETAINING WALL
 - ⑤ CONSTRUCT NETTING TRASH TRAP
- SCALE: 1"=40'



FIGURE 2.6.3-1
Kroc Community Center Grading Plan

4. Removal of existing concrete swales and regrading of the Hamilton Bowl Detention Basin to its finished elevation

Note: The invert of the existing Low-flow Pump Station located on Walnut Avenue is lower than the proposed new finished grade of the reconfigured Hamilton Bowl Detention Basin. The existing Low-flow Pump Station would remain operational throughout most of the Hamilton Bowl Detention Basin's reconfiguration.

5. Construction of land mass key stone retaining walls and associated earthwork during the Hamilton Bowl Detention Basin's regrading
6. With the completion of the new Low-flow Pump Station, the existing Low-flow Pump Station located on Walnut Avenue would be demolished, and the key stone retaining walls and associated land mass would be completed.
7. With the Hamilton Bowl Detention Basin reconfigured, the new below-grade storm drain system would be constructed.
8. Simultaneous construction of the new storm drain system and the proposed bio-filtration planters to remove bacteria and heavy metals from an incoming storm's first flush

Page 2-11 Please replace the first sentence of the first complete paragraph on this page:

Construction equipment would be turned off when not in use and drip pans would be required under parked construction equipment.

2.6.3.1 Phase I: Demolition

Page 2-11 Please replace the first paragraph after the bulleted list:

While the current site plan reveals that all structures located on the proposed project site, with the exception of the Hamilton Bowl Pump Station, would be removed in preparation for the proposed project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that documentation of the Low-flow Pump Station is completed in the form of a Historic American Buildings Survey that shall comply with the Secretary of the Interior's Standards for Architectural and Engineering Documentation, prior to issuance of demolition permits.

2.6.4 Facility Access, Parking, and Circulation

2.6.4.1 Access

Page 2-16 Please delete the last paragraph in this subsection.

2.6.4.2 *Parking and On-site Circulation*

Page 2-16 Please add the following text to this subsection after the bulleted list:

Prior to the issuance of an occupancy permit, the City of Long Beach shall require the project applicant to complete a Parking Management Plan (please see Appendix H, *Draft Parking Management Plan*). At a minimum, the Parking Management Plan shall specify the roles and responsibilities of the City, property owner, and event sponsor; specification for on-site and off-site parking; requirements for a detailed way-finding program; signage; number of traffic and parking control personnel; temporary access control and channelization; shuttle and/or charter bus programs; permit parking program; and public outreach strategies. The Parking Management Plan shall be developed and refined with participation of Kroc Community Center staff, City staff, the Police Department, and key representatives from the City of Signal Hill and immediately adjacent neighborhoods. The Parking Management Plan shall specifically provide provisions for special cultural and regional sports events (such as soccer and swimming) that may be expected to require surplus parking.

The project applicant is in the process of establishing a parking agreement with the adjoining Long Beach City College, Pacific Coast Campus, that would allow the use of campus spaces during major special events at the proposed project. Adequate parking is available at the campus to absorb the additional 109 spaces to support the proposed project's parking needs during major special events (to occur at most four times per year during a Saturday or Sunday) since parking demand at Long Beach City College is relatively light during weekends. The Parking Management Plan shall include the use of Long Beach City College, Pacific Coast Campus, parking for overflow or other comparable facilities sufficient to accommodate the needs of the event.

The applicant shall be required to complete a queuing analysis to demonstrate that there is adequate street and on-site circulation capacity to accommodate anticipated queuing for access via the driveway located at the intersection of Pacific Coast Highway and Walnut Avenue or provide sufficient project or street improvements for the anticipated queuing. This first driveway on Walnut Avenue is located approximately 425 feet north of the Pacific Coast Highway / Walnut Avenue intersection, and the projected southbound queue of vehicles on Walnut Avenue is forecast to total 18 vehicles (or 363 feet). Therefore, if adequate separation is provided, motorists entering and exiting the proposed project site would be able to do so safely and without undue congestion.

2.7 INTENDED USES OF THE EIR

Page 2-17 Please replace Table 2.7-1, *Permit Requirements*, with the following revised Table R.2.7-1, *Permit Requirements*:

**TABLE R.2.7-1
PERMIT REQUIREMENTS**

Agency	Permit	How to Obtain the Permit
City of Long Beach	Building Permit / Grading Permits / Development Plan / Plan Approval	Application
County of Los Angeles	Notification	Letter / Lease
County of Los Angeles Department of Public Works	Construction Permit	Detention Basin Analysis (including project design, water quality assessment, improvement plan, hydrology impacts, demonstration of building pads elevation clearing requirements, and flood protection)
South Coast Air Quality Management District	Notification and Operating Permit	Application
NPDES Program	NPDES Permit / SUSMP / SWPPP	Application
California Department of Transportation	Approval for Traffic Signal at Rose Avenue and Pacific Coast Highway and associated signing and striping modifications	Application
California Department of Transportation	Encroachment Permit	Application
California Department of Transportation	Transportation Permit for the use of oversized vehicles on state highways	Application
County of Los Angeles Flood Control District	Amendment to Lease Agreement No 76300	Request for Lease Amendment
Advisory Council on Historic Preservation	Notification	Letter

KEY: SUSMP = Standard Urban Storm Water Management Plan; SWPPP = Storm Water Pollution Prevention Plan.

**SECTION 3.0
EXISTING CONDITIONS, IMPACTS, MITIGATION,
AND LEVEL OF SIGNIFICANCE AFTER MITIGATION**

3.2 AIR QUALITY

3.2.1 Regulatory Framework

Regional

South Coast Air Quality Management District

Page 3.2-10 Please replace the third sentence in this subsection:

This Act merged four air pollution agencies into one regional district to improve air quality in Southern California.

3.2.5 Mitigation Measures

Construction Phase Mitigation Measures

Measure Air-1

Page 3.2-34 Please replace mitigation measure Air-1:

Water or a stabilizing agent that will not cause or contribute to water pollution shall be applied to exposed surfaces in sufficient quantity two times a day to prevent generation of dust plumes. Soil moistening shall be required to treat exposed soil during construction of each element of the project to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid contributions to cumulative increases in criteria pollutants. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications submitted for review include the requirement for the construction contractor to ensure that soil shall be moistened not more than 15 minutes prior to the daily commencement of soil-moving activities and three times a day, or four times a day under windy conditions, in order to maintain a soil moisture content of 12 percent. The applicant shall demonstrate compliance with this measure through the submission of weekly monitoring reports to the City of Long Beach Department of Development Services. At a minimum, active operations shall utilize one or more of the applicable best available control measures to minimize fugitive dust emissions from each fugitive dust source type that is part of the active operation.

Measure Air-4

Page 3.2-35 Please replace mitigation measure Air-4:

A wheel washing system shall be installed and used to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site. Washing of wheels leaving the construction site during construction of each phase of the project shall be required to avoid fugitive dust emissions, ensure compliance with current air quality standards, and avoid

contributions to cumulative increases in criteria pollutants. Water used for wheel washing will be filtered to remove fine sediment before release to the storm drain system. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications for each phase of the project include the requirement for the construction contractor to clean adjacent streets of tracked dirt at the end of each workday or install on-site wheel-washing facilities.

Measure Air-6

Page 3.2-35 Please replace mitigation measure Air-6:

All trucks hauling soil, sand, and other loose materials on site or through neighboring streets shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions). All transport of soils to and from the project site for each phase of the project shall be conducted in a manner that avoids fugitive dust emissions, ensures compliance with current air quality standards, and avoids contributions to cumulative increases in criteria pollutants. Prior to the issuance of permits for each phase of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications for each phase of the project include the requirement for the construction contractor to cover all loads of dirt leaving the site or to leave sufficient freeboard capacity in the truck to prevent fugitive dust emissions en route to the disposal site.

3.5 GEOLOGY AND SOILS

3.5.4 Impact Analysis

Seismic-related Ground Failure/Liquefaction

Page 3.5-15 Please replace the only paragraph in this subsection:

The proposed project would be expected to result in potentially significant impacts from seismic-related ground failure. Potential impacts due to liquefaction could include foundation bearing failure or large foundation settlements, imposition of additional loads on foundations, localized lateral displacement (spreading) or compression, floatation of light structures, and damage to infrastructure such as streets and utilities. According to Plate 7 of the City of Long Beach General Plan, Seismic Safety element,⁸ the proposed project is located in a part of the City where the potential for liquefaction to occur is suspected to be minimal.⁹ However, according to the State of California Seismic Hazard Zones Map—Long Beach Quadrangle, the proposed project site is located within an area where historic occurrence or local site conditions indicate the potential for liquefaction exists and requires investigation.¹⁰ Consistent with the City of Long Beach General Plan, Seismic Safety

⁸ City of Long Beach, Department of Planning and Building. October 1988. *City of Long Beach General Plan, Seismic Safety Element*. Long Beach, CA.

⁹ California Department of Conservation. 2007. Web site. "Seismic Hazards Zonation Program." Available at: <http://www.conservation.ca.gov/Index/Pages/Index.aspx>

¹⁰ California Department of Conservation, Division of Mines and Geology. 1999. *Seismic Hazards Zones Map: Long Beach Quadrangle*. Available at: http://gmw.consrv.ca.gov/shmp/download/pdf/ozn_longb.pdf

element,¹¹ the City will require the applicant to have a geotechnical engineer conduct a subsurface investigation to evaluate the site's potential for liquefaction. Mitigation measures shall be implemented to address any potential impacts that may result from liquefaction, as identified in the geotechnical analysis. In addition, all structures on the proposed project site would be built to meet specific design standards as advised by State and local standards as well as project engineers. Therefore, the proposed project would be expected to result in potentially significant impacts from exposing people or structures to potential substantial adverse effects involving seismic-related ground failure, including liquefaction.

3.7 HYDROLOGY AND WATER QUALITY

3.7.1 Regulatory Framework

Federal

Section 401 of the Clean Water Act of 1972

Page 3.7-2 Please insert the following text before the last sentence of the first complete paragraph in this page:

Specifically, the relevant 1987 amendments to the CWA included the following:

- Requirement that the U.S. EPA, in conjunction with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration, conduct research, as part of the Great Lakes Program, on the harmful effects of pollutants on the general health and welfare.¹² Such research should emphasize the effect bioaccumulation of these pollutants in aquatic species has on reducing the value of aquatic commercial and sport fisheries.
- Requirement that states develop strategies for toxics cleanup in waters where the application of best available technology (BAT) discharge standards is not sufficient to meet state water quality standards and support public health.¹³
- Increase in the penalties for violations of Section 404 permits.¹⁴
- Establishment of a \$400 million program for states to develop and implement, on a watershed basis, non-point-source management and control programs with U.S. EPA responsibility for grant administration, program approval, and periodic program evaluation.¹⁵

¹¹ California Department of Conservation, Division of Mines and Geology. 1999. *Seismic Hazards Zones Map: Long Beach Quadrangle*. Available at: http://gmw.consrv.ca.gov/shmp/download/pdf/ozn_longb.pdf

¹² U.S. Government Printing Office. *Code of Federal Regulations*. 33 U.S.C. 1254.

¹³ U.S. Government Printing Office. *Code of Federal Regulations*. 33 U.S.C. 1314.

¹⁴ U.S. Government Printing Office. *Code of Federal Regulations*. 33 U.S.C. 1344.

¹⁵ U.S. Government Printing Office. *Code of Federal Regulations*. 33 U.S.C. 1329.

Page 3.7-2 Please replace the first sentence of the third complete paragraph on this page:

As adopted in December 2001, the requirements of Order No. 01-182 (Permit) cover 84 cities and the unincorporated areas of the County, with the exception of the portion of the County in the Antelope Valley. These excluded portions include the Cities of Lancaster and Palmdale, as well as the City of Avalon.

General Construction Activity Storm Water Discharges

Page 3.7-2 Please replace the second sentence in this subsection:

Construction activities that qualify include clearing, grading, excavation, reconstruction, and dredge-and-fill activities that result in the disturbance of at least 1 acre of total land area.

Page 3.7-2 Please replace the fourth sentence in this subsection:

A SWPPP is required by the construction general permit and describes the construction site operators' activities to prevent storm water contamination, control sedimentation and erosion, and comply with the requirements of the CWA. A SUSMP is a report that includes one or more site maps, an identification of post-construction activities that could cause pollutants to enter the storm water and a description of measures or best management practices (BMPs) to control these pollutants to the maximum extent practicable.

Page 3.7-2 Please replace the fifth sentence in this subsection:

A BMP is defined by the California Stormwater Quality Association (CASQA), formerly known as the Storm Water Quality Task Force, as any program, technology, process, citing criteria, operating method, measure, or device that controls, prevents, removes, or reduces storm water pollution.

3.7.2 Existing Conditions

Drainage

Page 3.7-5 Please insert the following as the last sentence of the first paragraph in this subsection:

Water pumped from the Hamilton Bowl discharges to the southern section of the Los Angeles River. The river enters Long Beach at the far northern boundary and flows south to the harbor.¹⁶

¹⁶ City of Long Beach. August 2001. *Stormwater Management Plan of City of Long Beach*. Available at: http://www.lbstormwater.org/plan/stw-pdfs/LBSWMP_GEOGRAPHIC_CHARACTERISITICS_s3.pdf

Surface Water Quality

Page 3.7-7 Please replace the first sentence of this subsection:

The original drainage area that constituted the Hamilton Bowl was roughly bounded by Willow Street (on the north), Redondo Avenue (on the east), 4th Street (on the south), and Atlantic Avenue (on the west).

Groundwater

Page 3.7-9 Please replace the second sentence in the last paragraph of this subsection:

Shallow groundwater in the area is encountered within a semi-perched aquifer within the southern portion of the West Coast groundwater basin.¹⁷ Regional groundwater contour maps indicate that groundwater flow in deeper aquifers to the south of the Newport-Inglewood fault line, which lies along the northern edge of the proposed project property, is southerly to southeasterly.¹⁸ According to the Phase II Investigation Report, groundwater would be encountered at approximately 15 feet below ground surface at the proposed project property.¹⁹

3.7.4 Impact Analysis

Cumulative Impacts

Page 3.7-13 Please insert the following after the last sentence in the first paragraph of this subsection:

Along with construction BMPs, the proposed project would incorporate the post-construction BMPs described in the *California Stormwater Best Management Practice Handbook: Industrial and Commercial*.²⁰ These BMPs include practices contained within the following BMP elements: 1) the preparation of a Storm Water Pollution Prevention Plan (SWPPP); 2) source control BMPs; 3) treatment control BMPs; and 4) monitoring, reporting, and program evaluation.

Page 3.7-13 Please replace the first sentence in the second paragraph of this subsection:

The proposed project would include the incorporation of NPDES, BMPs, and LEED elements, and infrastructure improvements to the Hamilton Bowl Detention Basin and the SWPPP would reduce potential impacts associated with construction to below the level of significance.

¹⁷ SCS Engineers. October 2005. *Phase II Investigation Report*. Long Beach, CA.

¹⁸ SCS Engineers. October 2005. *Phase II Investigation Report*. Long Beach, CA.

¹⁹ SCS Engineers. October 2005. *Phase II Investigation Report*. Long Beach, CA.

²⁰ California Stormwater Quality Association. 2003. *California Stormwater Best Management Practice Handbook: Industrial and Commercial*. Menlo Park, CA Available at: <http://www.cabmhandbooks.com/Industrial.asp>

3.7.5 Mitigation Measures

Measure Hydrology-1

Page 3.7-13 Please replace mitigation measure Hydrology-1:

In order to mitigate impacts related to surface water quality caused by construction at the project site to below the level of significance, the City of Long Beach Department of Development Services shall require the construction contractor to implement best management practices consistent with National Pollutant Discharge Elimination System Permit No. CAS 004003 prior to completion of final plans and specifications. The construction contractor for each construction phase shall be required to submit a Storm Water Pollution Prevention Plan to the City of Long Beach for review and approval at least 30 days prior to the anticipated need for a grading permit. The applicant shall complete a water quality assessment prior to the issuance of permits. The City of Long Beach Department of Development Services shall monitor construction to ensure compliance with National Pollutant Discharge Elimination System Permit No. CAS 004003. Such compliance measures would, at a minimum, include preparation and implementation of a local Storm Water Quality Management Plan and a wet Season Erosion Control Plan (for work between October 15 and April 15). These plans shall incorporate all applicable best management practices described in the California Storm Water Best Management Practice Handbook, Construction Activity into the construction phase of the project. Prior to construction, temporary measures must be implemented in order to prevent transport of pollutants of concern from the construction site to the storm drainage system. The best management practices should apply to both the actual work areas as well as contractor staging areas. Selection of construction-related best management practices would be in accordance with the requirements of the City of Long Beach Department of Development Services. The City of Long Beach Department of Development Services shall ensure compliance throughout the duration of the project.

Page 3.7-14 Please replace mitigation measure Hydrology-2:

Measure Hydrology-2

In order to mitigate impacts related to surface water quality caused by construction at the project site, prior to the issuance of permits for all phases of the project, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the plans and specifications require the construction contractor to prepare a Standard Urban Storm Water Mitigation Plan for construction activities and implement best management practices for construction, construction material handling, and waste handling activities, which include the following:

- Schedule excavation, grading, and paving activities for dry weather periods.
- Control the amount of runoff crossing the construction site by means of berms and drainage ditches to divert water flow around the site.
- Identify potential pollution sources from materials and wastes that will be used, stored, or disposed of on the job site.
- Inform contractors and subcontractors about the clean storm water requirements and enforce their responsibilities in pollution prevention.

The construction contractor shall incorporate Standard Urban Storm Water Mitigation Plan requirements and best management practices to mitigate storm water runoff, which include the following:

- The incorporation of bio-retention facilities located within the project area.
- The incorporation of catch basin filtration systems.
- The use of porous pavements to reduce runoff volume.

Page 3.7-14 Please replace mitigation measure Hydrology-3:

Measure Hydrology-3

In order to mitigate impacts related to surface water quality caused by construction at the project site, the applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that the construction contractor is undertaking daily street sweeping and trash removal throughout the construction of the project to avoid degradation of water quality.

3.8 NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM

3.8.1 Regulatory Framework

Federal

NPDES Permit

Page 3.8-2 Please replace the second sentence in this subsection:

The construction phases and operation of the proposed project would require a SUSMP, SWPPP, and overall compliance with the NPDES permit programs.

General Construction Activity Storm Water Discharges

Page 3.8-4 Please replace the second sentence in the first paragraph in this subsection:

Construction activities that qualify include clearing, grading, excavation, reconstruction, and dredge-and-fill activities that result in the disturbance of at least 1 acre of total land area.

Page 3.8-4 Please replace the fourth sentence in the first paragraph in this subsection:

A SWPPP is required by the construction general permit and describes the construction site operators' activities to prevent storm water contamination, control sedimentation and erosion, and comply with the requirements of the CWA. A SUSMP is a report that includes one or more site maps, an identification of post-construction activities that could cause pollutants to enter the storm water, and a description of measures or BMPs to control these pollutants to the maximum extent practicable.

3.8.2 Existing Conditions

Drainage

Page 3.8-7 Please insert the following after the third complete paragraph on this page.

The incoming storm drains to the Hamilton Bowl Detention Basin are either fitted with Fresh Creek Technologies Trash Nets or Roscoe-Moss Linear Radial Devices. All of the incoming storm drains to the Hamilton Bowl Detention Basin will be fitted with Fresh Creek Technologies Trash Net Systems in vaults in the adjoining streets to the proposed project site. Due to the length of the two Roscoe-Moss Linear Radial Devices, the reinstallation of these devices in vaults is not possible.²¹

Pervious Surface

Page 3.8-8 Please insert the following as the second sentence in this subsection:

However, beneath the surface of the Hamilton Bowl Detention Basin is an extensive clay layer, which precludes the possibility of infiltration taking place at the proposed project site.^{22,23}

3.10 NOISE

3.10.5 Mitigation Measures

Construction Phase Mitigation Measures

Measure Noise-3

Page 3.10-23 Please replace mitigation measure Noise-3:

A 10-foot sound attenuation blanket shall be installed along the eastern portion of the property line such that the line of sight is blocked from construction activity to the residential land uses, which would include the area for the proposed 6–8 Middle School scheduled to open in 2011 northeast of the project. The blankets shall remain in place as long as construction activity utilizing heavy duty equipment is located within 200 feet of the property line.

Measure Noise-6

Page 3.10-24 Please replace mitigation measure Noise-6:

A 10-foot sound attenuation blanket shall be installed along the northern portion of the property line such that the line of sight is blocked from construction activity to the Alvarado (Juan Bautista) Elementary School and the new 6–8 Middle School if it is in operation

²¹ Christoffels, Mark. 23 March 2009. *Storm Water Quality and Storage/Operational Concerns Regarding the Proposed Kroc Community Center Site in Hamilton Bowl*. Long Beach, CA.

²² SCS Engineers. April 2005. *Phase I Environmental Assessment*. Long Beach, CA.

²³ SCS Engineers. October 2005. *Phase II Investigation Report*. Long Beach, CA.

during construction activities. The blankets shall remain in place as long as construction activity utilizing heavy duty equipment is located within 50 feet of the property line.

3.11 RECREATION

3.11.2 Existing Conditions

Page 3.11-3 Please replace the third to last sentence in the first paragraph of this subsection:

The 19-acre property is bounded by East 20th Street, a light industrial area, and the City of Signal Hill to the north.

3.12 TRANSPORTATION AND TRAFFIC

3.12.5 Mitigation Measures

Measure Transportation-1

Page 3.12-22 Please replace mitigation measure Transportation-1:

In order to mitigate the impact related to substantially increasing hazards due to a design feature or incompatible uses, the project applicant shall install a traffic signal at the intersection of Rose Avenue and East Pacific Coast Highway. The installation of a traffic signal at this key intersection, and associated signing and striping modifications inclusive of crosswalks to facilitate pedestrian access to the site, is subject to the approval of the City of Long Beach and the California Department of Transportation.

Measure Transportation-2

Page 3.12-23 Please replace mitigation measure Transportation-2:

To ensure that impacts to the surrounding street system are minimized, it is recommended that the construction management plan for the project be developed in coordination with the City of Long Beach and, at a minimum, address the following:

- Address traffic control for any street closure, detour, or other disruption to traffic circulation.
- Identify the routes that construction vehicles shall utilize for the delivery of construction materials (i.e., lumber, tiles, piping, windows, etc.) and to access the site, traffic controls and detours, and construction phasing plan for the project.
- Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets.
- Require the applicant to keep all haul routes clean and free of debris including but not limited to gravel and dirt as a result of its operations. The applicant shall clean adjacent streets, as directed by the City Engineer (or representative of the City Engineer), of any material which may have been spilled, tracked, or blown onto adjacent streets or areas.

- Limit hauling or transport of oversize loads to between the hours of 9:00 a.m. and 3:00 p.m. only, Monday through Friday, unless approved otherwise by the City Engineer. No hauling or transport shall be allowed during nighttime hours, weekends, or federal holidays.
- Prohibit use of local streets.
- Ensure that haul trucks entering or exiting public streets shall at all times yield to public traffic.
- Ensure that, if hauling operations cause any damage to existing pavement, street, curb, and/or gutter along the haul route, the applicant shall be fully responsible for repairs. The repairs shall be completed to the satisfaction of the City Engineer.
- Keep all constructed-related parking and staging of vehicles on site and out of the adjacent public roadways.
- Ensure that the plan shall meet standards established in the current California Manual on Uniform Traffic Control Device as well as City of Long Beach requirements.
- Limit hauling or transport of oversize loads to between the hours of 9:00 a.m. and 3:00 p.m. only, Monday through Friday, unless approved otherwise by the City Engineer. No hauling or transport shall be allowed during nighttime hours, weekends, or federal holidays.

3.13 UTILITIES AND SERVICE SYSTEMS

3.13.2 Existing Conditions

Wastewater Treatment

Page 3.13-7 Please replace the third sentence in this subsection:

The facility has the design capacity to provide both primary and secondary treatment for approximately 400 million gallons of wastewater per day.

3.13.4 Impact Analysis

Wastewater Treatment Requirements

Page 3.13-11 In the third sentence of the second paragraph in this subsection, please replace "309.6" with "295.6."

3.13.5 Mitigation Measures

Measure Utilities-2

Page 3.13-14 Please replace mitigation measure Utilities-2:

The City of Long Beach has incorporated Leadership in Energy and Environmental Design elements into the project that would reduce the potable water demand at the site and increase the efficiency of the water used for the project. This would include water conservation requirements for the proposed project, namely the installation of high-

efficiency toilets (HET) in which the applicant may receive a \$30 rebate per HET installed; the installation of ultra-low flush or zero-water urinals; and compliance with the State of California Model Landscape Ordinance, which only allows for the use of water-efficient irrigation equipment, has strict limits on the use of turf grass, and places strict limits on the expected quantity of water required per square foot of landscape. The applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that consultation with the County of Los Angeles and Long Beach Water Department is conducted to incorporate other best management practices to address the increase in water demand, with the potential of implementing ordinances and regulations that would promote the efficient use of water at the project site. Degradation of water quality during construction of the project shall be reduced to below the level of significance through the requirement to conduct a detailed hydrology study based on the final site plans and to implement the recommendations, or comparable measures, into the plans and specifications for each project element prior to final approval by the City of Long Beach Department of Development Services. A Senate Bill 610 water supply assessment or comparable study shall be prepared by a certified civil engineer, and a draft report, including recommendations, shall be submitted to the Department of Development Services for review. The Department of Development Services shall provide comments, if any, within 14 days of receiving the draft hydrology study. A Senate Bill 610 water supply assessment or comparable study shall be prepared by the retail water supplier. The Long Beach Water Department has determined that a water assessment is not required for this project.

SECTION 4.0
ALTERNATIVES TO THE PROPOSED PROJECT

Page 4-3 Objective No. 12 has been added to the end of Table 4-1, *Summary of Proposed Project and Alternatives' Ability to Attain Project Objectives*. Please replace Table 4-1 with revised Table R.4-1, *Summary of Proposed Project and Alternatives' Ability to Attain Project Objectives*:

TABLE R.4-1
SUMMARY OF PROPOSED PROJECT AND
ALTERNATIVES' ABILITY TO ATTAIN PROJECT OBJECTIVES

Objective	Proposed Project	No Project	Alternative No. 1: Reduced Site	Alternative No. 2: Alternate Site (former Sports Park site)	Alternative No. 3: Enhance Existing Facilities
1. Provide a safe recreational facility that meets the needs and interests of the residents in an underserved community.	Yes	No	Yes	Yes	Yes
2. Provide services to underserved individuals in the central area of the City of Long Beach and the southwestern portion of the City of Signal Hill. The primary service area would be U.S. Census Tract Numbers 5733.00, 5752.02, 5751.01, 5751.02, and 5752.01 in the City of Long Beach, and 5734.02 in the City of Signal Hill.	Yes	Yes (but very limited)	Yes	No	Yes
3. Contain the passive and active recreation for a minimum of 32,000 square feet of gymnasium, 25,000 square feet for aquatic recreation, and 4 acres of playing fields.	Yes	No	No	Yes	No
4. Have the ability to provide educational programming for a minimum of 300 adults and 100 children at one time and the capacity to serve a minimum of 100 families within the same facility.	Yes	No	No	Yes	No
5. Offer social programs (such as job training, family resources, and health seminars) to accommodate up to 450 people at one time.	Yes	No	No	Yes	No
6. Be accessible to public transit.	Yes	Yes	Yes	Yes	Yes
7. Encourage positive social and recreational opportunities to an ethnically diverse community.	Yes	No	Yes	Yes	Yes
8. Stimulate stability and growth in an economically challenged neighborhood.	Yes	No	Yes	Yes	Yes
9. Create a sustainable facility that reflects the requirements of the City of Long Beach interim Green Building Requirements for Private Development.	Yes	No	Yes	No	No
10. Be consistent with Kroc Foundation Grant requirements.	Yes	No	Yes	Yes	No
11. Be consistent with National Pollutant Discharge Elimination System permit requirements.	Yes	Yes	No	Yes	Yes
12. Maintain water detention capability of approximately 160 acre-feet.	Yes	Yes	Yes	Yes	Yes

SECTION 10.0 REFERENCES

Page 10-3 Please replace the first reference on this page with the following two references:

California Department of Conservation, Division of Mines and Geology. 1999. *Seismic Hazards Zones Map: Long Beach Quadrangle*. Available at: http://gmw.consrv.ca.gov/shmp/download/pdf/ozn_longb.pdf

California Department of Conservation, Division of Mines and Geology. 2003. *Earthquake Shaking Potential for the Los Angeles Metropolitan Region: Counties*. Available at: http://www.seismic.ca.gov/pub/intensitymaps/la_county_print.pdf

Page 10-4 Please insert the additional reference after the California Stormwater Quality Association reference:

California Stormwater Quality Association. 2003. *California Stormwater Best Management Practice Handbook: Industrial and Commercial*. Menlo Park, CA Available at: <http://www.cabmphandbooks.com/Industrial.asp>

Page 10-4 Please insert the additional reference after the Charles W. Jennings Database reference:

Christoffels, Mark. 23 March 2009. *Stormwater Quality and Storage/Operational Concerns Regarding the Proposed Kroc Community Center Site in Hamilton Bowl*. Long Beach, CA.

Page 10-7 Please insert the additional reference as the last City of Signal Hill, Public Works reference:

City of Signal Hill, Public Works, Charlie Honeycutt, Director of Public Works. 30 June 2005. Correspondence to Mr. Kirk Cessna, California Department of Transportation, Los Angeles, CA.

Page 10-11 Please delete ",Inc" from the SCS Engineers 2004 reference.

Page 10-11 Please insert the additional reference after the SCS Engineers 2004 reference:

SCS Engineers. April 2005. *Phase I Environmental Assessment*. Long Beach, CA.

Page 10-14 Please insert these additional references after the last U.S. Geological Survey reference:

U.S. Government Printing Office. *Code of Federal Regulations*. 33 U.S.C. 1254.

U.S. Government Printing Office. *Code of Federal Regulations*. 33 U.S.C. 1314.

U.S. Government Printing Office. *Code of Federal Regulations*. 33 U.S.C. 1329.

U.S. Government Printing Office. *Code of Federal Regulations*. 33 U.S.C. 1344.

SECTION 11.0 DISTRIBUTION LIST

11.1.2 Regional Agencies

Page 11-3 Please remove the County Sanitation Districts of Los Angeles County from Section 11.1.3, County Agencies, and insert it as the third agency within Section 11.1.2, Regional Agencies.

11.1.3 County Agencies

Page 11-3 Under County of Los Angeles Department of Public Works, please replace Dr. Ara Kasparian with Mr. Conal McNamara.

VOLUME II: TECHNICAL APPENDICES

**APPENDIX C
CULTURAL RESOURCES TECHNICAL REPORT**

Page 5-9 In the first sentence of the first paragraph, please change "1520" to "1542."

**APPENDIX G
PARKING SUMMARY FOR KROC COMMUNITY CENTER**

Please insert the new Appendix G, *Parking Summary for Kroc Community Center*, after Appendix F, *Traffic Impact Analysis*.

**APPENDIX H
DRAFT PARKING MANAGEMENT PLAN**

Please insert the new Appendix H, *Draft Parking Management Plan*, after Appendix G, *Parking Summary for Kroc Community Center*.

**APPENDIX I
DRAFT YEAR 2010 ALTERNATIVE INTERSECTION CAPACITY ANALYSIS**

Please insert the new Appendix I, *Draft Year 2010 Alternative Intersection Capacity Analysis*, after Appendix H, *Draft Parking Management Plan*.

SECTION 13.0
RESPONSE TO COMMENTS
ON DRAFT ENVIRONMENTAL IMPACT REPORT

The Draft Environmental Impact Report (EIR) was completed and forwarded to the Governor's Office of Planning and Research (OPR) and a Notice of Completion (NOC) was posted at both OPR and the Office of Los Angeles County Clerk on March 27, 2009. Copies of the Draft EIR and Notice of Availability (NOA) were mailed to 50 agency representatives. The Draft EIR was made available for public review at the City of Long Beach (City) Department of Development Services, the City Web site until May 11, 2009, and three local public libraries for a period of 45 days (March 27, 2009 to May 11, 2009). A NOA of the Draft EIR for public review was advertised in the *Long Beach Press Telegram*, as well as sent via regular mail to 50 public agency representatives and 1,390 interested parties, including private organizations and individuals. Copies of the Draft EIR were available for purchase, at reproduction cost, from the City.

The public comment period closed on May 11, 2009, at 5 p.m. A total of nine letters of comment were received on the Draft EIR.

This section of the EIR contains a summary of the distribution list for the Draft EIR and a listing of the parties that provided comments during the public review period. The distribution list/respondents have been divided into the following categories: (1) Federal Agencies, (2) State Agencies, (3) Regional Agencies, (4) County Agencies, (5) Local Agencies, (6) Private Organizations, and (7) Individuals.

13.1 SUMMARY DISTRIBUTION LIST/RESPONDENTS

13.1.1 Federal Agencies

There were no federal agencies identified with responsible or trustee agencies pursuant to the California Environmental Quality Act (CEQA); therefore, the NOA and Draft EIR were not distributed to any federal agencies. No comment letters were received from federal agencies.

13.1.2 State Agencies

Ten State of California (State) agencies received copies of the NOA and the Draft EIR. The City received no timely letters of comment. The City received one late letter of comment from a State agency after closing of the public review period:

- California Department of Transportation (Caltrans).

13.1.3 Regional Agencies

Three regional agencies received copies of the NOA and the Draft EIR. The City received a letter of comment from a regional agency:

- County Sanitation Districts of Los Angeles County

13.1.4 County Agencies

Six county agencies received copies of the NOA and the Draft EIR. The City received a letter of comment from a county agency:

- County of Los Angeles Department of Public Works

13.1.5 Local Agencies

Seventeen local agencies received copies of the NOA. The City received letters of comment from four local agencies. The City received one late letter of comment from the City of Signal Hill Traffic Engineer, 11 days after the closing of the public review period. The City is responding to the late letter to ensure responsiveness to all commenting parties.

- City of Signal Hill
- City of Signal Hill Traffic Engineer
- Long Beach Unified School District
- Long Beach Water Department

13.1.6 Private Organizations

Six private organization received copies of the NOA and the Draft EIR. The City did not receive any letters of comment from private organizations.

13.1.7 Individuals

A NOA of the Draft EIR for public review was sent to over 1,300 individuals.

Two letters of comment were received from individuals:

- Douglas and Annamarie Barry, Long Beach property owners
- Lane Stubblefield, City of Signal Hill resident

13.2 LETTERS OF COMMENT AND RESPONSES

The letters of comment received on the Draft EIR are presented in this subsection with the comments numbered and annotated in the right margin. Responses to the comments follow each comment letter. All changes and additions to the mitigation measures are made for clarification only.

13.2.1 Federal Agencies

No letters of comment were received from federal agencies.

13.2.2 State Agencies

California Department of Transportation
District 7, Regional Planning
IGR / CEQA Branch
Elmer Alvarez, IGR / CEQA Branch Chief
100 Main Street, MS #16
Los Angeles, CA 90012-3606

DEPARTMENT OF TRANSPORTATION

DISTRICT 7, REGIONAL PLANNING

IGR/CEQA BRANCH

100 MAIN STREET, MS # 16

LOS ANGELES, CA 90012-3606

PHONE: (213) 897-6696

FAX: (213) 897-1337



*Flex your power!
Be energy efficient!*

IGR/CEQA No. 090334-DEIR
Kroc Community Center
Vic. LA-01 / PM 5.14
SCH # 2008071085

May 11, 2009

Ms. Jill Griffiths
City Long Beach
333 West Ocean Boulevard
Long Beach, CA 90802

Dear Ms. Griffiths:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project consists of six distinct elements: chapel/auditorium building, administration/education building, recreation center, outdoor recreation, soccer field, and landscaping. This multipurpose facility provides programs and services for children, adults, senior citizen and families.

