2002 Long Range Development Plan/ Northwest Housing Infill Project Final Environmental Impact Report

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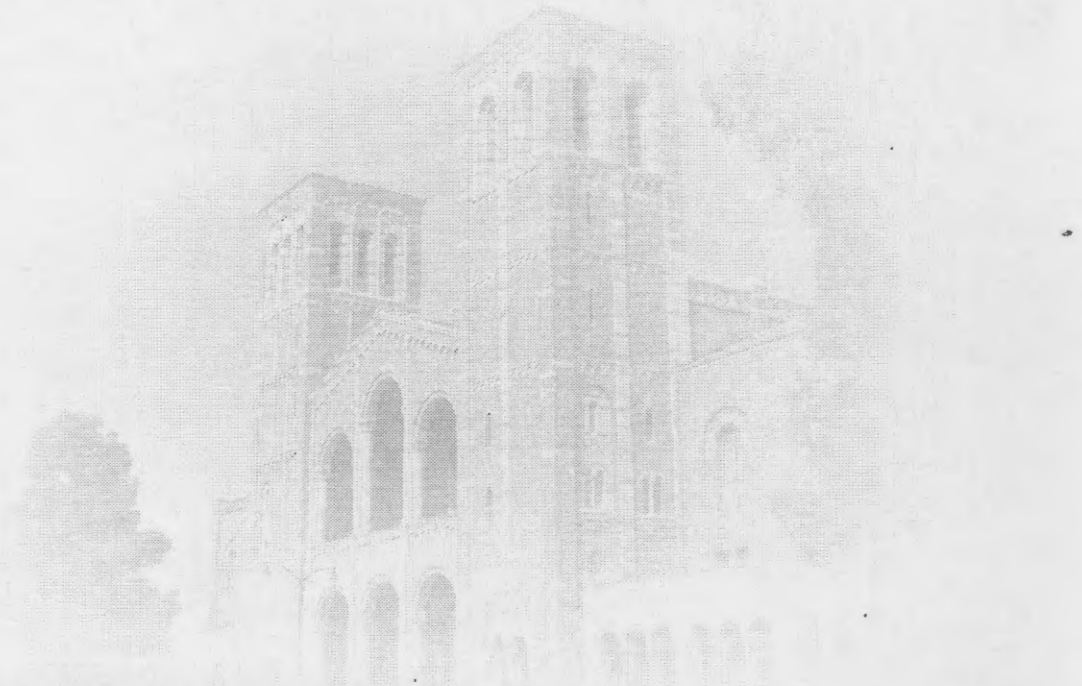

University of California, Los Angeles

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VOLUME 2

2002 Long Range Development Plan/
Northwest Housing Infill Project
Final EIR and Technical Appendices

Volume 2

University of California, Los Angeles
Northwest Housing Infill Project
Draft Environmental Impact Report
SCH No. 2002031115

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PREFACE

This document, in its entirety (Volumes 1, 1a, 2, 3, and 3a), constitutes the Final Environmental Impact Report (Final EIR) for the 2002 Long Range Development Plan (LRDP) and Northwest Housing Infill Project (NHIP). A Final EIR is defined by Section 15362(b) of the California Environmental Quality Act (CEQA) *Guidelines* as "...containing the information contained in the Draft EIR; comments, either verbatim or in summary, received in the review process; a list of persons commenting; and the response of the Lead Agency to the comments received."

This 2002 LRDP Final EIR is composed of five volumes. They are as follows:

Volumes 1 and 1a **2002 LRDP Draft EIR and Technical Appendices**—These volumes describe the existing environmental setting on the UCLA campus and in the vicinity of the campus; analyze potential impacts on that setting due to implementation of the 2002 LRDP; identify mitigation measures that could avoid or reduce the magnitude of significant impacts; evaluate cumulative impacts that would be caused by the project in combination with other future projects or growth that could occur in the region; analyze growth-inducing impacts; and provide a full evaluation of the alternatives to the proposed project that could eliminate, reduce, or avoid project-related impacts. Refer to the Contents of Volume 1 for a complete list of appendices. Any text revisions due to corrections of errors, or resulting from comments received on the Draft EIR, are included in Volume 3.

Volume 2 **2002 LRDP/NHIP Draft EIR and Technical Appendices**—This volume provides project-specific analysis of the NHIP, a component of the 2002 LRDP. This volume describes the existing environmental setting on the NHIP project site and in the vicinity of the project site; analyzes potential impacts on that setting due to construction and operation of the NHIP; identifies mitigation measures that could avoid or reduce the magnitude of significant impacts; and provides a full evaluation of the alternatives to the proposed project that could eliminate, reduce, or avoid project-related impacts. Refer to the Contents of Volume 2 for a complete list of appendix titles. Any text revisions due to corrections of errors, or resulting from comments received on the Draft EIR, are included in Volume 3.

Volumes 3 and 3a **Draft EIR Text Changes, Responses to Comments, and Mitigation Monitoring and Reporting Programs**—This volume contains an explanation of the format and content of the Final EIR; all Draft EIR text changes; a complete

list of all persons, organizations, and public agencies that commented on the Draft EIR; copies of the actual comment letters; the transcript from the public hearing; the Lead Agency's responses to all comments; and the Mitigation Monitoring and Reporting Programs (MMRPs).

REVIEW PROCESS

The Draft LRDP and EIR for the 2002 LRDP, including the NHIP, was issued on October 31, 2002, and initially circulated for public review and comment for a 46-day period scheduled to end on December 16, 2002. In response to a request from the community, the public review and comment period was extended an additional 4 days to December 20, 2002. During the public review period, copies of the Draft EIR were distributed to public agencies through the State of California, Office of Planning and Research. UCLA also directly distributed the document to over eighty individuals, agencies, and organizations. Copies of the Draft EIR were available for review at two on-campus libraries and nine off-campus libraries. In addition, the Draft EIR was available on UCLA's website and at the UCLA Capital Programs Facility, which is located at 1060 Veteran Avenue, Third Floor, on the UCLA campus.

Although not required by CEQA or the *CEQA Guidelines*, a Community Information and EIR Scoping Meeting for the proposed project was also held on April 6, 2002, to solicit input from interested agencies, individuals, and organizations regarding the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in this EIR. A public hearing was also held on November 20, 2002, on the UCLA campus during which the public was given the opportunity to provide comments on the Draft EIR. Nine persons presented verbal comments on the proposed project and the Draft EIR during the public hearing.

REVISIONS TO THE DRAFT EIR

Revisions to the text of the Draft EIR have been made in Volume 3 of this Final EIR, with ~~strikethrough~~ text for deletions and double underline text for additions.

MITIGATION MONITORING AND REPORTING PROGRAMS

An MMRP will be adopted by The Board of Regents of the University of California (The Regents) for both the 2002 LRDP and the NHIP, as required for compliance with Sections 21081(a) and 21081.6 of the Public Resources Code. The proposed MMRPs are included in their entirety in Volume 3a (Chapter IV and Chapter V) of this Final EIR. All 2002 LRDP and NHIP mitigation measures included in the 2002 LRDP Final EIR for this project would be monitored by the appropriate campus entity, and reported on an annual basis.

Chapter 1 INTRODUCTION

This Environmental Impact Report (EIR) assesses the potential environmental effects of the Northwest Housing Infill Project (NHIP), which would provide additional student housing in the Northwest zone of the University of California, Los Angeles (UCLA) campus, as well as a recreational facility and a new parking structure. The NHIP is a project-specific component of the UCLA 2002 Long Range Development Plan (2002 LRDP). As required by the California Environmental Quality Act (CEQA), this EIR (1) assesses the expected individual impacts of the NHIP; (2) identifies means of avoiding or minimizing potential adverse impacts; and (3) evaluates a reasonable range of alternatives to the proposed project, including the No Project Alternative.

1.1 BACKGROUND

The 2002 LRDP is a comprehensive land use plan that guides physical development of the campus in response to its teaching, research, and public service mission. The 2002 LRDP updates the 1990 LRDP to accommodate an increased enrollment of 4,000 full-time-equivalent (FTE) students through 2010–11 to meet the anticipated demand for public higher education that will result from a projected increase in the number of high school graduates over the next decade. As the increased enrollment would exceed the student enrollment projections described in the 1990 LRDP, the 2002 LRDP and the 2002 LRDP EIR have been prepared in compliance with Section 21080.09 of CEQA.

Planning efforts underway to prepare the 2002 LRDP have also converged with planning to address the housing needs of existing and anticipated student enrollment. Currently, UCLA has an unmet demand for undergraduate student housing of approximately 733 beds, and it is anticipated that this demand will be increased to 2,229 beds by 2010–11. In order to meet the continuing demand for on-campus housing for undergraduate students with guaranteed housing, the campus has converted some double-occupancy rooms to triple-occupancy rooms. This situation compromises the quality of the residential experience and places considerable strain on the residential facilities. Based on these conditions, the campus has determined that the number of triple rooms should be reduced. In addition, a large component of the increase in the demand for housing is anticipated to result from the additional planned enrollment growth.

To meet the on-campus undergraduate student housing goals established by the 2001 Student Housing Master Plan, which is discussed in detail in Section 4.10 (Population and Housing) of Volume 1 of this EIR, and to accommodate the anticipated enrollment growth and reduce the number of triple room

occupancies, the campus has proposed the NHIP to provide up to 2,000 additional bed spaces in the Northwest zone. With completion of the proposed 2,000 bed spaces, the undergraduate bed space inventory on campus would increase to approximately 9,000 spaces.

In this volume (Volume 2) of the 2002 LRDP EIR, the project-specific effects of the NHIP, as a component of the 2002 LRDP EIR, are presented. Refer to Volume 1 of the 2002 LRDP EIR (Chapter 1 [Introduction]) for a detailed discussion of the background of the 2002 LRDP EIR.

1.2 PURPOSE OF THE EIR

UCLA, as directed by the University of California (UC), has prepared this EIR for the following purposes:

- To satisfy the requirements of CEQA
- To inform the general public, the local community, responsible and interested public agencies, and The Board of Regents (The Regents) of the proposed components of the NHIP, potential environmental effects, possible measures to mitigate those effects, and alternatives to the project
- To enable The Regents to consider environmental consequences when deciding whether to approve the NHIP
- To serve as a source document for responsible agencies to issue permits and approvals, as required, for the NHIP

This EIR has been prepared in accordance with CEQA, the CEQA Guidelines, and the UC procedures for implementing CEQA. The determination that the University is the "lead agency" is made in accordance with Sections 15051 and 15367 of the CEQA Guidelines, which defines the lead agency as the public agency that has the principal responsibility for carrying out or approving a project.

1.3 TYPE OF EIR/RELATIONSHIP TO THE 2002 LRDP EIR

The environmental analysis for the 2002 LRDP considers the potential effects of developing the remaining 1.71 million gross square feet (gsf) previously allocated under the 1990 LRDP, of which the NHIP is a part, while accommodating anticipated enrollment growth through 2010–11. The 2002 LRDP EIR is a Program EIR. The environmental analysis of the NHIP, which is presented as a Project EIR, builds upon the broader programmatic analysis of environmental impacts resulting from implementation of the 2002 LRDP. The organization of the NHIP EIR, provided in Volume 2, replicates the organization of the 2002 LRDP EIR provided in Volume 1; however, it avoids repetition of information and analysis provided in the 2002 LRDP EIR, such as general background and setting

information for environmental topic areas, the regulatory context, overall growth-related and growth-inducing issues, issues for which there is no additional information that would require new analysis, cumulative impacts, and broad campus planning alternatives. Instead, the analysis presented in the NHIP EIR reflects more detailed project-level information regarding the NHIP, as compared to the broader, planning-level information regarding the campus as a whole. Analyses of potential environmental effects of the proposed NHIP cover the same issue areas analyzed for the 2002 LRDP.

1.4 EIR REVIEW PROCESS

On June 12, 2001, UCLA filed a Notice of Preparation (NOP) for the 2002 LRDP EIR. A revised NOP (including an Initial Study [IS]) was subsequently filed on March 20, 2002, to acknowledge that the potential environmental effects of both the 2002 LRDP and the proposed NHIP would be considered in a single EIR. The 30-day public review period for the revised NOP ended on April 19, 2002.

Although not required by CEQA or the CEQA Guidelines, a Community Information and EIR Scoping Meeting for the proposed project was also held on April 6, 2002, to solicit input from interested agencies, individuals, and organizations regarding the range of actions, alternatives, mitigation measures, and significant effects to be analyzed in this EIR.

During the NOP review periods, and as part of the Scoping Meeting, both written and verbal comments were submitted by a variety of agencies, organizations, and individuals. Appendix 1 to Volume 1 provides the first NOP, including all comment letters received by UCLA, while Appendix 2 to Volume 1 provides the second (and final) NOP/IS, also including all comment letters received by UCLA. The transcript from the Scoping Meeting, and written comments submitted in direct response to the Scoping Meeting, is provided in Appendix 3 to Volume 1. A comprehensive list of all agencies, organizations, and individuals who commented in response to both NOPs and the Scoping Meeting is provided in Appendix 2 to Volume 1.

This EIR is being circulated for review and comment to the public and other interested parties, agencies, and organizations for a 45-day period. The comment period will begin on November 1, 2002, and end on December 16, 2002. A public hearing on the Draft EIR, where oral comments may be presented, will also be held at 7:00 P.M. on November 20, 2002, at the UCLA Faculty Center, which is located at 408 Charles E. Young Drive East. During the review period, the Draft EIR will be available on the web at www.capital.ucla.edu and at two on-campus libraries, the Charles E. Young Research Library and the Biomedical Library. In addition, the Draft EIR will be available at the following nine off-campus libraries:

Beverly Hills Public Library
444 North Rexford Drive
Los Angeles, CA 90210

Santa Monica Public Library
1343 Sixth Street
Santa Monica, CA 90401

Robertson Branch Library
1719 South Robertson Boulevard
Los Angeles, CA 90035

Culver City Julian Dixon Library
4975 Overland Avenue
Culver City, CA 90230

West Los Angeles Regional Branch Library
11360 Santa Monica Boulevard
Los Angeles, CA 90025

Donald Bruce Kaufman/
Brentwood Branch Library
11820 San Vicente Boulevard
Los Angeles, CA 90049

West Hollywood Library
715 North San Vicente Boulevard
West Hollywood, CA 90069

Studio City Branch Library
12511 Moorpark Street
Studio City, CA 91604

Katy Geissert Civic Center Library
3301 Torrance Boulevard
Torrance, CA 90503

This Draft EIR will also be available for review at the UCLA Capital Programs building located at 1060 Veteran Avenue (third floor) from 8:00 A.M. to 5:00 P.M., Monday through Friday.

Written comments on the EIR may be provided by e-mail, submitted to www.capital.ucla.edu/ep-curr-proj.html, or may be sent via U.S. mail or FAX and addressed to

Ms. Tova Lelah, Assistant Director
UCLA Capital Programs
1060 Veteran Avenue, Box 951365
Los Angeles, CA 90095-1365
Fax: (310) 206-1510

Following the public hearing and after the close of the written public comment period on the Draft EIR, responses to written and recorded comments will be prepared and published. The Final EIR, which will consist of the Draft EIR, comments on the Draft EIR, written responses to those comments, and the Mitigation Monitoring and Reporting Program (MMRP), will be considered for certification by The Regents consistent with Section 15090 of the CEQA Guidelines. The Regents must consider the Final EIR prior to any decision to approve or reject the proposed project, and the 2002 LRDP and the NHIP (as a separate action) can only be approved if the 2002 LRDP EIR is certified. If the 2002 LRDP EIR is certified and the NHIP is approved, written findings will be adopted for each significant adverse environmental effect identified in the Final EIR, as required by Section 15091 of the CEQA Guidelines. The University must subsequently adopt the MMRP to ensure compliance with mitigation measures that

have been incorporated into the project to reduce or avoid significant effects on the environment during project construction and/or implementation.

Where feasible mitigation measures are not available to reduce significant environmental impacts to a less-than-significant level, impacts are considered significant and unavoidable. If The Regents approve a project that has significant and unavoidable impacts, The Regents shall also state in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record. This is called a "Statement of Overriding Considerations" and is used to explain the specific reasons that the benefits of a proposed project outweigh its unavoidable environmental effects. The Statement of Overriding Considerations is adopted after the Final EIR has been certified, yet before action to approve the project has been taken.

1.5 INTENDED USES OF THE EIR

As previously discussed, this EIR will be used by The Regents to evaluate the environmental impacts of its decision with respect to approval or denial of the 2002 LRDP, and, as a separate action, the NHIP. Under CEQA, other public agencies that have discretionary authority over the project, or aspects of the project, are considered responsible agencies. The responsible agencies for the 2002 LRDP include, but are not necessarily limited to, the State Water Resources Control Board, Regional Water Quality Control Board, and South Coast Air Quality Management District, and the Los Angeles Department of Transportation. This document can be used by the responsible agencies to comply with CEQA in connection with permitting or approval authority over relevant aspects of the project. The University prepared this EIR to address all State, regional, and local government approvals needed for construction and/or operation of the project, whether or not such actions are known or are explicitly listed in this EIR. Examples of the anticipated approvals required to implement the NHIP include the following:

University of California Board of Regents

- Certification of the EIR
- Adoption of the Statement of Overriding Considerations
- Approval of the Northwest Housing Infill Project
- Adoption of the Findings of Fact
- Adoption of the Mitigation Monitoring and Reporting Program

Los Angeles Regional Water Quality Control Board/State Water Resources Control Board

- National Pollutant Discharge Elimination System (NPDES) General Construction Permit[1]

South Coast Air Quality Management District

- Permits to Construct and/or Permits to Operate (for any new or relocated stationary sources of equipment that emit or control air contaminants, such as heating, ventilation, and air conditioning [HVAC] units)

Los Angeles Department of Transportation

- City street encroachment permit for temporary construction access

1.6 EIR FORMAT AND CONTENTS

This EIR is organized in two primary volumes (Volumes 1 and 2) and one secondary volume (Volume 1a). Volume 1 addresses the environmental impacts of the physical development of the 2002 LRDP, while Volume 2 addresses the specific impacts of the NHIP. (The technical appendices of Volume 1 are provided under separate cover as Volume 1a; the technical appendices of Volume 2 are located at the back of Volume 2.) Both primary volumes of this EIR describe the existing environmental conditions on and in the vicinity of the project site, analyze potential project-related impacts on environmental resources, identify mitigation measures and existing campus programs, practices, and procedures that could avoid or reduce the magnitude of project-related impacts, and provide an evaluation of a reasonable range of alternatives to the proposed project that could eliminate, reduce, or avoid identified project impacts while attaining most of the basic project objectives. In addition to project-related impacts, this EIR also provides an evaluation of cumulative impacts that would be caused by the project in combination with other future projects or growth that could occur in the region. In this fashion, the cumulative impact analysis considers the additive effect of future projects, both on and off campus, including the 2002 LRDP. As required by Section 15126.2(d) of the CEQA Guidelines, this EIR also provides an analysis of growth-inducing impacts, which are defined as "environmental impacts that could result in additional growth by the proposed project by either removing an obstacle to development or by generating substantial increased growth of the local or regional economy."