Caltrans concurs with the recommended project-specific improvements at Rose Avenue/ Project Driveway No. 1 at Pacific Coast Highway in which the project would install a five-phase traffic signal, and associated signing and striping modifications, inclusive of crosswalks. The installation of a traffic signal at Rose Avenue and Pacific Coast Highway, and associated signing and striping modifications, is subject to the approval from Caltrans. 1

We remind you that any work to be performed within the State Right-of-way will need an Encroachment Permit from the California Department of Transportation. An encroachment permit is needed for this improvement 2

Storm water run-off is a sensitive issue for Los Angeles and Ventura counties. Please be mindful that projects need to be designed to discharge clean run-off water. Additionally storm water run-off is not permitted to discharge onto State highway facilities. 3

Any transportation of heavy construction equipment and/or materials which requires the use of oversized-transport vehicles on State highways will require a Caltrans transportation permit. We recommend that large size truck trips be limited to off-peak commute periods. 4

If you have any questions, please feel free to contact me at (213) 897-6696 or Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 090334AL.

Sincerely,



ELMER ALVAREZ
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

**California Department of Transportation
District 7, Regional Planning
IGR / CEQA Branch
Elmer Alvarez, IGR / CEQA Branch Chief
100 Main Street, MS #16
Los Angeles, CA 90012-3606**

Response to Comment No. 1:

Thank you for concurring with mitigation measure Transportation-3. Please see Section 12.0, Clarifications and Revisions to the Draft Environmental Impact Report, Table 2.7-1, *Permit Requirements*, for the modified table that reflects the need for Caltrans to approve the traffic signal at Rose Avenue and Pacific Coast Highway and the associated signing and striping modifications.

Response to Comment No. 2:

Thank you for the comment regarding the need for an encroachment permit for any work done within the State right-of-way. Please see Section 12.0, Table 2.7-1, *Permit Requirements*, for the modified table that reflects the need for an Encroachment Permit from Caltrans for any work done within the State right-of-way.

Response to Comment No. 3:

Thank you for the comment. It has been noted that storm water runoff is a sensitive issue for the Counties of Los Angeles and Ventura. As indicated in Section 2.6.3, Construction Scenario; Section 3.7, Hydrology and Water Quality; and Section 3.8, National Pollutant Discharge Elimination System, the proposed project would be designed in such a manner to ensure that the storm water discharged from the property is not polluted. In addition, the City would ensure that no storm water discharge from the proposed project property is released onto the State highway facilities.

Response to Comment No. 4:

Thank you for the comment regarding use of oversized vehicles on State highways. It is acknowledged that a Caltrans transportation permit is required for the transportation of heavy construction equipment and/or materials that require the use of oversized transport vehicles on State highways (i.e., Pacific Coast Highway). Consistent with the Caltrans recommendation to limit large-size truck trips to off-peak commute periods, Section 3.12, Transportation and Traffic, mitigation measure Transportation-2 recommends that the construction management plan for the proposed project include provisions to:

Limit hauling or transport of oversize loads to between the hours of 9:00 a.m. and 3:00 p.m. only, Monday through Friday, unless approved otherwise by the City Engineer. No hauling or transport shall be allowed during nighttime hours, weekends, or federal holidays.

Please see Section 12.0, Table 2.7-1, *Permit Requirements*, for the modified table that reflects the need for a Caltrans Transportation Permit for the use of oversized vehicles on State highways.

13.2.3 Regional Agencies

County Sanitation Districts of Los Angeles County
Facilities Planning Department
Ruth I. Frazen, Customer Service Specialist
1955 Workman Mill Road
Whittier, CA 90601-1400



COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

April 2, 2009

File No: 03-00.04-00

Ms. Jill Griffiths, Environmental Planner
Community & Environmental Planning Division
Department of Planning and Building
City of Long Beach
333 West Ocean Boulevard, 5th Floor
Long Beach, CA 90802

Dear Ms. Griffiths:

Kroc Community Center

The County Sanitation Districts of Los Angeles County (Districts) received a Draft Environmental Impact Report for the subject project on March 26, 2009. The proposed development is located within the jurisdictional boundaries of District No. 3. We offer the following updated information and comments regarding sewerage service:

1. The Joint Water Pollution Control Plant currently processes an average flow of 295.6 million gallons per day. | 1
2. All other information concerning Districts' facilities and sewerage service contained in the document is current. | 2

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Stephen R. Maguin

Ruth I. Frazen
Customer Service Specialist
Facilities Planning Department

RIF:rf

**County Sanitation Districts of Los Angeles County
Facilities Planning Department
Ruth I. Frazen, Customer Service Specialist
1955 Workman Mill Road
Whittier, CA 90601-1400**

Response to Comment No. 1:

Thank you for the comment regarding average daily flow processed by the Joint Water Pollution Control Plant (JWPCP). Please see Section 12.0 for revisions to Section 3.13, Utilities and Service Systems, that reflect the average flow of 295.6 million gallons per day at the JWPCP.

Response to Comment No. 2:

Thank you for confirmation that the remaining information related to the County Sanitations Districts of Los Angeles County's facilities and sewage service is accurate.

13.2.4 County Agencies

County of Los Angeles Department of Public Works
Land Development Division
Gail Farber, Director of Public Works, for Dennis Hunter, Assistant Deputy Director
900 South Fremont Avenue
Alhambra, CA 91803-1331



COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

May 6, 2009

IN REPLY PLEASE
REFER TO FILE: **LD-1**

Ms. Jill Griffiths
Planning Bureau
City of Long Beach
333 Ocean Boulevard, 5th Floor
Long Beach, CA 90802-4664

Dear Ms. Griffiths:

DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) KROC COMMUNITY CENTER PROJECT

Thank you for the opportunity to review the DEIR for the subject project. The project would utilize roughly 19 acres of land at the current site for the Hamilton Bowl Detention Basin. The Salvation Army will manage the project, through a grant from the Kroc Foundation, to construct a chapel, auditorium, administration/education building, recreation center, outdoor recreation areas, soccer field, and to install landscaping.

We offer the following comments for your consideration.

Land Use and Planning

1. Sections ES.1 and 2.2: Revise the DEIR and associated documents to reflect that the subject property is owned by the Los Angeles County Flood Control District (LACFCD), not the County of Los Angeles Department of Public Works. | 1
2. Sections ES.2 and 2.6: The site plan shows a two-level parking structure proposed as part of the development. There was no reference to the parking structure in the DEIR. The DEIR should disclose the flooding impact to the structure and include proposed mitigations as applicable. | 2
3. Section 2.6.3: Currently, the information provided to Public Works, including the site plan and the Preliminary Conceptual Level Detention Basin Analysis, provides only general information and is inadequate for design purposes or the determination of the proposed development impact on the hydrology. The project developer will be required to submit improvement plans for review and approval | 3

and obtain construction permits from Public Works' Construction Division, Permits and Subdivisions Section, prior to any construction within the LACFCD-owned property. Building pad elevations must meet minimum clearance requirements above the maximum proposed water surface in the basin. Public Works may have additional comments, suggested changes and conditions related to the development once the detailed improvement plans are submitted.

3 cont.

4. The existing lease agreement, No. 76300, between the LACFCD and the City of Long Beach **does not** allow the site to be developed for recreation and appurtenant uses as stated in the DEIR. Authorized uses under the existing lease are specifically for "publicly-owned recreational improvements consisting specifically of baseball fields, soccer fields, a dirt parking lot, and restroom structures." Any other use is strictly prohibited. The lease would need to be amended to allow the proposed uses. Additionally, the City of Long Beach has proposed to purchase the portion of the site that would no longer be needed by the LACFCD for flood control purposes as a result of the project, subject to the Los Angeles County Board of Supervisors' approval. This potential transaction should be described in the DEIR, which currently fails to disclose it.

4

If you have any questions regarding the lease agreement, please contact Ms. Dayna Rothman at (626) 458-7072.

Drainage

1. Section 2.2: The language should be modified to state: "This site... of land which serves as a flood control detention basin that has..."
2. The DEIR does not provide enough information to adequately identify the impacts to hydrology. The proposed project specifies the use of three electric pumps to avoid impacts to drainage due to the proposed fill. These new pumps must be used to maintain the existing level of protection in the basin.

5

Based on a previous review by Public Works' Water Resource Division, of the existing conditions, the basin currently has capacity for the Capital Flood. The proposed project must maintain this level of flood protection during and after construction. It is anticipated that the new pumps and regraded detention basin can accomplish this, but no analysis has been performed conclusively demonstrating that the proposed project will maintain the capital level of flood protection. This analysis must be completed and must be reviewed and approved

6

by Public Works' Water Resource Division prior to certification of the environmental document.

6 cont.

3. In a recent presentation to the City Planning Commission, a concept was shown contemplating underground storage of stormwater. The environmental document does not address this concept. Please clarify whether or not underground storage is proposed. If underground storage is proposed, the concept shall be submitted to, and approved by, Public Works' Water Resources Division and incorporated into the Final Environmental Document prior to certification.

7

If you have any questions regarding drainage/hydrology, please contact Mr. Iraj Nasser at (626) 458-6124.

Water Quality

The Environmental document does not provide adequate detail regarding the implementation of post-construction Best Management Practices. This information should be submitted to, and approved by, Public Works' Watershed Management Division and incorporated into the Final Environmental Document prior to certification.

8

If you have any questions, regarding water quality, please contact Ms. Angela George at (626) 458-4341.

Geotechnical/Soils

The site is located within a potentially liquefiable area per the State of California Seismic Hazard Zones Map—Long Beach Quadrangle. Site-specific geotechnical reports addressing the proposed development and recommended mitigation measures for geotechnical hazards should be included as part of the DEIR.

9

If you have any questions regarding geotechnical, please contact Mr. Jeremy Wan at (626) 458-4925.

Ms. Jill Griffith
May 7, 2009
Page 4

If you have any other questions, please contact Mr. Toan Duong at (626) 458-4945.

Very truly yours,

GAIL FARBER
Director of Public Works

For 
DENNIS HUNTER, PLS PE
Assistant Deputy Director
Land Development Division

MA:ca

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cc: Supervisor Don Knabe (Julie Moore, Connie Sziebl)
County Counsel (Lauren Dods, Mark Yanai)

**County of Los Angeles Department of Public Works
Land Development Division
Gail Farber, Director of Public Works, for Dennis Hunter, Assistant Deputy Director
900 South Fremont Avenue
Alhambra, CA 91803-1331**

Response to Comment No. 1:

Thank you for the comment. Please see Section 12.0 for revisions to Section ES.1, Existing Facilities, and Section 2.2, Existing Conditions, indicating that the proposed project property is owned by the Los Angeles County Flood Control District (LACFCD).

Response to Comment No. 2:

Thank you for the comment. The proposed two-level parking structure is described in Section 2, Project Description, and in Section 3.12, Transportation and Traffic, of the EIR. Please see Section 12.0 for revisions to Section ES, Executive Summary, that include the two-level parking structure as a part of the proposed project, as discussed in the Project Description.

The proposed drainage improvements are described in Section 2.6.3.3, Phase III: Drainage Improvements. The impacts of the proposed project, including the proposed two-level parking structure, are analyzed in Section 3.7.4, Impact Analysis, Drainage.

Response to Comment No. 3:

Thank you for the comment regarding the need for additional information to support the processing of construction permits with the County of Los Angeles Department of Public Works. Please see Section 12.0 for revisions to Table 2.7-1, *Permit Requirements*, that include the County of Los Angeles Department of Public Works requirement for a Detention Basin Analysis (containing the project design, water quality assessment, improvement plan, hydrology impacts, demonstration of building pads elevation clearing requirements, and flood protection).

The City will require that the project applicant produce a Detention Basin Analysis that is deemed adequate according to the County of Los Angeles Department of Public Works. This analysis will extensively discuss the project design and the project's impact on hydrology. The City will require that the applicant (developer) submit improvement plans for review and approval and obtain all relevant and applicable construction permits from the County of Los Angeles Department of Public Works Construction Division, Permits and Subdivisions Section, prior to any construction within the LACFCD-owned property.

The documentation will also demonstrate that building pad elevations meet the minimum clearance requirements above the proposed water surface in the Hamilton Bowl Detention Basin. The City welcomes any additional comments, suggested changes, and conditions related to the development that may be provided by the County of Los Angeles Department of Public Works once the detailed improvement plans are submitted.

Response to Comment No. 4:

Thank you for the comment regarding the scope of the provisions of the existing lease agreement No. 76300 between the LACFCD and the City. Please see Section 12.0 for revisions to Section 2.0, Project Description, indicating that the proposed project property is currently owned by LACFCD and is leased by the City. As requested, Section 2.2 has been clarified to indicate that the authorized uses of the proposed project site under the existing lease agreement, No. 76300, are for “publicly-owned recreational improvements consisting of baseball fields, soccer fields, a dirt parking lot, and restroom structures,” and that the lease would have to be amended to allow for the facilities included in the proposed project. The City recognizes its need to work with the LACFCD regarding applicable amendments to the lease agreement pertaining to the proposed project. In addition, Table 2.7-1, *Permit Requirements*, has been revised to reflect the need for an amendment to the lease.

Response to Comment No. 5:

Thank you for the comment regarding the flood control detention basin function at the subject property. Please see Section 12.0 for the requested revisions to Section 2.2.3, Existing Uses of the Site.

Response to Comment No. 6:

Thank you for the comment regarding the scope of the analysis of the flood control capacity. As specified in Section 15151 of the State CEQA Guidelines, Standards for Adequacy of an EIR, the EIR need only provide decision makers with information that enables them to make a decision that intelligently takes account of environmental consequences. As indicated in the comment, it is anticipated that, based on standard engineering practices, the proposed project can be designed to maintain the existing level of flood control protection. Detailed modeling and design are more appropriately left to plan design, plan checks, and construction permits.

The City further understands that the proposed project must maintain the capital flood capacity at the project property. The City will require the project applicant to provide the County of Los Angeles Department of Public Works with the analysis that conclusively demonstrates that the proposed project would maintain this level of flood protection. The completed analysis must be reviewed and approved by the County of Los Angeles Department of Public Works Water Resource Division prior to certification of the EIR. Please see Section 12.0 for revisions to Section 2.0, Project Description, that include the requirement of a Detention Basin Analysis to be submitted prior to obtaining the proper permits for construction by the project applicant.

Response to Comment No. 7:

Thank you for the comment regarding consideration of underground storage of storm water. The project applicant has not asked the City to revise the project description to accommodate underground storage of storm water; therefore, the proposed use of underground storage is not analyzed in the EIR. If as a result of engineering design, the applicant determines that underground storage of storm water is a preferable approach to maintaining the existing level of flood protection, the applicant would be required to request the City to consider the proposed project refinement. The City would evaluate the proposed project modifications in light of Section 15162 of the State CEQA Guidelines and complete the requested level of environmental analysis. It is further understood that the applicant would be required to conduct the required hydrologic and hydraulic

analysis to the specification of the County of Los Angeles Department of Public Works as part of the processing of the requested construction permit.

Response to Comment No. 8:

Thank you for the comment requiring the scope of the required best management practices (BMPs). Please see Section 12.0 for updates to Section 3.7, Hydrology and Water Quality, that include a discussion of post-construction BMPs:

The proposed project would incorporate the post-construction BMPs described in the *California Stormwater Best Management Practice Handbook: Industrial and Commercial*.¹ These BMPs include practices contained within the following BMP elements: 1) the preparation of a storm water pollution prevention plan (SWPPP); 2) source control BMPs; 3) treatment control BMPs; and 4) monitoring, reporting, and program evaluation.

Response to Comment No. 9:

Thank you for the comment regarding potentially liquefiable soils. Please see Section 12.0 for revisions to Section 3.5, Geology and Soils, indicating that the proposed project site is located within an area where historic occurrence or local site conditions indicate the potential for liquefaction exists and requires investigation, according to the State of California Seismic Hazard Zones Map—Long Beach Quadrangle.² Consistent with the City of Long Beach General Plan, Seismic Safety element, the City will require the applicant to have a geotechnical engineer conduct a subsurface investigation to evaluate the site's potential for liquefaction. Mitigation measures shall be implemented to address any potential impacts that may result from liquefaction, as identified in the geotechnical analysis.

Section 3.5, Geology and Soils, Subsection 3.5.4, Impact Analysis, has been clarified:

The proposed project would be expected to result in potentially significant impacts from seismic-related ground failure. Potential impacts due to liquefaction could include foundation bearing failure or large foundation settlements, imposition of additional loads on foundations, localized lateral displacement (spreading) or compression, floatation of light structures, and damage to infrastructure such as streets and utilities. According to Plate 7 of the City General Plan, Seismic Safety element, the proposed project is located in a part of the City where the potential for liquefaction to occur is suspected to be minimal. However, according to the State of California Seismic Hazard Zones Map—Long Beach Quadrangle, the proposed project site is located within an area where historic occurrence or local site conditions indicate the potential for liquefaction exists and requires investigation. Consistent with the City General Plan, Seismic Safety element, the City will require the applicant to have a geotechnical engineer conduct a subsurface investigation to evaluate the site's potential for liquefaction. Mitigation measures shall be implemented to address any potential impacts that may result from liquefaction, as

¹ California Stormwater Quality Association. 2003. *California Stormwater Best Management Practice Handbook: Industrial and Commercial*. Menlo Park, CA. Available at: <http://www.cabmphandbooks.com/Industrial.asp>

² California Department of Conservation, Division of Mines and Geology. 1999. *State of California Seismic Hazard Zones—Long Beach Quadrangle*. Available at: http://gmw.consrv.ca.gov/shmp/download/pdf/ozn_longb.pdf

identified in the geotechnical analysis. In addition, all structures on the proposed project site would be built to meet specific design standards as advised by State and local standards and by project engineers. Therefore, the proposed project would be expected to result in potentially significant impacts from exposing people or structures to potential substantial adverse effects involving seismic-related ground failure, including liquefaction.

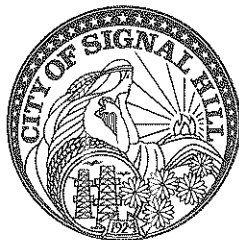
13.2.5 Local Agencies

City of Signal Hill
Barbara Munoz, Director of Public Works
2175 Cherry Avenue
Signal Hill, California 90755-3799

City of Signal Hill Traffic Engineer
Bill Zimmerman
W.G. Zimmerman Engineering Inc.
801 Pacific Coast Highway, Suite 200
Seal Beach, California 90740

Long Beach Unified School District
Facilities Development & Planning Branch
Carri M. Matsumoto, Executive Director
2425 Webster Avenue
Long Beach, California 90810

Long Beach Water Department
Matthew P. Lyons, Director of Planning and Conservation
1800 East Wardlow Road
Long Beach, California 90807-4931



CITY OF SIGNAL HILL

2175 Cherry Avenue • Signal Hill, California 90755-3799

May 11, 2009

Ms. Jill Griffiths
Department of Development Services
City of Long Beach
333 West Ocean Boulevard, 5th Floor
Long Beach, California 90802

Subject: Kroc Community Center – Draft Environmental Impact Report (DEIR)

Dear Ms. Griffiths:

On behalf of the City of Signal Hill ("Signal Hill"), I am providing comments regarding the Draft Environmental Impact Report ("DEIR") prepared for the City of Long Beach by Sapphos Environmental, Inc. to address environmental issues associated with the construction and operation of the proposed Kroc Community Center. This letter builds upon comments submitted in our letter dated August 13, 2008 in response to the July 26, 2008 Initial Study for the project. After review of the Draft EIR, the City of Signal Hill still has concerns about parking, traffic, and water quality. Our city supports the concept of the proposed KROC Community Center, but has concluded that the following topics are not adequately addressed in the Draft EIR. In addition, we are providing in "Attachment A" some questions and comments on specific sections of the Draft EIR.

Traffic in the Area Surrounding the Kroc Center

The traffic comments Signal Hill submitted on August 8, 2008 have not been fully considered in this Draft EIR, and we remain concerned that traffic impacts have not been adequately addressed. The EIR states that Walnut Avenue will be used for overflow parking during major events at the Kroc Center, or as a result of the parking facilities being unavailable due to flooding. However, Walnut Avenue is a relatively narrow street – as we stated in our August 2008 comment letter, the portion of Walnut Avenue immediately north of Alamitos Avenue is only 36 feet in width and allows parking on both sides of the street. Signal Hill would like to clarify whether or not Long Beach includes in the proposed use for overflow event parking the portion of Walnut Avenue that lies within the City of Signal Hill. If so, this will likely have a significant impact on traffic in this section of Walnut Avenue.

Signal Hill continues to be concerned that the intersection of Walnut Avenue and 20th Street is not designed to accommodate significant traffic and that the proposed project will have a significant impact on Walnut Avenue and the adjacent neighborhood. In addition, a new middle school is planned for construction at Cherry Avenue and 20th Street. This will add to the traffic and parking demands in the area north of the Kroc Center. The traffic analysis in the Draft EIR assumes that a traffic signal will be installed at Walnut and 20th Street. However, the City of Signal Hill has received no information from the City of Long Beach verifying that a signal will be installed at this location prior to the opening of the KROC Center. To get a more accurate understanding of potential traffic impacts on this intersection, an analysis for a stop sign warrant should be performed. Further, the traffic analysis does not take into account the GTE site for the planned middle school. The Final EIR should consider the impacts to local streets and intersections adjacent to both the Kroc Center project and the planned middle school. Signal Hill requests that Long Beach reassess the impacts on Walnut Avenue, Alamitos Avenue, and 20th Street, as well as the intersections of Walnut and 20th, Walnut and 21st, and Walnut and Hill.

2

As stated in our August 2008 letter, the EIR should include an assessment of the need to widen and improve Walnut Avenue to accommodate both vehicular and pedestrian traffic. If a new bus route on Walnut Avenue is approved, this new route could further impede vehicle and pedestrian traffic. The EIR should evaluate the need to improve the streets along the new bus route to accommodate the traffic flow and bus loads related to the proposed Kroc Center project. Improvements to the intersection of Walnut Avenue and Pacific Coast Highway, as well as the intersection of Walnut Avenue and 20th Street, should also be considered.

3

Further, Signal Hill requests access to the SYNCHRO data sheets used in development of the Traffic Impact Analysis for the KROC Community Center to complete our review of the traffic report section of the Draft EIR. In addition, an analysis still needs to be performed to determine potential construction traffic impacts on streets in Signal Hill.

4

Parking Concerns

Signal Hill is concerned about the potential lack of adequate parking for the Kroc Community Center. The project requires 6,500 parking spaces, but currently provides for only 1,139 parking spaces. The comment in the Draft EIR that overflow parking will be accommodated through on-street parking does not take into consideration the undue burden that this will cause residents, businesses, and schools near the project. A parking management program is a required element of a traffic analysis, and needs to be fully addressed by Long Beach. Such a program should include identification of off-street parking facilities with shuttle service or pedestrian pathways clearly identified.

5

The overflow parking segment of the parking management program should include agreements with the owners of the facilities proposed to be used for overflow parking.

6

Signal Hill also is concerned about the current design of the parking structure. The lower level of the structure is to be accessed from Walnut Avenue, and the upper deck is to be accessed from Pacific Coast Highway via Rose Avenue. There is an emergency access from East 19th Street, which appears to be the only access to both levels. It is unusual that the two levels of the parking structure will not have internal access to each other. This will cause vehicular traffic to re-enter neighboring surface streets in the event of one floor reaching capacity. The ramps associated with the emergency exit/entry at East 19th Street should be designed to provide access between the upper deck and lower level of the parking structure during normal operations.

7

Water Quality Concerns

Signal Hill wishes to restate some of the water quality concerns expressed in our August 2008 letter. The plan by Long Beach to replace the existing Roscoe-Moss linear radial devices in the Hamilton Bowl with nets is inconsistent with the demonstration project funded pursuant to SWRCB (State Water Resources Control Board) Agreement No. 03-141-554-0 between Signal Hill and the State Water Resources Control Board. The purpose of the State-funded demonstration project was to gain *long-term experience* with the utilization of different types and sizes of structural trash capture systems.

8

We appreciate the comments on the replacement of the trash capture devices in the March 23, 2009 letter from Mark Christoffels. However, we continue to believe that every effort should be made to replace the existing devices in kind. Furthermore, we do not understand how the future vaults associated with the storm drains currently fitted with the Roscoe-Moss linear radial devices can be accessed from public streets. It appears that access would have to be provided through the parking lot of the storage facility immediately northeast of the Hamilton Bowl. Further, as stated in our previous comment letter, the Roscoe-Moss linear radial devices could also be installed in concrete vaults. The Final EIR for the Kroc Center should include, as a preferred alternative, the replacement of the existing trash capture devices in kind. There should also be a mitigation measure in the Final EIR that specifies how the existing trash BMPs will be replaced.

9

As stated previously, the long-term maintenance of storm water quality devices also needs to be thoroughly evaluated, especially in terms of access. Also, responsibility for the long-term maintenance of trash BMPs needs to be specified.

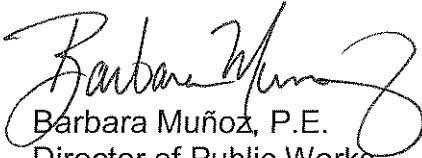
10

Signal Hill continues to be concerned about the potential increases in sediment discharges from the Bowl. Based on the preliminary construction schedule, there will be a gap of approximately 5 to 8 months from removal of the existing storm drain outlet structures during Phase I to construction of the new outlets during Phase III. Signal Hill requests that Long Beach evaluate the potential for sediment discharges and the need for temporary storm drain improvements during construction.

11

Thank you for the opportunity to provide these comments. We hope that you consider them carefully and incorporate the needed modifications into the Final EIR. We look forward to continuing to work with the City of Long Beach to move forward on what we anticipate will be a mutually beneficial project.

Sincerely,



Barbara Muñoz, P.E.
Director of Public Works

Attachment

cc: Kenneth C. Farfsing

ATTACHMENT "A"

Detailed Comments on Draft EIR for Kroc Community Center

- The City of Long Beach Stormwater/Environmental Compliance Officer should review the water quality portions of the EIR. There are several other places in the draft EIR where there appears to be confusion between SUSMPs and SWPPPs. 12
- For clarity, the surface water quality and NPDES sections could be combined into one Water Quality Section. 13
- **Page ES-4. Table ES.4-1. Summary of Significant Impacts.** Measure Air-1 states "water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity two times a day to prevent generation of dust plumes." If a stabilizing agent is to be applied twice a day, as described, it is important to determine what the stabilizing agent will be to ensure that the agent(s) used to do not cause or contribute to water quality problems. The mitigation measure should specify that a stabilizing agent will be used that will not cause water pollution. 14
- **Page ES-5. Table ES.4-1. Summary of Significant Impacts.** Measure Air-4 specifies the installation and use of a wheel washing system to remove bulk materials from tires and vehicle undercarriages before vehicles exit the project site. The measure should further specify that the water used in this system will be filtered to remove fine sediment before it is released to the storm drain system. 15
- **Page ES-6. Table ES.4-1. Summary of Significant Impacts.** Measure Air-6 specifies that trucks carrying loose materials will be covered. It should be clarified whether or not there will be any trucks carrying soil, sand, or other loose materials be routed over Signal Hill streets. 16
- **Pages ES-12 – ES-13. Table ES.4-1. Summary of Significant Impacts.** Measures Hydrology 1, 2, and 3 appear to confuse the SUSMP with a SWPPP. For example, Measure Hydrology-1 states, "The construction contractor for each construction phase shall be required to submit a Standard Urban Storm Water Mitigation Plan to the City of Long Beach for review and approval at least 30 days prior to the anticipated need for a grading permit." This measure should be corrected to require submittal of a SWPPP. The Stormwater/Environmental Compliance Officer should review the water quality portions of the EIR. There are several other places in the draft EIR where there appears to be confusion between SUSMPs and SWPPPs. These should all be corrected: 17

Detention Basin” is incorrect. Only about 34% of Signal Hill’s runoff drains to Hamilton Bowl. This statement should be corrected. There is a similar reference on Page 3.7-5 in the Drainage subsection of Section 3.7.2 that should also be corrected, as should any like references to Signal Hill drainage throughout the EIR.

21 cont.

- **Page 2-3. Section 2.2.4. Existing Site Facilities** states that the parcel “is bounded by a flood control area to the north.” This is incorrect, as is the aerial photograph in Figure 2.2.4-1, Neighboring Land Uses. Page 3.6-6 correctly identifies the site as a future middle school site. The statement in section 2.2.4 and Figure 2.2.4-1 should be corrected.

22

- **Page 2-8. Section 2.6.1. Project Elements.** This section includes a statement that the 4-acre recreational soccer field would accommodate up to 5,000 spectators. The draft EIR does not demonstrate sufficient seating for 5,000 spectators. In addition, it does not clarify the modal split for the spectators arriving at the site. Since it is unlikely that a majority of spectators would walk or take public transportation, it appears that the 1,139 planned parking spaces would be insufficient. The assumptions regarding number of persons per vehicle and anticipated modal split should be clarified and this section changed to reflect that information.

23

- **Page 2-9. Section 2.6.3. Construction Scenario.** There is inconsistency in the EIR regarding project size. Here it is listed as 886,065 gross square feet, which equals 20.34 acres. However, on page 2-10, the combined acreage is listed as 885,795 square feet, and on page ES-1 the project site is described as being 19 acres. The acreage needs to be consistent throughout the EIR.

24

- **Page 2-10. Section 2.6.3. Construction Scenario.** This page contains a statement that “the construction contractor would be required to incorporate best management practices consistent with the guidelines provided in the *California Stormwater Best Management Practice Handbooks: Construction*.” This should also be amended to state that construction contractors would be required to incorporate BMPs consistent with the aforementioned Construction Handbook and the *California Stormwater Best Management Practice Handbook: New Development and Redevelopment*.

25

- **Page 2-11. Section 2.6.3.1. Phase I: Demolition.** This section notes, “plans to demolish the restrooms and the Low-flow Pump Station may need to be avoided or delayed due to the historical significance of these structures.” A determination should be made as to whether or not these structures actually have historical significance.

26

- **Page 2-11. Section 2.6.3. Construction Scenario** – There is a statement that construction equipment would be turned off when not in use. There should also be a statement that drip pans would be required under parked construction equipment. 27
- **Page 2-15. Section 2.6.4.1. Access.** This section mentions a traffic study that “would be required for the proposed project.” A traffic study should be completed now and the results incorporated in the EIR. 28
- **Page 3.2.6. Executive Order S-3-05.** This section states that Executive Order S-3-05 requires reduction of greenhouse gases to 80% *below* 1990 levels by 2050. This should be amended to state that it requires a reduction to 80% of 1990 levels. 29
- **Page 3.2-10. South Coast Air Quality Management District.** The South Coast Air Quality Management District (SCAQMD) is not made up exclusively of Los Angeles County air pollution agencies. According to the SCAQMD website, “it is the air pollution control agency for all of Orange County and the urban portions of Los Angeles, Riverside and San Bernardino Counties.” The language in this section should be revised to reflect the true composition of the District. 30
- **Page 3.7-2. Section 3.7.1. Regulatory Framework.** The explanation of the 1987 Amendments to the CWA is not accurate. The amendments actually made discharges from a municipal storm drain de jure point source discharges. 31
- **Page 3.7-2. Section 3.7.1. Regulatory Framework.** This section should refer to the separate MS4 permit issued to the City of Long Beach, not the Los Angeles permit. 32
- **Page. 3.7-2. Section 3.7.1. Regulatory Framework.** The Cities of Lancaster, Palmdale, and Avalon are not covered by Order No. 01-182 (municipal NPDES permit). The statement that those cities are covered needs to be corrected. 33
- **Page. 3.7-2. Section 3.7.1. Regulatory Framework.** The construction permit covers projects of one acre or larger, not five acres or larger as stated on this page. This reference is to an earlier construction general permit requirement and should be revised to reflect current requirements. 34
- **Page. 3.7-2. Section 3.7.1. Regulatory Framework. Construction Activity Storm Water Discharges.** The Storm Water Quality Task Force has been superceded by the California Stormwater Quality Association (CASQA). The reference on this page should be corrected. 35

- **Page 3.7-2. Section 3.7.1. Regulatory Framework.** The discussion of Executive Order 11988 belongs in a Flood Control Section, not a discussion of water quality. 36
- **Page 3.7-3. Section 3.7.1. Regulatory Framework. Los Angeles Regional Water Quality Control Board Basin Plan.** It is unclear from the wording whether or not the authors recognize that the Basin Plan is a Water Quality Control Plan. This section should be revised to make that clear. 37
- **Page 3.7-5. Section 3.7.2. Existing Conditions. Drainage.** This section should be revised to include a description of where the water pumped from Hamilton Bowl discharges to the Los Angeles River. 38
- **Page 3.7-5. Section 3.7.2. Existing Conditions Drainage.** The Hamilton Bowl is actually owned by the Flood Control District. 39
- **Page 3.7-7. Section 3.7.2. Existing Conditions. Surface Water Quality.** This section states that the drainage area extends to Redondo Avenue on the east. Within the City of Signal Hill, drainage only goes to approximately Temple Avenue. The easterly extent of the drainage area should be confirmed, and, if necessary, clarified in the EIR. 40
- **Page 3.7-7, 3.7-8. Section 3.7.2. Existing Conditions. Surface Water Quality.** Since there is a Trash TMDL for the Los Angeles River, there should also be a discussion of existing stormwater quality conditions. 41
- **Page 3.7-8. Section 3.7.2. Existing Conditions. Surface Water Quality.** More information should be provided about metals in Long Beach stormwater. 42
- **Page 3.7-7. Footnote.** It appears that the title of the document is incorrect. The most recent monitoring report should be used. 43
- **Page 3.7-9. Section 3.7.2. Existing Conditions. Groundwater.** This section states that groundwater could be less than 10' or more than 20' below the surface. The depth to groundwater at this site should be determined and included in the EIR. 44
- **Page 3.7-9. Section 3.7.2. Existing Conditions. Groundwater.** Modify the depth to groundwater discussion to include comments from a March 23, 2009 letter from Mark Christoffels, Deputy Director of Public Works/City Engineer for the City of Long Beach to Barbara Muñoz, Director of Public Works for the City of Signal Hill. This letter mentions a thorough site geotechnical investigation, with soil borings. The results of 45

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| <p>this study should be included in the discussion of existing groundwater condition.</p> | <p>45 cont.</p> |
| <ul style="list-style-type: none"> • Page 3.11-3. Section 3.11.2. Existing Conditions. This section also mentions a small flood control area north of the Hamilton Bowl. This reference should be corrected. | <p>46</p> |
| <ul style="list-style-type: none"> • Page 3.12-4. Section 3.12.2. Existing Conditions. Street System. Will curbside parking remain on Walnut Avenue when bus service commences for the proposed new bus route? | <p>47</p> |
| <ul style="list-style-type: none"> • The water quality section should contain a mitigation measure should be added that requires drip pans under parked construction equipment. | <p>48</p> |

City of Signal Hill
Barbara Munoz, Director of Public Works
2175 Cherry Avenue
Signal Hill, California 90755-3799

Response to Comment No. 1:

Thank you for the comment regarding traffic impacts, particularly as they relate to the use of Walnut Avenue, north of Alamos Avenue, within the City of Signal Hill, to accommodate overflow parking.