[1] A Phase I NPDES permit is currently required if the area of ground disturbance associated with construction activities exceeds five acres. Under the Phase II NPDES permit, which will become effective March 10, 2003, a NPDES permit would be required if the area of ground disturbance associated with construction activities exceeds one acre.

The contents of Volume 2 of the 2002 LRDP EIR include

- *Chapter 1: Introduction*—This section provides an overview of the background of the NHIP, the purpose of the EIR, the type of EIR and its relationship to Volume 1 of the 2002 LRDP EIR, the EIR review process, the intended uses of the EIR, and an overview of the format and contents of the EIR.
- *Chapter 2: Executive Summary*—This section includes a brief synopsis of the proposed project and project objectives, community/agency issues, a description of the Mitigation Monitoring and Reporting Program, and an overview of project alternatives. This Chapter also summarizes environmental impacts that would result from construction and/or implementation of the proposed project; 2002 LRDP mitigation measures and/or existing campus programs, practices, and procedures that are incorporated into the NHIP project description; NHIP mitigation measures; and the level of significance of impacts both before and after project-specific mitigation.
- *Chapter 3: Project Description*—This section provides a detailed description of the proposed project, including its location, background information, objectives, and technical characteristics.
- *Chapter 4: Environmental Setting, Impacts, and Mitigation Measures*—This section contains an analysis of environmental impacts for each environmental issue area. Each environmental issue area contains a description of the environmental setting (or existing conditions), describes 2002 LRDP mitigation measures and/or existing campus programs, practices, and procedures that are incorporated into the NHIP project description, identifies project-related impacts, and recommends feasible project-related mitigation measures that would avoid or minimize significant environmental impacts. The "Introduction to the Analysis," at the beginning of the chapter, provides an overview of the scope and format of the environmental analysis.
- *Chapter 5: Other CEQA Considerations*—This section summarizes impacts that would result from the proposed project, including significant environmental effects, significant and unavoidable environmental effects, irreversible changes to the environment, and growth-inducing impacts.
- *Chapter 6: Alternatives*—This section describes alternatives to the proposed project that would feasibly attain most of the basic objectives of the project while avoiding or substantially lessening any of its significant effects. The analysis evaluates the environmental effects that would result from implementation of each of the alternatives and compares these effects to the effects that would result from implementation of the proposed project.
- *Chapter 7: Report Preparers/Organizations and Persons Consulted*—This section identifies all federal, State, or local agencies, other organizations, and/or private individuals consulted during preparation of the EIR, as well as the firm who prepared the EIR under contract to the University.
- *Chapter 8: References*—This section provides bibliographic references for all information sources used during preparation of the EIR.

1.7 LIST OF ABBREVIATIONS

The following comprehensive list of abbreviations is provided to clarify references used in this EIR.

Table 1-1 List of Abbreviations

AB	Assembly Bill
ADT	average daily trips
AEA	Atomic Energy Act
AGSM	Anderson Graduate School of Management
AHC	Academic Health Center
AHCFRP	Academic Health Center Facilities Reconstruction Plan
ANSI	American National Standards Institute
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
ATCS	Adaptive Traffic Control System
ATSAC	Automated Traffic Surveillance and Control
AVR	Average Vehicle Ridership
AVTA	Antelope Valley Transportation Authority
BACT	Best Available Control Technology
BMP	Best Management Practices
BTU	British thermal units
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CAR	Commuter Assistance-Ridesharing
CBC	California Building Code
CCB	Culver City Bus
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDMG	California Department of Conservation, Division of Mines and Geology
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CHRIS	California Historic Resources Information System
CIWMB	California Integrated Waste Management Board
CMA	Critical Movement Analysis
CMP	Congestion Management Plan
CNDDB	California Natural Diversity Database
CNEL	community equivalent noise level
CNG	compressed natural gas

Table 1-1 List of Abbreviations	
CO	carbon monoxide
CPA	Community Planning Area
CRHR	California Register of Historic Resources
CSO	Community Service Officer
CSWMP	Comprehensive Stormwater Management Program
CWA	Clean Water Act
D/C	demand/capacity
dB	decibels
dBA	A-weighted decibels
DHS	California Department of Health Services
DIRT	Disaster Initial Response Team
DTSC	California Department of Toxic Substances Control
DU	Dwelling Unit
EDR	Environmental Data Resources
EH&S	Environment, Health and Safety
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESB	Emergency Services Building
ESF	Energy System Facility
ESF	Environmental Service Facility
EV	electric vehicle
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FHWA-RD-77-108	Federal Highway Prediction Model
FICUN	Federal Interagency Committee on Urban Noise
FIRM	Flood Insurance Rate Map
FRA	Federal Railroad Administration
ft^3	cubic feet
FTE	full-time equivalent
gpd	gallons per day
gsf	gross square feet
HCM	Highway Capacity Manual
HI	Hazard Index
HOV	high occupancy vehicle
HRA	Health Risk Assessment
HTP	Hyperion Treatment Plant
HUD	United States Department of Housing and Urban Development

Table 1-1 List of Abbreviations	
HVAC	heating, ventilation, and air conditioning
IFPS	Intramural Field Parking Structure
IS	Initial Study
IWMD	Industrial Waste Management Division
kWh	kilowatt-hour
LAA	Los Angeles Aquaduct
LACMTA	Los Angeles County Metropolitan Transportation Authority
LADOT	Los Angeles Department of Transportation
LADWP	Los Angeles Department of Water and Power
LAFD	Los Angeles Fire Department
LAPD	Los Angeles Police Department
LAUSD	Los Angeles Unified School District
LAX	Los Angeles World Airport
L_{eq}	equivalent energy noise level
LLRW	low-level radioactive waste
L_{max}	maximum instantaneous noise level
L_{min}	minimum instantaneous noise level
LNG	liquid natural gas
LOS	level of service
LRDP	Long Range Development Plan
LUST	leaking underground storage tanks
MBTA	Migratory Bird Treaty Act
MCE	maximum credible earthquake
MDU	multiple dwelling unit
MEI	maximally exposed individual
MEP	maximum extent practicable
mgd	million gallons per day
MM	mitigation measure
mmBtu	one million British thermal units
MMP	Mitigation Monitoring Program
MMRP	Mitigation Monitoring and Reporting Program
MOU	Memorandum of Understanding
MS4s	municipal separate storm sewer systems
MSDS	material safety data sheets
MTA	Metropolitan Transportation Authority
MTBE	methyl tertiary-butyl ether
Mw	moment magnitude
MWD	Metropolitan Water District

Table 1-1 List of Abbreviations	
NHIP	Northwest Housing Infill Project
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NOx	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historical Places
NTSB	National Transportation Safety Board
OEHHA	Office of Environmental Health Hazard Assessment
Pb	lead
PCB	polychlorinated biphenyls
PM_{10}	particulate matter 10 microns in size or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns in size or less in diameter
PPM	parts per million
PPs	campus programs, practices, and procedures
PRC	Public Resources Code
psi	pounds per square inch
RCPG	Regional Comprehensive Plan and Guide
RCRA	Resources Conservation Recovery Act
RD	reporting district
RMPP	Risk Management Prevention Plan
RSD	Radiation Safety Division
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCGC	Southern California Gas Company
SCH	State Clearinghouse
SCT	Santa Clarita Transit
SEAS	School of Engineering and Applied Sciences
sf	square feet
SFB	San Fernando Basin
SHMP	Student Housing Master Plan
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SMMBL	Santa Monica Municipal Bus Lines
SO_2	sulfur dioxide
SOx	sulfur oxides

Table 1-1 List of Abbreviations	
SQTF	Stormwater Quality Task Force
SRA	source receptor area
SRLF	Southern Regional Library Facility
SWH	Southwest Campus Housing Project
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TDM	Transportation Demand Management
TDS	total dissolved solids
TES	thermal energy storage system
TMMA	Transportation Mitigation Monitoring Program
TSA	Transportation Systems Analysis
UBC	Uniform Building Code
UC	University of California
UCLA	University of California, Los Angeles
UCPD	University of California Police Department
UES	University Elementary School
URBEMIS	Urban Emissions Model
USDHHS	Unites States Department of Health and Human Services
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
UST	underground storage tanks
USTP	Underground Storage Tank Program
UWMP	Urban Water Management Plan
VdB	vibration decibels
VMT	vehicle miles traveled
VOC	volatile organic compounds
VPR	vehicles per hour
WDR	waste discharge requirements
ZOA	zone of analysis

Chapter 2 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

2.1 PURPOSE OF THE SUMMARY

This summary is intended to highlight major areas of importance in the environmental analysis for the Northwest Housing Infill Project (NHIP) as required by Section 15123 of the CEQA Guidelines. The summary includes a brief description of the NHIP, the project objectives, community/agency issues, the purpose of the Mitigation Monitoring and Reporting Program, and an analysis of alternatives to the proposed project. In addition, this chapter also provides a table summarizing (1) the potential environmental impacts that would occur as a result of the NHIP; (2) the 2002 mitigation measures and/or campus programs, practices, and procedures incorporated into the NHIP project description; (3) the level of significance before project-specific mitigation measures; and (4) the level of significance after project-specific mitigation measures are implemented. Finally, a comparison of the proposed project to the project alternatives is provided. A separate impact summary table and alternatives comparison table for the 2002 LRDP is included in Volume 1 of this EIR.

2.2 PROJECT DESCRIPTION

UCLA proposes to design and construct infill housing within the existing residential area in the Northwest zone of campus, consisting of up to 2,000 beds, associated recreation facilities, and a 299-space parking structure. The project would total approximately 550,000 gross square feet (gsf) of net building space associated with the residential and recreational uses.[2] The infill housing will be built among existing residence halls, accommodated in three buildings at two locations, known as the Hedrick and Rieber Precincts. Given site constraints, the new residence halls would be multi-level buildings, each nine-stories in height. The project would also include renovation of the first-floor areas of Hedrick Hall, Rieber Hall and Sproul Hall to provide sufficient space for expanded administrative, community support, and programming functions to accommodate the existing and anticipated residents of the Northwest zone.

The new recreation facilities would be concentrated in one location along De Neve Drive, just south of the Hitch Residential Suites and central to most of the existing and proposed residence halls. In addition,

[2] In accordance with the 2002 LRDP, excludes 86,250 gsf for the parking structure, which is analyzed in terms of the number of parking spaces.

the project includes a new parking structure that will serve the proposed housing, as well as Tom Bradley International Hall, at a site just south of Dykstra Hall. The parking structure replaces 233 spaces removed by the project and provides 66 additional spaces to accommodate parking needs of the housing project.

Development of the NHIP would require demolition of approximately 31,000 gsf of existing space, including the Housing Administration Building, facilities management buildings (Ornamental Horticultural Buildings "J" and "M" [OHJ and OHM]), and a vending/storage facility attached to Hedrick Hall.

2.3 PROJECT OBJECTIVES

All of the 2002 LRDP EIR objectives identified in Volume 1 apply to the NHIP. Additionally, specific objectives for the proposed NHIP have also been identified. All of the project objectives, including 2002 LRDP and NHIP objectives, are fully set forth in Chapter 3 (Project Description) of this document.

2.4 COMMUNITY/AGENCY ISSUES

The only specific issue raised by agencies or interested parties during the NOP public review periods with respect to the NHIP is the project consistency with the Stipulated Use Agreement between the campus and the Westwood Hills Property Owners Association. The Agreement governs proposed uses in a portion of the Northwest zone affected by NHIP. A detailed discussion of the Agreement, and the project's compliance with its terms, is provided in Section 4.8 (Land Use), Impact NHIP 4.8-1, and in Section 4.1 (Aesthetics), Impact NHIP 4.1-2. An additional issue was raised with respect to potential noise impacts associated with the recreation component of the NHIP, which is addressed in Section 4.9 (Noise), Impact NHIP 4.9-7.

2.5 MITIGATION MONITORING AND REPORTING PROGRAM

CEQA requires that a public agency must adopt a Mitigation Monitoring and Reporting Program (MMRP) for mitigation measures that have been incorporated into the project to reduce or avoid significant effects on the environment. The MMRP is designed to ensure compliance during project implementation, as required by Public Resources Code Section 21081.6.

This EIR discusses feasible mitigation measures that could be implemented to reduce significant impacts, including both project-specific mitigation measures and applicable 2002 LRDP EIR mitigation measures

(MMs), as well as campus programs, practices, and procedures (PPs) that currently reduce environmental impacts. The MMRP for the NHIP, which obligates the University to implement mitigation measures and continue to follow PPs, will be prepared and submitted for review by The Regents in conjunction with consideration of the NHIP and certification of the Final EIR.

2.6 ALTERNATIVES

Alternatives that would avoid or substantially lessen some of the significant effects of the project were analyzed. These alternatives include:

- *Alternative 1: No Project-No Build*—The No Project alternative would leave the project site in its present condition. No construction of new residence halls and associated recreation and parking facilities, and no ground-floor renovations to the Hedrick, Rieber, and Sproul residential halls would occur, and no relocation and consolidation of Facilities Management structures and uses would occur in the Northwest zone. Full development of the 2002 LRDP is assumed to occur, and the 550,000 square feet (sf) proposed under the NHIP would be reallocated among the other campus zones.
- *Alternative 2: Alternative Site*—This alternative includes a 2,000-bed housing complex provided on Parking Lot 32, with additional dining and student services facilities instead of recreational facilities, as well as 801 spaces of subterranean parking beneath the development. There would be no first-floor renovations of Dykstra, Hedrick, Rieber, and Sproul Halls, and no relocation and consolidation of Facilities Management structures and uses. Also, no demolition of the Housing Administration Building or surface parking lots would occur.

A detailed description of these alternatives, as well as an analysis of related environmental effects, is presented in Chapter 6 (Alternatives) of this EIR.

2.7 ENVIRONMENTAL IMPACTS

Table 2-1 (Summary of Environmental Effects and Mitigation Measures), provided at the end of this chapter, presents a summary of the environmental impacts resulting from the proposed NHIP. It has been organized to correspond with the environmental issues discussed in Chapter 4 (Environmental Setting, Impacts, and Mitigation Measures) and is arranged in five columns: the identified impact under each EIR issue area; 2002 LRDP EIR mitigation measures and/or existing campus programs, practices, and procedures incorporated into the project description; the level of significance prior to project-specific mitigation; NHIP mitigation measures that would avoid or reduce the level of impacts; and the level of significance after implementation of NHIP mitigation measures, if applicable. The campus programs, practices, and procedures are considered to be part of the 2002 LRDP for purposes of

determining the level of significance prior to mitigation. These PPs are also enforceable in the same manner as the mitigation measures. Where no mitigation is required, it is noted in the table.

While the campus has evaluated a range of potential mitigation measures to reduce significant project impacts, and will implement all feasible mitigation measures, construction and operation of the NHIP would result in the following significant and unavoidable impacts:

Air Quality

- Construction-related impacts resulting from peak daily emissions of NOx

Noise

- Construction impacts resulting from on-campus groundborne vibration or groundborne noise levels
- Construction-related impacts resulting from an increase in on-campus ambient noise levels
- Construction-related impacts resulting from an increase in off-campus ambient noise levels

Transportation/Traffic

- Operational impacts resulting from an increase in vehicular trips during the twelve-week summer session at one intersection in the AM peak hour, one intersection in the PM peak hour, and two intersections in both the AM and PM peak hours.
- Construction impacts resulting from truck trips

Refer to Volume 3, Chapter II (Text Changes)

While most project-related impacts resulting from implementation of the NHIP can be mitigated to a less-than-significant level, cumulative impacts would result from implementation of the NHIP in combination with the development of related projects in the area and projected regional growth, as discussed in each of the technical sections of Volume 1 of this EIR. The impact areas for which there is a significant and unavoidable contribution of the 2002 LRDP, and therefore the NHIP, to significant and adverse cumulative impacts include:

Traffic

- Operational impacts resulting from exceedance of the applicable LOS criteria would make a significant and cumulatively considerable contribution to cumulative impacts on traffic on local streets and intersections during both the regular and summer sessions
- Construction impacts resulting from exceedance of the applicable LOS criteria would make a significant and cumulatively considerable contribution to cumulative impacts on traffic on local streets and intersections during both the regular and summer sessions

Air Quality

- Construction impacts resulting from air emissions would make a significant and cumulatively considerable contribution to cumulative significant impacts on regional air quality from daily emissions of criteria pollutants.

All other physical environmental impacts (project-specific and cumulative) are either less than significant or can be mitigated to a less-than-significant level.