Section 12 includes Appendix G, *Parking Summary for Kroc Community Center*, which presents a parking summary that evaluates the parking needs of the various components of the proposed project, depending on time of day and day of week, based on the anticipated operational characteristics of the proposed project and the application of City Code parking ratios. This summary assumes that all components of the proposed project would not be operating at the same time and, therefore, reports three possible scenarios: (1) a typical weekday or Saturday without any special, major events (but presumes soccer league games) (2) a weeknight or a Sunday morning with a church service in the 450-seat sanctuary of the Chapel/Auditorium Building; and (3) a Saturday or a Sunday afternoon with both a 5,000-spectator major special event in the Recreation "Soccer" Field (expected to occur only four times a year) and a 750-spectator outdoor event in the amphitheater or outdoor complex. Parking generation for the proposed element of swimming pools has been accounted for in the application of the City Code ratio to the Recreation Center component of the proposed project.

As indicated in Appendix G, the parking required for the proposed project during a typical weekday without major special events totals 1,005 spaces, which constitutes a surplus of 134 spaces when compared against the proposed supply of 1,139 spaces. During a weeknight or Sunday morning with a church service, the total required is 925 spaces, resulting in a surplus of 214 spaces in comparison to the proposed supply. These comparisons indicate that the on-site supply proposed for the project would adequately serve the parking demand under conditions without large, special events; therefore, overflow or off-site parking, including that portion of Walnut Avenue within the City of Signal Hill, would not be necessary under typical project operations.

It should further be noted that development of the proposed project would result in the reduction of the number of playfields from four existing fields to two fields in the future. The proposed project is expected to continue to accommodate the soccer league and/or baseball games currently played on site. Despite this, no trip reductions have been applied in the traffic study to discount the site's existing traffic generation from the proposed project's future trip-making potential, yielding more conservative estimates of project-generated traffic and associated impacts; any trips associated with the proposed soccer field (or two baseball fields) are represented in the existing traffic volumes. In addition, the trip-making potential of the proposed element of swimming pools are inherent in the application of Institute of Transportation Engineers (ITE) trip generation rates (ITE Land Use 495) to the Recreation Center component of the proposed project and have therefore been evaluated as part of the traffic study.

As a conservative measure, parking needs during major special events were evaluated presuming both a 5,000-spectator event held in the recreation field (e.g., a cultural fair or festival) and a 750-spectator outdoor event in the amphitheater or outdoor complex (e.g., sporting events such as

large-scale swim meets during the summer). All 5,000 attendees are not expected to be at the event at the same time; therefore, Appendix G presumes that 50 percent of those attendees would be present during the peak time periods. In addition, it is unlikely that a 750-spectator outdoor event would be held simultaneously with a 5,000-spectator event. Despite that, a parking evaluation was conducted presuming both types of large, special events to estimate the need for overflow parking. With these assumptions, Appendix G indicates that an additional 109 spaces would be needed off site to sufficiently meet the needs of the proposed project.

Compared to Table 1-1, *Parking Summary for Kroc Community Center*, in Appendix G, Table 1-2, *Parking Summary for Kroc Community Center Based on ITE*, in Appendix G presents another parking evaluation based on the application of ITE parking generation rates to the estimation of the parking needs of the various components of the proposed project. As indicated in Table 1-2, large surpluses of 509 to 639 spaces on site could result under conditions without a 5,000-spectator event in the Recreation "Soccer" Field and a 750-spectator event in the outdoor amphitheater/complex. During these large, special events, approximately 7 spaces will be needed off site to accommodate the parking requirements calculated per ITE rates (a much lower off-site parking requirement compared to the City Code-based estimate of 109 spaces, as indicated in Table 1-1).

Section 12.0 includes Appendix H, *Draft Parking Management Plan*, which will be implemented during major special events to address parking and access/circulation needs, including how best to manage off-site parking. Prior to the issuance of an occupancy permit, the City of Long Beach shall require the project applicant to complete a Parking Management Plan. At a minimum, the Parking Management Plan shall specify the roles and responsibilities of the City, property owner, and event sponsor; specification for on-site and off-site parking; requirements for a detailed way-finding program; signage; number of traffic and parking control personnel; temporary access control and channelization; shuttle and/or charter bus programs; permit parking program; and public outreach strategies. The Parking Management Plan shall be developed and refined with participation of Kroc Community Center staff, City staff, the Police Department, and key representatives from the City of Signal Hill and immediately adjacent neighborhoods. The Parking Management Plan shall specifically provide provisions for special cultural and regional sports events (such as soccer and swimming) that may be expected to require surplus parking.

The project applicant is in the process of establishing a parking agreement with the adjoining Long Beach City College Pacific Coast Campus that would allow the use of campus spaces during major special events at the proposed project. Adequate parking is available at the campus to absorb the additional 109 spaces to support the proposed project's parking needs during major special events (to occur at most four times per year during a Saturday or Sunday) since parking demand at Long Beach City College is relatively light during weekends. The Parking Management Plan shall include the use of Long Beach City College Pacific Coast Campus parking for overflow or other comparable facilities sufficient to accommodate the needs of the event.

Response to Comment No. 2:

Thank you for the comment regarding potential cumulative impacts to the intersection of Walnut Avenue and 20th Street. The proposed realignment and signal at Walnut Avenue / Alamitos Avenue / 20th Street is planned within the City and would be constructed prior to, or shortly after, completion of the proposed project. It is understood that the proposed improvements would provide a safe route and an important link for pedestrians and bicyclists to access the schools in the immediate area, including the Long Beach City College and recreational facilities.

With regards to the GTE Middle School, in review of the list of related projects provided by the City of Signal Hill, dated July 15, 2008, this related project was not identified and therefore was excluded. Please see Section 12.0 for the updated Table 2.8-1, *List of Related Projects*. Based on the updated information provided by the City of Signal Hill, the cumulative impact analysis was reevaluated inclusive of the GTE Middle School as a related project.³ Furthermore, as requested, the update cumulative impact analysis assumes no signal at Walnut Avenue / Alamitos Avenue / 20th Street.

Please see Section 12.0 for the updated Appendix I, *Draft Year 2010 Alternative Intersection Capacity Analysis*, which summarizes the results of the updated cumulative analysis for all 12 key study intersections. Review of this table indicates that the inclusion of the GTE Middle School as a related project, and the assumption that all-way stop control would remain in place at Walnut Avenue / Alamitos Avenue / 20th Street, would not result in significant impacts. The results of the level of service analysis indicate that the proposed project would have a significant (cumulative) traffic impact at only one of the studied intersections, Rose Avenue at Pacific Coast Highway, as discussed in Section 3.12, Transportation and Traffic, of the Draft EIR.

Response to Comment No. 3:

Thank you for the comment regarding the City of Signal Hill's request for an assessment of the need to widen and improve Walnut Avenue to accommodate both vehicular and pedestrian traffic. The traffic analysis prepared for the proposed project has not identified a need to widen Walnut Avenue or a need for improvements at Walnut Avenue and Pacific Coast Highway. The results of the updated cumulative intersection analysis, as summarized in Appendix I, *Draft Year 2010 Alternative Intersection Capacity Analysis*, further indicate that no improvements are necessary at these two locations as both intersections are projected to continue to operate acceptable service levels under existing intersection lane configurations and controls. In addition, the project applicant shall be required to complete a queuing analysis to demonstrate that there is adequate street and on-site circulation capacity to accommodate anticipated queuing for access via the driveway located at the intersection of Pacific Coast highway and Walnut Avenue or provide sufficient project or street improvements for the anticipated queuing. This first driveway on Walnut Avenue is located approximately 425 feet north of the Pacific Coast Highway / Walnut Avenue intersection, and the projected southbound queue of vehicles on Walnut is forecast to total 18 vehicles (or 363 feet). Therefore, if adequate separation is provided, motorists entering and exiting the proposed project site would be able to do so safely and without undue congestion.

There is no new bus route proposed along Walnut Avenue. All references to this new route has been removed from the EIR, as clarified in Section 12.0. In addition, there are no improvements needed at Walnut Avenue and 20th Street beyond those that are proposed by the City of Long Beach relative to signalization and realignment of the intersection.

Response to Comment No. 4:

Thank you for the comment regarding the SYNCHRO data sheets. A summary of the SYNCHRO data sheets were included in the Appendix F, *Traffic Impact Analysis*, of the EIR, which was provided as a CD-ROM to the City of Signal Hill on March 26, 2009. The City transmitted an

³ Trip generation and trip distribution pattern for the GTE Middle School are based on information contained in the GTE Middle School Traffic Impact Analysis prepared by Urban Crossroads.

additional hard copy of Appendix F, along with the SYNCHRO data sheets, to the City of Signal Hill on May 30, 2009.

Response to Comment No. 5:

Thank you for the comment regarding the need for adequate parking for the proposed project. The City has developed a sample of a typical Parking Management Plan that will be considered for the proposed project. Please see Response to Comment No.1 above and Section 12.0 that includes Appendix H, *Draft Parking Management Plan*.

Response to Comment No. 6:

Thank you for the comment regarding the Parking Management Plan and the recommendation that the plan should include agreements with owners of facilities proposed to be used for overflow parking. The City agrees that the Parking Management Plan should be required to contain agreements with owners of the parking facilities to be used for overflow parking and should require such agreements to be in place prior to execution of an occupancy permit that would allow events that would likely require overflow parking. As noted in Response to Comment No.1, the project applicant is in the process of establishing a parking agreement with the adjoining Long Beach City College Pacific Coast Campus that would allow the use of campus spaces during major special events at the proposed project.

Response to Comment No. 7:

Thank you for the comment regarding the current design of the parking structure and associated ramps. This condition was used as the basis for the analysis of direct, indirect, and cumulative effects. Adequate traffic mitigation measures were identified to reduce impacts on traffic to below the level of significance. Under the current design of the parking structure, access between the lower level and the upper level is provided via the ramps located on the northeast corner of the parking structure; the ramps are designed to provide internal access during normal operations and can accommodate the turning requirements of passenger cars. Hence, there is no need for vehicular traffic to re-enter the surface streets to circulate between the upper and lower parking levels. The turning requirements of two passenger vehicles using the ramps concurrently (one going up and one going down) can also be accommodated provided that the upper level access ramp aligns with the second north-south drive aisle on the upper level. An evaluation of the parking structure layout indicates that this potential change in design would not impact the proposed project's parking supply.

Response to Comment No. 8:

Thank you for the comment that the plan to replace the existing Roscoe-Moss linear radial devices in the Hamilton Bowl with nets is inconsistent with the demonstration project funded pursuant to State Water Resources Control Board (SWRCB) Agreement No. 03-141-554-0 between the City of Signal Hill and the SWRCB. The improvements to the infrastructure at the Hamilton Bowl Detention Basin will be completed to accommodate the proposed project and to improve the quality of water discharged from the proposed project site. The improvements include trash capture and maintenance operations on all storm drain outlets to the basin. As such, the flood control improvements to the basin would support and fulfill the intent of the State-funded demonstration project.

As stated in a March 23, 2009, letter to the City of Signal Hill, from Mark Christoffels, Deputy Director of Public Works / City Engineer for the City of Long Beach,⁴ “Currently the incoming storm drains to the Basin are either fitted with Fresh Creek Technologies Trash Nets or Roscoe–Moss Linear Radial Devices.” All of the incoming storm drains to the Detention Basin will be fitted with Fresh Creek Technologies Trash Net Systems in vaults in the adjoining streets to the project site with the exception of the two small storm drains on the north side of the basin.

Furthermore, reconfiguration of the Hamilton Bowl Detention Basin will not impede future National Pollutant Discharge Elimination System (NPDES) compliance options, specifically the option of reducing urban runoff through infiltration:

Several things prevent the Detention Basin from the concept of implementing infiltration. The Hamilton Bowl Detention Basin is a dry storm water detention basin, in which at the conclusion of a storm event water is pumped out as soon as practical in preparation for the next incoming storm event.

The City acknowledges that this practice will continue following the reconfiguration. In addition, Mr. Christoffels indicated that an extensive clay layer precluding the possibility of infiltration is located just beneath the surface of the Hamilton Bowl Detention Basin. He also confirmed that bio-retention treatment areas, which will remove both bacteria and heavy metals from a storm’s first flush, would be incorporated into the reconfigured detention basin.

Response to Comment No. 9:

Thank you for the comment regarding the existing trash capture devices at the proposed project site and the potential to replace these devices. As discussed in Section 3.8, National Pollution Discharge Elimination System, maintenance of this drainage system is very important to maintain a high flood flow capacity. To aid in this, the City performs maintenance work on the system at least two times a year. Work is also performed on an emergency basis as needed. A plugged drainage system cannot carry water and could cause flooding when it rains. Dumping in the streets or drainage system is in violation of County of Los Angeles Code Section 20.94.040⁵ and Long Beach Municipal Code Section 8.60.111.⁶

The design for the proposed project includes upgrades to the drainage infrastructure of the Hamilton Bowl Detention Basin to improve drainage from the proposed project site and to alleviate any erosion or siltation due to the implementation of the proposed project.

The two inlets on the north side of the basin, one 18-inch pipe and one 30-inch pipe, will have accessible trash net structures, but not in the street. For the 18-inch pipe, the trash net precast structure will be installed inside the basin, and for the 30-inch pipe, the trash net precast structure will be installed inside the new school property on the north side of the basin by the school district. Due to the length of the two Roscoe-Moss Linear Radial Devices on these two pipes, it is

⁴ Christoffels, Mark. 23 March 2009. *Storm Water Quality and Storage/Operational Concerns Regarding the Proposed Kroc Community Center Site in Hamilton Bowl*. Long Beach, CA.

⁵ County of Los Angeles. County Code, Title 20, Section 20.94.040: “Flood Control Channel Ordinance.” Available at: <http://municipalcodes.lexisnexis.com/codes/lacounty/>

⁶ City of Long Beach. Municipal Code, Title 8, Section 8.60.111: “Solid Waste, Recycling, and Litter Prevention: Throwing Rubbish and Refuse on Public Right-of-Way or Storm Drain System Prohibited.” Available at: <http://www.municode.com/Resources/gateway.asp?pid=16115&sid=5>

not feasible to reinstall these devices in vaults in their respective locations. As a condition of approval, the City of Long Beach shall require the project applicant to return the existing Roscoe-Moss units that are not utilized as part of the final project to the City of Signal Hill. For maintenance operations, it will be more efficient to use the same kind of trash trap equipment and trash disposal methods.

The new trash traps shall be installed by excavating around the existing pipe, removing the necessary length of the existing pipe, installing the precast concrete vault and prefabricated steel frame and trash net, backfilling, and replacing the pavement prior to removal of existing trash trap structure in the basin. The work shall be completed during a time of good weather, and any dry weather water flow in the pipe shall be bypassed as necessary to the basin.

Section 2.0, Project Description, Construction Scenario, has been revised to include a more detailed schedule that specifically outlines the construction sequence for the basin configuration in preparation for the proposed project.

Response to Comment No. 10:

Thank you for the comment regarding the need for evaluating the long-term maintenance of storm water quality devices, especially in terms of access. As stated in the Section 2, Project Description, of the EIR, the Salvation Army and the City identified 12 objectives that are requisite to the achievement of the proposed project goals. These objectives include maintaining consistency with NPDES permit requirements and water detention capability of approximately 160 acre-feet. These objectives require that the water quality facilities at the proposed project site be both maintained and accessible for evaluation throughout the duration of the life of the proposed project.

As further discussed in Section 3.7, Hydrology and Water Quality (mitigation measure Hydrology-1), and Section 3.8, National Pollution Discharge Elimination System (mitigation measure NPDES-1), of the EIR, the City of Long Beach Department of Development Services is responsible for long-term NPDES compliance throughout the duration of the proposed project. According to an overview of the NPDES program available on the U.S. Environmental Protection Agency Web site, conditions developed to supplement effluent limit guidelines include BMPs.⁷

Response to Comment No. 11:

Thank you for the comment that there will be a gap of approximately 5 to 8 months between the removal of the existing storm drain outlet structures during Phase I and the construction of the new outlets during Phase III. Demolition, removal, and drainage improvements at the proposed project site would be performed concurrently to ensure that there is no significant lapse between the removal of the drainage structures and the proposed project improvements to these structures. As described in Section 2, Project Description, of the EIR, the three phases, Phase I—Demolition, Phase II—Earthwork, and Phase III—Drainage Improvements, would be performed in a concurrent manner such that, throughout the duration of Phase I, the storm water detention and pumping capabilities of the Hamilton Bowl Pump Station would not be impaired.

⁷ U.S. Environmental Protection Agency, Office of Wastewater Management—Water Permitting. May 2009. *Water Permitting 101*. Available at: <http://www.epa.gov/npdes/pubs/101pape.pdf>

Response to Comment No. 12:

Thank you for the statement that the City of Long Beach Storm Water / Environmental Compliance Officer should review the water quality portions of the EIR and for the comment regarding the distinction between a standard urban storm water mitigation plan (SUSMP) and a storm water pollution prevention plan (SWPPP). All construction-related activities referenced in Sections 3.7, Hydrology and Water Quality, and Section 3.8, National Pollutant Discharge Elimination System, have been clarified to require a SWPPP for construction and a SUSMP for post-construction activities.

Response to Comment No. 13:

Thank you for the comment that Sections 3.7, Hydrology and Water Quality, and Section 3.8, National Pollutant Discharge Elimination System, be combined into one water quality section. Section 3.7, Hydrology and Water Quality, and Section 3.8, National Pollutant Discharge Elimination System, remain organized as they were for the proposed project's Initial Study. Consistent with the City's guidelines for preparation of an EIR, these sections are organized in a manner that allows the reader to review Section 3.8 subsequent to the review of Section 3.7.

Response to Comment No. 14:

Thank you for the comment regarding mitigation measure Air-1 as described in Table ES.4-1, *Summary of Significant Impacts*. Section 12.0 has added the phrase, "that will not cause or contribute to water pollution," to mitigation measure Air-1 in the Executive Summary and in Section 3.2, Air Quality.

Response to Comment No. 15:

Thank you for the comment regarding mitigation measure Air-4 as described in Table ES.4-1, *Summary of Significant Impacts*. Section 12.0 has added the sentence, "Water used for wheel washing will be filtered to remove fine sediment before release to the storm drain system," to mitigation measure Air-4 in the Executive Summary and in Section 3.2, Air Quality.

Response to Comment No. 16:

Thank you for the comment regarding mitigation measure Air-6 as described in Table ES.4-1, *Summary of Significant Impacts*. Section 12.0 has added the phrase, "on site or through neighboring streets," to mitigation measure Air-6 in the Executive Summary and in Section 3.2, Air Quality.

Response to Comment No. 17:

Thank you for the comment regarding the use of SUSMP and SWPPP in mitigation measures Hydrology-1, -2, and -3. Please see Response to Comment No. 12.

Response to Comment No. 17 a:

Thank you for the comment regarding the use of SUSMP and SWPPP in Table 2.7-1, *Permit Requirements*, in Section 2, Project Description. Please see Response to Comment No. 12. Section

12.0 removes the two uses of the word *plan*, following the SUSMP and SWPPP acronyms, from Table 2.7-1, *Permit Requirements*, in Section 2, Project Description.

Response to Comment No. 17 b:

Thank you for the comment regarding the use of SUSMP and SWPPP on page 3.7-13 of Section 3.7, Hydrology and Water Quality, Cumulative Impacts. Please see Response to Comment No. 12.

Response to Comment No. 17 c:

Thank you for the comment regarding mitigation measure Hydrology-1, in Section 3.7, Hydrology and Water Quality. Please see Response to Comment No. 12.

Response to Comment No. 17 d:

Thank you for the comment regarding the use of SUSMP and SWPPP on page 3.7-2 of Section 3.7, Hydrology and Water Quality, Regulatory Framework. Please see Response to Comment No. 12.

Response to Comment No. 18:

Thank you for the comment that water quality should be added to the list of detailed evaluations to take place prior to the issuance of permits. Section 12.0 has revised mitigation measure Hydrology-1 to include the following language: "The applicant shall complete a water quality assessment prior to the issuance of permits."

Response to Comment No. 19:

Thank you for the comment that City of Signal Hill demographics be included in Section 2.2.1, Local Demographics. Please see Section 12.0 for the revised Section 2.2.1 that includes demographic information for the City of Signal Hill.

Response to Comment No. 20:

Thank you for the comment. It has been noted that the Figure 2.1-4, *Aerial Photograph*, should be revised to show the storage property as entirely within the City of Long Beach boundary. The property north of the proposed project boundary (which also serves as a flood control area) contains privately owned and operated storage parcels. These parcels are not and would not be included in the proposed project. Figure R.2.1-4, *Aerial Photograph*, has been revised to reflect the information on the City of Signal Hill zoning map that places the City boundaries north of the bins. The revised figure is provided in Section 12.0.

Response to Comment No. 21:

Thank you for the correction that approximately 34 percent of the City of Signal Hill's runoff drains into the Hamilton Bowl Detention Basin. Section 12.0 has replaced the statement that "approximately one-half of the City of Signal Hill's runoff drains into the Hamilton Bowl Detention Basin" with "approximately 34 percent of the City of Signal Hill's runoff drains into the Hamilton Bowl Detention Basin."

Response to Comment No. 22:

Thank you for the comment that the statement in Section 2, Project Description, Subsection 2.2.4, Existing Site Facilities, that the site is bound by a flood control area to the north is incorrect.

Flood Control Area: The use of the word *bound* in Section 2.2.4, Existing Site Facilities, and throughout the Draft EIR refers to existing property/land uses that limit or confine the proposed project site and it is in reference to the term *boundary lines*. According to site visits, a review of aerial photographs, and the City's Land Use Map, the proposed project property is bound to the north by Land Use District 9R, Restricted Industry. As the commenter properly noted in Comment No. 20, this property (which also serves as a flood control area) contains privately owned and operated storage parcels. These parcels are not and would not be included in the proposed project.

Neighboring Land Uses: Figure 2.2.4-1, *Neighboring Land Uses*, has been revised to illustrate that the land use of the City of Signal Hill property northeast of the proposed project site is light industrial. The name of Figure 2.2.4-1, *Neighboring Land Uses* has been changed to Figure R.2.2.4-1, *Surrounding Land Uses*, and is provided in Section 12.0.

Future Middle School Site: As noted in Section 3.6, Hazards and Hazardous Materials, the proposed 6–8 Middle School is planned for construction at 1777 and 1778 East 20th Street, in the City of Signal Hill, within approximately 0.18 mile of the proposed project site. At the time when the Notice of Preparation (NOP) for the proposed project was distributed on July 16, 2008, the proposed 6–8 Middle School site was not an existing land use, nor is it an existing structure that currently bounds the proposed project site. As noted in Section 2, Project Description, Table 2.8-1, *List of Related Projects*, the proposed 6–8 Middle School is an anticipated project that was evaluated along with 38 other anticipated or proposed projects within the vicinity of the proposed project site for potential cumulative impacts.

Response to Comment No. 23:

Thank you for the comment that the Draft EIR does not demonstrate sufficient seating for 5,000 spectators. According to the Kroc Community Center Facilities Design, as prepared by the Salvation Army Southern California Division,⁸ the amphitheater would consist of 10,000 square feet on the north side of the gymnasium. The amphitheater would face the roughly 4-acre playing field, and these combined spaces would accommodate at least 5,000 spectators for cultural events. The stage would be in the round with a movable band shell that could be changed for small or large audiences. The amphitheater seating would hold at least 750 spectators in the bowl-shaped seating area.

The demographic and competitive analysis prepared by Brailsford & Dunlavey / Heery International of the targeted population demographics demonstrates that event participants would likely arrive by a variety of modes of travel, including walking, drop-off, or public transportation:⁹

- There is a concentration of children and youth living near the site. More than 37 percent of the estimated population within a 1-mile radius of the project property is

⁸ Salvation Army, Southern California Division. 30 July 2007. *Kroc Facilities and Program Design*. Los Angeles, California.

⁹ Brailsford & Dunlavey / Heery International. 2006. *Salvation Army of Long Beach Ray and Joan Kroc Corps Community Center Report*. Long Beach, CA.

under the age of 18 years. It is highly unlikely that the youth accessing the site would do so by means other than walking, drop-off, or public transportation.

- Approximately 64 percent of the households within a 1-mile radius of the proposed project property have low household incomes. In addition, nearly 30 percent of the families within a 1-mile radius are below the poverty line. In the same year that this information was collected for the report, only approximately 10 percent of all households within California were below the poverty line.
- Car ownership is low near the proposed project property and only increases with distance from the property. Approximately 26 percent of households within a 1-mile radius do not own a vehicle. The majority of household within a 5-mile radius only have access to 0 or 1 vehicle.

Please also see Response to Comment Nos. 1 and 5.

Response to Comment No. 24:

Thank you for the comment regarding the inconsistency in the EIR with respect to the project size. The proposed project site is described as having an approximate area of 19 acres. Section 2.0, Project Description, Construction Scenario, has been revised to replace the 886,065 gross square feet with 885,795 gross square feet in order to eliminate the 270 gross square feet difference noted between the previously stated 886,065 gross square feet and the combined 885,795 gross square feet (which includes 170,536 gross square feet for the buildings and the remaining 715,259 square feet for the parking lots, gardens, aquatic center, and sports fields).

Response to Comment No. 25:

Thank you for the comment recommending that the use of the *California Stormwater Best Management Practice Handbook: New Development and Redevelopment* for construction contractors be added to Section 2.6.3, Project Description, Construction Scenario. The project applicant would be required to ensure that BMPs are implemented and consistent with the *California Stormwater Best Management Practice Handbook: New Development and Redevelopment* for project concept, planning, and design in addition to the *California Stormwater Best Management Practice Handbook: Construction*, as “each handbook is geared to a specific target audience during each stage of a project.”¹⁰

Response to Comment No. 26:

Thank you for the comment regarding the historical significance of the restrooms and the Low-flow Pump Station. The analysis provided in Section 3.4, Cultural Resources, determined that the Low-flow Pump Station satisfies the definition of, and qualifies as, a historical resource pursuant to CEQA.¹¹ This finding is supported by a Cultural Resources Technical Report containing a California Historical Resources Inventory, Department of Parks and Recreation (DPR) 523 Form (Appendix C,

¹⁰ California Stormwater Quality Association. 2003. *California Stormwater Best Management Practice Handbook: Construction*. Menlo Park, CA. Available at: http://www.cabmphandbooks.com/Documents/Development/Section_1.pdf

¹¹ State of California. Title 14, California Code of Regulations, Chapter 3, Guidelines for Implementation of the California Environmental Quality Act, Section 15064.5(3): “Determining the Significance of Impacts to Archeological and Historical Resources.”

Cultural Resources Technical Report). Please see Section 12.0 for the clarification to Section 2.6.3, Construction Scenario, Phase I: Demolition, to explain the need to document the Low-flow Pump Station prior to the issuance of demolition permits in order to mitigate for the loss of a historical resource. The project analysis in the EIR assumes that the structures are significant and would be demolished, and mitigation has been provided to reduce the impact to the maximum extent practicable.

Response to Comment No. 27:

Thank you for the comment. It has been noted that there should be a statement that drip pans would be required under parked construction equipment. Section 12.0 clarifies Section 2.6.3, Construction Scenario, with the addition of “drip pans under parked construction equipment” as part of the proposed project.

Response to Comment No. 28:

Thank you for the comment that a traffic study be completed now in support of the EIR. The Traffic Impact Analysis was completed and incorporated into the Draft EIR, Section 3.12, Traffic and Transportation, and provided as Appendix F, *Traffic Impact Analysis*.¹² Please see Section 12.0 for the clarifications to Section 2, Project Description, indicating that, for the proposed project, the access to the site was evaluated in terms of their linkages to the adjacent street system.

Response to Comment No. 29:

Thank you for the comment that the reference to Executive Order S-3-05 in Section 3.2, Air Quality, should be amended to state that Executive Order S-3-05 requires a reduction to 80 percent of 1990 levels. According to Executive Order S-3-05 by the Governor of the State of California, “the following greenhouse gas emission reduction targets are hereby established for California: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels.”¹³

Response to Comment No. 30:

Thank you for the comment. It has been noted that the South Coast Air Quality Management District (SCAQMD) is not made up of County of Los Angeles air pollution agencies. Section 3.2, Air Quality, states, “The SCAQMD, which monitors air quality within the project area, has jurisdiction over an area of approximately 10,743 square miles and a population of over 16 million. The 1977 Lewis Air Quality Management Act (Act) created SCAQMD to coordinate air quality planning efforts throughout Southern California.”

Section 3.2, Air Quality, has been clarified in Section 12.0 to state that “This Act also merged Orange, Riverside, and San Bernardino Counties, as well as urban portions of the Los Angeles County, into one regional district to improve air quality in Southern California.”

¹² Linscott, Law, & Greenspan Engineers. 30 January 2009. *Kroc Community Center Traffic Impact Analysis*. Costa Mesa, CA.

¹³ State of California. 13 May 2009. Executive Order S-3-05. Available at:<http://www.dot.ca.gov/hq/energy/ExecOrderS-3-05.htm>

Response to Comment No. 31:

Thank you for the comment that the explanation of the 1987 Amendments to the Clean Water Act is not accurate. Please see Section 12.0 for the update to Section 3.7, Hydrology and Water Quality, which includes additional information regarding the 1987 Amendments to the Clean Water Act.

Response to Comment No. 32:

Thank you for the comment that Section 3.7, Hydrology and Water Quality, Regulatory Framework, should refer to the MS4 Permit issued to the City of Long Beach, not the Los Angeles permit. The proposed project property is owned by and located within the LACFCD and, as such, is subject to the MS4, Los Angeles County Municipal Permit Order No. 01-182 and NPDES No. CAS0041, rather than the Long Beach Municipal Permit Order No. 99-060 and NPDES No. CAS004003.¹⁴

Response to Comment No. 33:

Thank you for the comment regarding the cities that are not covered under the municipal NPDES Permit. Section 3.7, Hydrology and Water Quality, Regulatory Framework, has been revised in Section 12.0 to indicate that the Cities of Lancaster and Palmdale, as well as the City of Avalon, are excluded.

Response to Comment No. 34:

Thank you for the comment. It has been noted that the construction permit covers projects of 1 acre or larger, not 5 acres or larger. Please see Section 12.0 for the revisions to Section 3.7, Hydrology and Water Quality, Regulatory Framework, indicating that the construction permit covers projects of 1 acre or larger.

Response to Comment No. 35:

Thank you for the comment regarding the need to correct the reference to the Storm Water Quality Task Force in Section 3.7, Hydrology and Water Quality, Regulatory Framework, on page 3.7-2. Please see Section 12.0 for the revisions to Section 3.7, Hydrology and Water Quality, Regulatory Framework, indicating that the California Stormwater Quality Association (CASQA) is the current name of the former Storm Water Quality Task Force.

Response to Comment No. 36:

Thank you for the comment regarding the placement of the discussion of Executive Order 11988 in Section 3.7, Hydrology and Water Quality, Regulatory Framework. The discussion of Executive Order 11988 is included in Section 3.7, Hydrology and Water Quality, Regulatory Framework, in order to ensure that all applicable regulations and guidance measures related to both hydrology

¹⁴ California Regional Water Quality Control Board, Los Angeles Region. 30 June 1999. *Water Discharge Requirements for Municipal Stormwater and Urban Runoff Discharges within the City of Long Beach*. Available at: http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/ms4_permits/long_beach/99-060_LongBeachMS4Permit.pdf

and water quality are addressed. The discussion of Executive Order 11988 is not included in a discussion of water quality, but in a discussion of regulatory framework that identifies the federal, state, and local statutes and policies that relate to hydrology and water quality and that must be considered by the City during the decision-making process for projects involving the potential to result in significant impacts related to hydrology and water quality. Executive Order 11988 is listed and discussed within this section as a federal regulation.

Response to Comment No. 37:

Thank you for the comment regarding the Regional Water Quality Control Plan as discussed in Section 3.7, Hydrology and Water Quality, Regulatory Framework. Please note that the words *Basin Plan* are used to describe the “Los Angeles Regional Water Quality Control Board Basin Plan” and that the words *Los Angeles RWQCB* are used to describe the “Los Angeles Regional Water Quality Control Board” as an entity.

Response to Comment No. 38:

Thank you for the comment. It has been noted that Section 3.7, Hydrology and Water Quality, Existing Conditions, Drainage, should be revised to include a description of where the water pumped from the Hamilton Bowl discharges to the Los Angeles River. The water pumped from the Hamilton Bowl Detention Basin discharges to the southern section of the Los Angeles River. The river enters Long Beach at the far northern boundary and flows south to the harbor. Section 12.0 clarifies Section 3.7, Hydrology and Water Quality, to include this information.

Response to Comment No. 39:

Thank you for the comment that the Hamilton Bowl is actually owned by the Los Angeles County Flood Control District. The statement, in Section 3.7, Hydrology and Water Quality, Existing Conditions, Drainage, that “The Hamilton Bowl area was originally excavated as a joint project of the City and the County Department of Public Works (LACDPW) to create a storm water detention basin in the 1930s,” was a reference from the Hamilton Bowl Pump Station / Detention Basin Hydrology Analysis.¹⁵ Please see Section 12.0 for revisions to Section 3.7, Hydrology and Water Quality, Existing Conditions, indicating the owner of the Hamilton Bowl.

Response to Comment No. 40:

Thank you for the comment that drainage within the City of Signal Hill only goes to approximately Temple Avenue rather than Redondo Avenue. The referenced text in Section 3.7, Hydrology and Water Quality, Existing Conditions, Surface Water Quality, refers to the original drainage area, which according to the Hamilton Bowl Pump Station / Detention Basin Hydrology Analysis,¹⁶ extended east to Redondo Avenue. When the 10th Street storm drain was built, it intercepted the drainage from the area east of Temple Avenue, north of Anaheim Street. Please see Section 12.0 for clarifications to Section 3.7, Hydrology and Water Quality.

¹⁵ Moffatt & Nichol. October 2006. *Hamilton Bowl Pump Station / Detention Basin Hydrology Analysis*. Long Beach, CA.

¹⁶ Moffatt & Nichol. October 2006. *Hamilton Bowl Pump Station / Detention Basin Hydrology Analysis*. Long Beach, CA.

Response to Comment No. 41:

Thank you for the comment regarding the discussion of existing storm water quality conditions. The City's existing storm water conditions for the proposed project site are discussed within Section 3.7, Hydrology and Water Quality, Existing Conditions, Surface Water Quality. The data from the City Storm Water Monitoring Program, as described by the U.S. Environmental Protection Agency, includes information regarding bacteria, microbiology, and toxicity (including the implication of metals, i.e., zinc and copper, within the storm water) of the City's storm water.

Response to Comment No. 42:

Thank you for the comment. It has been noted that more information should be provided about metals in Long Beach storm water. Please see Response to Comment No. 41.

Response to Comment No. 43:

Thank you for the comment that it appears that the title of the document is incorrect. The title of the City of Long Beach General Plan, Seismic Safety element, as stated in Section 3.7, Hydrology and Water Quality, is correct. The Liquefaction Potential Areas Map as referenced in the October 1988 version of the City of Long Beach General Plan, Seismic Safety element, is the most recent version available of this document. In addition, the 2004 reprint of the City of Long Beach General Plan, Public Safety element,¹⁷ verifies the validity of the City of Long Beach General Plan, Seismic Safety element, by stating that the document could provide "more detailed and precise information" with regards to liquefaction. Please reference the last paragraph on page 57 of the City of Long Beach General Plan, Public Safety element.¹⁸

Response to Comment No. 44:

Thank you for the comment regarding the determination of the depth of the groundwater below the surface. Please see Section 12.0 for revisions to Section 3.7, Hydrology and Water Quality, that include a more detailed description from the October 2005 Phase II Environmental Site Assessment.