Table 2-2 (Comparison of Alternatives to the Proposed Project), which follows Table 2-1, provides a summary comparison of post-mitigation project impacts with those of each alternative, assuming that feasible mitigation measures are also implemented for each alternative. This table presents the level of significance for impacts resulting from each project alternative, by issue area, as compared to the impacts of the 2002 LRDP (e.g., "LS (greater)" indicates that although the level of significance of the project alternative is "less than significant," the impacts are greater than the proposed project).

Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures		Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
AESTHETICS					
Impact NHIP 4.1-1: Implementation of the NHIP would not have a substantial adverse effect on a scenic vista (focal views).	PP 4.1-1(a)	The design process shall evaluate and incorporate, where appropriate, factors including, but not necessarily limited to, building mass and form, building proportion, roof profile, architectural detail and fenestration, the texture, color, and quality of building materials, focal views, pedestrian and vehicular circulation and access, and the landscape setting to ensure preservation and enhancement of the visual character and quality of the campus and the surrounding area. Landscaped open space (including plazas, courts, gardens, walkways, and recreational areas) shall be integrated with development to encourage use through placement and design. *(This is identical to Land Use PP 4.8-1(a).)*	LS	*None required.*	LS
	PP 4.1-1(c)	New building projects shall be sited to ensure compatibility with existing uses and the height and massing of adjacent facilities. *(This is identical to Land Use PP 4.8-1(h).)*			
Impact NHIP 4.1-2: Implementation of the NHIP would not substantially degrade the visual character or quality of the campus and the immediately surrounding area.	MM 4.1-2	In conjunction with CEQA documentation required for each project proposal under the 2002 LRDP, a tree replacement plan shall be prepared and implemented. The tree replacement plan for each project shall determine the	LS	*None required.*	LS

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Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
	appropriate number of replacement trees in relation to the specific project site characteristics. The tree replacement plan would ensure that the appropriate number of new trees is planted within the available site area so that each tree planted has sufficient space to grow and thrive. *(This is identical to Biological Resources MM 4.3-1(c).)*			
	PP 4.1-2(a) Additions to, or expansions of, existing structures shall be designed to complement the existing architectural character of the buildings.			
	PP 4.1-2(b) The architectural and landscape traditions that give the campus its unique character shall be respected and reinforced. *(This is identical to Land Use PP 4.8-1(f).)*			
	PP 4.1-2(d) Projects proposed under 2002 LRDP shall include landscaping.			
	PP 4.1-2(e) The western, northern, and eastern edges of the main campus shall include a landscaped buffer to complement the residential uses of the surrounding community and to provide an attractive perimeter that effectively screens and enhances future development. *(This is identical to Land Use PP 4.8-1(c).)*			
	PP 4.1-1(a), PP 4.1-1(c), MM 4.1-3(a), MM 4.1-3(b), and MM 4.1-3(c) also apply to Impact NHIP 4.1-2.			

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Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	*2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures*	*Level of Significance Prior to Mitigation*	*Northwest Housing Infill Project Mitigation Measure(s)*	*Level of Significance After Mitigation*
Impact NHIP 4.1-3: Implementation of the NHIP would not create a new source of substantial light or glare on campus or in the vicinity that would adversely affect day or nighttime views in the area.	MM 4.1-3(a) Design for specific projects shall provide for the use of textured nonreflective exterior surfaces and nonreflective glass. MM 4.1-3(b) All outdoor lighting shall be directed to the specific location intended for illumination (e.g., roads, walkways, or recreation fields) to limit stray light spillover onto adjacent residential areas. In addition, all lighting shall be shielded to minimize the production of glare and light spill onto adjacent uses. MM 4.1-3(c) Ingress and egress from parking areas shall be designed and situated so the vehicle headlights are shielded from adjacent uses. If necessary, walls or other light barriers will be provided. *PP 4.1-2(e) also applies to Impact NHIP 4.1-3.*	LS	*None required.*	LS

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Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures		Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
AIR QUALITY					
Impact NHIP 4.2-1: Implementation of the NHIP would not conflict with or obstruct implementation of the Air Quality Management Plan.	PP 4.2-1(a)	The campus shall continue to provide on-campus housing to continue the evolution of UCLA from a commuter to a residential campus. *(This is identical to Noise and Vibration PP 4.9-5(a) and Transportation/ Traffic PP 4.13-1(c).)*	LS	*None required.*	LS
	PP 4.2-1(b)	The campus shall continue to implement a TDM program that meets or exceeds all trip reduction and AVR requirements of the SCAQMD. The TDM program may be subject to modification as new technologies are developed or alternate program elements are found to be more effective. *(This is identical to Noise and Vibration PP 4.9-5(b) and Transportation/ Traffic PP 4.13-1(d).)*			
Impact NHIP 4.2-2: The NHIP construction could contribute substantially to an existing or projected air quality violation.	MM 4.2-2(a)	The campus shall require by contract specifications that construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than five minutes.	S	*No feasible additional mitigation is available.*	SU
	MM 4.2-2(b)	The campus shall encourage contractors to utilize alternative fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas, and unleaded gasoline) and low-emission diesel construction equipment to the extent that the equipment is readily available and			

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Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
	cost effective. PP 4.2-2(a) The campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation: ▪ Apply water and/or approved nontoxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days) ▪ Replace ground cover in disturbed areas as quickly as possible ▪ Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content ▪ Water active grading sites at least twice daily ▪ Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period			

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Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
	▪ All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code ▪ Sweep streets at the end of the day if visible soil material is carried over to adjacent roads ▪ Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip ▪ Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces ▪ Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads			
	PP 4.2-2(b) The campus shall continue to require by contract specifications that construction equipment engines will be maintained in good condition and in proper tune per manufacturer's specification for the duration of construction.			

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Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
	PP 4.2-2(c) The campus shall continue to require by contract specifications that construction operations rely on the campus' existing electricity infrastructure rather than electrical generators powered by internal combustion engines to the extent feasible.			
Impact NHIP 4.2-3: Implementation of the NHIP would not result in daily operational emissions that contribute substantially to an existing or projected air quality violation during the regular session.	PP 4.2-3 The campus shall continue to implement energy conservation measures (such as energy-efficient lighting and microprocessor-controlled HVAC equipment) to reduce the demand for electricity and natural gas. The energy conservation measures may be subject to modification as new technologies are developed or if current technologies become obsolete through replacement. *(This is identical to Utilities and Service Systems PP 4.14-10.)* *PP 4.2-1(a), PP 4.2-1(b), PP 4.2-2(a), PP 4.2-2(b), and PP 4.2-2(c) also apply to Impact NHIP 4.2-3.*	LS	*None required.*	LS

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Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
Impact NHIP 4.2-4: Implementation of the NHIP would not result in daily operational emissions that contribute substantially to an existing or projected air quality violation during the twelve-week summer session.	MM 4.2-4 The TDM program will be extended through the student registration process to provide information concerning alternative transportation options to summer session students to increase awareness of, and participation in, alternative transportation programs during the summer session. *(This is identical to Noise and Vibration MM 4.9-6 and Transportation/Traffic MM 4.13-2(a).)* *PP 4.2-1(a), PP 4.2-1(b), PP 4.2-2(a), PP 4.2-2(b), PP 4.2-2(c), and PP 4.2-3 also apply to Impact NHIP 4.2-4.*	LS	*None required.*	LS
Impact NHIP 4.2-5: Implementation of the NHIP would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard.	*MM 4.2-4, PP 4.2-1(a), PP 4.2-1(b), and PP 4.2-3 also apply to Impact NHIP 4.2-5.*	LS	*None required.*	LS
Impact NHIP 4.2-6: Implementation of the NHIP would not expose sensitive receptors near roadway intersections to substantial localized pollutant concentrations.	*None applicable.*	LS	*None required.*	LS

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Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
Impact NHIP 4.2-7: Implementation of the NHIP would not expose sensitive receptors on or off campus to substantial pollutant concentrations due to campus-generated toxic air emissions.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.2-8: Implementation of the NHIP would not create objectionable odors affecting a substantial number of people.	*None applicable.*	LS	*None required.*	LS
BIOLOGICAL RESOURCES				
Impact NHIP 4.3-1: Implementation of the NHIP would not have a substantial adverse effect as a result of the direct loss of nesting habitat for resident and migratory avian species of special concern and raptors.	MM 4.3-1(a) Prior to the onset of construction activities that occur between March and mid-August, surveys for nesting special status avian species and raptors shall be conducted on the affected portion of the campus following USFWS and/or CDFG guidelines. If no active avian nests are identified on or within 250 feet of the construction site, no further mitigation is necessary. MM 4.3-1(b) If active nests for avian species of concern or raptor nests are found within the construction footprint or a 250-foot buffer zone, exterior construction activities shall be delayed within the construction footprint and buffer zone until the young have fledged or appropriate mitigation measures responding to the specific situation have	LS	*None required.*	LS

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Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures		Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
		been developed and implemented in consultation with CDFG.			
	MM 4.3-1(c)	In conjunction with CEQA documentation required for each project proposal under the 2002 LRDP, a tree replacement plan shall be prepared and implemented. The tree replacement plan for each project shall determine the appropriate number of replacement trees in relation to the specific project site characteristics. The tree replacement plan would ensure that the appropriate number of new trees is planted within the available site area so that each tree planted has sufficient space to grow and thrive. *(This is identical to Aesthetics MM 4.1-2.)*			
	PP 4.3-1(a)	Mature trees to be retained and protected in place during construction, shall be fenced at the drip-line, and maintained by the contractor in accordance with landscape specifications contained in the construction contract.			
	PP 4.3-1(b)	Trees shall be examined by an arborist and trimmed, if appropriate, prior to the start of construction.			
	PP 4.3-1(c)	Construction contract specifications shall include the provision for temporary irrigation/watering and feeding of these trees during construction, as recommended by the designated arborist.			

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Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
	PP 4.3-1(d) Construction contract specifications shall require that no building material, parked equipment, or vehicles shall be stored within the fence line. PP 4.3-1(e) Examination of these trees by an arborist shall be performed monthly during construction to ensure that they are being adequately maintained.			
Impact NHIP 4.3-2: The NHIP construction would not interfere with the movement of resident and migratory avian species of special concern and raptors.	*MM 4.3-1(a), MM 4.3-1(b), MM 4.3-1(c), PP 4.3-1(a), PP 4.3-1(b), PP 4.3-1(c), PP 4.3-1(d), and 4.3-1(e) also apply to Impact NHIP 4.3-2.*	LS	*None required.*	LS
CULTURAL RESOURCES				
Impact NHIP 4.4-1: Implementation of the NHIP would not result in a substantial adverse change in the significance of structures that have been designated as eligible or potentially eligible for listing on the NRHP or CRHR.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.4-2: Implementation of the NHIP would not result in the demolition of historic or potentially historic structures.	*None applicable.*	LS	*None required.*	LS

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Impact	*2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures*		*Level of Significance Prior to Mitigation*	*Northwest Housing Infill Project Mitigation Measure(s)*	*Level of Significance After Mitigation*
Impact NHIP 4.4-3: The NHIP construction would not cause a substantial adverse change in the significance of an archaeological resource.	MM 4.4-3(a)	Prior to site preparation or grading activities, construction personnel shall be informed of the potential for encountering unique archaeological resources and taught how to identify these resources if encountered. This shall include the provision of written materials to familiarize personnel with the range of resources that might be expected, the type of activities that may result in impacts, and the legal framework of cultural resources protection. All construction personnel shall be instructed to stop work in the vicinity of a potential discovery until a qualified, non-University archaeologist assesses the significance of the find and implements appropriate measures to protect or scientifically remove the find. Construction personnel shall also be informed that unauthorized collection of archaeological resources is prohibited.	LS	*None required.*	LS
	MM 4.4-3(b)	A qualified archaeologist shall first determine whether an archaeological resource uncovered during construction is a "unique archaeological resource" under Public Resources Code Section 21083.2(g). If the archaeological resource is determined to be a "unique archaeological resource," the archaeologist shall formulate a mitigation plan in consultation with the campus that			

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		satisfies the requirements of Section 21083.2. If the archaeologist determines that the archaeological resource is not a unique archaeological resource, the archaeologist may record the site and submit the recordation form to the California Historic Resources Information System South Central Coastal Information Center. The archaeologist shall prepare a report of the results of any study prepared as part of a mitigation plan, following accepted professional practice. Copies of the report shall be submitted to the University and to the California Historic Resources Information System South Central Coastal Information Center.			
Impact NHIP 4.4-4: The NHIP construction would not directly or indirectly result in damage to, or the destruction of, unique paleontological resources on site or unique geologic features.	MM 4.4-4(a)	Prior to site preparation or grading activities, construction personnel shall be informed of the potential for encountering paleontological resources and taught how to identify these resources if encountered. This shall include the provision of written materials to familiarize personnel with the range of resources that might be expected, the type of activities that may result in impacts, and the legal framework of cultural resources protection. All construction personnel shall be	LS	*None required.*	LS

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Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
	instructed to stop work in the vicinity of a potential discovery until a qualified, non-University paleontologist assesses the significance of the find and implements appropriate measures to protect or scientifically remove the find. Construction personnel shall also be informed that unauthorized collection of paleontological resources is prohibited. MM 4.4-4(b) A qualified paleontologist shall first determine whether a paleontological resource uncovered during construction meets the definition of a "unique archaeological resource" under Public Resources Code Section 21083.2(g). If the paleontological resource is determined to be a "unique archaeological resource," the paleontologist shall formulate a mitigation plan in consultation with the campus that satisfies the requirements of Section 21083.2. If the paleontologist determines that the paleontological resource is not a unique resource, the paleontologist may record the site and submit the recordation form to the Natural History Museum of Los Angeles County. The paleontologist shall prepare a report of the results of any study prepared as part of a mitigation plan, following			

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Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures		Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
		accepted professional practice. Copies of the report shall be submitted to the University and to the Natural History Museum of Los Angeles County.			
Impact NHIP 4.4-5: The NHIP construction would not result in the disturbance of human remains, including those interred outside of formal cemeteries.	PP 4.4-5	In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately, the area of the find shall be protected, and the University immediately shall notify the Los Angeles County Coroner of the find and comply with the provisions of P.R.C. Section 5097 with respect to Native American involvement, burial treatment, and re-burial, if necessary.	LS	*None required.*	LS
GEOLOGY AND SOILS					
Impact NHIP 4.5-1: Implementation of the NHIP would not expose people and/or structures to potentially substantial adverse effects resulting from rupture of a known earthquake fault, strong seismic groundshaking, seismic-related ground failure (i.e., liquefaction), or landsliding.	PP 4.5-1(a)	During project-specific building design, a site-specific geotechnical study shall be conducted under the direct supervision of a California Registered Engineering Geologist or licensed geotechnical engineer to assess detailed seismic, geological, soil, and groundwater conditions at each construction site and develop recommendations to prevent or abate any identified hazards. The study shall follow applicable recommendations of CDMG Special Publication 117 and shall include, but not necessarily be limited to	LS	*None required.*	LS

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Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
	▪ Determination of the locations of any suspected fault traces and anticipated ground acceleration at the building site ▪ Potential for displacement caused by seismically induced shaking, fault/ground surface rupture, liquefaction, differential soil settlement, expansive and compressible soils, landsliding, or other earth movements or soil constraints ▪ Evaluation of depth to groundwater The campus shall incorporate into project design the recommendations for the prevention and abatement of any identified hazards, including landslides and liquefaction, as well as for groundwater dewatering, as necessary, to ensure soil stability during construction and operation of the project.			
	PP 4.5-1(b) The campus shall continue to implement its current seismic upgrade program.			
	PP 4.5-1(c) The campus shall continue to comply with the University Policy on Seismic Safety adopted on January 17, 1995 or with any subsequent revision to the policy that provides an equivalent or higher level of protection with respect to seismic hazards.			

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	PP 4.5-1(d) Development projects under the 2002 LRDP shall continue to be subject to structural peer review.			
Impact NHIP 4.5-2: The NHIP construction and operation would not result in substantial soil erosion and the loss of topsoil.	*PP 4.2-2(a) also applies to Impact NHIP 4.5-2.*	LS	*None required.*	LS
Impact NHIP 4.5-3: The NHIP construction in areas underlain by soils of varying stability would not subject people and structures to hazards associated with landsliding, lateral spreading, subsidence, liquefaction, collapse, or differential settlement.	*PP 4.5-1(a) and PP 4.5-1(d) also apply to Impact NHIP 4.5-3.*	LS	*None required.*	LS
Impact NHIP 4.5-4: Implementation of the NHIP would not result in construction of facilities on expansive soils, and would not create a substantial risk to people and structures.	*PP 4.5-1(a) and 4.5-1(d) also apply to Impact NHIP 4.5-4.*	LS	*None required.*	LS

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Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures		Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
HAZARDS AND HAZARDOUS MATERIALS					
Impact NHIP 4.6-1: Implementation of the NHIP would not expose campus occupants or the nearby public to a significant hazard due to the routine transport, use, disposal, or storage of hazardous materials (including chemical, radioactive, and biohazardous waste).	PP 4.6-1	The campus shall continue to implement the same (or equivalent) health and safety plans, programs, practices, and procedures related to the use, storage, disposal, or transportation of hazardous materials during the 2002 LRDP planning horizon, including, but not necessarily limited to, the Business Plan, Hazardous Materials Management Program, Hazard Communication Program, Injury and Illness Prevention Program, Chemical Exposure Monitoring Program, Asbestos Management Program, Respiratory Protection Program, Risk Management Prevention Plan for the use and storage of ammonia in the ESF, EH&S procedures for decommissioning and demolishing buildings that may contain hazardous materials, and the Broadscope Radioactive Materials License. These programs may be subject to modification as more stringent standards are developed or if the programs become obsolete through replacement by other programs that incorporate similar health and safety protection measures.	LS	*None required.*	LS

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Table 2-1 Summary of Environmental Effects and Mitigation Measures