Response to Comment No. 45:

Thank you for the comment that the depth to groundwater in Section 3.7, Hydrology and Water Quality, should be modified to include comments from the March 23, 2009, letter from Mark Christoffels, Deputy Director of Public Works / City Engineer for the City of Long Beach to Barbara Munoz, Director of Public Works for the City of Signal Hill. The March 23, 2009, letter refers to the Phase I and Phase II Environmental Site Assessments prepared by SCS Engineers.^{19,20} Please see Section 12.0 for revisions to Section 3.7, Hydrology and Water Quality, that include additional discussion of groundwater from the October 2005 Phase II Environmental Site Assessment.

¹⁷ City of Long Beach Planning Department. May 1975 (Reprint 2004). *City of Long Beach General Plan, Public Safety Element*. Long Beach, CA.

¹⁸ City of Long Beach Planning Department. May 1975 (Reprint 2004). *City of Long Beach General Plan, Public Safety Element*. Long Beach, CA.

¹⁹ SCS Engineers. April 2005. *Phase I Environmental Assessment*. Long Beach, CA.

²⁰ SCS Engineers. October 2005. *Phase II Investigation Report*. Long Beach, CA.

Response to Comment No. 46:

Thank you for the comment that the mention of a small flood control area north of the Hamilton Bowl should be corrected in Section 3.11, Recreation, Existing Conditions. Please see Response to Comment Nos. 20 and 22. Please see Section 12.0 for revisions to Section 3.11, Recreation, stating that this area is light industrial.

Response to Comment No. 47:

Thank you for the question regarding curbside parking on Walnut Avenue in relation to a new bus route on this street. The proposed project would not entail a proposed Long Beach Transit Authority (LBTA) bus stop. Rather, the proposed project would entail a drop-off/pick-up as confirmed with the project applicant and clarified in conversation and coordination with the City (Mr. Dave Roseman). Section 12.0 has removed references to the LBTA bus stop from Section 2, Project Description. As such, curbside parking should continue to generally be permitted on Walnut Avenue.

Response to Comment No. 48:

Thank you for the comment that Section 3.7, Hydrology and Water Quality, should contain a mitigation measure requiring drip pans under parked construction equipment. Please see Response to Comment No. 27.

May 18, 2009

Mr. Richard Barretto
Linscott, Law & Greenspan Engineers
1580 Corporate Drive, Suite 122
Costa Mesa, CA 92626

RE: KROC Community Center Traffic Impact Analysis

Dear Mr. Barretto:

As the Traffic Engineer for the City of Signal Hill, I have reviewed the Traffic Impact Analysis for the KROC Community Center. Before I can continue my review of the Traffic Impact Analysis, the following items shall be addressed:

1. A mitigation measure has not been included to upgrade the intersection of Walnut and Pacific Coast Highway for striping, lane configuration, traffic signals and pedestrian heads, and ADA ramps for the anticipated pedestrian activities described in the traffic study and the DEIR. This mitigation measure shall be included in the Traffic Impact Analysis. 1
2. Since Walnut Avenue is only 35 feet in width with parking on both sides, a traffic mitigation measure shall be included in the analysis to widen Walnut Avenue for safety with the addition traffic proposed by the project. 2
3. A Stop Sign LOS for the intersection of Walnut and 20th Street is required since the traffic signal alternative has not been installed and plans have not been submitted to the City of Signal Hill for review and comment. 3
4. The outdoor Recreation facility traffic and parking demands are not included in the analysis. The additional traffic and parking increases the impacts to the street infrastructure. Update the study to include this facility and associated impact to the community.USDLB plans on constructing a Middle school on the former GTE site at 20th and Cherry. The analysis does not include the site traffic into the analysis. Update the traffic analysis. 4 5
5. The Analysis data sheets for the intersections shall be provided before the Traffic Impact Analysis review can be completed. 6
6. A parking analysis and a Parking Management Program shall be incorporated into the Traffic Impact Analysis. The number of parking spaces verses the project demand is not adequate based upon the development. This will cause overflow parking onto the adjacent streets placing a burden on the existing community. The parking analysis shall incorporate the required staff parking for the entire facility including the recreational open space, daily special parking needs, peak parking demands periods, and percent occupancy. It should be noted that the City College Students currently use Walnut Avenue for parking. The parking analysis shall consider on-street parking occupancy and peak periods. 7
7. The DEIR stated that the Facility may use the City College Parking facility for overflow parking and transit will also be used as access to the facility. An Agreement with the City College shall be provided to document the parking overflow issue. In addition, a Study to confirm the use of transit as a parking credit to the project is required. 8
8. The parking structure does not have on-site circulation to access the different parking levels. The traffic must exit the facility from one level onto 9

- | | |
|---|---------|
| the street system to access the other parking structure level. This traffic shall be included in the analysis. | 9 cont. |
| 9. The parking structure exits are not shown on the site layout. A site layout shall denote the ingress and egress points. | 10 |
| 10. Overflow parking from the KROC Community Center will not be allowed on Walnut Avenue and/or 20 th Street. This shall be reflected in the parking analysis. | 11 |

These issues have a significant impact to the City of Signal Hill's street infrastructure and our community's quality of life and these issues need to be addressed to the City's satisfaction. We believe the KROC Community Center is a worthwhile project with a positive impact to the community; however, it must consider how it impacts the community at-large.

Please do not hesitate to contact me directly should you have any questions relating to these issues. My direct line is (562) 594-8589 ext. 11.

W.G. Zimmerman Inc.
Sincerely,

Bill Zimmerman, P.E., T.E., PTOE
City Traffic Engineer

cc: Ken Farfsing, City Manager, Signal Hill
Mark Christoffels, City Engineer, Long Beach
Barbara Munoz, Director of Public Works, Signal Hill
Jill Griffiths, Acting Advance Planning Officer, Long Beach
Eric Charlton, Senior Project Manager, Sapphos Environmental

LATE LETTER

**City of Signal Hill Traffic Engineer
Bill Zimmerman
W.G. Zimmerman Engineering Inc.
801 Pacific Coast Highway, Suite 200
Seal Beach, California 90740**

Response to Comment No. 1:

Thank you for the comment regarding the need to upgrade the intersection of Walnut Avenue and Pacific Coast Highway with striping, lane configuration, traffic signals and pedestrian heads, and Americans with Disabilities Act (ADA) ramps for anticipated pedestrian activities. As noted in Response to Comment No. 3 for the City of Signal Hill comment letter of May 11, 2009, the traffic analysis prepared for the proposed project does not identify a need for improvements at Walnut Avenue and Pacific Coast Highway. The Pacific Coast Highway and Walnut Avenue intersection is state controlled by Caltrans. The existing ADA improvements were designed in accordance with Caltrans specifications, and any intended changes or improvements would require the coordination and approval of Caltrans. The City understands that Caltrans intends to make further ADA improvements all along Pacific Coast Highway in the City of Long Beach in the foreseeable future. However, until that time, this intersection is projected to continue to operate at an acceptable level of service under existing intersection lane configurations and controls.

Response to Comment No. 2:

Thank you for the comment regarding the City of Signal Hill's request to widen and improve Walnut Avenue to accommodate both vehicular and pedestrian traffic generated by the proposed project and for safety purposes. The traffic analysis prepared for the proposed project does not identify a need to widen Walnut Avenue. The results of the updated cumulative intersection analysis, as summarized in Appendix I, *Draft Year 2010 Alternative Intersection Capacity Analysis*, further indicate that no improvements are necessary at this location as the intersection is projected to continue to operate at acceptable service levels under existing intersection lane configurations and controls. In addition, the project applicant shall be required to complete a queuing analysis to demonstrate that there is adequate street and on-site circulation capacity to accommodate anticipated queuing for access via the driveway located at the intersection of Pacific Coast Highway and Walnut Avenue or provide sufficient project or street improvements for the anticipated queuing. This first driveway on Walnut Avenue is located approximately 425 feet north of the Pacific Coast Highway / Walnut Avenue intersection, and the projected southbound queue of vehicles on Walnut Avenue is forecast to total 18 vehicles (or 363 feet). Therefore, if adequate separation is provided, motorists entering and exiting the proposed project site would be able to do so safely and without undue congestion.

Response to Comment No. 3:

Thank you for the comment regarding the stop sign level of service for the intersection of Walnut Avenue and 20th Street. Please see Response to Comment No. 2 for the City of Signal Hill comment letter dated May 11, 2009. The intersection of Walnut Avenue / Alamitos Avenue / 20th Street is projected to operate at an acceptable level of service, assuming that the existing all-way stop control would remain in place. The City of Long Beach received written support from the City

of Signal Hill regarding the design of the intersection of Walnut Avenue and 20th Street in a letter to Caltrans dated June 30, 2005.²¹

Response to Comment No. 4:

Thank you for the comment regarding the outdoor recreation facility traffic and parking demands. Please see Response to Comment No. 1 for the City of Signal Hill comment letter dated May 11, 2009.

Response to Comment No. 5:

Thank you for the comment regarding the middle school on the former GTE site. It has been noted that the Long Beach Unified School District plans on constructing a middle school on the former GTE site at 20th Street and Cherry Avenue. Please see Response to Comment No. 2 for the City of Signal Hill comment letter dated May 11, 2009. The inclusion of the GTE Middle School as a related project does not result in significant impacts; no change in forecast levels of service are anticipated with the GTE Middle School included in cumulative traffic conditions, as summarized in Table 3.12.4-3, *Year 2010 Intersection Capacity Analysis Summary*, of the EIR.

Response to Comment No. 6:

Thank you for the comment. It has been noted that the City of Signal Hill requests a copy of the analysis data sheets for the intersections discussed in the Traffic Impact Analysis. A summary of the data sheets are included Appendix F, *Traffic Impact Analysis*, of the EIR provided to the City of Signal Hill. The City has transmitted an additional hard copy of the Appendix F, along with all related data sheets, to the City of Signal Hill on May 30, 2009.

Response to Comment No. 7:

Thank you for the comment. It has been noted that the City of Signal Hill requests that a parking analysis and a Parking Management Program be incorporated into the Traffic Impact Analysis. Please see Response to Comment No. 1 for the City of Signal Hill comment letter dated May 11, 2009, regarding the parking analysis and the Parking Management Plan for the proposed project.

Response to Comment No. 8:

Thank you for the comment regarding an overflow parking agreement between the project applicant and the Long Beach City College. Please see Response to Comment No. 1 for the City of Signal Hill comment letter dated May 11, 2009.

Response to Comment No. 9:

Thank you for the comment regarding on-site circulation to access the different parking levels. Please see Response to Comment No. 7 for the City of Signal Hill comment letter dated May 11, 2009. Under the current design of the parking structure, access between the lower level and the upper level is provided via the ramps located on the northeast corner of the parking structure; the ramps are designed to provide internal access during normal operations and can accommodate the

²¹ City of Signal Hill, Public Works, Charlie Honeycutt, Director of Public Works. 30 June 2005. Correspondence to Mr. Kirk Cessna, California Department of Transportation, Los Angeles, CA.

turning requirements of passenger cars. Hence, there is no need for vehicular traffic to re-enter the surface streets to circulate between the upper and lower parking levels. The turning requirements of two passenger vehicles using the ramps concurrently (one going up and one going down) can also be accommodated provided that the upper level access ramp aligns with the second north-south drive aisle on the upper level. An evaluation of the parking structure layout indicates that this potential change in design will not impact the project's parking supply.

Response to Comment No. 10:

Thank you for the comment indicating that the parking structure exits are not shown on the site layout. Figure 2.6.1-1, *Site Plan*, has been updated to denote the ingress and egress points of the parking structure. The revised Figure R.2.6.1-1, *Site Plan*, is provided in Section 12 of the EIR.

Response to Comment No. 11:

Thank you for the comment regarding overflow parking for the proposed project. It has been noted that overflow parking from the proposed project would not be allowed on Walnut Avenue and/or 20th Street. Please see Response to Comment No. 1 for the City of Signal Hill comment letter dated May 11, 2009, regarding the parking analysis and Parking Management Plan for the proposed project. Parking along Walnut Avenue would not be needed to meet the parking requirements of the proposed project. Overflow parking for the proposed project during special events is expected to be provided at the adjacent Long Beach City College Pacific Coast Campus, as the project applicant is in the process of establishing a parking agreement with the campus that would allow the use of campus spaces during major special events.



BUSINESS DEPARTMENT - Business Services
Facilities Development & Planning Branch
 Donald K. Allen Building Services Facility
 2425 Webster Ave., Long Beach, CA 90810
 (562) 997-7550 Fax (562) 595-8644

May 11, 2009

Via US Mail, Fax, & Email
 Fax (562) 570-6068
 Jill_Griffiths@longbeach.gov

Ms. Jill Griffiths
 Advance Planning Officer
 Department of Development Services
 City of Long Beach
 333 West Ocean Boulevard
 Long Beach, California 90802

Re: Comments on the Draft Environmental Impact Report for the Proposed Kroc Community Center Project, Long Beach, California

Dear Ms. Griffiths:

The Long Beach Unified School District (LBUSD) appreciates the opportunity to comment on the reference Draft Environmental Impact Report (DEIR) for the proposed Kroc Community Center project (Project). The LBUSD previously submitted a comment letter (dated August 12, 2008) on the Initial Study (IS) and Notice of Preparation (NOP) for the DEIR.

The proposed Kroc Community Center includes a wide range of recreational amenities and other programs and services intended to benefit the local community. The LBUSD recognizes, and appreciates, that the suitability of the Project site was determined in part due to the proximity of neighborhood institutions -- including local schools -- "to ensure access to the proposed facility."

COMMENTS

Proximity to Schools

The District notes that the DEIR identifies four existing LBUSD schools within 0.25 mile of proposed Project:

Whittier ES: 1761 Walnut Avenue, Long Beach; 310 feet southwest

Butler MS: 1400 20th street, Long Beach; 530 feet west

Alvarado ES: 1900 E. 21st Street, Signal Hill; 520 feet northeast

Signal Hill ES: 2285 Walnut Avenue, Signal Hill; 1,315 feet northwest

Mary Stanton	Felton Williams	Michael Ellis	Jon Meyer	David Barton
District 1	District 2	District 3	District 4	District 5
Vice President	Member	Member	President	Member

These four school properties are potentially affected by construction impacts associated with the Project, as noted in our comment letter (dated August 12, 2008) on the KROC Community Center NOP. In addition, a new 6-8 Middle School is identified to be constructed on the 8.5-acre LBUSD-owned parcel (former GTE site) and is located adjacent to the north-northeast boundary of the proposed Project site. This school is potentially impacted by the Project during construction, as the new 6-8 Middle School is proposed to open in the Fall of 2011 and the Kroc Community Center Project construction schedule is from 2009 to 2012. However, the DEIR does not consider impacts from the proposed Project on the new school.

1 cont.

Construction Noise Impacts.

The DEIR calls for a 10-foot sound blanket to be installed along the eastern portion of the property line to mitigate line-of-site noise impacts to the sensitive residential receptors immediately east from the proposed Project whenever construction activities are within 200 feet of the property line (Mitigation measure "Noise-3"). The DEIR also calls for a 10-foot sound blanket to be installed along the northern portion of the property line to mitigate line-of-site noise impacts to the Alvarado Elementary School located 520 feet north from the proposed Project whenever construction activities are within 50 feet of the property line (Mitigation measure "Noise-6").

2

The LBUSD requests that, to the extent the Project construction activities occur after the new 6-8 Middle School opens in 2011, the conditions of mitigation measure "Noise-3" be applied to the northern portion of the property line (in place of Noise-6). Installing sound blankets along the northern property line when construction is within 200 feet of the north boundary will better serve to mitigate noise impacts to the new 6-8 Middle School site adjacent to the proposed Project, and also mitigate those impacts identified for the Alvarado Elementary School.

CONCLUSION

The LBUSD appreciates the opportunity to participate in the environmental review process. We look forward to working with the City and the Developer on the Kroc Community Center project. Please feel free to contact me at 562-997-7550 if you have any questions regarding the LBUSD comments.

Sincerely,

Carri M. Matsumoto
Executive Director
Facilities Development & Planning Branch
Long Beach Unified School District

KHR:sa

**Long Beach Unified School District
Facilities Development & Planning Branch
Carri M. Matsumoto, Executive Director
2425 Webster Avenue
Long Beach, California 90810**

Response to Comment No. 1:

Thank you for the comment. The Long Beach Unified School District provided a response to the Initial Study / NOP on August 12, 2008. This letter informed the City of the proposed 6–8 Middle School project. As a result of this letter, the Draft EIR in Table 2.8-1, *List of Related Projects*, noted the potential planned construction of the proposed 6–8 Middle School that would be located at 1777 and 1778 East 20th Street, in the City of Signal Hill, within approximately 0.18 mile of the proposed project site. However, at the time when the NOP for the proposed project was distributed on July 16, 2008, the proposed 6–8 Middle School site was not an existing land use, nor is it an existing structure that currently bounds the proposed project site. As noted in Section 2, Project Description, Table 2.8-1, *List of Related Projects*, the proposed 6–8 Middle School, is an anticipated project, which was evaluated along with 38 other anticipated or proposed projects within the vicinity of the proposed project site for potential cumulative impacts. All related projects were taken into consideration, and mitigation measures are provided in Section 3.1, Air Quality; Section 3.10, Noise; and Section 3.12, Transportation and Traffic, that serve to protect the school.

Response to Comment No. 2:

Thank you for the comment regarding the need to provide adequate noise protection to the proposed 6–8 Middle School. Should the construction activities related to the proposed project occur after the new 6–8 Middle School opens in 2011, the conditions of mitigation measure Noise-3, which specifies that a 10-foot sound attenuation blanket to be installed along the eastern portion of the property, would be protective of the new 6–8 Middle School. Section 12.0 has revised mitigation measure Noise-3 to specifically address the potential need for protecting the new 6–8 Middle School.



Long Beach Water Department
The Standard in Water Conservation &
Environmental Stewardship

KEVIN L. WATTIER, General Manager

DATE: April 24, 2009
TO: Jimmy Chen, Senior Civil Engineer
FROM: Matthew P. Lyons, Director of Planning and Conservation *MPL*
SUBJECT: Kroc Community Center – Draft EIR

Per the information I have received from you, I have determined that this project does NOT require a water supply assessment, as the expected annual water use is less than what would be expected of a development of 500 dwelling units. | 1

That being said, in order to maintain our high level of water reliability, it is important that the City require the developer to build water conservation into the project. For example, the City should:

1. Require that all water-using devices be very high-efficiency; for example:
 - a. Installation of only High Efficiency Toilets (HET, 1.28 gallons per flush or less, as opposed to standard 1.6 gallons per flush). | 2
 - b. Installation of only Ultra-low flush urinals (less than or equal to 0.25 gallons per flush).
2. Landscape:
 - a. Require all landscape irrigation use one or more dedicated water meter used only for that purpose.
 - b. Require compliance with the State's "Model Landscape Ordinance" (MLO). The City will be required, as of January 2010, to enforce the MLO on new development, or enforce an ordinance at least as water-conserving. | 3
 - c. Recommend sports field be made of synthetic turf if feasible.
3. Pools:
 - a. Require pools to be covered when not in use to decrease evaporation. | 4

Mr. Jimmy Chen
April 24, 2009
Page 2

b. Require installation of a high-quality system for filtering pool water to minimize quantity of water to be drained on a periodic basis, if feasible. | 4 cont.

4. Recommend that hot water lines be fitted with water recirculation systems. | 5

Please contact me if you have any questions regarding this matter.

cc: Isaac Pai, Director of Engineering/ Chief Engineer

INSERT "A"

It is important that the developer incorporate the following water conservation requirements into the project.

- Installation of only High Efficiency Toilets (HET, 1.28 gallons per flush or less, as opposed to standard 1.6 gallons per flush). This would reduce the development's demand for water by about 1 million gallons per year.
- Developer will receive a \$30 rebate for each HET installed. The Renaissance Hotel recently installed 375 of these devices and was very impressed with their high quality. For more information go to <http://www.mwdsaveabuck.com>
- Installation of only Ultra-low flush or zero-water urinals (less than or equal to 0.25 gallons per flush). Developer receives a \$120 rebate for each of these devices installed. For more information go to <http://www.mwdsaveabuck.com>
- Compliance with the State's "Model Landscape Ordinance" (MLO). The City will be required, as of January 2010, to enforce the MLO on new development, or enforce an ordinance at least as water-conserving. The City should require the developer of this large project to comply at this time; <http://www.owue.water.ca.gov/landscape/ord/ord.cfm>
 - Only water efficient irrigation equipment allowed.
 - Strict limits on the use of turf grass.
 - Strict limits on expected quantity of water required per square foot of landscape.

6

INSERT "B"

The Long Beach Water Department has determined that a water assessment is not required for this project.
the retail water supplier. ~~The assessment must be completed prior to the issuance of a draft Environmental Report or proposed Negative Declaration. The CEQA lead agency shall make a request to the Director of Planning and Conservation of the Long Beach Water Department (LBWD) to start the process. LBWD has 90 days to complete the assessment and a 30-day extension is possible if necessary after receiving the request.~~

7

INSERT "C"

Please estimate the water demand and wastewater generation for this project. Please prepare analyses to demonstrate there is enough water supply under the following conditions. Future year is the year 2025.

- Current potable demands with the proposed project in normal and dry-year supplies.
- Future potable demands with the proposed project in normal and dry-year supplies.

8

Samples for the analyses are attached.

**TABLE ES.4-1
SUMMARY OF SIGNIFICANT IMPACTS, Continued**

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>Services that consultation with the County of Los Angeles and Long Beach Water Department is conducted to incorporate other best management practices to address the increase in water demand, with the potential of implementing ordinances and regulations that would promote the efficient use of water at the project site. Degradation of water quality during construction of the project shall be reduced to below the level of significance through the requirement to conduct a detailed hydrology study based on the final site plans and to implement the recommendations, or comparable measures, into the plans and specifications for each project element prior to final approval by the City of Long Beach Department of Development Services. A Senate Bill 610 water supply assessment or comparable study shall be prepared by a certified civil engineer, and a draft report, including recommendations, shall be submitted to the Department of Development Services for review. The Department of Development Services shall provide comments, if any, within 14 days of receiving the draft hydrology study.</p> <p>Measure Utilities-3</p> <p>The applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that at least 50 percent of the construction solid waste from the project is being diverted to comply with applicable federal, state, and local statutes related to solid waste and reduce direct and cumulative impacts from construction to below the level of significance. To ensure conformance with the Solid Waste Management Act of 1989, the City of Long Beach shall further require the construction contractor to manage the solid waste generated during construction of each element of the project by diverting at least 50 percent of it from disposal in landfills, particularly Class III landfills, through source reduction, reuse, and recycling of construction and demolition debris. The construction contractor shall submit a construction Solid Waste Management Plan to the City of Long Beach prior to construction of the project. The construction contractor shall demonstrate compliance with the Solid Waste Management Plan through the submission of monthly reports during demolition activities that estimate the total solid waste generated and diversion of 50 percent of the solid waste.</p>	<p align="center">Insert "A"</p> <p>the retail water supplier. The assessment must be completed prior to the issuance of a draft Environmental Impact Report or proposed Negative Declaration. The CEQA Lead agency must make a request to Matthew [unclear] Director of Water planning and conservation, Long Beach Water Department to start the process. The [unclear] Long Beach Water Department has 90 days to prepare the receiving water supply assessment. A 30 day extension is possible.</p>

Insert "B"

ES.5 PROJECT ALTERNATIVES

As a result of the project formulation process, the City explored alternatives to the proposed project to assess their ability to meet most of the objectives of the project and reduce significant effects of the proposed project. Alternative projects recommended by the scoping process were evaluated as related to the proposed project objectives and their ability to reduce significant impacts as described in Section 4.0 of this EIR. Four project alternatives required under CEQA have been carried forward for detailed analysis in this EIR:

- No Project Alternative

River. The flood control channels eventually discharge to over 65 shoreline outfalls rimming the coast.¹⁷

The City is divided into 30 major drainage basins. Within each major basin, there are sub-basins for major drains 36 inches in diameter or larger that have their outfall to a regional drain, regional retention basin, or the harbor. The storm drain system, as managed by the Long Beach Stormwater Management Plan, indicates that the proposed project site lies within Basin 04. Basin 04 is 810 acres and is made up of 426 residential acres, 176 commercial acres, 140 industrial acres, 56 institutional acres, and 12 acres of open space. It is located in the southwestern portion of Long Beach just east of the Los Angeles River and is bound on the north, south, east, and west by Hill Street, 10th Street, Orange Avenue, and the Los Angeles River, respectively. The drainage pattern is from east to west, and one of the two major storm drain systems that serves the basin serves to drain the Hamilton Bowl. This major system originates in one of two pump stations that outfalls into the Los Angeles River through a pump station located between 10th Street and 11th Street that has a maximum operating capacity of 117 cubic feet per second. The pump station located between 10th Street and 11th Street is known as the Cerritos Station, and is owned by the County.¹⁸ The storm drain system for the proposed project site is discussed further in Section 3.7, *Hydrology and Water Quality*, of this EIR.

Water Supply

The City receives its potable (drinking) water supply from two sources. Ownership of water rights allows approximately half of the water supply needs to be produced from groundwater wells located within the City. At the proposed project site, existing water lines that provide potable water would not be disturbed and would continue to serve the site during construction. These water lines include an 8-inch water line in Walnut Avenue, a 6-inch water line in Gaviota Avenue, a 2-inch water line in East Pacific Coast Highway, and a 6-inch water line in Rose Avenue.¹⁹ (The other portion of the City's potable (drinking) water supply is treated surface water purchased from the Metropolitan Water District of Southern California.²⁰)

9

Currently, there are no existing or proposed reclaim water facilities available to serve the proposed project.²¹ Several factors would drive future water demands, including population growth, housing density, employment, and household income. The population of Long Beach is expected to increase 15 percent from the current population of 490,100 to approximately 564,900 by 2030.²² In order to meet these future water demands, the Long Beach Water Department (LBWD) has partnered with the U.S. Bureau of Reclamation and the Los Angeles Department of Water and Power to construct and

¹⁷ City of Los Angeles, Department of Public Works. 27 October 2008. *City of Los Angeles Stormwater Program*. Available at: <http://www.lastormwater.org/siteorg/general/lastrmdrn.htm>

¹⁸ City of Long Beach. August 2001. *Stormwater Management Plan of City of Long Beach*. Available at: http://www.lbstormwater.org/plan/stw-pdfs/LBSWMP_GEOGRAPHIC_CHARACTERISTICS_s3.pdf

¹⁹ Long Beach Water Department. 28 November 2007. Correspondence to Jeffrey Winklepleck, City of Long Beach, Long Beach, CA.

²⁰ City of Long Beach. Accessed 9 January 2008. Web site. "Long Beach Water." Available at: http://www.lbwater.org/drinking_water/source.html

²¹ Long Beach Water Department. 28 November 2007. Correspondence to Jeffrey Winklepleck, City of Long Beach, Long Beach, CA.

²² City of Long Beach. Accessed 9 January 2008. Web site. "Long Beach Water." Available at: http://www.lbwater.org/drinking_water/source.html

- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Lack sufficient water supplies available to serve the project from existing entitlements and resources or will require new or expanded entitlements
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments
- Is not served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs
- Does not comply with federal, state, and local statutes and regulations related to solid waste

3.13.4 Impact Analysis

Wastewater Treatment Requirements

The proposed project would be expected to result in significant impacts to utilities related to the exceeding of wastewater treatment requirements of the RWQCB. Because the proposed project is expected to generate additional wastewater that would flow into the existing system, it must be determined which best management practices (BMPs) would be required to control and support the increased discharge of non-potable water from the facility. However, it is expected that neither additional wastewater treatment facilities nor new sewer lines would be required to be constructed.

It is expected that wastewater generated at the proposed project would be treated at the JWPCP located at 24501 Figueroa Street, Carson, California, 90745, approximately 7.5 miles northwest of the proposed project site.³⁰ The JWPCP is one of the largest wastewater treatment plants in the world and is the largest of the district's wastewater treatment plants. According to the County Sanitation District, the facility has the design capacity of 400 million gallons per day (MGD) and currently processes an average flow of 309.6 MGD.³¹ The JWPCP currently operates in conformance with the applicable standards of the RWQCB, Los Angeles Region. Although it is anticipated that the LBWD has the capacity to absorb wastewater that would result from the proposed project, LEED elements that will be incorporated within the proposed project would reduce the amount of wastewater from the proposed project site. The proposed project has the potential to impact the wastewater treatment requirements of the RWQCB. Therefore, the proposed project would be expected to result in significant impacts to utilities related to wastewater treatment requirements that would require mitigation.

10
 Please explain.
 No new wastewater treatment facilities or sewer lines required.
 Why significant impact?
 Is the significant impact caused by storm water or domestic sewage?

³⁰ Sanitation Districts of Los Angeles County. Accessed 9 January 2008. Web site. "Joint Water Pollution Control Plant." Available at: http://www.lacsd.org/about/wastewater_facilities/jwpcp/default.asp

³¹ County Sanitation Districts of Los Angeles County. 21 July 2008. Correspondence to Jill Griffiths, City of Long Beach, Long Beach, CA.

Wastewater Treatment Capacity

The proposed project is expected to result in less than significant impacts to utilities and service systems in relation to the construction of new wastewater treatment facilities. The expected average wastewater flow from the proposed project site is 16,834 gallons per day.³² The proposed project would not generate more wastewater that would overburden the JWPCP's current capacity and require the additional wastewater treatment facilities. Moreover, the proposed project is consistent with regional growth factors that have been accounted for in the JWPCP wastewater treatment capacity allowance.

Storm Drain System

The proposed project would not result in significant impacts related to the need for new or expanded storm water drainage systems. According to proposed project plans, development at the proposed project site is not expected to result in the creation of significant discharge of pollutants into the nearby storm drains or waterways. Controls for storm drain or waterway have been incorporated into the proposed project design pursuant to the NPDES permit issued to the County by the RWQCB and Storm Water Pollution Prevention Plan (SWPPP), and thus would not be expected to result in significant impacts to storm drain systems.

Water Supply

The proposed project would result in significant impacts to utilities and service systems in relation to having sufficient water supplies available to serve the proposed project that would be reduced to below the level of significance with the incorporation of mitigation measures. Existing conditions, as described in the Section 3.7, *Hydrology and Water Quality*, of this EIR, discuss the significant impact to hydrology of the proposed project in relation to surface water quality, ground water discharge, and planned drainage system, and conclude that the capacity of water supply will be indirectly affected. Because a portion of the 19-acre proposed project site is to be covered by impervious materials, groundwater discharge will be reduced, thus reducing the capacity of water supply to be produced from its groundwater wells. Furthermore, it is anticipated that the amount of water demanded over the course of the proposed project's development and its operation may be equal to, if not greater than, the amount of water needed to serve a 500-dwelling unit project. The source of the expected increase in water usage during the constructional and operational phases of the proposed project would be due primarily to the development of a kitchen, swimming pools, fields that require watering, and bathroom facilities.

Although the proposed project would entail LEED elements, the anticipated increase in water usage of the proposed project may contribute to the increase in demand for water supplies. Although the LBWD, U.S. Bureau of Reclamation, California Department of Water Resources, and the Los Angeles Department of Water and Power have partnered to construct and operate the largest and most significant seawater desalination research facility in the United States by 2030,³³ the short-term needs of a water supply from the proposed project may require further mitigation. Therefore, the proposed project would be expected to result in significant impacts to utilities and service systems related to insufficient water supplies that would require mitigation. *please indicate your methods of mitigation.*

³² County Sanitation Districts of Los Angeles County. 21 July 2008. Correspondence to Jill Griffiths, City of Long Beach, Long Beach, CA.

³³ City of Long Beach. Accessed 9 January 2008. *2005 Urban Water Management Plan*. Available at: <http://lbwd-desal.org/>

Measure Utilities-2

The City of Long Beach has incorporated Leadership in Energy and Environmental Design elements into the project that would reduce the potable water demand at the site and increase the efficiency of the water used for the project. The applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that consultation with the County of Los Angeles and Long Beach Water Department is conducted to incorporate other best management practices to address the increase in water demand, with the potential of implementing ordinances and regulations that would promote the efficient use of water at the project site. Degradation of water quality during construction of the project shall be reduced to below the level of significance through the requirement to conduct a detailed hydrology study based on the final site plans and to implement the recommendations, or comparable measures, into the plans and specifications for each project element prior to final approval by the City of Long Beach Department of Development Services. A Senate Bill 610 water supply assessment or comparable study shall be prepared by a certified civil engineer, and a draft report, including recommendations, shall be submitted to the Department of Development Services for review. The Department of Development Services shall provide comments, if any, within 14 days of receiving the draft hydrology study. *Insert "B"*

Measure Utilities-3

The applicant shall demonstrate to the satisfaction of the City of Long Beach Department of Development Services that at least 50 percent of the construction solid waste from the project is being diverted to comply with applicable federal, state, and local statutes related to solid waste and reduce direct and cumulative impacts from construction to below the level of significance. To ensure conformance with the Solid Waste Management Act of 1989, the City of Long Beach shall further require the construction contractor to manage the solid waste generated during construction of each element of the project by diverting at least 50 percent of it from disposal in landfills, particularly Class III landfills, through source reduction, reuse, and recycling of construction and demolition debris. The construction contractor shall submit a construction Solid Waste Management Plan to the City of Long Beach prior to construction of the project. The construction contractor shall demonstrate compliance with the Solid Waste Management Plan through the submission of monthly reports during demolition activities that estimate the total solid waste generated and diversion of 50 percent of the solid waste.

3.13.6 Level of Significance after Mitigation

Implementation of mitigation measures Utilities-1 through Utilities -3 would reduce significant impacts to utilities and service systems to below the level of significance.

SAMPLE

Energy. Electricity and natural gas demand was estimated using factors from the SCAQMD Air Quality Handbook (1993). The proposed project would cause a significant impact on energy resources if energy consumption would exceed the projected supply capacity of either the electric or natural gas systems of the City, or if the applicant does not take steps to reduce energy consumption through the use of efficient electrical and mechanical systems.

b. Project Impacts and Mitigation Measures.

Impact U-1 Buildout of the proposed project would incrementally increase water demand in the City of Long Beach. However, the Long Beach Water Department's water supplies are sufficient to meet the projected demand. Therefore, the impact on water supplies is considered to be Class III, less than significant for Option A or Option B.

Water for the proposed development would be provided by the City of Long Beach Water Department (LBWD). Based on the Department's water demand factors, the proposed project would generate net demand for approximately 28.17 AFY of water, or about gallons of water per day (see Table 4.12-7). This increase in demand would constitute about 0.04% of the existing water demand level for the City, which is approximately 60 million gallons per day (LBWD, 2007). Project demand could be met with current and projected supplies of water, as projected through 2030 based on reported water availability as identified in the Water Availability Assessment (2006) for the City of Long Beach Press-Telegram Project.

**Table 4.12-7
 Estimated Project Water Demand**

Land Use	Size	Generation Rate (acre-feet/year)*	Total (acre-feet/year)
Retail/Commercial/Public	66,000 square feet	224 per million square feet*	14.78
Residential	61 dwelling units	0.249 per unit**	15.19
Total for Proposed Project (acre-feet/year)			29.97
Existing Annual Water Use On-Site			(1.8)
Net Increase in Water Demand (acre-feet/year)			28.17
Total Net Increase in Water Demand (gallons/day)			25,132

*Based on LBWD Comprehensive Sewer System Master Plan and Management Program.

**Base on average use in Long Beach.

1 AFY = 892.15 GPD

The LBWD would have the water resources to meet the demand of the proposed project during normal and dry year events. Tables 4.12-8 and 4.12-9 show that the supply of supplemental water would increase to accommodate the demands of the project. The reliability of the supplemental supply reflects the MWD's reliability and commitment to regional water

reliability. Not shown but available is the LBWD's right to pump its carryover storage and to access other groundwater supplies in case of emergency per the adjudication of the basin.

Table 4.12-9 shows the impact of the proposed project on future supplies and demand during multiple dry years. The LBWD 2005 Urban Water Management Plan projected demand 25 years into the future. This demand forecast in the 2005 UWMP incorporates the type of new demand the proposed project represents. Therefore, the "With Project" sections of Table 4.12-9 show the same overall total demand for potable water in the year 2025 as shown in Table 4.12-1. The proposed project would not have an impact on the supply and demand for water in the fiscal year 2025 as the demand expected from the proposed project was anticipated and planned for in the 2005 UWMP.

**Table 4.12-8
 Current Potable Demands with Project and Dry-year Supplies
 (acre-feet/year)**

	Normal Year	1 st Dry Yr	2 nd Dry Yr	3 rd Dry Yr	4 th Dry Yr
Groundwater Supplies	32,684	32,684	32,684	32,684	32,684
Wholesale from MWD	37,453	38,864	38,864	38,864	38,864
Supply Subtotal	70,137	71,548	71,548	71,548	71,548
Less Project Demand	(51)	(53)	(53)	(53)	(53)
Less Non-Project Demand	(70,086)	(71,495)	(71,495)	(71,495)	(71,495)
Demand Subtotal	70,137	71,548	71,548	71,548	71,548
Balance	-	-	-	-	-

Source: LBWD, Water Availability Assessment prepared for the Press-Telegram Mixed Use Development, 2006. Assumes demands increase 2% due to dry-year conditions, worse case scenario of consecutive dry weather without extraordinary "dry year conservation".

**Table 4.12-9
 Future Potable Demands with Project and Dry-year Supplies
 (acre-feet/year)**

	Normal Year	1 st Dry Yr	2 nd Dry Yr	3 rd Dry Yr	4 th Dry Yr
Groundwater Supplies	32,684	32,684	32,684	32,684	32,684
Wholesale from MWD	30,490	31,954	31,954	31,954	31,954



North Village Center Redevelopment Project EIR
 Section 4.12 Utilities and Service Systems

Desalinated Seawater	10,000	10,000	10,000	10,000	10,000
Supply Subtotal	73,174	74,638	74,638	74,638	74,638
Less Project Demand	(51)	(53)	(53)	(53)	(53)
Less Non-Project Demand	(73,123)	(74,585)	(74,585)	(74,585)	(74,585)
Demand Subtotal	73,174	74,638	74,638	74,638	74,638
Balance	-	-	-	-	-

Source: LBWD, Water Availability Assessment prepared for the Press-Telegram Mixed Use Development, 2006. Assumes demands increase 2% due to dry-year conditions, worse case scenario of consecutive dry weather without extraordinary "dry year conservation".

Mitigation Measures. As impacts would be less than significant, no mitigation is necessary.

Significance After Mitigation. Impacts related to water supply would be less than significant without mitigation. This would be the case for Option A or Option B, as the number of housing units and quantity of non-residential space would be the same for either option.

Impact U-2 The proposed project would generate an estimated net increase of 29,235 gallons of wastewater per day, which would flow to the Joint Water Pollution Control Plant. The treatment plant has sufficient capacity to accommodate this increase in wastewater generation. Therefore, this impact is considered Class III, *less than significant* for Option A or Option B.

As shown in Table 4.12-10, the proposed project would generate an estimated 29,235 gallons of wastewater per day¹. This increase in wastewater would not conflict with the City's contractual entitlement (unlimited flow) for flows to the Joint Water Pollution Control Plant, nor would it exceed the plant's capacity. Project-generated wastewater would account for about 0.008% of the 385 MGD permitted capacity for the JWPCP. Therefore, impacts to the City's wastewater treatment system would be less than significant.

¹ Wastewater generation is typically lower than water demand. In this case, projected wastewater generation is higher than estimated water demand, due to differences in agency generation rates. (Agencies do not necessarily match their generation rates.) Further, the water demand generation rates are based on actual average usage, rather than a set rate. Thus the estimate of wastewater generation is conservative and would likely be lower.

**Table 4.12-10
 Project Estimated Wastewater Generation**

Land Use	Size (sf) ^a	Generation Rate (gallons/day/1000 sf) ^a	Total (gallons/day)
Retail/Commercial/Public	66,000	300	19,800
Residential	61 units	195 (gallons /unit)	11,895
Total for Project			31,695
Existing Wastewater Generation On-Site			2,460
Net Increase in Wastewater Generation			29,235

Note: sf = square feet

* Source: Sanitation Districts of Los Angeles County, 2006

^a All figures assume maximum 1.6 gallon/flush toilets, 1.0 gallon/flush urinals, and 2.5 gallon/minute showerheads.

Mitigation Measures. As impacts would be less than significant, no mitigation is necessary.

Significance After Mitigation. Impacts related to wastewater flows would be less than significant without mitigation. This would be the case for Option A or Option B, as the number of housing units and quantity of non-residential space would be the same for either option.

Impact U-3 The proposed project would incrementally increase the long-term generation of solid waste at the site. However, the City's solid waste and recycling systems have adequate capacity to accommodate the increases. Therefore, impacts to the City's solid waste handling system would be Class III, *less than significant* for Option A or Option B.

Table 4.12-11 shows the estimated amount of solid waste that would be generated by the various uses for the project site. These estimates do not take into account any reduction in amount of waste produced due to recycling and other waste reduction programs. The City has completed a comprehensive waste reduction and recycling plan in compliance with State Law AB 939, which required every city in California to reduce the waste it sends to landfills by 50% by the year 2000. Based on solid waste generation factors from the California Integrated Waste Board (2004), the proposed project would generate a net increase of 165 net tons of solid waste per year (3 tons per week), of which less than 50% would go to processing at the SRRF. In the City, an average of 7,077 tons of solid waste is generated weekly by all sources (LACSD, 2006).



**Long Beach Water Department
Matthew P. Lyons, Director of Planning and Conservation
1800 East Wardlow Road
Long Beach, California 90807-4931**

Response to Comment No. 1:

Thank you for the comment indicating that the Long Beach Water Department has determined that a water assessment would not be required for the proposed project. Please refer to Section 12.0 for revisions to Section 3.7, Hydrology and Water Quality, describing the determination that the proposed project does not require a water assessment.

Response to Comment No. 2:

Thank you for the comment regarding the need to specify the use of water conserving devices in the project design. As discussed in Section 2.6.2, Leadership in Energy and Environmental Design Elements, the proposed project would be designed in a manner that is consistent with the interim Green Building Requirements for Private Development for the City. Leadership in Energy and Environmental Design (LEED) elements would be incorporated in the construction and operational phases of the proposed project to ensure that it is eligible to attain the minimum level of LEED certification. These elements may include the water-efficient measures suggested by the Long Beach Water Department, including high-efficiency toilets, low-flush or waterless urinals, water recirculation systems, compliance with the State of California Model Landscape Ordinance, and the use of water-efficient irrigation equipment.

Response to Comment No. 3:

Thank you for the comment that provides input to the landscaping at the proposed project site. Please refer to Response to Comment No. 2. The Long Beach Water Department recommendation that sports fields be made of synthetic turf whenever feasible has been provided to the project applicant.

Response to Comment No. 4:

Thank you for the comment regarding the use of pool covers as a water-conserving measure. Please see Section 12.0 for revisions to Section 2.6.1, Project Elements, including the requirement that pools will be covered when not in use to decrease evaporation and that a high-quality system for filtering pool water will be installed to minimize the quantity of water to be drained on a periodic basis.

Response to Comment No. 5:

Thank you for the comment regarding the use of recirculation systems for hot water lines as a water-conserving measure. Section 2.6.1, Project Elements, has been revised to indicate that pools shall be required to incorporate water-conserving design measures specified by the Long Beach Water Department.

Response to Comment No. 6:

Thank you for the comment regarding the need to specify the use of water-conserving devices in the project design. As requested by the Long Beach Water Department, Section 12.0 includes revisions to mitigation measure Utilities-2 in the Executive Summary and in Section 3.13, Utilities and Service Systems.

Response to Comment No. 7:

Thank you for the comment indicating that the Long Beach Water Department has determined that a water assessment would not be required for the proposed project. Please refer to Response to Comment Nos. 1. and 6.

Response to Comment No. 8:

Thank you for the comment regarding estimates of water demand and wastewater generation for the proposed project. It is noted that the Long Beach Water Department has requested an estimate of the water demand and water generation for the proposed project and has provided a sample. The amount of water demand and wastewater generated were both analyzed and described in Section 3.7, Hydrology, and Section 3.13, Utilities and Service Systems.

Based on calculations provided by the Long Beach Water Department, it is estimated that the proposed project would generate the equivalent water demand and wastewater generation of less than 500 dwelling units. The 500 dwelling units equivalent multiplied by an average water demand of 0.249 acre-feet/year (as indicated by the Long Beach Water Department) per dwelling unit would equal approximately 124.5 acre-feet/year of water demand by the proposed project. This increase in water demand would account for approximately 111,072 gallons per day since 1 acre-feet/year = 892.15 gallons per day. This would account for less than 0.18 percent of the approximately 60 million gallons per day of existing water demand for the City of Long Beach.

The 500 dwelling units equivalent would account for 97,500 gallons of wastewater generated per day (using the County Sanitation Districts of Los Angeles County generation rate of 195 gallons per dwelling unit). The JWPCP has an average flow of 295.6 million gallons per day. Therefore, the proposed project would account for 0.03 percent of the permitted capacity of the JWPCP.

Mitigation measures Utilities-1 and Utilities -2, as well as the proposed LEED elements to be incorporated into the proposed project, would ensure that the respective impacts to water supply and wastewater generation are reduced to below the level of significance. Please refer to Section 12.0 for revisions to the level of impacts related to water supply and wastewater generation.

Response to Comment No. 9:

Thank you for the comment regarding the water supply discussion in the EIR. Section 12.0 provides the requested revisions to Section 3.7, Hydrology and Water Quality.

Response to Comment No. 10:

Thank you for the comment requesting clarification regarding inputs to water supply and wastewater treatment. Please refer to Response to Comment No. 8.

Response to Comment No. 11:

Thank you for the comment requesting clarification regarding the method of mitigation for the water supply in Section 3.13, Utilities and Service Systems, and in Section 3.13.4, Impact Analysis, Water Supply. Please refer to Response to Comment Nos. 2, 4, and 5, as well as mitigation measure Utilities-2.

13.2.6 Private Organizations

No letters of comment were received from private organizations.

13.2.7 Individuals

Douglas and Annamarie Barry
1815 Rose Avenue
Long Beach, California 90806

Lane Stubblefield
2205 East 20th Street
Signal Hill, California 90755

Jill Griffiths
Advance Planning Officer
City of Long Beach
Department of Development Services
333 West Ocean Boulevard, 5th Floor
Long Beach, California 90802 Via Fax: (562) 570-6068 Via email Jill_Griffiths@longbeach.gov

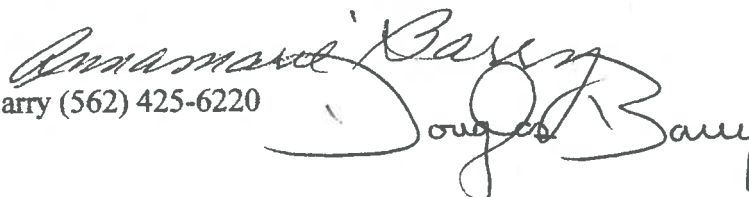
May 6, 2009

Dear Jill Griffiths,

We have owned the 1815 Rose Ave, six unit apartment building on Rose Avenue's entrance to the Kroc Community Center, for thirty four years since 1974. When the Kroc Center is open and Rose Ave becomes a major street with traffic coming in and out, it will leave us without any parking spaces on Rose Ave that we have now as a "dead end" street. Our building was built with six two bedroom units and only space for five car garages. That leaves one tenant without a garage for two cars and the remaining five tenants have one car that has to be parked on the street. They have approximately thirteen cars with only five garages, which leaves eight without spaces. This does not even include the cars of family and friends who come to visit who will be without parking spaces. We can't park on the east or west side of the building because it is private parking for the businesses there. Pacific Coast Highway has posted signs of No Parking during certain hours and the street south of PCH is full of their own tenants cars from homes and apartments. You can see that there is a great need to replace the spaces we now have. The lack of parking greatly impacts our ability to acquire tenants presently. The Kroc Center Plans will all but leave us with our tenants having no choice but to give notice to move. What tenants could we replace them with without parking. We might have been "better off" if Eminent Domain had purchased our property. Please let us know what our city or the Kroc Foundation can do to preserve our property and business rights.

Sincerely,

Douglas and Annamarie Barry (562) 425-6220

A handwritten signature in black ink that reads "Douglas Barry". The signature is written in a cursive style and is positioned to the right of the typed name.

**Douglas and Annamarie Barry
1815 Rose Avenue
Long Beach, California 90806**

Response to Comment No. 1:

Thank you for the comment regarding parking on Rose Avenue. It has been noted that Rose Avenue is currently a dead-end street used by tenants of the building located at 1815 Rose Avenue for their additional parking needs. Curbside parking on Rose Avenue is not expected to be restricted with the implementation of the proposed project. Mitigation measure Transportation-1 in Section 3.12, Transportation and Traffic, on page 3.12-22 of the Draft EIR recommends improvements at the intersection of Rose Avenue and Pacific Coast Highway, including the installation of a traffic signal and associated signing and striping modifications, inclusive of crosswalks. The proposed project would not reduce the area allowed for on-street parking on Rose Avenue.

Response to Comment No. 2:

Thank you for the comment regarding the potential tenants and their visitors who may be left without parking on Rose Avenue. Please see Response to Comment No. 1.

Response to Comment No. 3:

Thank you for the comment regarding the restrictions of surface parking on the surrounding surface streets including Pacific Coast Highway. Please see Response to Comment No. 1.

Response to Comment No. 4:

Thank you for the comment regarding the need to replace the existing parking at the proposed project site. Please see Response to Comment No. 1.



Lane Stubblefield
<lane.stubblefield@gmail.com>

To Jill Griffiths <jill_Griffiths@longbeach.gov>
cc
bcc

03/28/2009 12:30 PM

Subject Kroc Community Center Comment

History: This message has been replied to and forwarded.

Jill Griffiths
Advance Planning Officer, City of Long Beach, Department of Development Services
333 West Ocean Boulevard, 5th Floor, Long Beach, California 90802.

Kroc Community Center Comment

March 28, 2009

I live on the ocean side of signal hill and hear the noise from Hamilton bowl often.

I am hopeful that the Kroc community center will reduce the noise from Hamilton bowl.

1

The amphitheater concerns me. The sound will be projected into the residential areas.

2

No matter the stated purpose of the amphitheater, the amphitheater facing the field makes a perfect place to hold a mini-concert. The amplified sound will surely be projected into the residential areas.

3

If the amphitheater were facing the long beach city college campus most of the sound would be projected and absorbed by the college.

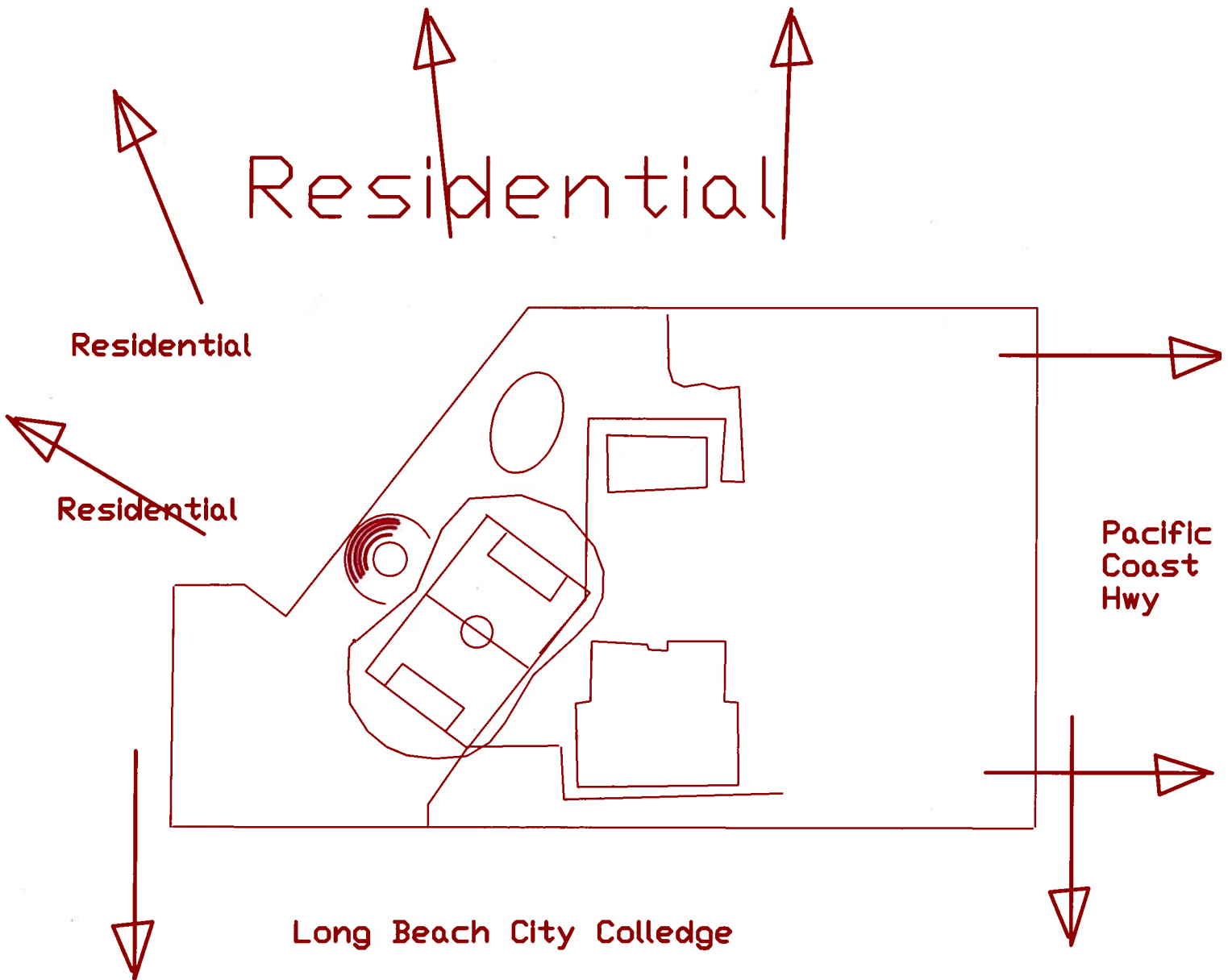
4

Thank you for any adjustment you can make.

Lane Stubblefield lane.stubblefield@gmail.com
(562) 494-8072 calling hours 9am-9pm daily
2205 East 20th Street, Signal Hill, California 90755



Kroc Community Center comment 032809.pdf Kroc Community Center google overlay 032809.jpg



Jill,
Please face the amphitheater away from the residential neighbors..

I live on the ocean side of signal hill and hear the noise from Hamilton bowl often.
I am hopeful that the Kroc community center will reduce the noise from Hamilton bowl.
No matter the stated purpose of the amphitheater, the amphitheater facing the field makes a perfect place to hold a mini-concert. The amplified sound will surely be projected into the residential areas.
If the amphitheater were facing the long beach city college campus most of the sound would be projected and absorbed by the college.
Thank you for any adjustment you can make.

Lane Stubblefield



2205 E 20th St Signal Hill, Los Angeles, California 90755

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[Search Maps](#)

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**Lane Stubblefield
2205 East 20th Street
Signal Hill, California 90755**

Response to Comment No. 1:

Thank you for the comment hoping that the proposed project would reduce noise from the Hamilton Bowl site. It is anticipated that noise from operational activity at the proposed project would be reduced to below the level of significance with the incorporation of mitigation measures Noise-8 and Noise-9. Although construction-generated noise would be significant, as discussed in Section 2, Project Description, of the EIR, construction would be scheduled in compliance with the City regulations and the contractor would conduct construction activities in such a manner that the maximum noise levels at the affected buildings would not exceed established noise levels.

Response to Comment No. 2:

Thank you for the comment regarding the potential for noise from the amphitheater being projected into the residential areas. Noise levels generated by typical outdoor activities anticipated to take place with the proposed project as analyzed in Appendix E, *Noise and Vibration Impact Report*, of the EIR would be below the level of significance with the incorporation of mitigation measures Noise-8 and Noise-9.²² With regard to the amphitheater, any events held in the amphitheater would be subject to the Long Beach Municipal Code, which contains specific prohibitions to protect the environment from nuisance noise levels:

Using or operating for any purpose any loudspeaker, loudspeaker system, or similar device between the hours of ten p.m. and seven a.m. the following day, such that the sound therefrom creates a noise disturbance across a residential real property line, or at any time violates the provisions of section 8.80.150 or 8.80.170, except for any noncommercial public speaking, public assembly or other activity for which a variance has been issued by the noise control office.²³

Response to Comment No. 3:

Thank you for the comment regarding the potential for a mini-concert to occur in the amphitheater and the subsequent comment that the sound from such activities would be projected into the residential areas. Please see Response to Comment No. 2.

Response to Comment No. 4:

Thank you for the comment. It has been noted that the comment expressed that the sound from the amphitheater would be absorbed by the Long Beach City College Pacific Coast Campus if the amphitheater were to face the college. The orientation of the proposed project, including all outdoor elements, was given consideration during the planning phase of the project. It is anticipated that noise from operational activity at the proposed project would be reduced to below the level of significance with the incorporation of mitigation measures Noise -8 and Noise 9. Please

²² Terry A. Hayes Associates LLC. November 2008. *Kroc Community Center Project Noise and Vibration Impact Report*. Culver City, CA.

²³ City of Long Beach. Municipal Code, Title 8, Section 8.80.130: "Noise: Disturbing Noises Prohibited." Available at: <http://www.municode.com/Resources/gateway.asp?pid=16115&sid=5>

see Response to Comment No. 2. The comment will be taken into consideration when the City Council and City Planning Commission render their decision on the proposed project.

Response to Comment No. 5:

Thank you for the comment regarding noise from the proposed amphitheater being projected into the surrounding residential areas. Please see Response to Comment No. 2. As stated in Section 3.10, Noise, and as found in Appendix E, *Noise and Vibration Impact Report*, of the EIR, it is anticipated that the sound resulting from the operational activities at the proposed project site would be reduced to below the level of significance with the incorporation of mitigation measures Noise-8 and Noise-9. The comment will be taken into consideration when the City Council and City Planning Commission render their decision on the proposed project.

APPENDIX G
PARKING SUMMARY FOR KROC COMMUNITY CENTER

TABLE 1-1
PARKING SUMMARY FOR KROC COMMUNITY CENTER

Project Component	Size	City Code Parking Ratio	Spaces Required
Typical Weekday/Non-Event Conditions <i>(8:00 AM to 6:00 PM, Monday thru Saturday)</i>			
Recreation Center (including 9,167 SF of exercise floors)	84,171 SF	5 spaces, plus 4 spaces per 1,000 SF, plus 20 spaces per 1,000 SF of exercise floors	525
Administration/Education Building	73,910 SF	5 spaces, plus 4 spaces per 1,000 SF	301
Chapel/Auditorium Building	5 staff	---	5
Outdoor Recreational Amenities (i.e., outdoor recreation and amphitheater)	---	[a]	[a]
Recreation "Soccer" Field	174,240 SF	1 space per 1,000 SF	174
Total Spaces Required:			1,005
Parking Supply:			1,139
Surplus (+) or Deficiency (-):			134
Weeknight or Sunday with Church Service <i>(6:00 PM to 10:00 PM, weeknight; Sunday morning)</i>			
Recreation Center (including 9,167 SF of exercise floors)	84,171 SF	5 spaces, plus 4 spaces per 1,000 SF, plus 20 spaces per 1,000 SF of exercise floors	525
30% Usage of Administration/Education Building	73,910 SF	5 spaces, plus 4 spaces per 1,000 SF	90
Chapel/Auditorium Building	450 seats	1 space per 3.3 fixed seats	136
Outdoor Recreational Amenities (i.e., outdoor recreation and amphitheater)	---	[a]	[a]
Recreation "Soccer" Field	174,240 SF	1 space per 1,000 SF	174
Total Spaces Required:			925
Parking Supply:			1,139
Surplus (+) or Deficiency (-):			214
Special Event Conditions <i>(Saturday, or Sunday PM w/ 5,000-Spectator Event in Recreation "Soccer" Field 4 times per year, plus 750-Spectator Outdoor Event)</i>			
50% Usage of Recreation Center (including 9,167 SF of exercise floors)	84,171 SF	5 spaces, plus 4 spaces per 1,000 SF, plus 20 spaces per 1,000 SF of exercise floors	263
0% Usage of Administration/Education Building	73,910 SF	5 spaces, plus 4 spaces per 1,000 SF	0
0% Usage of Chapel/Auditorium Building	450 seats	1 space per 3.3 fixed seats	0
Outdoor Recreational Amenities (i.e., outdoor recreation and amphitheater)	750 persons	1 space per 3.3 persons	227
Recreation "Soccer" Field used for 5,000-spectator event (assuming 50% of attendees present during peak time)	2,500 persons	1 space per 3.3 persons	758
Total Spaces Required:			1,248
Parking Supply:			1,139
Surplus (+) or Deficiency (-):			-109

Note:

[a] The outdoor recreation complex (including a 50-meter pool, warm-up pool, leisure pool, and a children's area), 10,000-SF outdoor amphitheater, playgrounds, outdoor climbing wall, and a challenge course are ancillary uses, and would not generate additive parking demand to the spaces reported for the other project component categories. Also, it is expected that major events will not be held in the outdoor complex and amphitheater concurrent with large league games in the recreation "soccer" field.

TABLE 1-2
PARKING SUMMARY FOR KROC COMMUNITY CENTER BASED ON ITE

Project Component	Size	ITE <i>Parking Generation</i> (3rd Edition) Parking Ratio	Spaces Required
Typical Weekday/Non-Event Conditions <i>(8:00 AM to 6:00 PM, Monday thru Saturday)</i>			
Recreation Center (including 9,167 SF of exercise floors)	84,171 SF	3.83 spaces per 1,000 SF	322
Administration/Education Building	73,910 SF	3.83 spaces per 1,000 SF	283
Chapel/Auditorium Building	5 staff	---	5
Outdoor Recreational Amenities (i.e., outdoor recreation and amphitheater)	---	[a]	[a]
Recreation "Soccer" Field	4 acres	5.1 spaces per acre	20
Total Spaces Required:			630
Parking Supply:			1,139
Surplus (+) or Deficiency (-):			509
Weeknight or Sunday with Church Service <i>(6:00 PM to 10:00 PM, weeknight; Sunday morning)</i>			
Recreation Center (including 9,167 SF of exercise floors)	84,171 SF	3.83 spaces per 1,000 SF	322
30% Usage of Administration/Education Building	73,910 SF	3.83 spaces per 1,000 SF	85
Chapel/Auditorium Building	450 seats	Parking = 0.16 (seats) + 1	73
Outdoor Recreational Amenities (i.e., outdoor recreation and amphitheater)	---	[a]	[a]
Recreation "Soccer" Field	4 acres	5.1 spaces per acre	20
Total Spaces Required:			500
Parking Supply:			1,139
Surplus (+) or Deficiency (-):			639
Special Event Conditions <i>(Saturday, or Sunday PM w/ 5,000-Spectator Event in Recreation "Soccer" Field 4 times per year, plus 750-Spectator Outdoor Event)</i>			
50% Usage of Recreation Center (including 9,167 SF of exercise floors)	84,171 SF	3.83 spaces per 1,000 SF	161
0% Usage of Administration/Education Building	73,910 SF	3.83 spaces per 1,000 SF	0
0% Usage of Chapel/Auditorium Building	450 seats	Parking = 0.16 (seats) + 1	0
Outdoor Recreational Amenities (i.e., outdoor recreation and amphitheater)	750 persons	1 space per 3.3 persons	227
Recreation "Soccer" Field used for 5,000-spectator event (assuming 50% of attendees present during peak time)	2,500 persons	1 space per 3.3 persons	758
Total Spaces Required:			1,146
Parking Supply:			1,139
Surplus (+) or Deficiency (-):			-7

Note:

[a] The outdoor recreation complex (including a 50-meter pool, warm-up pool, leisure pool, and a children's area), 10,000-SF outdoor amphitheater, playgrounds, outdoor climbing wall, and a challenge course are ancillary uses, and would not generate additive parking demand to the spaces reported for the other project component categories. Also, it is expected that major events will not be held in the outdoor complex and amphitheater concurrent with large league games in the recreation "soccer" field.

KROC Draft Parking Management Plan (PMP)

As previously discussed, traffic access and parking needs during special events will be addressed through the implementation of a Traffic and Parking Management Plan (T&PMP). Permanent, physical improvement measures, such as roadway widening, roadway restriping, or traffic signal installations, are not recommended for traffic conditions that are considered to be atypical.

This report describes T&PMP recommendations to minimize potential impacts to the adjacent street system and surrounding areas, provide adequate wayfinding for event attendees unfamiliar with the area, and refine event arrival, event departure, and on-site traffic patterns upon completion of the project. The focus is to accommodate parking demand and traffic loading/unloading for the project during special events.

Our recommendations are described in detail in the following sections.

POTENTIAL T&PMP MEASURES

Close coordination between Kroc staff, city staff (City of Long Beach and adjoining cities), Police, and Fire Department will be necessary in the development, implementation, and enforcement of a comprehensive T&PMP.

As with typical T&PMPs, specific measures and controls are refined and adjusted over time. All framework elements of the T&PMP could be rigorously implemented at first. After the initial “education and enforcement” phase, the management strategies could be refined and improved on an as-needed basis. The preparation of a “report card” (through a monitoring program during special events) to review the T&PMP’s effectiveness, benefits, and areas for improvement will help the City to know when adjustments to the T&PMP implementation and enforcement are appropriate.

1. Parking Management Plan – The parking area designations (on site, off site/overflow parking), parking controls, and parking ingress and egress layouts should be determined and implemented. Parking facilities and their occupancy should be monitored on a consistent basis by parking personnel, so that traffic patterns can be adjusted/rerouted accordingly, and on a timely basis. A pre-paid/pre-assigned parking program for events could be designed and implemented. This would initiate an on-site parking program for all event-ticket holders, and would enable patrons to receive directions to a designated parking area via a designated travel route. This pre-paid parking program would enhance traffic and parking operations and minimize delay during the peak arrival periods, because parking fees would not need to be collected. Pre-paid parking could be demonstrated through the use of dashboard placards. Preferential parking could be provided through implementation of this program.

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Parking

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Clare M. Look-Jaeger, PE
Richard E. Barretto, PE
Keil D. Maberry, PE

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2. Traffic/Access Management – Detailed plans on any necessary travel lane closures, turn restrictions at intersections, and on-street parking restrictions during events should be developed in coordination with Kroc staff, City staff, Police, and Fire Department Personnel. In addition, traffic signal timing and phasing plan modifications at key intersections during events could be implemented. Pedestrian crossings to/from off-site parking areas, such as the Long Beach City College campus, should be addressed and incorporated in the traffic/access management plan.
3. Shuttle Bus System and Charter Bus Program - A parking shuttle bus route and operational plan could be developed to ensure adequate service is provided to any more remote off-site parking areas. Similarly, a detailed route and operational plan could be developed for any shuttle service connecting the project site with nearby public transit facilities, and any charter bus service programs.
4. Design and Implementation of Pre-Assigned Travel Routes – As discussed above, the implementation of a pre-paid/pre-assigned parking program would make it possible for event patrons to receive directions to a designated parking area via a designated travel route in advance of the event. This is expected to help facilitate event arrival traffic flows, in that traffic volumes along certain routes could be influenced through the early notification of an assigned travel route to event patrons.
5. Traffic and Parking Control Personnel – The T&PMP should identify a master schedule and the number of traffic and parking staff (from a private traffic/parking management company) needed to manage and enforce the T&PMP measures on site. Roles, responsibilities/assignments, locations/posts/stations, action items, and phone/radio contact lists should be outlined. This would require close coordination with the City staff and Fire Department (for emergency routes), and include identifying the number of City Police personnel that would be deployed at major intersections (public intersections external to the project site).
6. Special-Event/Temporary Signage – In conjunction with the deployment of traffic and parking control personnel at key locations, and the provision of standard/permanent wayfinding amenities for the project (especially to and from adjoining regional routes), special-event/temporary signage could be provided to make parking lot/structure entries and exits more visible during events. The special event signs should be a minimum of 24” x 30”, have green lettering on a white background, be of permanent quality, and attached to a temporary mounting device such as a Type II Barricade. The addition of a Kroc logo to these special event signs will help establish a visual target for visitors to recognize and follow the signs.

7. Emergency Routes - Close coordination between the Kroc staff, City staff, Police, and Fire Department will be necessary in the development of an emergency route plan during events.
8. Marketing/Public Information/Media Alert and Outreach Programs – It is recommended that a comprehensive marketing effort be undertaken to provide event patrons with ample public information regarding transportation issues, aimed at reducing impacts associated with the proposed project to the greatest extent possible. The target audiences would be event ticket holders that purchase pre-paid parking passes, single-event ticket patrons, regional media, employees, charter bus operators, and area commuters.

Event-ticket holders who purchase on-site parking should receive a ticket package containing detailed information on their designated parking area, designated ingress travel route, egress travel route suggestions, detailed maps, and any shuttle bus service and operations. A dashboard parking pass/placard to display on event days would also be provided as part of the ticket package.

A website for Kroc, traffic advisory radio, and a “hotline” phone number (to call with questions on event traffic and parking details, or comments on event traffic and parking-related issues) should be developed

Key public messages should be provided via the website, hotline phone, public radio, and other forms of media. Those public announcements should include the following key messages: (1) arrive early, (2) vehicles should use the routes shown on their parking pass/placard, (3) if patrons do not have parking passes/placards, follow directions provided by signs and/or traffic and parking personnel, (4) in the event of rain, which parking areas to go to, and (5) publicize any parking shuttle service and charter bus programs.

9. T&PMP Committee - A T&PMP Committee (with Kroc, City of Long Beach and adjoining cities, Police, and Fire Department key members) could be established, with on-going responsibility to define, implement, and refine the T&PMP measures and strategies, and evaluate the need for a “report card” (through a monitoring program during events). Even if a plan is in place, it should be monitored and refined on an intermittent, if not continuing, basis. Another aspect of administration might be to monitor and report the status of traffic and parking-related requirements imposed by the City from the project.

**TABLE 2-1
YEAR 2010 ALTERNATIVE INTERSECTION CAPACITY ANALYSIS SUMMARY**

Key Intersections	Time Period	(1) Existing Traffic Conditions		(2) Year 2010 Background Traffic Conditions ¹		(3) Year 2010 Plus Project Traffic Conditions		(4) Project Significant Impact ²		(5) Year 2010 With Recommended Improvements	
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	Change in ICU/Delay	Yes/No	ICU / Delay	LOS
1. Orange Avenue at Hill Street	AM	0.552	A	0.571	A	0.583	A	0.012	N	--	--
	PM	0.684	B	0.708	C	0.711	C	0.003	N	--	--
	Saturday	0.448	A	0.477	A	0.484	A	0.007	N	--	--
2. Walnut Avenue at Hill Street	AM	9.6 s/v	A	10.1 s/v	B	10.5 s/v	B	0.4 s/v	N	--	--
	PM	11.6 s/v	B	12.2 s/v	B	13.3 s/v	B	1.1 s/v	N	--	--
	Saturday	8.6 s/v	A	8.7 s/v	A	8.9 s/v	A	0.2 s/v	N	--	--
3. Cherry Avenue at Hill Street	AM	0.506	A	0.530	A	0.534	A	0.004	N	--	--
	PM	0.613	B	0.639	B	0.642	B	0.003	N	--	--
	Saturday	0.576	A	0.595	A	0.599	A	0.004	N	--	--
4. Walnut Avenue at East 20 th Street/ Alamitos Ave. ³	AM	10.5 s/v	B	11.8 s/v	B	13.1 s/v	B	1.3 s/v	N	--	--
	PM	10.0 s/v	A	10.6 s/v	B	11.5 s/v	B	0.9 s/v	N	--	--
	Saturday	8.2 s/v	A	8.4 s/v	A	8.7 s/v	A	0.3 s/v	N	--	--
5. Cherry Avenue at 21 st Street	AM	0.472	A	0.502	A	0.504	A	0.002	N	--	--
	PM	0.488	A	0.520	A	0.540	A	0.020	N	--	--
	Saturday	0.535	A	0.555	A	0.561	A	0.006	N	--	--

Notes: Bold ICU/LOS and HCM/LOS values indicate adverse service levels based on City LOS standards.

s/v = seconds per vehicle (delay).