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Impact NHIP 4.6-2: Implementation of the NHIP would not expose construction workers and campus occupants to a significant hazard through the renovation or demolition of buildings or relocation of underground utilities that contain hazardous materials.	*PP 4.6-1 also applies to Impact NHIP 4.6-2.*	LS	*None required.*	LS
Impact NHIP 4.6-3: Implementation of the NHIP would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	PP 4.6-1 *also applies to Impact NHIP 4.6-3.*	LS	*None required.*	LS
Impact NHIP 4.6-4: Implementation of the NHIP would not create a significant risk of exposure of campus occupants and construction workers to contaminated soil or groundwater.	PP 4.6-4 While not expected to occur on campus, if contaminated soil and/or groundwater is encountered during the removal of on-site debris or during excavation and/or grading activities, the construction contractor(s) shall stop work and immediately inform the EH&S. An on-site assessment shall be conducted to determine if the discovered materials pose a significant risk to the public or construction workers. If the materials are determined to pose such a risk, a remediation plan shall be prepared and submitted to the EH&S to comply with all federal and State regulations necessary to	LS	*None required.*	LS

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	clean and/or remove the contaminated soil and/or groundwater. Soil remediation methods could include, but are not necessarily limited to, excavation and on-site treatment, excavation and off-site treatment or disposal, and/or treatment without excavation. Remediation alternatives for cleanup of contaminated groundwater could include, but are not necessarily limited to, on-site treatment, extraction and off-site treatment, and/or disposal. The construction schedule shall be modified or delayed to ensure that construction will not inhibit remediation activities and will not expose the public or construction workers to significant risks associated with hazardous conditions. *PP 4.6-1 also applies to Impact NHIP 4.6-4.*			
Impact NHIP 4.6-5: Implementation of the NHIP would not result in hazardous emissions but could require the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	PP 4.6-1 *also applies to Impact NHIP 4.6-5.*	LS	*None required.*	LS

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Impact NHIP 4.6-6: Implementation of the NHIP would not result in construction of facilities on sites containing hazardous materials, and thus would not create a significant hazard to the public or environment.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.6-7: Implementation of the NHIP would not result in a safety hazard for an increased number of people residing or working on campus due to its proximity to the UCLA Medical Center helipad.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.6-8: Implementation of the NHIP would not impair implementation of, or physically interfere with, an adopted emergency response or emergency evacuation plan.	PP 4.6-8(a) To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways. At any time only a single lane is available, the campus shall provide a temporary traffic signal, signal carriers (i.e., flagpersons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway segment, the campus shall provide appropriate signage indicating alternative routes. *(This is identical to Traffic/Transportation PP 4.13-6.)* PP 4.6-8(b) To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, UCLA shall consult with the UCPD, EH&S, and the LAFD to	LS	*None required.*	LS

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	disclose temporary lane or roadway closures and alternative travel routes. *(This is identical to Traffic/Transportation PP 4.13-9).*			
HYDROLOGY AND WATER QUALITY				
Impact NHIP 4.7-1: Implementation of the NHIP would not violate existing water quality standards or waste discharge requirements.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.7-2: Implementation of the NHIP would not substantially deplete groundwater supplies or interfere with groundwater recharge.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.7-3: Implementation of the NHIP would not substantially alter site drainage patterns and would not result in substantial erosion or siltation on- or off- site.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.7-4: Implementation of the NHIP would not substantially alter site drainage patterns or substantially increase the rate or amount of surface runoff and would not result in flooding either on or off site.	*None applicable.*	LS	*None required.*	LS

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Impact NHIP 4.7-5: Implementation of the NHIP would not result in runoff that exceeds the capacity of existing storm drain systems or provides substantial additional sources of polluted runoff.	PP 4.7-5 Project design shall include measures to upgrade and expand campus storm drain capacity where necessary. Design of future projects will include measures to reduce runoff, including the provision of permeable landscaped areas adjacent to structures to absorb runoff and the use of pervious or semi-pervious paving materials.	LS	*None required.*	LS
Impact NHIP 4.7-6: Implementation of the NHIP would not require the construction of new stormwater conveyance systems or the expansion of existing stormwater conveyance systems.	*PP 4.7–5 and 4.1-2(d) also apply to Impoct NHIP 4.7-6.*	LS	*None required.*	LS
Impact NHIP 4.7-7: Implementation of the NHIP would not otherwise substantially degrade water quality.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.7-8: Implementation of the NHIP would not place housing within a 100-year flood hazard area.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.7-9: Implementation of the NHIP would not place structures within a 100-year flood hazard area, which would impede or redirect flood flows.	*None applicable.*	LS	*None required.*	LS

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Impact NHIP 4.7-10: Implementation of the NHIP would not expose people or structures to a significant risk involving flooding due to the failure of Stone Canyon Reservoir.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.7-11: Implementation of the NHIP would not expose people or structures to a significant risk of mudflows.	*None applicable.*	LS	*None required.*	LS
LAND USE AND PLANNING				
Impact NHIP 4.8-1: Implementation of the NHIP would not result in potential incompatibilities between campus development and adjacent land uses.	PP 4.8-1(a) The design process shall evaluate and incorporate, where appropriate, factors including, but not necessarily limited to, building mass and form, building proportion, roof profile, architectural detail and fenestration, the texture, color, and quality of building materials, focal views, pedestrian and vehicular circulation and access, and the landscape setting to ensure preservation and enhancement of the visual character and quality of the campus and the surrounding area. Landscaped open space (including plazas, courts, gardens, walkways, and recreational areas) shall be integrated with development to encourage use through placement and design. *(This is identical to Aesthetics PP 4.1-1(a).)*	LS	*None required.*	LS

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Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
	PP 4.8-1(c) The western, northern, and eastern edges of the main campus shall include a landscaped buffer to complement the residential uses of the surrounding community and to provide an attractive perimeter that effectively screens and enhances future development. *(This is identical to Aesthetics PP 4.1-2(e).)* PP 4.8-1(f) The architectural and landscape traditions that give the campus its unique character shall be respected and reinforced. *(This is identical to Aesthetics PP 4.1-2(b).)* PP 4.8-1(h) New building projects shall be sited to ensure compatibility with existing uses and the height and massing of adjacent facilities. *(This is identical to Aesthetics PP 4.1-1(c).)* PP 4.8-1(i) Facilities shall be sited and designed to enhance spatial development of the campus while maximizing use of limited land resources. *MM 4.3-1(c) also applies to Impact NHIP 4.8-1.*			
Impact NHIP 4.8–2: Implementation of the NHIP would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.	*All relevant 2002 LRDP MMs and PPs that ensure consistency with applicable land use plans, policies, or regulations shall be applied during the LRDP planning horizon.*	LS	*None required.*	LS

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NOISE				
Impact NHIP 4.9-1: Implementation of the NHIP would not expose new on-campus student residential uses to noise levels in excess of the State's 45 dBA CNEL interior noise standard.	PP 4.9-1 The campus shall continue to evaluate ambient noise conditions when placing new student housing near regular sources of noise such as roadways and stationary equipment and design the new buildings to ensure that interior noise levels would be less than 45 dBA CNEL.	LS	*None required.*	LS
Impact NHIP 4.9-2: The NHIP construction could generate and expose persons on campus to excessive groundborne vibration or groundborne noise level.	*None applicable.*	S	NHIP MM 4.9-2 The campus shall notify on-campus residential and administrative users in the Northwest zone when construction activities that could produce excessive groundborne vibration (such as the use of large bulldozers and loaded trucks) are anticipated to occur within 50 feet of the residence halls. *No additional feasible mitigation is available.*	SU
Impact NHIP 4.9-3: The NHIP construction would not generate and expose persons off campus to excessive groundborne vibration or groundborne noise levels.	*None applicable.*	LS	*None required.*	LS

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Impact NHIP 4.9-4: Implementation of the NHIP would not generate and expose persons on or off campus to excessive groundborne vibration or groundborne noise levels.	*None applicable.*		LS	*None required.*	LS
Impact NHIP 4.9-5: Implementation of the NHIP would generate increased local traffic volumes, but would not cause a substantial permanent on- or off-campus increase in ambient roadway noise levels in the project vicinity during the regular session.	PP 4.9-5(a)	The campus shall continue to provide on-campus housing to continue the evolution of UCLA from a commuter to a residential campus. *(This is identical to Air Quality PP 4.2-1(a) and Transportation/Traffic PP 4.13-1(c).)*	LS	*None required.*	LS
	PP 4.9-5(b)	The campus shall continue to implement a TDM program that meets or exceeds all trip reduction and AVR requirements of the SCAQMD. The TDM program may be subject to modification as new technologies are developed or alternate program elements are found to be more effective. *(This is identical to Air Quality PP 4.2-1(b) and Transportation/Traffic PP 4.13-1(d).)*			