¹ Assumes GTE Middle School is a part of the related projects.

² A significant project impact is defined as a 0.020 or greater increase in ICU value of a signalized intersection or a 2% or more increase in delay at an unsignalized location where the final LOS is E or F.

³ Assumes planned traffic signal will not be installed; current all-way stop operation assumed to remain in place.

TABLE 2-1 (CONTINUED)
YEAR 2010 ALTERNATIVE INTERSECTION CAPACITY ANALYSIS SUMMARY

Key Intersections	Time Period	(1) Existing Traffic Conditions		(2) Year 2010 Background Traffic Conditions ⁴		(3) Year 2010 Plus Project Traffic Conditions		(4) Project Significant Impact ⁵		(5) Year 2010 With Recommended Improvements	
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	Change in ICU/Delay	Yes/No	ICU / Delay	LOS
6. Martin Luther King Jr. Ave at Pacific Coast Highway	AM	0.611	B	0.673	B	0.682	B	0.009	N	--	--
	PM	0.652	B	0.682	B	0.691	B	0.009	N	--	--
	Saturday	0.484	A	0.551	A	0.555	A	0.004	N	--	--
7. Orange Avenue at Pacific Coast Highway	AM	0.863	D	0.890	D	0.905	E	0.015	N	--	--
	PM	0.869	D	0.900	D	0.917	E	0.017	N	--	--
	Saturday	0.626	B	0.657	B	0.670	B	0.013	N	--	--
8. Walnut Avenue at Pacific Coast Highway	AM	0.783	C	0.830	D	0.853	D	0.023	N	--	--
	PM	0.749	C	0.789	C	0.813	D	0.024	N	--	--
	Saturday	0.441	A	0.467	A	0.483	A	0.016	N	--	--
9. Rose Avenue at Pacific Coast Highway	AM	241.1 s/v	F	289.6 s/v	F	1,717.9 s/v	F	1,428.3 s/v	Y	0.590	A ⁶
	PM	96.6 s/v	F	132.7 s/v	F	956.6 s/v	F	823.9 s/v	Y	0.622	B ⁶
	Saturday	18.2 s/v	C	20.1 s/v	C	64.7 s/v	F	44.6 s/v	Y	0.392	A ⁶
10. Cherry Avenue at Pacific Coast Highway	AM	0.827	D	0.776	C ⁷	0.785	C	0.009	N	--	--
	PM	0.866	D	0.809	D ⁷	0.820	D	0.011	N	--	--
	Saturday	0.922	E	0.791	C ⁷	0.799	C	0.008	N	--	--

Notes: **Bold ICU/LOS and HCM/LOS values** indicate adverse service levels based on City LOS standards.

s/v = seconds per vehicle (delay).

⁴ Assumes GTE Middle School is a part of the related projects.

⁵ A significant project impact is defined as a 0.020 or greater increase in ICU value of a signalized intersection or a 2% or more increase in delay at an unsignalized location where the final LOS is E or F.

⁶ Represents anticipated LOS with installation of a traffic signal at the intersections of Rose Avenue at Pacific Coast Highway to facilitate access to the Project site.

⁷ Represents anticipated operation conditions with implementation of planned intersection and signalization improvements by the City of Signal Hill/City of Long Beach. Improvements are assumed to be completed by Year 2010 and incorporated in the cumulative 2010 background traffic setting.

TABLE 2-1 (CONTINUED)
YEAR 2010 ALTERNATIVE INTERSECTION CAPACITY ANALYSIS SUMMARY

Key Intersections	Time Period	(1) Existing Traffic Conditions		(2) Year 2010 Background Traffic Conditions ⁸		(3) Year 2010 Plus Project Traffic Conditions		(4) Project Significant Impact ⁹		(5) Year 2010 With Recommended Improvements	
		ICU / Delay	LOS	ICU / Delay	LOS	ICU / Delay	LOS	Change in ICU / Delay	Yes/No	ICU / Delay	LOS
11. Temple Avenue at Pacific Coast Highway	AM	0.542	A	0.564	A	0.573	A	0.009	N	--	--
	PM	0.712	C	0.749	C	0.759	C	0.010	N	--	--
	Saturday	0.492	A	0.524	A	0.530	A	0.006	N	--	--
12. Redondo Avenue at Pacific Coast Highway	AM	0.933	E	0.981	E	0.983	E	0.002	N	--	--
	PM	0.984	E	1.025	F	1.029	F	0.004	N	--	--
	Saturday	0.882	D	0.923	E	0.926	E	0.003	N	--	--

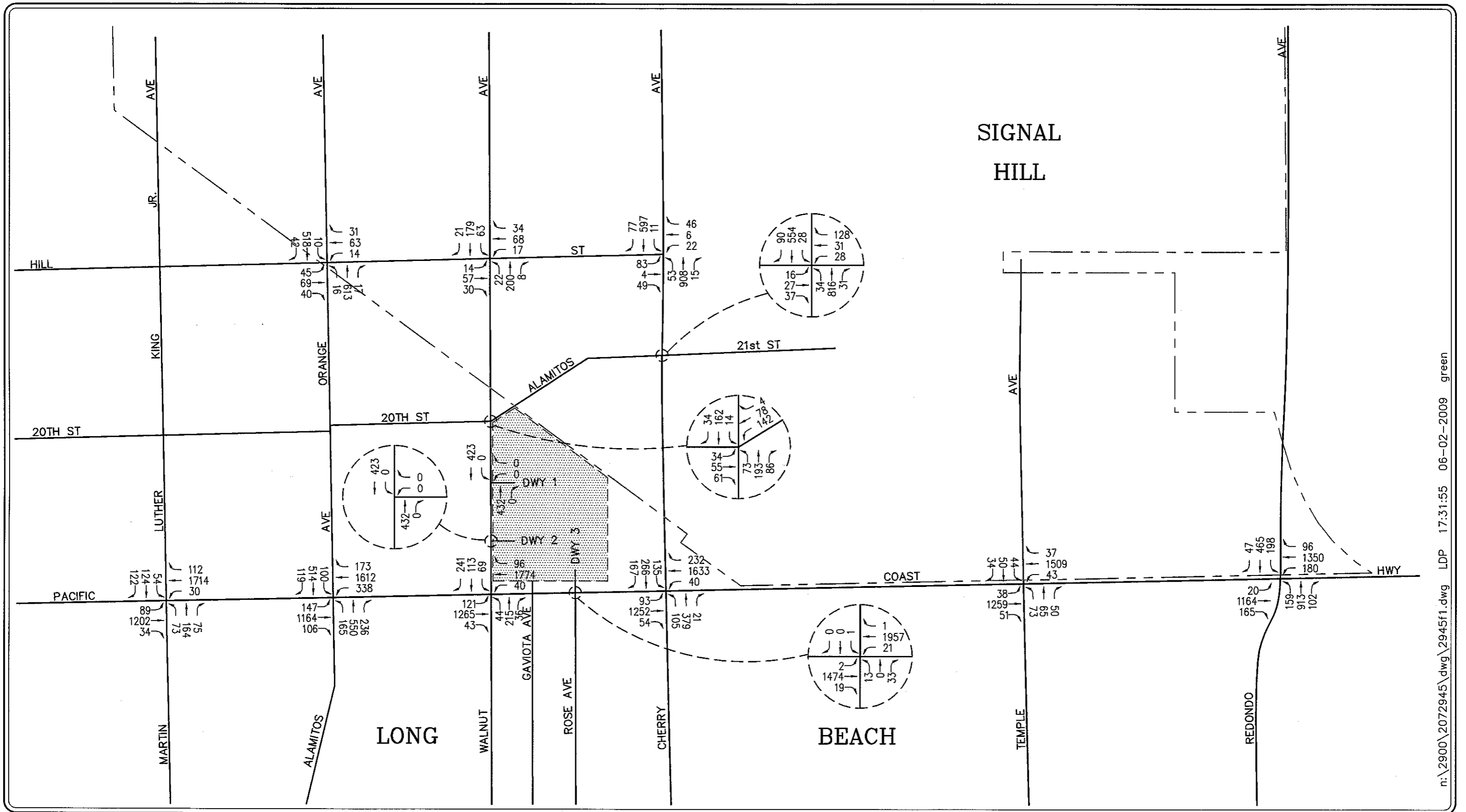
Notes: **ICU/LOS and HCM/LOS values** indicate adverse service levels based on City LOS standards.
s/v = seconds per vehicle (delay).

⁸ Assumes GTE Middle School is a part of the related projects.

⁹ A significant project impact is defined as a 0.020 or greater increase in ICU value of a signalized intersection or a 2% or more increase in delay at an unsignalized location where the final LOS is E or F.

APPENDIX A

Level of Service Calculation Sheets
with the Inclusion of GTE Middle School



n:\2900\2072945\dwg\2945f1.dwg LDP 17:31:55 06-02-2009 green

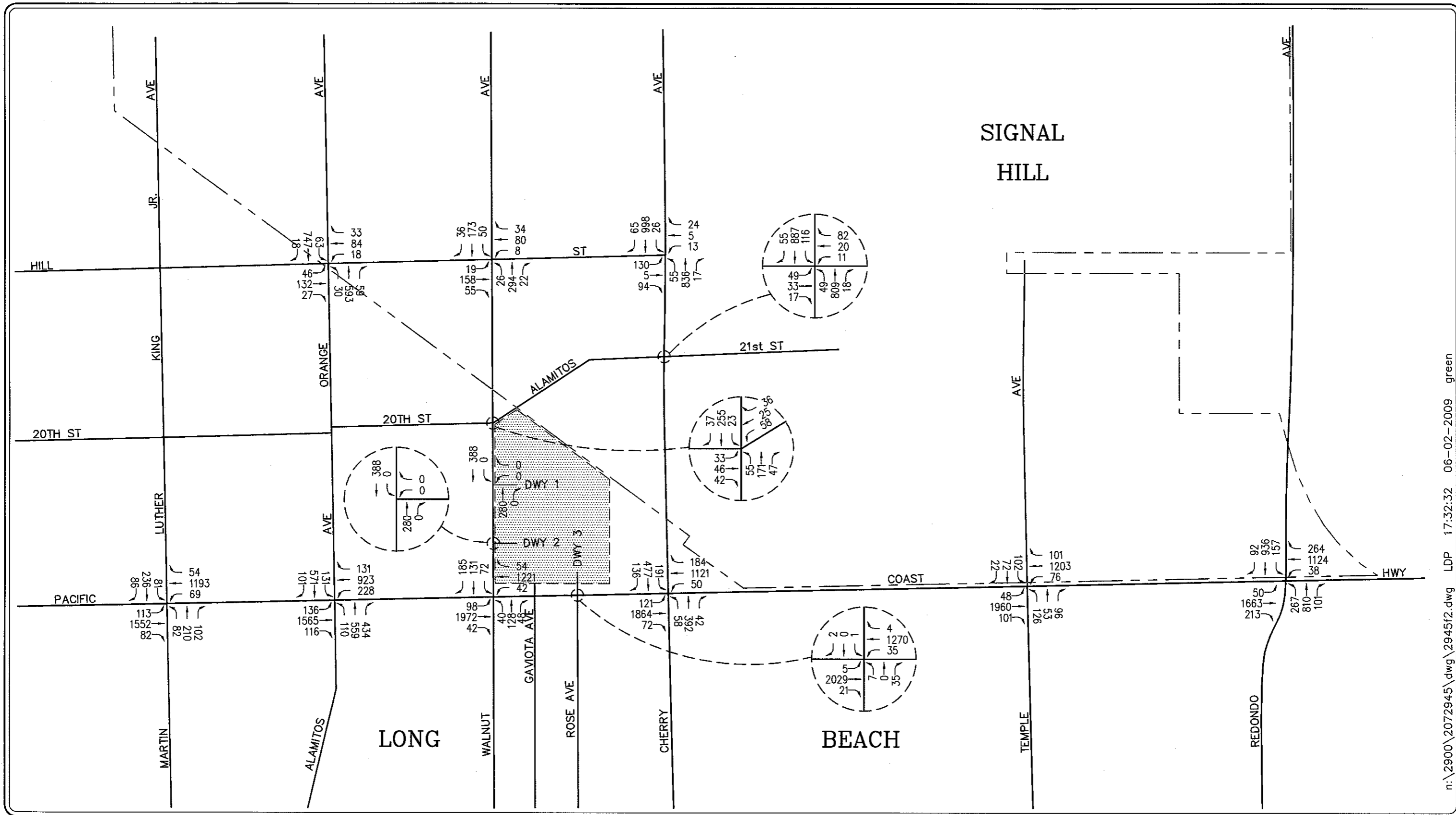
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LAW &
GREENSPAN
engineers



KEY
[Shaded Box] = PROJECT SITE

FIGURE 1

YEAR 2010 AM PEAK HOUR BACKGROUND TRAFFIC VOLUMES
KROC COMMUNITY CENTER, LONG BEACH



n:\2900\2072945\dwg\2945f2.dwg LDP 17:32:32 06-02-2009 green

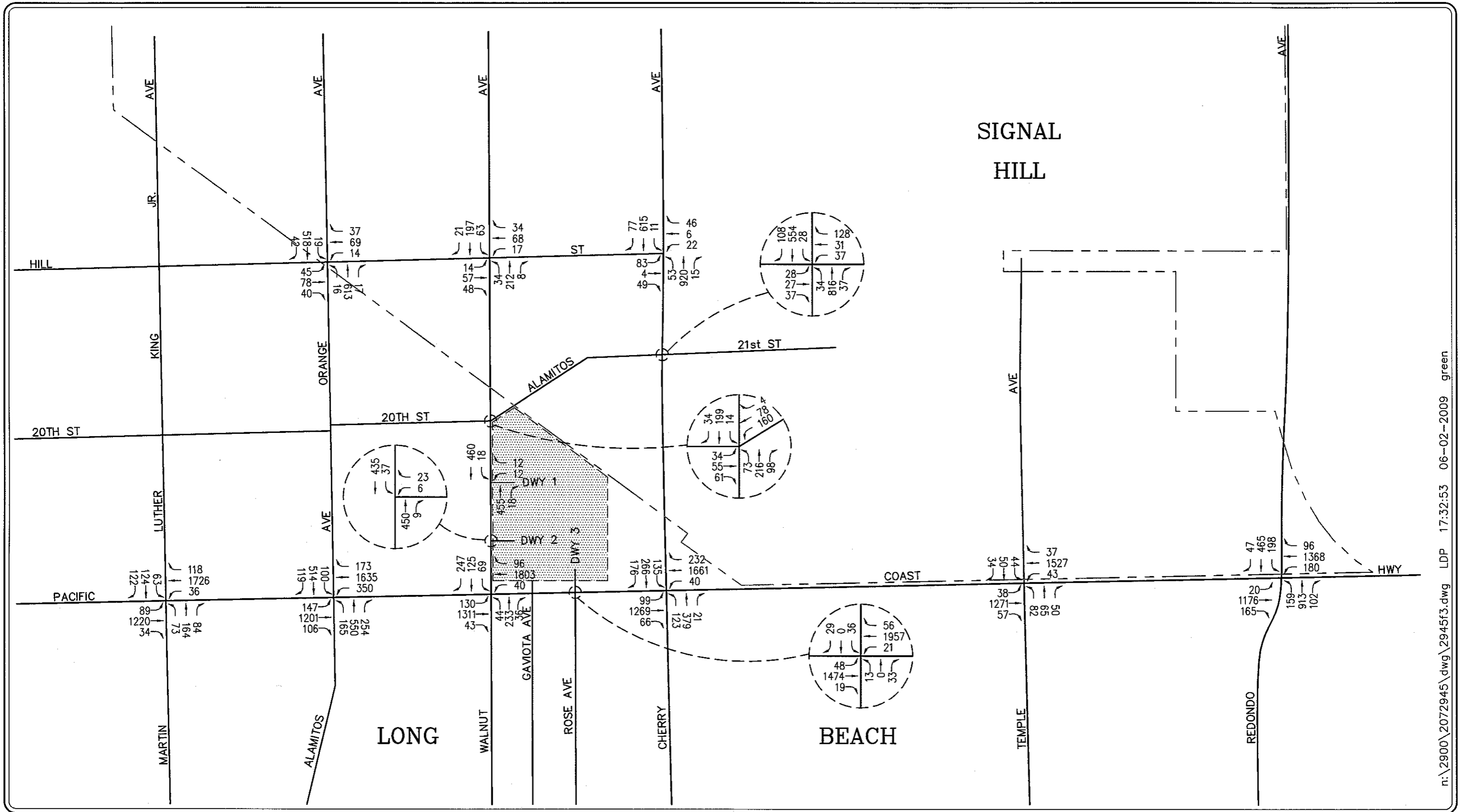
LINSCOTT
LAW &
GREENSPAN
engineers



KEY
[Shaded Box] = PROJECT SITE

FIGURE 2

YEAR 2010 PM PEAK HOUR BACKGROUND TRAFFIC VOLUMES
KROC COMMUNITY CENTER, LONG BEACH



n:\2900\2072945\dwg\2945f3.dwg LDP 17:32:53 06-02-2009 green

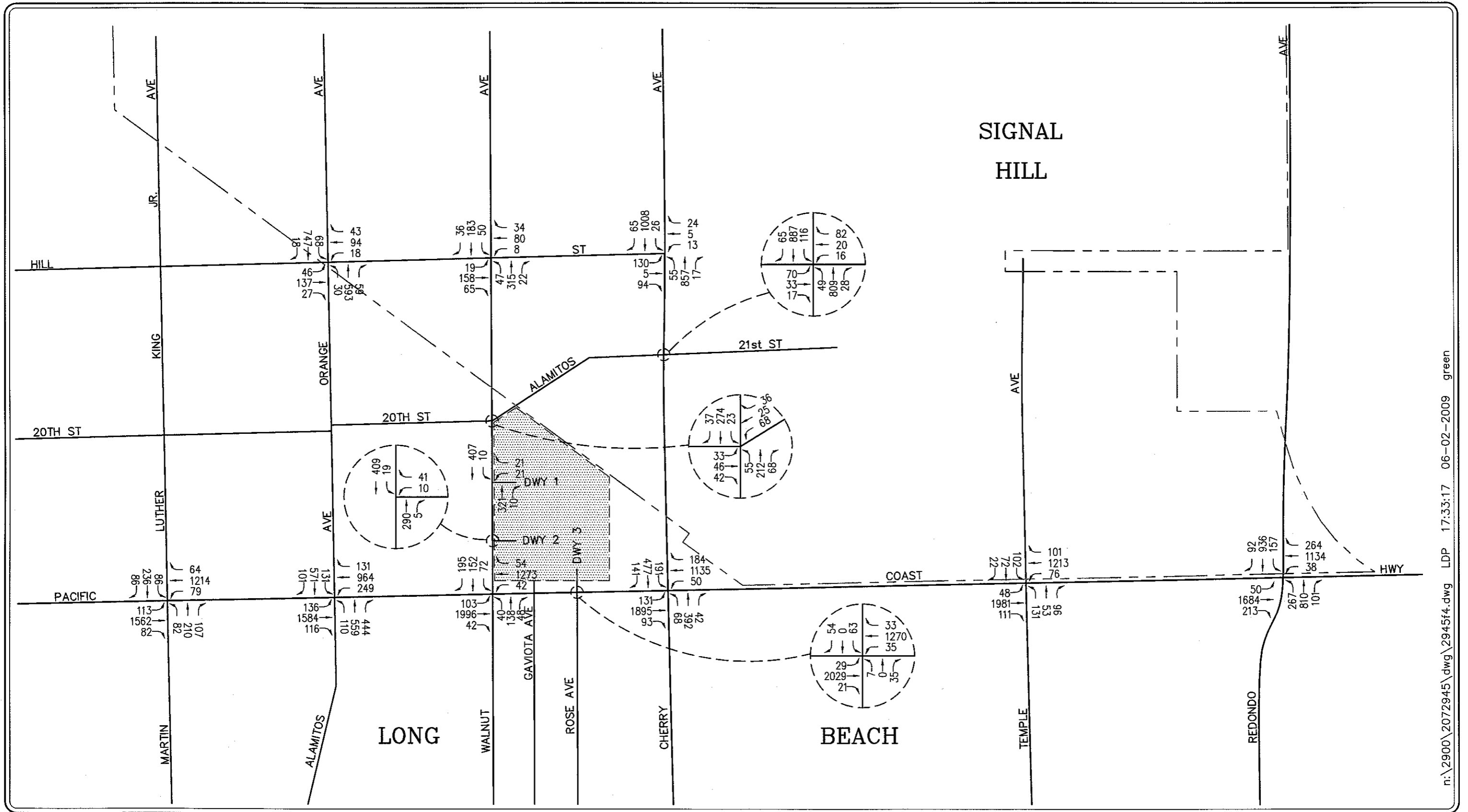
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GREENSPAN
engineers



KEY
[Shaded Box] = PROJECT SITE

FIGURE 3

YEAR 2010 AM PEAK HOUR BACKGROUND PLUS PROJECT TRAFFIC VOLUMES
KROC COMMUNITY CENTER, LONG BEACH



n:\2900\2072945\dwg\2945f4.dwg LDP 17:33:17 06-02-2009 green

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KEY
[Shaded Box] = PROJECT SITE

FIGURE 4

YEAR 2010 PM PEAK HOUR BACKGROUND PLUS PROJECT TRAFFIC VOLUMES
KROC COMMUNITY CENTER, LONG BEACH

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INTERSECTION CAPACITY UTILIZATION

Intersection: 1.
 N-S St: Orange Avenue
 E-W St: Hill Street
 Project: KRCC Community Center, Long Beach
 File: N:\290002072945\ICU2945 ICU.xls
 Control Type: 2Ø Traffic Signal Split: No

Orange Avenue at Hill Street
 Peak Hour: AM
 Annual Growth: 1.00%

Date: 05/21/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 - EXISTING TRAFFIC			2010 - WITH AMBIENT GROWTH			2010 - WITH CUMULATIVE PROJECTS			2010 - WITH PROJECT TRAFFIC			2010 - WITH MITIGATION			
	Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	
Nb Left	16	1	1600 0.010	0	16	1	1600 0.010	0	16	1	1600 0.010	0	16	1	1600 0.010	
Nb Thru	591	1	1600 0.380 *	12	603	1	1600 0.388 *	10	613	1	1600 0.394 *	0	613	1	1600 0.394 *	
Nb Right	17	0	-	0	17	0	-	0	17	0	-	0	17	0	-	
Sb Left	10	1	1600 0.006 *	0	10	1	1600 0.006 *	0	10	1	1600 0.006 *	9	19	1	1600 0.012 *	
Sb Thru	496	1	1600 0.336 *	10	506	1	1600 0.343 *	12	518	1	1600 0.350 *	0	518	1	1600 0.350 *	
Sb Right	41	0	-	1	42	0	-	0	42	0	-	0	42	0	-	
Eb Left	44	0	0 0.000	1	45	0	0 0.000	0	45	0	0 0.000	0	45	0	0 0.000	
Eb Thru	61	1	1600 0.066 *	1	62	1	1600 0.067 *	7	69	1	1600 0.071 *	9	78	1	1600 0.077 *	
Eb Right	39	1	1600 0.024	1	40	1	1600 0.025	0	40	1	1600 0.025	0	40	1	1600 0.025	
Wb Left	14	0	0 0.000 *	0	14	0	0 0.000 *	0	14	0	0 0.000 *	0	14	0	0 0.000 *	
Wb Thru	57	1	1600 0.063	1	58	1	1600 0.064	5	63	1	1600 0.068	6	69	1	1600 0.075 *	
Wb Right	30	0	-	1	31	0	-	0	31	0	-	6	37	0	-	
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *	
ICU			0.552				0.561				0.571				0.583	
LOS			A				A				A				A	
Total Vol.	1416			28	1444			34	1478			30	1508		0	1508

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.012
 Significant Impact: No
 Area Traffic Mitigation:

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Intersection: 1. Orange Avenue
 N-S St: Hill Street
 E-W St: KRCC Community Center, Long Beach
 Project: N:\290012072945\ICU\2945\ICU.xls
 File: N:\290012072945\ICU\2945\ICU.xls
 Control Type: 2Ø Traffic Signal

INTERSECTION CAPACITY UTILIZATION

Orange Avenue at Hill Street
 Peak Hour: PM
 Annual Growth: 1.00%

Date: 05/21/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION		
	Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes Capacity Ratio	Added Volume	Total Volume	Lanes Capacity Ratio	Added Volume	Total Volume	Lanes Capacity Ratio	Added Volume	Total Volume	Lanes Capacity Ratio
Nb Left	29	1	1600 0.018 *	1	30	1 1600 0.019 *	0	30	1 1600 0.019 *	0	30	1 1600 0.019 *	0	30	1 1600 0.019 *
Nb Thru	563	1	1600 0.388	11	574	1 1600 0.386	19	593	1 1600 0.408	0	593	1 1600 0.408	0	593	1 1600 0.408
Nb Right	58	0	-	1	59	0 0	0	59	0 0	0	59	0 0	0	59	0 0
Sb Left	62	1	1600 0.039	14	63	1 1600 0.039	0	63	1 1600 0.039	5	68	1 1600 0.043	0	68	1 1600 0.043
Sb Thru	715	1	1600 0.458 *	14	729	1 1600 0.457 *	18	747	1 1600 0.478 *	0	747	1 1600 0.478 *	0	747	1 1600 0.478 *
Sb Right	18	0	-	0	18	0 0	0	18	0 0	0	18	0 0	0	18	0 0
Eb Left	45	0	0 0.050	1	46	0 0 0.050	0	46	0 0 0.050	0	46	0 0 0.050	0	46	0 0 0.050
Eb Thru	127	1	1600 0.108 *	3	130	1 1600 0.110 *	2	132	1 1600 0.111 *	5	137	1 1600 0.114 *	0	137	1 1600 0.114 *
Eb Right	26	1	1600 0.016	1	27	1 1600 0.017	0	27	1 1600 0.017	0	27	1 1600 0.017	0	27	1 1600 0.017
Wb Left	18	0	0 0.000 *	0	18	0 0 0.000 *	0	18	0 0 0.000 *	0	18	0 0 0.000 *	0	18	0 0 0.000 *
Wb Thru	79	1	1600 0.081	2	81	1 1600 0.083	3	84	1 1600 0.084	10	94	1 1600 0.087	0	94	1 1600 0.087
Wb Right	32	0	-	1	33	0 0	0	33	0 0	10	43	0 0	0	43	0 0
Yellow Allowance:	0.100 *			0.100 *			0.100 *			0.100 *			0.100 *		
ICU	0.684			0.686			0.708			0.711			0.711		
LOS	B			B			C			C			C		
Total Vol.	1772	36	1808	42	1850	30	1880	0	1880	0	1880	0	1880	0	1880

* Key conflicting movement as a part of ICU
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.003
 Significant Impact: No
 Area Traffic Mitigation:

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INTERSECTION CAPACITY UTILIZATION

Intersection: 1. Orange Avenue
 N-S St: Hill Street
 E-W St: KROC Community Center, Long Beach
 Project: N:\2900\0272945\ICU\Saturday 29-45 ICU.xls
 Control Type: 20 Traffic Signal Split: No

Orange Avenue at Hill Street
 Peak Hour: Midday
 Annual Growth: 1.00%

Date: 10/05/08
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 - EXISTING TRAFFIC			2010 - WITH AMBIENT GROWTH			2010 - WITH CUMULATIVE PROJECTS			2010 - WITH PROJECT TRAFFIC			2010 - WITH MITIGATION						
	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	
Nb Left	63	1	1600 0.039 *	1	64	1	1600 0.040 *	0	64	1	1600 0.040 *	0	64	1	1600 0.040 *	0	64	1	1600 0.040 *
Nb Thru	349	1	1600 0.227	7	356	1	1600 0.231	34	390	1	1600 0.253	0	390	1	1600 0.253	0	390	1	1600 0.253
Nb Right	14	0	-	0	14	0	-	0	14	0	0	0	14	0	0	0	14	0	0
Sb Left	9	1	1600 0.006	0	9	1	1600 0.006	0	9	1	1600 0.006	6	15	1	1600 0.009	0	15	1	1600 0.009
Sb Thru	397	1	1600 0.261 *	8	405	1	1600 0.266 *	34	439	1	1600 0.288 *	0	439	1	1600 0.288 *	0	439	1	1600 0.288 *
Sb Right	21	0	-	0	21	0	-	0	21	0	0	0	21	0	0	0	21	0	0
EB Left	26	0	0 0.000 *	1	27	0	0 0.000 *	0	27	0	0 0.000 *	0	27	0	0 0.000 *	0	27	0	0 0.000 *
EB Thru	48	1	1600 0.046	1	49	1	1600 0.048	0	49	1	1600 0.048	6	55	1	1600 0.051	0	55	1	1600 0.051
EB Right	32	1	1600 0.020	1	33	1	1600 0.021	0	33	1	1600 0.021	0	33	1	1600 0.021	0	33	1	1600 0.021
WB Left	8	0	0 0.000	0	8	0	0 0.000	0	8	0	0 0.000	0	8	0	0 0.000	0	8	0	0 0.000
WB Thru	63	1	1600 0.048 *	1	64	1	1600 0.049 *	0	64	1	1600 0.049 *	6	70	1	1600 0.056 *	0	70	1	1600 0.056 *
WB Right	6	0	-	0	6	0	-	0	6	0	0	0	6	0	0	0	6	0	0
Yellow Allowance:	0.100 *			0.100 *			0.100 *			0.100 *			0.100 *			0.100 *			
ICU	0.448			0.455			0.477			0.484			0.484			0.484			
LOS	A			A			A			A			A			A			

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.007
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	1036	20	1056	68	1124	24	1148	0	1148
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Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Walnut Ave at Hill St [Existing]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.339
Loss Time (sec): 0 Average Delay (sec/veh): 9.6
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Stop Sign), Rights (Include), Min. Green (0), and Lanes (0 0 1 0 0).

Volume Module: Table with 12 columns for volume metrics. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 12 columns for saturation flow metrics. Rows include Adjustment (1.00), Lanes (0.06), and Final Sat. (47).

Capacity Analysis Module: Table with 12 columns for capacity analysis metrics. Rows include Vol/Sat (0.28), Crit Moves (****), Delay/Veh (9.6), Delay Adj (1.00), AdjDel/Veh (9.6), LOS by Move (A), ApproachDel (9.6), Delay Adj (1.00), ApprAdjDel (9.6), LOS by Appr (A), and AllWayAvgQ (0.3).

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Walnut Ave at Hill St [Background]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.374
Loss Time (sec): 0 Average Delay (sec/veh): 10.1
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for movement types and 12 rows for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns for movement types and 3 rows for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for movement types and 12 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Walnut Ave at Hill St [With Project]

Cycle (sec): 100 Critical Vol./Cap. (X): 0.409
Loss Time (sec): 0 Average Delay (sec/veh): 10.5
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for different volume types (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume).

Saturation Flow Module: Table with 13 columns for flow metrics (Adjustment, Lanes, Final Sat.).

Capacity Analysis Module: Table with 13 columns for capacity metrics (Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ).

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Walnut Ave at Hill St [Existing]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.493
Loss Time (sec): 0 Average Delay (sec/veh): 11.6
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Stop Sign), Rights (Include), Min. Green (0 0 0), and Lanes (0 0 1 0 0).

Volume Module: Table with 13 columns for different traffic movements. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 13 columns. Rows include Adjustment (1.00), Lanes (0.07), and Final Sat. (45).

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat (0.49), Crit Moves (****), Delay/Veh (12.9), Delay Adj (1.00), AdjDel/Veh (12.9), LOS by Move (B), ApproachDel (12.9), Delay Adj (1.00), ApprAdjDel (12.9), LOS by Appr (B), and AllWayAvgQ (0.8).

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Walnut Ave at Hill St [Background]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.530
Loss Time (sec): 0 Average Delay (sec/veh): 12.2
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume).

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Adjustment, Lanes, Final Sat.).

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ).

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Walnut Ave at Hill St [With Project]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.603
Loss Time (sec): 0 Average Delay (sec/veh): 13.3
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 13 rows of volume-related metrics.

Saturation Flow Module: Table with 12 columns and 3 rows showing saturation flow factors and final saturation values.

Capacity Analysis Module: Table with 12 columns and 13 rows detailing delay, LOS, and capacity analysis for each movement.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Walnut Ave at Hill St [Existing]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.229
Loss Time (sec): 0 Average Delay (sec/veh): 8.6
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 12 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 12 columns and 3 rows showing adjustment factors, lane saturation, and final saturation values.

Capacity Analysis Module: Table with 12 columns and 12 rows detailing delay, LOS, and capacity metrics for each movement.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Walnut Ave at Hill St [Background]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.243
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 8.7
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns representing different traffic flows. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and FinalVolume.

Saturation Flow Module: Table with 12 columns. Rows include Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns. Rows include Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 Walnut Ave at Hill St [Background Plus Project]

Cycle (sec): 100 Critical Vol./Cap. (X): 0.276
Loss Time (sec): 0 Average Delay (sec/veh): 8.9
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume).

Saturation Flow Module: Table with 12 columns for saturation flow metrics (Adjustment, Lanes, Final Sat.).

Capacity Analysis Module: Table with 12 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ).

Note: Queue reported is the number of cars per lane.

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INTERSECTION CAPACITY UTILIZATION

Intersection: 3.
 N-S St: Cherry Avenue
 E-W St: Hill Street
 Project: KROC Community Center, Long Beach
 File: N:\290012072945\ICU\2945 ICU.xls
 Control Type: 50 Traffic Signal Split: No

Cherry Avenue at Hill Street
 Peak Hour: AM
 Annual Growth: 1.00%

Date: 05/21/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION						
	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity				
Nb Left	52	1	1600	53	1	1600	0	53	1	1600	0	53	1	1600	0.033				
Nb Thru	844	2	3200	861	2	3200	47	908	2	3200	12	920	2	3200	0.292 *				
Nb Right	6	0	0	6	0	0	9	15	0	0	0	15	0	0	0.292 *				
Sb Left	11	1	1600	11	1	1600	0	11	1	1600	0	11	1	1600	0.007 *				
Sb Thru	542	2	3200	553	2	3200	44	597	2	3200	18	615	2	3200	0.192				
Sb Right	75	1	1600	77	1	1600	0	77	1	1600	0	77	1	1600	0.048				
Eb Left	81	0	0	83	0	0	0	83	0	0	0	83	0	0	0.000				
Eb Thru	4	1	1600	4	1	1600	0	4	1	1600	0	4	1	1600	0.085 *				
Eb Right	48	0	0	49	0	0	0	49	0	0	0	49	0	0	0.085 *				
Wb Left	11	0	0	11	0	0	11	22	0	0	0	22	0	0	0.000 *				
Wb Thru	6	1	1600	6	1	1600	0	6	1	1600	0	6	1	1600	0.046				
Wb Right	45	0	0	46	0	0	0	46	0	0	0	46	0	0	0.046				
Yellow Allowance:	0.150 *			0.150 *			0.150 *			0.150 *			0.150 *						
ICU	0.506			0.513			0.530			0.534			0.534						
LOS	A			A			A			A			A						
Total Vol.				1725				1760				1871				1901			
				35				111				1671				0			
				1760				1871				1901				0			

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.004
 Significant Impact: No
 Area Traffic Mitigation:

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Intersection: 3.
 N-S St: Cherry Avenue
 E-W St: Hill Street
 Project: KROC Community Center, Long Beach
 File: N:\2900\2072945\ICU\2945 ICU.xls
 Control Type: 50 Traffic Signal

INTERSECTION CAPACITY UTILIZATION
 Cherry Avenue at Hill Street
 Peak Hour: PM
 Annual Growth: 1.00%

Date: 05/21/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION		
	Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes Capacity Ratio	Added Volume	Total Volume	Lanes Capacity Ratio	Added Volume	Total Volume	Lanes Capacity Ratio	Added Volume	Total Volume	Lanes Capacity Ratio
Nb Left	54	1	1600 0.034 *	1	55	1	1600 0.034 *	0	55	1	1600 0.034 *	0	55	1	1600 0.034 *
Nb Thru	770	2	3200 0.245	15	785	2	3200 0.249	51	836	2	3200 0.267	21	857	2	3200 0.273
Nb Right	13	0	-	0	13	0	-	4	17	0	-	0	17	0	-
Sb Left	25	1	1600 0.016	1	26	1	1600 0.016	0	26	1	1600 0.016	0	26	1	1600 0.016
Sb Thru	926	2	3200 0.289 *	19	945	2	3200 0.295 *	53	998	2	3200 0.312 *	10	1008	2	3200 0.315 *
Sb Right	64	1	1600 0.040	1	65	1	1600 0.041	0	65	1	1600 0.041	0	65	1	1600 0.041
Eb Left	127	0	0 0.000	3	130	0	0 0.000	0	130	0	0 0.000	0	130	0	0 0.000
Eb Thru	5	1	1600 0.140 *	0	5	1	1600 0.143 *	0	5	1	1600 0.143 *	0	5	1	1600 0.143 *
Eb Right	92	0	-	2	94	0	-	0	94	0	-	0	94	0	-
Wb Left	10	0	0 0.000 *	0	10	0	0 0.000 *	3	13	0	0 0.000 *	0	13	0	0 0.000 *
Wb Thru	5	1	1600 0.024	0	5	1	1600 0.024	0	5	1	1600 0.026	0	5	1	1600 0.026
Wb Right	24	0	-	0	24	0	-	0	24	0	-	0	24	0	-
Yellow Allowance:	0.150 *			0.150 *			0.150 *			0.150 *			0.150 *		
ICU	0.613			0.622			0.639			0.642			0.642		
LOS	B			B			B			B			B		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.003
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	2115	42	2157	111	2268	31	2299	0	2299
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Intersection: 3.
 N-S St: Cherry Avenue
 E-W St: Hill Street
 Project: KROC Community Center, Long Beach
 File: N:\29002072945\ICU\Saturday 2945 ICU.xls
 Control Type: 50 Traffic Signal Split: No

INTERSECTION CAPACITY UTILIZATION
 Cherry Avenue at Hill Street
 Peak Hour: Midday
 Annual Growth: 1.00%

Date: 10/06/08
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION								
	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Ratio	V/C	Ratio			
Nb Left	38	1	1600	0.024	0	39	1	1600	0.024	0	39	1	1600	0.024	0	39	1	1600	0.024		
Nb Thru	968	2	3200	0.306	34	1021	2	3200	0.322	11	1032	2	3200	0.326	0	1032	2	3200	0.326		
Nb Right	10	0	0	-	0	10	0	0	-	0	10	0	0	-	0	10	0	0	-		
Sb Left	20	1	1600	0.013	0	20	1	1600	0.013	0	20	1	1600	0.013	0	20	1	1600	0.013		
Sb Thru	1127	2	3200	0.352	34	1184	2	3200	0.370	13	1197	2	3200	0.374	0	1197	2	3200	0.374		
Sb Right	45	1	1600	0.028	1	46	1	1600	0.029	0	46	1	1600	0.029	0	46	1	1600	0.029		
Eb Left	50	0	0	0.000	1	51	0	0	0.000	0	51	0	0	0.000	0	51	0	0	0.000		
Eb Thru	5	1	1600	0.050	0	5	1	1600	0.051	0	5	1	1600	0.051	0	5	1	1600	0.051		
Eb Right	25	0	0	-	1	26	0	0	-	0	26	0	0	-	0	26	0	0	-		
Wb Left	9	0	0	0.000	0	9	0	0	0.000	0	9	0	0	0.000	0	9	0	0	0.000		
Wb Thru	16	1	1600	0.024	0	16	1	1600	0.024	0	16	1	1600	0.024	0	16	1	1600	0.024		
Wb Right	13	0	0	-	0	13	0	0	-	0	13	0	0	-	0	13	0	0	-		
Yellow Allway Stop																0.160	0.160	0.160	0.160	0.160	0.160
ICU																0.576	0.584	0.586	0.589	0.589	0.589
LOS																A	A	A	A	A	A

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.004
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol:	2326	46	2372	68	2440	24	2464	0	2464
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Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Walnut Ave at Alamitos Ave [Existing]

Cycle (sec): 100 Critical Vol./Cap. (X): 0.434
Loss Time (sec): 0 Average Delay (sec/veh): 10.5
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Stop Sign), Rights (Include), Min. Green (0), and Lanes (0 0 1 0 0).

Volume Module: Table with 13 columns for traffic flows. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 13 columns. Rows include Adjustment (1.00), Lanes (0.24), and Final Sat. (166).

Capacity Analysis Module: Table with 13 columns. Rows include Vol/Sat (0.43), Crit Moves (****), Delay/Veh (11.3), Delay Adj (1.00), AdjDel/Veh (11.3), LOS by Move (B), ApproachDel (11.3), Delay Adj (1.00), ApprAdjDel (11.3), LOS by Appr (B), and AllWayAvgQ (0.7).

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #7 Walnut Ave at Alamitos Ave [Background]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.526
Loss Time (sec): 0 Average Delay (sec/veh): 11.8
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for various volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, FinalVolume).

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Adjustment, Lanes, Final Sat.).

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ).

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #9 Walnut Ave at Alamitos Ave [With Project]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.595
Loss Time (sec): 0 Average Delay (sec/veh): 13.1
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows for various volume and adjustment factors like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns for movements and 4 rows for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 13 columns for movements and 13 rows for Vol/Sat, Crit Moves, Delay/Veh, etc.

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Walnut Ave at Alamitos Ave [Existing]

Cycle (sec): 100 Critical Vol./Cap. (X): 0.403
Loss Time (sec): 0 Average Delay (sec/veh): 10.0
Optimal Cycle: 0 Level of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Stop Sign), Rights (Include), Min. Green (0), and Lanes (0 0 1 0 0).

Volume Module: Table with 13 columns for volume components. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 13 columns for saturation flow components. Rows include Adjustment (1.00), Lanes (0.21), and Final Sat. (156).

Capacity Analysis Module: Table with 13 columns for capacity analysis components. Rows include Vol/Sat (0.35), Crit Moves (****), Delay/Veh (10.1), Delay Adj (1.00), AdjDel/Veh (10.1), LOS by Move (B), ApproachDel (10.1), Delay Adj (1.00), ApprAdjDel (10.1), LOS by Appr (B), and AllWayAvgQ (0.5).

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Walnut Ave at Alamitos Ave [Background]

Cycle (sec): 100 Critical Vol./Cap. (X): 0.439
Loss Time (sec): 0 Average Delay (sec/veh): 10.6
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns for volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume).

Saturation Flow Module: Table with 13 columns for saturation flow metrics (Adjustment, Lanes, Final Sat.).

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics (Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ).

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Walnut Ave at Alamitos Ave [With Project]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.479
Loss Time (sec): 0 Average Delay (sec/veh): 11.5
Optimal Cycle: 0 Level Of Service: B

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 13 columns representing different traffic movements and 13 rows of volume-related metrics like Base Vol, Growth Adj, Initial Bse, etc.

Saturation Flow Module: Table with 13 columns and 3 rows showing adjustment factors, lane saturation, and final saturation values.

Capacity Analysis Module: Table with 13 columns and 13 rows analyzing capacity metrics such as Vol/Sat, Crit Moves, Delay/Veh, and LOS by Move.

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Walnut Ave at Alamitos Ave [Existing]

Cycle (sec): 100 Critical Vol./Cap.(X): 0.216
Loss Time (sec): 0 Average Delay (sec/veh): 8.2
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Stop Sign), Rights (Include), Min. Green (0 0 0), and Lanes (0 0 1 0 0).

Volume Module: Table with 13 columns for traffic volumes and adjustment factors. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module: Table with 13 columns for saturation flow factors. Rows include Adjustment (1.00), Lanes (0.09), and Final Sat. (69).

Capacity Analysis Module: Table with 13 columns for capacity analysis metrics. Rows include Vol/Sat (0.22), Crit Moves (****), Delay/Veh (8.4), Delay Adj (1.00), AdjDel/Veh (8.4), LOS by Move (A), ApproachDel (8.4), Delay Adj (1.00), ApprAdjDel (8.4), LOS by Appr (A), and AllWayAvgQ (0.3).

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Walnut Ave at Alamitos Ave [Background]

Cycle (sec): 100 Critical Vol./Cap. (X): 0.237
Loss Time (sec): 0 Average Delay (sec/veh): 8.4
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for volume components (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume).

Saturation Flow Module: Table with 12 columns for flow components (Adjustment, Lanes, Final Sat.).

Capacity Analysis Module: Table with 12 columns for capacity components (Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ).

Note: Queue reported is the number of cars per lane.

Level of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #4 Walnut Ave at Alamitos Ave [Background Plus Project]

Cycle (sec): 100 Critical Vol./Cap. (X): 0.274
Loss Time (sec): 0 Average Delay (sec/veh): 8.7
Optimal Cycle: 0 Level Of Service: A

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table with 12 columns for traffic movements and rows for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module: Table with 12 columns for traffic movements and rows for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module: Table with 12 columns for traffic movements and rows for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

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 (714) 641-1587

Intersection: 5
 N-S St: Cherry Avenue
 E-W St: 21st Street
 Project: KRCC Community Center, Long Beach
 File: N:\25000\2072945\ICU\2945 ICU.xls
 Control Type: 50 Traffic Signal Split: No

Cherry Avenue at 21st Street
 Peak Hour: AM
 Annual Growth: 1.00%

Date: 05/21/09
 Date of Count: 2008
 Projection Year: 2010

INTERSECTION CAPACITY UTILIZATION

Movement	2008 - EXISTING TRAFFIC			2010 - WITH AMBIENT GROWTH			2010 - WITH CUMULATIVE PROJECTS			2010 - WITH PROJECT TRAFFIC			2010 - WITH MITIGATION		
	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio
Nb Left	33	1	1600 0.021	1	34	1	1600 0.021	0	34	1	1600 0.021	0	34	1	1600 0.021
Nb Thru	746	2	3200 0.238 *	15	761	2	3200 0.242 *	55	816	2	3200 0.265 *	0	816	2	3200 0.267 *
Nb Right	14	0	-	0	14	0	-	17	31	0	-	6	37	0	-
Sb Left	27	1	1600 0.017 *	1	28	1	1600 0.018 *	0	28	1	1600 0.018 *	0	28	1	1600 0.018 *
Sb Thru	489	2	3200 0.153	10	499	2	3200 0.156	55	554	2	3200 0.173	0	554	2	3200 0.173
Sb Right	88	1	1600 0.055	2	90	1	1600 0.056	0	90	1	1600 0.056	18	108	1	1600 0.068
Eb Left	16	0	0 0.000 *	0	16	0	0 0.000 *	0	16	0	0 0.000 *	12	28	0	0 0.000 *
Eb Thru	26	1	1600 0.049	1	27	1	1600 0.050	0	27	1	1600 0.050	0	27	1	1600 0.058
Eb Right	36	0	-	1	37	0	-	0	37	0	-	0	37	0	-
Wb Left	6	1	1600 0.004	0	6	1	1600 0.004	22	28	1	1600 0.018	9	37	1	1600 0.023
Wb Thru	30	1	1600 0.097 *	1	31	1	1600 0.099 *	0	31	1	1600 0.099 *	0	31	1	1600 0.099 *
Wb Right	125	0	-	3	128	0	-	0	128	0	-	0	128	0	-
Yellow Allowance:	0.120 *			0.120 *			0.120 *			0.120 *			0.120 *		
ICU	0.472			0.479			0.502			0.504			0.504		
LOS	A			A			A			A			A		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.002
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	1636	35	1671	149	1820	45	1865	0	1865
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 (714) 641-1587

Intersection: **5** Cherry Avenue
 N-S St: 21st Street
 E-W St: KROC Community Center, Long Beach
 Project: N:\29002072945\ICU12945 ICU.xls
 File: N:\29002072945\ICU12945 ICU.xls
 Control Type: 5/2 Traffic Signal

Cherry Avenue at 21st Street
 Peak Hour: PM
 Annual Growth: 1.00%

Date: 05/21/09
 Date of Count: 2008
 Projection Year: 2010

INTERSECTION CAPACITY UTILIZATION

Movement	2008 - EXISTING TRAFFIC			2010 - WITH AMBIENT GROWTH			2010 - WITH CUMULATIVE PROJECTS			2010 - WITH PROJECT TRAFFIC			2010 - WITH MITIGATION					
	Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	V/C		
Nb Left	48	1	1600 0.030	1	49	1	1600 0.031	0	49	1	1600 0.031	0	49	1	1600 0.031	0.031		
Nb Thru	738	2	3200 0.233 *	15	753	2	3200 0.238 *	56	809	2	3200 0.258 *	0	809	2	3200 0.262 *	0.262 *		
Nb Right	9	0	-	0	9	0	-	9	18	0	0	0	28	0	0	-		
Sb Left	114	1	1600 0.071 *	2	116	1	1600 0.073 *	0	116	1	1600 0.073 *	0	116	1	1600 0.073 *	0.073 *		
Sb Thru	814	2	3200 0.254 *	16	830	2	3200 0.259 *	57	887	2	3200 0.277 *	0	887	2	3200 0.277 *	0.277 *		
Sb Right	54	1	1600 0.034	1	55	1	1600 0.034	0	55	1	1600 0.034	10	65	1	1600 0.041	0.041		
EB Left	48	0	0 0.000	1	49	0	0 0.000	0	49	0	0 0.000	21	70	0	0 0.000	0.000		
EB Thru	32	1	1600 0.061 *	1	33	1	1600 0.062 *	0	33	1	1600 0.062 *	0	33	1	1600 0.075 *	0.075 *		
EB Right	17	0	-	0	17	0	-	0	17	0	0	0	17	0	0	-		
WB Left	4	1	1600 0.003 *	0	4	1	1600 0.003 *	7	11	1	1600 0.007 *	5	16	1	1600 0.010 *	0.010 *		
WB Thru	20	1	1600 0.063	0	20	1	1600 0.064	0	20	1	1600 0.064	0	20	1	1600 0.064	0.064		
WB Right	80	0	-	2	82	0	-	0	82	0	0	0	82	0	0	-		
Yellow Allowance:	0.120 *			0.120 *			0.120 *			0.120 *			0.120 *			0.120 *		
ICU	0.488			0.496			0.520			0.540			0.540			0.540		
LOS	A			A			A			A			A			A		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.020
 Significant Impact: No

Area Traffic Mitigation:

Total Vol.	1978	39	2017	129	2146	46	2192	0	2192
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Intersection: 5.
 N-S St: Cherry Avenue
 E-W St: 21st Street
 Project: KROC Community Center, Long Beach
 File: N:\2900\2072945\ICU\Saturday 2945 ICU.xls
 Control Type: 50 Traffic Signal Split: Nb

INTERSECTION CAPACITY UTILIZATION

Cherry Avenue at 21st Street Midday
 Peak Hour: 1.00%
 Annual Growth:

Date: 01/09/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION		
	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity
Nb Left	11	1	1600	11	1	1600	0	11	1	1600	0	11	1	1600	0.007
Nb Thru	918	2	3200	936	2	3200	34	970	2	3200	0	970	2	3200	0.307
Nb Right	5	0	0	5	0	0	0	5	0	0	0	5	0	0	0
Sb Left	128	1	1600	131	1	1600	0	131	1	1600	0	131	1	1600	0.082
Sb Thru	978	2	3200	998	2	3200	34	1032	2	3200	0	1032	2	3200	0.323
Sb Right	53	1	1600	54	1	1600	0	54	1	1600	13	67	1	1600	0.042
Eb Left	28	0	0	29	0	0	0	29	0	0	11	40	0	0	0.000
Eb Thru	17	1	1600	17	1	1600	0	17	1	1600	0	17	1	1600	0.044
Eb Right	14	0	0	14	0	0	0	14	0	0	0	14	0	0	0
Wb Left	7	1	1600	7	1	1600	0	7	1	1600	6	13	1	1600	0.008
Wb Thru	8	1	1600	8	1	1600	0	8	1	1600	0	8	1	1600	0.048
Wb Right	67	0	0	68	0	0	0	68	0	0	0	68	0	0	0
Yellow Allowance	0.120			0.120			0.120			0.120			0.120		
ICU	0.535			0.544			0.555			0.561			0.561		
LOS	A			A			A			A			A		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.006
 Significant Impact: Nb
 Area Traffic Mitigation:

Total Vol.	2234	44	2278	68	2346	36	2382	0	2382
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Intersection: Martin Luther King Jr Avenue
 N-S St Pacific Coast Highway
 E-W St KROC Community Center, Long Beach
 Project: N:\2900\2072945\ICU2945 ICU.xls
 Control Type: 2Ø Traffic Signal

INTERSECTION CAPACITY UTILIZATION

Martin Luther King Jr Avenue at Pacific Coast Highway
 Peak Hour: PM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION		
	Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	Lanes	Capacity Ratio
Nb Left	80	1	1600 0.050 *	2	82	1	1600 0.051 *	0	82	1	1600 0.051 *	0	82	1	1600 0.051 *
Nb Thru	194	1	1600 0.121	4	198	1	1600 0.124	12	210	1	1600 0.131	0	210	1	1600 0.131
Nb Right	100	1	1600 0.063	2	102	1	1600 0.064	0	102	1	1600 0.064	5	107	1	1600 0.067
Sb Left	71	1	1600 0.044	1	72	1	1600 0.045	9	81	1	1600 0.051	5	86	1	1600 0.054
Sb Thru	214	1	1600 0.134 *	4	218	1	1600 0.136 *	18	236	1	1600 0.148 *	0	236	1	1600 0.148 *
Sb Right	38	1	1600 0.024	1	39	1	1600 0.024	47	86	1	1600 0.054	0	86	1	1600 0.054
Eb Left	79	1	1600 0.049	2	81	1	1600 0.051	32	113	1	1600 0.071	0	113	1	1600 0.071
Eb Thru	1478	3	4800 0.325 *	30	1508	3	4800 0.331 *	44	1552	3	4800 0.340 *	10	1562	3	4800 0.343 *
Eb Right	80	0	-	2	82	0	-	0	82	0	-	0	82	0	-
Wb Left	68	1	1600 0.043 *	1	69	1	1600 0.043 *	0	69	1	1600 0.043 *	10	79	1	1600 0.049 *
Wb Thru	1123	3	4800 0.244	22	1145	3	4800 0.249	48	1193	3	4800 0.260	21	1214	3	4800 0.266
Wb Right	47	0	-	1	48	0	-	6	54	0	-	10	64	0	-
Yellow Allowance:			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.652				0.661				0.682				0.691
LOS			B				B				B				B

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.009
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	3572	72	3644	216	3860	61	3921	0	3921
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Intersection: 6. Martin Luther King Jr Avenue
 N-S St: Pacific Coast Highway
 E-W St: KROC Community Center, Long Beach
 Project: N:\2800\2072845\ICU\Saturday 2945 ICU.xls
 File: N:\2800\2072845\ICU\Saturday 2945 ICU.xls
 Control Type: 20 Traffic Signal Split: No

INTERSECTION CAPACITY UTILIZATION

Martin Luther King Jr Avenue at Pacific Coast Highway
 Peak Hour: Midday
 Annual Growth: 1.00%

Date: 10/08/08
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION										
	Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	V/C Ratio							
Nb Left	98	1	1600	0.061 *	2	98	1	1600	0.061 *	0	98	1	1600	0.061 *	0	98	1	1600	0.061 *				
Nb Thru	129	1	1600	0.081	3	132	1	1600	0.083	27	159	1	1600	0.089	0	159	1	1600	0.089				
Nb Right	108	1	1600	0.068	2	110	1	1600	0.069	0	110	1	1600	0.069	6	116	1	1600	0.073				
Sb Left	93	1	1600	0.058	2	95	1	1600	0.059	13	108	1	1600	0.068	6	114	1	1600	0.071				
Sb Thru	148	1	1600	0.093 *	3	151	1	1600	0.094 *	25	177	1	1600	0.111 *	0	177	1	1600	0.111 *				
Sb Right	38	1	1600	0.024	1	39	1	1600	0.024	51	90	1	1600	0.056	0	90	1	1600	0.056				
Eb Left	61	1	1600	0.038 *	1	62	1	1600	0.039 *	50	112	1	1600	0.070 *	0	112	1	1600	0.070 *				
Eb Thru	788	3	4800	0.171	16	814	3	4800	0.174	41	855	3	4800	0.183	13	868	3	4800	0.185				
Eb Right	22	0	0	-	0	22	0	0	-	0	22	0	0	-	0	22	0	0	-				
Wb Left	60	1	1600	0.038	1	61	1	1600	0.038	0	61	1	1600	0.038	6	67	1	1600	0.042				
Wb Thru	893	3	4800	0.193 *	18	911	3	4800	0.197 *	42	953	3	4800	0.209 *	11	964	3	4800	0.213 *				
Wb Right	35	0	0	-	1	36	0	0	-	14	50	0	0	-	6	56	0	0	-				
Yellow Allowance:				0.100 *				0.100 *				0.100 *				0.100 *				0.100 *			
ICU				0.484				0.491				0.551				0.555				0.555			
LOS				A				A				A				A				A			

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.004
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	2481	50	2531	264	2795	48	2843	0	2843
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INTERSECTION CAPACITY UTILIZATION

Intersection: **T**
 N-S St: Orange Avenue / Alamitos Avenue
 E-W St: Pacific Coast Highway
 Project: KROC Community Center, Long Beach
 File: N:\2900207294\VCU\2945 VCU.xls
 Control Type: 50 Traffic Signal Split: No

Orange Avenue / Alamitos Avenue at Pacific Coast Highway
 Peak Hour: AM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION								
	Volume	Lanes	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio			
Nb Left	162	1	1600 0.101 *	3	165	1	1600 0.103 *	0	165	1	1600 0.103 *	0	165	1	1600 0.103 *	0	165	1	1600 0.103 *		
Nb Thru	534	2	3200 0.167	11	545	2	3200 0.170	5	550	2	3200 0.172	0	550	2	3200 0.172	0	550	2	3200 0.172		
Nb Right	231	1	1600 0.144	5	236	1	1600 0.148	0	236	1	1600 0.148	18	254	1	1600 0.159	0	254	1	1600 0.159		
Sb Left	98	1	1600 0.061	2	100	1	1600 0.063	0	100	1	1600 0.063	0	100	1	1600 0.063	0	100	1	1600 0.063		
Sb Thru	498	2	3200 0.156 *	10	508	2	3200 0.159 *	5	514	2	3200 0.161 *	0	514	2	3200 0.161 *	0	514	2	3200 0.161 *		
Sb Right	117	1	1600 0.073	2	119	1	1600 0.074	0	119	1	1600 0.074	0	119	1	1600 0.074	0	119	1	1600 0.074		
EB Left	144	1	1600 0.090	3	147	1	1600 0.092	0	147	1	1600 0.092	0	147	1	1600 0.092	0	147	1	1600 0.092		
EB Thru	1092	3	4800 0.249 *	22	1114	3	4800 0.254 *	50	1164	3	4800 0.265 *	37	1201	3	4800 0.272 *	0	1201	3	4800 0.272 *		
EB Right	104	0	-	2	106	0	-	0	106	0	-	0	106	0	-	0	106	0	-		
WB Left	331	1	1600 0.207 *	7	338	1	1600 0.211 *	0	338	1	1600 0.211 *	12	350	1	1600 0.219 *	0	350	1	1600 0.219 *		
WB Thru	1539	3	4800 0.356	31	1570	3	4800 0.363	42	1612	3	4800 0.372	23	1635	3	4800 0.377	0	1635	3	4800 0.377		
WB Right	170	0	-	3	173	0	-	0	173	0	-	0	173	0	-	0	173	0	-		
Yellow Allowance:	0.150 *			0.150 *			0.150 *			0.150 *			0.150 *			0.150 *			0.150 *		
ICU	0.863			0.877			0.890			0.905			0.905			0.905			0.905		
LOS	D			D			D			D			E			E			E		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.015
 Significant Impact: Yes
 Area Traffic Mitigation:

Total Vol.	5021	101	5122	102	5224	90	5314	0	5374
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Intersection: 7 Orange Avenue / Alamitos Avenue
 N-S St: Pacific Coast Highway
 E-W St: KRCC Community Center, Long Beach
 Project: N:\290002072945\ICU2945 ICU.xls
 File: N:\290002072945\ICU2945 ICU.xls
 Control Type: 5Ø Traffic Signal

INTERSECTION CAPACITY UTILIZATION
 Orange Avenue / Alamitos Avenue at Pacific Coast Highway
 Peak Hour: PM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION							
	Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	
Nb Left	108	1	1600	0.068	2	110	1	1600	0.069	0	110	1	1600	0.069	0	110	1	1600	0.069	
Nb Thru	532	2	3200	0.166 *	11	543	2	3200	0.170 *	16	559	2	3200	0.175 *	0	559	2	3200	0.175 *	
Nb Right	425	1	1600	0.266	9	434	1	1600	0.271	0	434	1	1600	0.271	10	444	1	1600	0.278	
Sb Left	128	1	1600	0.080 *	3	131	1	1600	0.082 *	0	131	1	1600	0.082 *	0	131	1	1600	0.082 *	
Sb Thru	544	2	3200	0.170	11	555	2	3200	0.173	16	571	2	3200	0.178	0	571	2	3200	0.178	
Sb Right	99	1	1600	0.062	2	101	1	1600	0.063	0	101	1	1600	0.063	0	101	1	1600	0.063	
Eb Left	133	1	1600	0.083	3	136	1	1600	0.085	0	136	1	1600	0.085	0	136	1	1600	0.085	
Eb Thru	1482	3	4800	0.333 *	30	1512	3	4800	0.339 *	53	1565	3	4800	0.350 *	19	1584	3	4800	0.354 *	
Eb Right	114	0	0	-	2	116	0	0	-	0	116	0	0	-	0	116	0	0	-	
Wb Left	224	1	1600	0.140 *	4	228	1	1600	0.143 *	0	228	1	1600	0.143 *	21	249	1	1600	0.156 *	
Wb Thru	852	3	4800	0.204	17	869	3	4800	0.208	54	923	3	4800	0.220	41	964	3	4800	0.228	
Wb Right	128	0	0	-	3	131	0	0	-	0	131	0	0	-	0	131	0	0	-	
Yellow Allowance:				0.150 *				0.150 *	0.150 *				0.150 *				0.150 *			
ICU				0.869				0.884	0.900				0.917				0.917			
LOS				D				D	D				D				D			

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.017
 Significant Impact: Yes

Area Traffic Mitigation:

Total Vol.	4769	97	4866	139	5005	91	5096	0	5096
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INTERSECTION CAPACITY UTILIZATION

Orange Avenue / Alamitos Avenue at Pacific Coast Highway
 Peak Hour: Midday
 Annual Growth: 1.00%

10/05/08
 Date:
 Date of Count: 2008
 Projection Year: 2010

Intersection: 7. Orange Avenue / Alamitos Avenue
 N-S St: Pacific Coast Highway
 E-W St: KROC Community Center, Long Beach
 Project: NA29001072945\ICU\Saturday 2945 ICU.xls
 File: NA29001072945\ICU\Saturday 2945 ICU.xls
 Control Type: 50 Traffic Signal Split: No

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION		
	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity
Nb Left	139	1	1600	142	1	1600	142	1	1600	142	1	1600	142	1	1600
Nb Thru	354	2	3200	361	2	3200	34	395	2	3200	395	2	3200	2	3200
Nb Right	169	1	1600	172	1	1600	0	172	1	1600	185	1	1600	185	1
Sb Left	114	1	1600	116	1	1600	0	116	1	1600	116	1	1600	116	1
Sb Thru	323	2	3200	329	2	3200	34	363	2	3200	363	2	3200	363	2
Sb Right	53	1	1600	54	1	1600	0	54	1	1600	54	1	1600	54	1
Eb Left	61	1	1600	62	1	1600	0	62	1	1600	62	1	1600	62	1
Eb Thru	864	3	4800	881	3	4800	54	935	3	4800	25	960	3	4800	
Eb Right	102	0	0	104	0	0	0	104	0	0	0	104	0	0	
Wb Left	139	1	1600	142	1	1600	0	142	1	1600	11	153	1	1600	
Wb Thru	789	3	4800	805	3	4800	56	861	3	4800	22	883	3	4800	
Wb Right	45	0	0	46	0	0	0	46	0	0	0	46	0	0	
Yellow Allowance: 0.150															
ICU 0.626															
LOS B 0.636															
0.150															
0.670															
B 0.670															

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.013
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	3152	62	3214	178	3392	71	3463	0	3463
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Intersection: **B** Walnut Avenue
 N-S St: Pacific Coast Highway
 E-W St: KROC Community Center, Long Beach
 Project: N:\290002072945\ICU2945 ICU.xls
 File: N:\290002072945\ICU2945 ICU.xls
 Control Type: 2Ø Traffic Signal Split: No

INTERSECTION CAPACITY UTILIZATION
 Walnut Avenue at Pacific Coast Highway
 Peak Hour: AM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 - EXISTING TRAFFIC			2010 - WITH AMBIENT GROWTH			2010 - WITH CUMULATIVE PROJECTS			2010 - WITH PROJECT TRAFFIC			2010 - WITH MITIGATION		
	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio
Nb Left	42	0	0.000 *	1	43	0	0.000 *	1	44	0	0.000 *	0	57	0	0.000 *
Nb Thru	181	1	1600 0.159	4	185	1	1600 0.163	30	215	1	1600 0.184	18	233	1	1600 0.196
Nb Right	32	0	-	1	33	0	-	3	36	0	-	0	36	0	-
Sb Left	68	0	0.000 *	1	69	0	0.000 *	0	69	0	0.000 *	0	69	0	0.000 *
Sb Thru	89	1	1600 0.240 *	2	91	1	1600 0.245 *	22	113	1	1600 0.264 *	12	125	1	1600 0.276 *
Sb Right	227	0	-	5	232	0	-	9	241	0	-	6	247	0	-
Eb Left	108	1	1600 0.088 *	2	110	1	1600 0.089 *	11	121	1	1600 0.076 *	9	130	1	1600 0.081 *
Eb Thru	1203	3	4800 0.259	24	1227	3	4800 0.264	38	1265	3	4800 0.273	46	1311	3	4800 0.282
Eb Right	41	0	-	1	42	0	-	1	43	0	-	0	43	0	-
Wb Left	37	1	1600 0.023	1	38	1	1600 0.024	2	40	1	1600 0.025	0	40	1	1600 0.025
Wb Thru	1708	3	4800 0.375 *	34	1742	3	4800 0.383 *	32	1774	3	4800 0.390 *	29	1803	3	4800 0.396 *
Wb Right	94	0	-	2	96	0	-	0	96	0	-	0	96	0	-
Yellow Allowance:	0.100 *			0.100 *			0.100 *			0.100 *			0.100 *		
ICU	0.783			0.797			0.830			0.853			0.876		
LOS	C			C			D			D			D		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Area Traffic Mitigation: Volumes are adjusted to account for re-routed volumes due to left-turn restrictions at Rose Avenue.
 Project ICU Impact: 0.023
 Significant Impact: No

Total Vol.	3830	78	3908	149	4057	120	4177	0	4210
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Intersection: Walnut Avenue
 N-S St: Pacific Coast Highway
 E-W St: KROC Community Center, Long Beach
 Project: N:\29002072945\ICU2945 ICU.xls
 Control Type: 2Ø Traffic Signal

INTERSECTION CAPACITY UTILIZATION

Walnut Avenue at Pacific Coast Highway
 Peak Hour: PM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 - EXISTING TRAFFIC			2010 - WITH AMBIENT GROWTH			2010 - WITH CUMULATIVE PROJECTS			2010 - WITH PROJECT TRAFFIC			2010 - WITH MITIGATION								
	Volume	Lanes	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio			
Nb Left	38	0	0.000 *	1	39	0	0.000 *	1	40	0	0.000 *	0	40	0	0.000 *	0	47	0	0.000 *		
Nb Thru	114	1	0.123	2	116	1	0.126	12	128	1	0.135	10	138	1	0.141	0	138	1	0.146		
Nb Right	45	0	-	1	46	0	-	2	48	0	-	0	48	0	-	0	48	0	-		
Sb Left	71	0	0.000 *	1	72	0	0.000 *	0	72	0	0.000 *	0	72	0	0.000 *	0	125	0	0.000 *		
Sb Thru	111	1	0.224 *	2	113	1	0.229 *	18	131	1	0.243 *	21	152	1	0.262 *	0	152	1	0.295 *		
Sb Right	177	0	-	4	181	0	-	4	185	0	-	10	195	0	-	0	195	0	-		
Eb Left	93	1	0.058	2	95	1	0.059	3	98	1	0.061	5	103	1	0.064	0	109	1	0.068		
Eb Thru	1896	3	0.401 *	38	1924	3	0.409 *	48	1972	3	0.420 *	24	1996	3	0.425 *	0	1996	3	0.423 *		
Eb Right	39	0	-	1	40	0	-	2	42	0	-	0	42	0	-	0	42	0	-		
Wb Left	38	1	0.024 *	1	39	1	0.024 *	3	42	1	0.026 *	0	42	1	0.026 *	0	42	1	0.026 *		
Wb Thru	1149	3	0.250	23	1172	3	0.255	49	1221	3	0.266	52	1273	3	0.276	0	1273	3	0.276		
Wb Right	53	0	-	1	54	0	-	0	54	0	-	0	54	0	-	0	54	0	-		
Yellow Allowance:	0.100 *			0.100 *			0.100 *			0.100 *			0.100 *			0.100 *			0.100 *		
ICU	0.743			0.762			0.789			0.813			0.844			0.844			0.844		
LOS	C			C			C			D			D			D			D		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.024
 Significant Impact: No

Area Traffic Mitigation: Volumes are adjusted to account for re-routed volumes due to left-turn restrictions at Rose Avenue.

Total Vcl.	3814	77	3891	142	4033	122	4155	0	4211
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INTERSECTION CAPACITY UTILIZATION

Intersection: Walnut Avenue
 N-S St: Pacific Coast Highway
 E-W St: KROC Community Center, Long Beach
 Project: N:\2300\207294\VCU\Saturday 2945 ICU.xls
 File: N:\2300\207294\VCU\Saturday 2945 ICU.xls
 Control Type: 20 Traffic Signal Split: No

Walnut Avenue at Pacific Coast Highway
 Peak Hour: Midday
 Annual Growth: 1.00%

Date: 01/09/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION		
	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio
Nb Left	36	0	0.000 *	1	37	0	0.000 *	1	38	0	0.000 *	0	38	0	0.000 *
Nb Thru	89	1	1600 0.085	1	70	1	1600 0.087	7	77	1	1600 0.084	13	90	1	1600 0.102
Nb Right	31	0	0	1	32	0	0	3	35	0	0	0	35	0	0
Sb Left	27	0	0.000 *	1	28	0	0.000 *	0	28	0	0.000 *	0	28	0	0.000 *
Sb Thru	77	1	1600 0.103 *	2	79	1	1600 0.106 *	8	87	1	1600 0.111 *	11	98	1	1600 0.121 *
Sb Right	61	0	0	1	62	0	0	0	62	0	0	6	68	0	0
Eb Left	86	1	1600 0.041	1	67	1	1600 0.042	0	67	1	1600 0.042	6	73	1	1600 0.046
Eb Thru	1029	3	4800 0.221 *	21	1050	3	4800 0.225 *	52	1102	3	4800 0.237 *	32	1134	3	4800 0.243 *
Eb Right	31	0	0	1	32	0	0	2	34	0	0	0	34	0	0
Wb Left	27	1	1600 0.017 *	1	28	1	1600 0.018 *	3	31	1	1600 0.019 *	0	31	1	1600 0.019 *
Wb Thru	893	3	4800 0.192	16	911	3	4800 0.196	55	966	3	4800 0.207	28	994	3	4800 0.213
Wb Right	27	0	0	1	28	0	0	0	28	0	0	0	28	0	0
Yellow Allway:															
0.100															
0.441															
A															
0.449															
A															
0.467															
A															
0.100															
0.483															
A															
0.506															
A															
ICU LOS															
0.441															
A															
0.449															
A															
0.467															
A															
0.100															
0.483															
A															
0.506															
A															
Total Vol.															
2374															
50															
2424															
131															
2555															
96															
2651															
0															
2685															

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Area Traffic Mitigation: Volumes are adjusted to account for re-routed volumes due to left-turn restrictions at Rose Avenue.

Project ICU Impact: 0.016
 Significant Impact: No

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection # 9 Rose Ave at PCH [Existing]

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: F[241.1]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes (0 0 1! 0 0).

Volume Module table with 13 columns and 13 rows including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module table with 13 columns and 2 rows including Critical Gp and FollowUpTim.

Capacity Module table with 13 columns and 4 rows including Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module table with 13 columns and 10 rows including 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Rose Ave at PCH [Background]

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: F[289.6]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes (0 0 1! 0 0).

Volume Module: Table with 13 columns for volume components like Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume.

Critical Gap Module: Table with 13 columns for gap and follow-up times, including values like 7.5, 6.5, 6.9, 3.5, 4.1, 2.2.

Capacity Module: Table with 13 columns for capacity-related metrics like Cnflct Vol, Potent Cap., Move Cap., Volume/Cap.

Level Of Service Module: Table with 13 columns for LOS metrics like 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection # 9, Rose Ave at PCH [Background + Project]

Average Delay (sec/veh): 32.9 Worst Case Level Of Service: F[1717.9]

Table with 4 columns: Approach (North Bound, South Bound, East Bound, West Bound) and 3 sub-columns for movements (L, T, R). Rows include Control, Rights, and Lanes.

Volume Module: Table with 12 columns for different volume types (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume) and 4 columns for approaches.

Critical Gap Module: Table with 12 columns for critical gap and follow-up time for each approach.

Capacity Module: Table with 12 columns for capacity metrics (Cnflct Vol, Potent Cap., Move Cap., Volume/Cap) and 4 columns for approaches.

Level Of Service Module: Table with 12 columns for LOS metrics (2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS) and 4 columns for approaches.

Note: Queue reported is the number of cars per lane.

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Intersection: **9** Rose Avenue
 N-S St: Pacific Coast Highway
 E-W St: KROC Community Center, Long Beach
 Project: N:\29002072945\ICU2945 ICU.xls
 File: N:\29002072945\ICU2945 ICU.xls
 Control Type: Two-way Stop Split: No

INTERSECTION CAPACITY UTILIZATION
 Rose Avenue at Pacific Coast Highway
 Peak Hour: AM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION					
	Volume	Lanes	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio
Nb Left	13	0	0.000	0	13	0	0.000	0	13	0	0.000	0	13	0	0.000	0	0.000	*
Nb Thru	0	1	1600	0	0	1	1600	0.029	0	0	1	1600	0.029	0	0	1	1600	0.029
Nb Right	32	0	-	1	33	0	-	-	0	33	0	-	-	0	33	0	-	-
Sb Left	1	0	0.000	0	1	0	0.000	0.001	0	1	0	0.000	0.001	0	1	0	0.000	0.041
Sb Thru	0	1	1600	0	0	1	1600	0.001	0	0	1	1600	0.001	0	0	1	1600	0.041
Sb Right	0	0	-	0	0	0	-	-	0	0	0	-	-	0	0	0	-	-
Wb Left	2	1	1600	0	2	1	1600	0.001	0	2	1	1600	0.001	0	2	1	1600	0.030
Wb Thru	1405	3	4800	28	1433	3	4800	0.303	41	1474	3	4800	0.311	0	1474	3	4800	0.311
Wb Right	19	0	-	0	19	0	-	-	0	19	0	-	-	0	19	0	-	-
Yb Left	21	1	1600	0	21	1	1600	0.013	0	21	1	1600	0.013	0	21	1	1600	0.013
Yb Thru	1885	3	4800	38	1923	3	4800	0.401	34	1957	3	4800	0.408	0	1957	3	4800	0.419
Yb Right	1	0	-	0	1	0	-	-	0	1	0	-	-	0	1	0	-	-
Yellow Allowance:	0.100 *			0.100 *			0.100 *			0.100 *			0.100 *					
ICU	0.522			0.531			0.538			0.590			0.590					
LOS	A			A			A			A			A					

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.052
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	3379	67	3446	75	3521	165	3686	0	3686
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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection # 9 Rose Ave at PCH [Existing]

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: F[96.6]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, and Lanes.

Volume Module table with 13 columns and 13 rows including Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume.

Critical Gap Module table with 13 columns and 2 rows including Critical Gp and FollowUpTim.

Capacity Module table with 13 columns and 4 rows including Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module table with 13 columns and 10 rows including 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9. Rose Ave at PCH [Background]

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: F[132.7]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, and Lanes.

Volume Module: Table with 12 columns for volume and growth factors. Rows include Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, and FinalVolume.

Critical Gap Module: Table with 12 columns for gap and follow-up times. Rows include Critical Gp and FollowUpTim.

Capacity Module: Table with 12 columns for capacity and volume/capacity. Rows include Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module: Table with 12 columns for LOS and delay. Rows include 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection # 9 Rose Ave at PCH [Background + Project]

Average Delay (sec/veh): 33.8 Worst Case Level Of Service: F[956.6]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 12 columns for volume metrics (Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, FinalVolume) across four approaches.

Critical Gap Module: Table with 12 columns for gap metrics (Critical Gp, FollowUpTim) across four approaches.

Capacity Module: Table with 12 columns for capacity metrics (Cnflct Vol, Potent Cap., Move Cap., Volume/Cap) across four approaches.

Level Of Service Module: Table with 12 columns for LOS metrics (2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS) across four approaches.

Note: Queue reported is the number of cars per lane.

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 1580 Corporate Drive, Suite 122, Costa Mesa CA 92626
 (714) 641-1587

Intersection: ¹ Rose Avenue
 N-S St: Pacific Coast Highway
 E-W St: KROC Community Center, Long Beach
 Project: N:\2900\2072945\CU\2945 ICU.xls
 File: N:\2900\2072945\CU\2945 ICU.xls
 Control Type: Two-way Stop

INTERSECTION CAPACITY UTILIZATION

Rose Avenue at Pacific Coast Highway
 Peak Hour: PM
 Annual Growth: 1.00%

Date: 01/09/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION		
	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio	Volume	Lanes	Capacity Ratio
Nb Left	7	0	0.000	7	0	0.000	7	0	0.000	7	0	0.000	7	0	0.000
Nb Thru	0	1	1600 0.026 *	0	1	1600 0.026 *	0	1	1600 0.026 *	0	1	1600 0.026 *	0	1	1600 0.026 *
Nb Right	34	0	-	35	0	-	35	0	-	35	0	-	35	0	-
Sb Left	1	0	0.000 *	1	0	0.000 *	1	0	0.000 *	62	0	0.000 *	63	0	0.000 *
Sb Thru	0	1	1600 0.002	0	1	1600 0.002	0	1	1600 0.002	0	1	1600 0.002	0	1	1600 0.002
Sb Right	2	0	-	2	0	-	2	0	-	52	0	-	54	0	-
Eb Left	5	1	1600 0.003	5	1	1600 0.003	5	1	1600 0.003	24	1	1600 0.018	29	1	1600 0.018
Eb Thru	1940	3	4800 0.409 *	1979	3	4800 0.417 *	2029	3	4800 0.427 *	2029	3	4800 0.427 *	2029	3	4800 0.427 *
Eb Right	21	0	-	21	0	-	21	0	-	21	0	-	21	0	-
Wb Left	34	1	1600 0.021 *	35	1	1600 0.022 *	35	1	1600 0.022 *	0	1	1600 0.022 *	0	1	1600 0.022 *
Wb Thru	1194	3	4800 0.250	1218	3	4800 0.255	1270	3	4800 0.265	0	3	4800 0.271	0	3	4800 0.271
Wb Right	4	0	-	4	0	-	4	0	-	29	33	0	33	0	0
Yellow Allowance:	0.100 *			0.100 *			0.100 *			0.100 *			0.100 *		
ICU	0.566			0.575			0.575			0.622			0.622		
LOS	A			A			A			B			B		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.047
 Significant Impact: No

Total Vol.	3242	65	3307	102	3409	167	3576	0	3576
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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection # 9 Rose Ave at PCH [Existing]

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C [18.2]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 13 columns for different volume types (Base Vol, Growth Adj, etc.) and 4 rows for North, South, East, and West bounds.

Critical Gap Module: Table with 13 columns for gap and follow-up times and 4 rows for North, South, East, and West bounds.

Capacity Module: Table with 13 columns for capacity metrics (Conflict Vol, Potent Cap, etc.) and 4 rows for North, South, East, and West bounds.

Level of Service Module: Table with 13 columns for LOS metrics (2Way95thQ, Control Del, etc.) and 4 rows for North, South, East, and West bounds.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #9 Rose Ave at PCH [Background]

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C[20.1]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Approach, Movement, Control, Rights, and Lanes.

Volume Module: Table with 12 columns representing different traffic movements and 10 rows of volume data including Base Vol, Growth Adj, Initial Bse, etc.

Critical Gap Module: Table with 12 columns and 2 rows showing Critical Gp and FollowUpTim values.

Capacity Module: Table with 12 columns and 4 rows showing Capacity-related metrics like Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap.

Level Of Service Module: Table with 12 columns and 10 rows showing LOS-related metrics like 2Way95thQ, Control Del, LOS by Move, etc.

Note: Queue reported is the number of cars per lane.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection # 4. Rose Ave at PCH [Background Plus Project]

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: F[64.7]

Table with 4 columns: North Bound, South Bound, East Bound, West Bound. Rows include Movement, Control, Rights, and Lanes.

Volume Module table with 12 columns representing different traffic movements and 10 rows of volume-related metrics.

Critical Gap Module table with 12 columns and 2 rows showing gap and follow-up times.

Capacity Module table with 12 columns and 4 rows showing capacity and volume/capacity ratios.

Level Of Service Module table with 12 columns and 10 rows detailing delay, LOS, and approach metrics.

Note: Queue reported is the number of cars per lane.

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 (714) 641-1587

Intersection: 9. Ross Avenue
 N-S St: Pacific Coast Highway
 E-W St: KROC Community Center, Long Beach
 Project: N:28002072945\ICU\Saturday 2945 ICU.xls
 Control Type: Two-way Stop Split: No

INTERSECTION CAPACITY UTILIZATION

Rose Avenue at Pacific Coast Highway
 Peak Hour: Midday
 Annual Growth: 1.00%

Date: 01/09/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION			
	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	Volume	Lanes	Capacity	
Nb Left	5	0	0.000	0	5	0	0.000	0	5	0	0.000	0	5	0	0.000	
Nb Thru	0	1	1600	0	0	1	1600	0.031	0	0	1	1600	0	0	1	1600
Nb Right	43	0	-	1	44	0	-	-	44	0	-	0	44	0	0	
Sb Left	1	0	0.000	0	1	0	0.000	0	34	0	0.000	0	34	0	0.000	
Sb Thru	0	1	1600	0	0	1	1600	0.003	0	0	1	1600	0	0	1	1600
Sb Right	3	0	-	0	3	0	-	-	28	0	-	0	31	0	0	
Eb Left	3	1	1600	0	3	1	1600	0.002	0	35	1	1600	0	35	1	1600
Eb Thru	1058	3	4800	21	1079	3	4800	0.224	55	1134	3	4800	0	1134	3	4800
Eb Right	15	0	-	0	15	0	-	-	0	15	0	-	0	15	0	-
Wb Left	19	1	1600	0	19	1	1600	0.012	0	19	1	1600	0	19	1	1600
Wb Thru	957	3	4800	19	976	3	4800	0.204	58	1034	3	4800	0	1034	3	4800
Wb Right	3	0	-	0	3	0	-	-	0	3	0	-	0	3	0	-
Yellow Allowance:	0.100			0.100			0.100			0.100			0.100			
ICU	0.366			0.371			0.382			0.382			0.392			
LOS	A			A			A			A			A			

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.010
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	2107	41	2148	113	2261	131	2392	0	2392
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 (714) 641-1557

INTERSECTION CAPACITY UTILIZATION

Intersection: I D
 N-S St: Chery Avenue
 E-W St: Pacific Coast Highway
 Project: KROC Community Center, Long Beach
 File: N:\2900\2072945\ICU2945 ICU.xls
 Control Type: 5/8 Traffic Signal Split: No

Chery Avenue at Pacific Coast Highway
 Peak Hour: AM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION		
	Volume	Lanes	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	V/C Ratio
Nb Left	102	1	1600 0.064	2	104	1	1600 0.065	1	105	1	1600 0.066	18	123	1	1600 0.077
Nb Thru	328	1	1600 0.205 *	7	335	2	3200 0.111 *	44	379	2	3200 0.125 *	0	379	2	3200 0.125 *
Nb Right	19	1	1600 0.012	0	19	0	0	2	21	0	0	0	21	0	0
Sb Left	120	1	1600 0.075 *	2	122	1	1600 0.076 *	13	135	1	1600 0.084 *	0	135	1	1600 0.084 *
Sb Thru	230	1	1600 0.144	5	235	2	3200 0.073	31	266	2	3200 0.083	0	266	2	3200 0.083
Sb Right	163	1	1600 0.102	3	166	1	1600 0.104	1	167	1	1600 0.104	9	176	1	1600 0.110
EB Left	89	1	1600 0.056 *	2	91	1	1600 0.057 *	2	93	1	1600 0.058 *	6	99	1	1600 0.062 *
EB Thru	1189	3	4800 0.259	24	1213	3	4800 0.264	39	1252	3	4800 0.272	17	1269	3	4800 0.278
EB Right	53	0	0	1	54	0	0	0	54	0	0	12	66	0	0
WB Left	39	1	1600 0.024	1	40	1	1600 0.025	0	40	1	1600 0.025	0	40	1	1600 0.025
WB Thru	1570	3	4800 0.371 *	31	1601	3	4800 0.378 *	32	1633	3	4800 0.389 *	28	1661	3	4800 0.394 *
WB Right	210	0	0	4	214	0	0	18	232	0	0	0	232	0	0
Yellow Allowance:	0.120 *			0.120 *			0.120 *			0.120 *			0.120 *		
ICU	0.827			0.742			0.776			0.785			0.785		
LOS	D			C			C			C			C		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.009
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	4112	82	4194	183	4377	90	4467	0	4467
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LINSCOTT, LAW & GREENSPAN, ENGINEERS
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Intersection: I/O
 N-S St: Cherry Avenue
 E-W St: Pacific Coast Highway
 Project: KRCC Community Center, Long Beach
 File: N:\29002072945\ICU2945 ICU.xls
 Control Type: 50 Traffic Signal

INTERSECTION CAPACITY UTILIZATION

Cherry Avenue at Pacific Coast Highway
 Peak Hour: PM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 - EXISTING TRAFFIC			2010 - WITH AMBIENT GROWTH			2010 - WITH CUMULATIVE PROJECTS			2010 - WITH PROJECT TRAFFIC			2010 - WITH MITIGATION		
	Volume	Lanes	Capacity Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	V/C Ratio
Nb Left	56	1	1600 0.035	1	57	1	1600 0.036	1	58	1	1600 0.036	10	68	1	1600 0.043
Nb Thru	360	1	1600 0.225 *	7	367	2	3200 0.128 *	25	392	2	3200 0.136 *	0	392	2	3200 0.136 *
Nb Right	40	1	1600 0.025	1	41	0	0 -	1	42	0	0 -	0	42	0	0 -
Sb Left	170	1	1600 0.106 *	3	173	1	1600 0.108 *	18	191	1	1600 0.119 *	0	191	2	2880 0.066 *
Sb Thru	437	1	1600 0.273	9	446	2	3200 0.139	31	477	2	3200 0.149	0	477	2	3200 0.149
Sb Right	128	1	1600 0.080	3	131	1	1600 0.082	5	136	1	1600 0.085	5	141	1	1600 0.088
Eb Left	114	1	1600 0.071	2	116	1	1600 0.073	5	121	1	1600 0.075	10	131	1	1600 0.082
Eb Thru	1784	3	4800 0.386 *	36	1820	3	4800 0.394 *	44	1864	3	4800 0.403 *	31	1895	3	4800 0.414 *
Eb Right	70	0	0 -	1	71	0	0 -	1	72	0	0 -	21	93	0	0 -
Wb Left	47	1	1600 0.029 *	1	48	1	1600 0.030 *	2	50	1	1600 0.031 *	0	50	1	1600 0.031 *
Wb Thru	1054	3	4800 0.254	21	1075	3	4800 0.259	46	1121	3	4800 0.272	14	1135	3	4800 0.275
Wb Right	165	0	0 -	3	168	0	0 -	16	184	0	0 -	0	184	0	0 -
Yellow Allowance:	0.120 *			0.120 *			0.120 *			0.120 *			0.120 *		
ICU	0.866			0.780			0.809			0.820			0.767		
LOS	D			C			D			D			C		

* Key conflicting movement as a part of ICU
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.011
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	4425	88	4513	195	4708	91	4799	0	4799
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Intersection: 10
 N-S St: Chery Avenue
 E-W St: Pacific Coast Highway
 Project: KROC Community Center, Long Beach
 File: N:\2000\2072945\ICU\Saturday 2945 ICU.xls
 Control Type: 50 Traffic Signal Split: No

INTERSECTION CAPACITY UTILIZATION

Chery Avenue at Pacific Coast Highway
 Peak Hour: Midday
 Annual Growth: 1.00%

Date: 01/09/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC				2010 WITH AMBIENT GROWTH				2010 WITH CUMULATIVE PROJECTS				2010 WITH PROJECT TRAFFIC				2010 WITH MITIGATION			
	Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	
Nb Left	69	1	1600	0.243	1	70	1	1600	0.044	1	71	1	1600	0.044	13	84	1	1600	0.053	
Nb Thru	591	1	1600	0.369	12	603	2	3200	0.202	14	617	2	3200	0.207	0	617	2	3200	0.207	
Nb Right	42	1	1600	0.026	1	43	0	0	-	1	44	0	0	-	0	44	0	0	-	
Sb Left	209	1	1600	0.131	4	213	1	1600	0.133	11	224	1	1600	0.140	0	224	1	1600	0.140	
Sb Thru	510	1	1600	0.319	10	520	2	3200	0.163	14	534	2	3200	0.167	0	534	2	3200	0.167	
Sb Right	126	1	1600	0.079	3	129	1	1600	0.081	4	133	1	1600	0.083	6	139	1	1600	0.087	
EB Left	134	1	1600	0.084	3	137	1	1600	0.085	4	141	1	1600	0.088	6	147	1	1600	0.092	
EB Thru	861	3	4800	0.202	17	878	3	4800	0.206	50	928	3	4800	0.216	17	945	3	4800	0.222	
EB Right	107	0	0	-	2	109	0	0	-	1	110	0	0	-	11	121	0	0	-	
WB Left	54	1	1600	0.034	1	55	1	1600	0.034	1	56	1	1600	0.035	0	56	1	1600	0.035	
WB Thru	796	3	4800	0.216	16	812	3	4800	0.222	53	865	3	4800	0.236	19	884	3	4800	0.240	
WB Right	249	0	0	-	5	254	0	0	-	12	266	0	0	-	0	266	0	0	-	
Yellow Allowance:	0.120				0.120				0.120				0.120				0.120			
ICU	0.922				0.763				0.791				0.789				0.799			
LOS	E				C				C				C				C			

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.008
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	3748	75	3823	166	3989	72	4061	0	4061
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LINSCOTT, LAW & GREENSPAN, ENGINEERS
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Intersection: I1
 N-S St: Temple Avenue
 E-W St: Pacific Coast Highway
 Project: KRCC Community Center, Long Beach
 File: N:\230002072945\ICU2945 ICU.xls
 Control Type: 20 Traffic Signal Split: No

INTERSECTION CAPACITY UTILIZATION

Temple Avenue at Pacific Coast Highway
 Peak Hour: AM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 - EXISTING TRAFFIC			2010 - WITH AMBIENT GROWTH			2010 - WITH CUMULATIVE PROJECTS			2010 - WITH PROJECT TRAFFIC			2010 - WITH MITIGATION								
	Volume	Lanes	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio			
Nb Left	72	0	0.000	1	73	0	0.000	0	73	0	0.000	0	73	0	0.000	0	0	0.000			
Nb Thru	64	1	1600 0.114 *	1	65	1	1600 0.116 *	0	65	1	1600 0.118 *	0	65	1	1600 0.123 *	0	65	1	1600 0.123 *		
Nb Right	46	0	-	1	47	0	-	3	50	0	-	0	50	0	-	0	50	0	-		
Sb Left	43	0	0.000 *	1	44	0	0.000 *	0	44	0	0.000 *	0	44	0	0.000 *	0	44	0	0.000 *		
Sb Thru	49	1	1600 0.078	1	50	1	1600 0.080	0	50	1	1600 0.080	0	50	1	1600 0.080	0	50	1	1600 0.080		
Sb Right	33	0	-	1	34	0	-	0	34	0	-	0	34	0	-	0	34	0	-		
Eb Left	37	1	1600 0.023 *	1	38	1	1600 0.024 *	0	38	1	1600 0.024 *	0	38	1	1600 0.024 *	0	38	1	1600 0.024 *		
Eb Thru	1181	3	4800 0.256	24	1205	3	4800 0.262	54	1259	3	4800 0.273	12	1271	3	4800 0.277	0	1271	3	4800 0.277		
Eb Right	50	0	-	1	51	0	-	0	51	0	-	6	57	0	-	0	57	0	-		
Wb Left	31	1	1600 0.019	1	32	1	1600 0.020	11	43	1	1600 0.027	0	43	1	1600 0.027	0	43	1	1600 0.027		
Wb Thru	1430	3	4800 0.305 *	29	1459	3	4800 0.312 *	50	1509	3	4800 0.322 *	18	1527	3	4800 0.326 *	0	1527	3	4800 0.326 *		
Wb Right	36	0	-	1	37	0	-	0	37	0	-	0	37	0	-	0	37	0	-		
Yellow Allowances:	0.100 *			0.100 *			0.100 *			0.100 *			0.100 *			0.100 *			0.100 *		
ICU	0.542			0.552			0.564			0.573			0.573			0.573			0.573		
LOS	A			A			A			A			A			A			A		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.009
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	3072	63	3735	178	3253	45	3298	0	3298
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LINSCOTT, LAW & GREENSPAN, ENGINEERS
 1580 Corporate Drive, Suite 122, Costa Mesa CA 92626
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Intersection: 11
 N-S St: Temple Avenue
 E-W St: Pacific Coast Highway
 Project: KRCC Community Center, Long Beach
 File: N:\290002072945\ICU\2945 ICU.xls
 Control Type: 20 Traffic Signal

INTERSECTION CAPACITY UTILIZATION

Temple Avenue at Pacific Coast Highway
 Peak Hour: PM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 - EXISTING TRAFFIC			2010 - WITH AMBIENT GROWTH			2010 - WITH CUMULATIVE PROJECTS			2010 - WITH PROJECT TRAFFIC			2010 - WITH MITIGATION								
	Volume	Lanes	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio			
Nb Left	124	0	0.000	2	126	0	0.000	0	126	0	0.000	0	126	0	0.000	0	126	0	0.000		
Nb Thru	52	1	0.161 *	1	53	1	0.164 *	0	53	1	0.172 *	0	53	1	0.175 *	0	53	1	0.175 *		
Nb Right	82	0	-	2	84	0	-	12	96	0	-	0	96	0	-	0	96	0	-		
Sb Left	100	0	0.000 *	2	102	0	0.000 *	0	102	0	0.000 *	0	102	0	0.000 *	0	102	0	0.000 *		
Sb Thru	71	1	0.121	1	72	1	0.123	0	72	1	0.123	0	72	1	0.123	0	72	1	0.123		
Sb Right	22	0	-	0	22	0	-	0	22	0	-	0	22	0	-	0	22	0	-		
Eb Left	47	1	0.029	1	48	1	0.030	0	48	1	0.030	0	48	1	0.030	0	48	1	0.030		
Eb Thru	1860	3	0.408 *	37	1897	3	0.416 *	63	1960	3	0.429 *	21	1981	3	0.436 *	0	1981	3	0.436 *		
Eb Right	99	0	-	2	101	0	-	0	101	0	-	10	111	0	-	0	111	0	-		
Wb Left	69	1	0.043 *	1	70	1	0.044 *	6	76	1	0.048 *	0	76	1	0.048 *	0	76	1	0.048 *		
Wb Thru	1117	3	0.253	22	1139	3	0.258	64	1203	3	0.272	10	1213	3	0.274	0	1213	3	0.274		
Wb Right	99	0	-	2	101	0	-	0	101	0	-	0	101	0	-	0	101	0	-		
Yellow Allowance:	0.100 *			0.100 *			0.100 *			0.100 *			0.100 *			0.100 *			0.100 *		
ICU	0.712			0.724			0.749			0.759			0.789			0.789			0.789		
LOS	C			C			C			C			C			C			C		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.010
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	3742	73	3815	145	3960	46	4006	0	4006
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INTERSECTION CAPACITY UTILIZATION

Intersection: **12**
 N-S St: Redondo Avenue
 E-W St: Pacific Coast Highway
 Project: KROC Community Center, Long Beach
 File: N:\290002072945\ICU2945 ICU.xls
 Control Type: 5/2 Traffic Signal Split: No

Redondo Avenue at Pacific Coast Highway
 Peak Hour: AM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 EXISTING TRAFFIC			2010 WITH AMBIENT GROWTH			2010 WITH CUMULATIVE PROJECTS			2010 WITH PROJECT TRAFFIC			2010 WITH MITIGATION						
	Volume	Lanes	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	
Nb Left	153	1	1600 0.096	3	156	1	1600 0.098	3	159	1	1600 0.099	0	159	1	1600 0.099	0	159	1	1600 0.099
Nb Thru	888	2	3200 0.309 *	18	906	2	3200 0.315 *	7	913	2	3200 0.317 *	0	913	2	3200 0.317 *	0	913	2	3200 0.317 *
Nb Right	100	0	-	2	102	0	-	0	102	0	-	0	102	0	-	0	102	0	-
Sb Left	168	1	1600 0.105 *	3	171	1	1600 0.107 *	27	198	1	1600 0.124 *	0	198	1	1600 0.124 *	0	198	1	1600 0.124 *
Sb Thru	444	2	3200 0.139	9	453	2	3200 0.142	12	465	2	3200 0.145	0	465	2	3200 0.145	0	465	2	3200 0.145
Sb Right	46	1	1600 0.029	1	47	1	1600 0.029	0	47	1	1600 0.029	0	47	1	1600 0.029	0	47	1	1600 0.029
EB Left	20	1	1600 0.013	0	20	1	1600 0.013	0	20	1	1600 0.013	0	20	1	1600 0.013	0	20	1	1600 0.013
EB Thru	1091	3	4800 0.259 *	22	1113	3	4800 0.264 *	51	1164	3	4800 0.277 *	12	1176	3	4800 0.279 *	0	1176	3	4800 0.279 *
EB Right	151	0	-	3	154	0	-	11	165	0	-	0	165	0	-	0	165	0	-
WB Left	176	1	1600 0.110 *	4	180	1	1600 0.113 *	0	180	1	1600 0.113 *	0	180	1	1600 0.113 *	0	180	1	1600 0.113 *
WB Thru	1295	3	4800 0.286	26	1321	3	4800 0.291	39	1350	3	4800 0.301	18	1368	3	4800 0.305	0	1368	3	4800 0.305
WB Right	86	0	-	2	88	0	-	8	96	0	-	0	96	0	-	0	96	0	-
Yellow Allowance:			0.150 *				0.150 *				0.150 *				0.150 *				0.150 *
ICU			0.933				0.949				0.981				0.983				0.983
LOS			E				E				E				E				E

Project ICU Impact: 0.002
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	4608	93	4701	188	4859	30	4889	0	4889
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* Key conflicting movement as a part of ICU.
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 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

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Intersection: VZ
 N-S St: Redondo Avenue
 E-W St: Pacific Coast Highway
 Project: KROC Community Center, Long Beach
 File: N:\2900\2072945\ICU\2945 ICU.xls
 Control Type: 50 Traffic Signal

INTERSECTION CAPACITY UTILIZATION

Redondo Avenue at Pacific Coast Highway
 Peak Hour: PM
 Annual Growth: 1.00%

Date: 05/22/09
 Date of Count: 2008
 Projection Year: 2010

Movement	2008 - EXISTING TRAFFIC			2010 - WITH AMBIENT GROWTH			2010 - WITH CUMULATIVE PROJECTS			2010 - WITH PROJECT TRAFFIC			2010 - WITH MITIGATION								
	Volume	Lanes	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio			
Nb Left	250	1	1600 0.156 *	5	255	1	1600 0.159 *	12	267	1	1600 0.167 *	0	267	1	1600 0.167 *	0	267	1	1600 0.167 *		
Nb Thru	761	2	3200 0.275	16	797	2	3200 0.281	13	810	2	3200 0.285	0	810	2	3200 0.285	0	810	2	3200 0.285		
Nb Right	99	0	0 -	2	101	0	0 -	0	101	0	0 -	0	101	0	0 -	0	101	0	0 -		
Sb Left	138	1	1600 0.086	3	141	1	1600 0.088	16	157	1	1600 0.098	0	157	1	1600 0.098	0	157	1	1600 0.098		
Sb Thru	908	2	3200 0.284 *	18	926	2	3200 0.289 *	10	936	2	3200 0.293 *	0	936	2	3200 0.293 *	0	936	2	3200 0.293 *		
Sb Right	90	1	1600 0.056	2	92	1	1600 0.058	0	92	1	1600 0.058	0	92	1	1600 0.058	0	92	1	1600 0.058		
Eb Left	49	1	1600 0.031	1	50	1	1600 0.031	0	50	1	1600 0.031	0	50	1	1600 0.031	0	50	1	1600 0.031		
Eb Thru	1580	3	4800 0.371 *	32	1612	3	4800 0.379 *	51	1663	3	4800 0.391 *	21	1684	3	4800 0.395 *	0	1684	3	4800 0.395 *		
Eb Right	203	0	0 -	4	207	0	0 -	6	213	0	0 -	0	213	0	0 -	0	213	0	0 -		
Wb Left	37	1	1600 0.023 *	1	38	1	1600 0.024 *	0	38	1	1600 0.024 *	0	38	1	1600 0.024 *	0	38	1	1600 0.024 *		
Wb Thru	1045	3	4800 0.266	21	1066	3	4800 0.271	58	1124	3	4800 0.289	10	1134	3	4800 0.291	0	1134	3	4800 0.291		
Wb Right	230	0	0 -	5	235	0	0 -	29	264	0	0 -	0	264	0	0 -	0	264	0	0 -		
Yellow Allowance:	0.150 *			0.150 *			0.150 *			0.150 *			0.150 *			0.150 *			0.150 *		
ICU	0.994			1.001			1.025			1.025			1.025			1.025			1.025		
LOS	E			F			F			F			F			F			F		

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.004
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	5410	110	5520	195	5715	31	5746	0	5746
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INTERSECTION CAPACITY UTILIZATION

Intersection: **12.**
 N-S St: Redondo Avenue
 E-W St: Pacific Coast Highway
 Project: KROC Community Center, Long Beach
 File: N:\2900\2072945\ICU\Saturday 2845 ICU.xls
 Control Type: 50 Traffic Signal Split: No

Date: 10/06/08
 Date of Count: 2008
 Projection Year: 2010

Redondo Avenue at Pacific Coast Highway
 Peak Hour: Midday
 Annual Growth: 1.00%

Movement	2008: EXISTING TRAFFIC				2010: WITH AMBIENT GROWTH				2010: WITH CUMULATIVE PROJECTS				2010: WITH PROJECT TRAFFIC				2010: WITH MITIGATION			
	Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	Added Volume	Total Volume	Lanes	Capacity	V/C Ratio	
Nb Left	118	1	1600	0.074	2	120	1	1600	0.075	9	129	1	1600	0.081	0	129	1	1600	0.081	
Nb Thru	741	2	3200	0.296 *	15	756	2	3200	0.302 *	10	766	2	3200	0.305 *	0	766	2	3200	0.305 *	
Nb Right	205	0	0	-	4	209	0	0	-	0	209	0	0	-	0	209	0	0	-	
Sb Left	132	1	1600	0.083 *	3	135	1	1600	0.084 *	19	154	1	1600	0.096 *	0	154	1	1600	0.096 *	
Sb Thru	674	2	3200	0.211	13	687	2	3200	0.215	9	696	2	3200	0.218	0	696	2	3200	0.218	
Sb Right	93	1	1600	0.058	2	95	1	1600	0.059	0	95	1	1600	0.059	0	95	1	1600	0.059	
Eb Left	117	1	1600	0.073	2	119	1	1600	0.074	0	119	1	1600	0.074	0	119	1	1600	0.074	
Eb Thru	988	3	4800	0.215 *	20	1008	3	4800	0.220 *	53	1061	3	4800	0.232 *	11	1072	3	4800	0.235 *	
Eb Right	45	0	0	-	1	46	0	0	-	8	54	0	0	-	0	54	0	0	-	
Wb Left	220	1	1600	0.138 *	4	224	1	1600	0.140 *	0	224	1	1600	0.140 *	0	224	1	1600	0.140 *	
Wb Thru	862	3	4800	0.194	17	879	3	4800	0.197	58	937	3	4800	0.214	13	950	3	4800	0.217	
Wb Right	67	0	0	-	1	68	0	0	-	22	90	0	0	-	0	90	0	0	-	
Yellow Allowance:				0.150 *	0.150 *				0.150 *				0.150 *				0.150 *			
ICU				0.882	0.886				0.923				0.926				0.926			
LOS				D	D				E				E				E			

* Key conflicting movement as a part of ICU.
 ** Functions as a separate turn lane, however, is not striped as such.
 Counts conducted by: Transportation Studies, Inc.
 Capacity expressed in vehicles per hour of green.

Project ICU Impact: 0.003
 Significant Impact: No
 Area Traffic Mitigation:

Total Vol.	4262	84	4346	188	4534	24	4558	0	4558
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