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Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
Impact NHIP 4.9-6: Implementation of the NHIP would generate increased local traffic volumes, but would not cause a substantial permanent on- or off-campus increase in ambient roadway noise levels during the summer session.	MM 4.9-6 The TDM program will be extended through the student registration process to provide information concerning alternative transportation options to summer session students to increase awareness of, and participation in, alternative transportation programs during the summer session. *(This is identical to Air Quality MM 4.2-4 and Transportation/Traffic MM 4.13-2(a).)* *PP 4.9-5(a) and PP 4.9-5(b) also apply to Impact NHIP 4.9-6.*	LS	*None required.*	LS
Impact NHIP 4.9-7: Implementation of the NHIP could add new stationary sources of noise, but would not cause a substantial permanent on- or off-campus increase in ambient noise levels.	PP 4.9-7(a) The campus shall continue to shield all new stationary sources of noise that would be located in close proximity to noise-sensitive buildings and uses. PP 4.9-7(b) The campus shall continue to provide a landscaped buffer along the western, northern, and eastern edges of the main campus in order to maximize the distance between the roadways and new buildings and provide an acoustically soft environment. At a minimum, this environment can be provided by planting grass and other low landscaping.	LS	*None required.*	LS

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Impact NHIP 4.9-8: The NHIP construction could result in substantial temporary or periodic increases in ambient noise levels at on-campus locations.	PP 4.9-8(a)	To the extent feasible, construction activities shall be limited to 7:00 A.M. to 9:00 P.M. Monday through Friday, 8:00 A.M. to 6:00 P.M. on Saturday, and no construction on Sunday and national holidays, as appropriate, in order to minimize disruption to area residences surrounding the campus and to on-campus uses that are sensitive to noise.	S	*No feasible mitigation available.*	SU
	PP 4.9-8(b)	The campus shall continue to require by contract specifications that construction equipment be required to be muffled or otherwise shielded. Contracts shall specify that engine-driven equipment be fitted with appropriate noise mufflers.			
	PP 4.9-8(c)	The campus shall continue to require that stationary construction equipment material and vehicle staging be placed to direct noise away from sensitive receptors.			
	PP 4.9-8(d)	The campus shall continue to conduct regular meetings with on-campus constituents to provide advance notice of construction activities in order to coordinate these activities with the academic calendar, scheduled events, and other situations, as needed.			

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Impact	*2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures*	*Level of Significance Prior to Mitigation*	*Northwest Housing Infill Project Mitigation Measure(s)*	*Level of Significance After Mitigation*
Impact NHIP 4.9-9: The NHIP construction would result in substantial temporary or periodic increases in ambient noise levels at off-campus locations.	PP 4.9-9 The campus shall continue to conduct meetings, as needed, with off-campus constituents that are affected by campus construction to provide advance notice of construction activities and ensure that the mutual needs of the particular construction project and of those impacted by construction noise are met, to the extent feasible. *PP 4.9-8(a), PP 4.9-8(b), and PP 4.9-8(c) also apply to Impact NHIP 4.9-9.*	S	*No feasible mitigation available.*	SU
Impact NHIP 4.9-10: Implementation of the NHIP would not result in substantial temporary or periodic increases in ambient noise levels due to special events.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.9-11: Implementation of the NHIP would not expose additional students, faculty, and visitors within the Northwest zone to excessive noise levels generated by helicopter operations.	*None applicable.*	LS	*None required.*	LS
POPULATION AND HOUSING				
Impact NHIP 4.10-1: Implementation of the NHIP would accommodate population growth on the UCLA campus.	*None applicable.*	LS	*None required.*	LS

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Impact NHIP 4.10-2: Implementation of the NHIP would not result in a substantial increase in demand for housing.	*None applicable.*		LS	*None required.*	LS
PUBLIC SERVICES					
Impact NHIP 4.11-1: Implementation of the NHIP could increase the demand for fire protection services, but would not require the construction of new or physically altered facilities to accommodate the increased demand and maintain acceptable response times and fire flows.	PP 4.11-1	Fire alarm connections to the University Police Command Center shall continue to be provided in all new and renovated buildings to provide immediate location information to the Los Angeles Fire Department to reduce response times in emergency situations.	LS	*None required.*	LS
Impact NHIP 4.11-2: Implementation of the NHIP could increase the demand for police services, but would not require new or physically altered facilities to maintain acceptable service ratios for police protection services.	PP 4.11-2(a)	Police staffing levels and equipment needs shall continue to be assessed on an ongoing basis as individual development projects are proposed and on an annual basis during the campus budgeting process to ensure that the appropriate service levels will be maintained to protect an increased campus population and an increased level of development.	LS	*None required.*	LS
	PP 4.11-2(b)	Annual meetings shall continue to be attended by the Director of UCLA Housing and the UCPD to evaluate the adequacy of police protection service for University-owned housing, assess institutional priorities and budgetary requirements, and identify and implement			

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	appropriate actions to ensure the continued adequacy of police protection services for resident students. *PP 4.11-1 also applies to Impact NHIP 4.11-2.*			
Impact NHIP 4.11-3: Implementation of the NHIP would not require new or physically altered facilities to accommodate additional students in LAUSD schools.	*None applicable.*	LS	*None required.*	LS
RECREATION				
Impact NHIP 4.12-1: Implementation of the NHIP would increase the campus population but would not result in the increased use of parks and recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.	PP 4.12-1(a) The campus shall continue to provide, operate, and maintain recreational facilities for students, faculty, and staff on campus. PP 4.12-1(b) The campus shall continue to integrate landscaped open space (including plazas, courts, gardens, walkways, and recreational areas) with development to encourage use through placement and design.	LS	*None required.*	LS
Impact NHIP 4.12-2: The NHIP would include recreation facilities, the construction of which would not have an adverse physical effect on the environment.	*All relevant 2002 LRDP MMs and PPs shall be applied during construction activities.*	LS	*None required.*	LS

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TRANSPORTATION/TRAFFIC					
Impact NHIP 4.13-1: Implementation of the NHIP would result in additional vehicular trips during the regular session, which would not result in a substantial degradation in intersection levels of service.	PP 4.13-1(a)	The campus shall continue to maintain the 1990 LRDP vehicle trip cap of 139,500 average daily trips.	LS	*None required.*	LS
	PP 4.13-1(b)	The campus shall continue to maintain the 1990 LRDP parking cap of 25,169 spaces.			
	PP 4.13-1(c)	The campus shall continue to provide on-campus housing to continue the evolution of UCLA from a commuter to a residential campus. *(This is identical to Air Quality PP 4.2-1(a) and Noise and Vibration PP 4.9-5(a).)*			
	PP 4.13-1(d)	The campus shall continue to implement a TDM program that meets or exceeds all trip reduction and AVR requirements of the SCAQMD. The TDM program may be subject to modification as new technologies are developed or alternate program elements are found to be more effective. *(This is identical to Air Quality PP 4.2-1(b) and Noise and Vibration 4.9-5(b).)*			

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Impact NHIP 4.13-2: Implementation of the NHIP would result in additional vehicular traffic during the twelve-week period of summer instruction, which would result in a substantial degradation in intersection levels of service.	MM 4.13-1 The campus shall provide fair share funding to the City of Los Angeles for installation of ATCS at the intersection of Montana Avenue/Gayley Avenue and Veteran Avenue. MM 4.13-2(a) The TDM program will be extended through the student registration process to provide information concerning alternative transportation options to summer session students to increase awareness of, and participation in, alternative transportation programs during the summer session. *(This is identical to Air Quality MM 4.2-4 and Noise and Vibration MM 4.9-6.)* MM 4.13-2(c) The campus shall provide fair share funding to the City of Los Angeles for installation of ATCS at the intersection of Strathmore Place and Gayley Avenue. *PP 4.13-1(a), PP 4.13-1(b), PP 4.13-1(c), and PP 4.13-1(d) also apply to Impact NHIP 4.13-2.*	S	*No additional feasible mitigation is available.*	SU

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Impact NHIP 4.13-3: Implementation of the NHIP would result in the generation of construction-related vehicle trips, which would impact traffic conditions along roadway segments and at individual intersections.	PP 4.13-3 UCLA Capital Programs will assess construction schedules of major projects to determine the potential for overlapping construction activities to result in periods of heavy construction vehicle traffic on individual roadway segments, and adjust construction schedules, work hours, or access routes to the extent feasible to reduce construction-related traffic congestion.	S	*No additional feasible mitigation is available.*	SU
Impact NHIP 4.13-4: Implementation of the NHIP would result in additional vehicular traffic volumes, but would not exceed established service levels on roadways designated by the Los Angeles Congestion Management Program.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.13-5: Implementation of the NHIP would not substantially increase hazards due to design features or incompatible uses.	*None applicable.*	LS	*Nane Required*	LS

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Impact NHIP 4.13-6: The NHIP construction would not substantially increase vehicular hazards due to closure of traffic lanes or roadway segments.	PP 4.13-6 To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways. At any time only a single lane is available, the campus shall provide a temporary traffic signal, signal carriers (i.e., flagpersons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway segment, the campus shall provide appropriate signage indicating alternative routes. *(This is identical to Hazards and Hazardous Materials PP 4.6-8(a).)*	LS	*None required.*	LS
Impact NHIP 4.13-7: The NHIP construction would not substantially increase pedestrian hazards due to the closure of sidewalks or paths.	PP 4.13-7 For any construction-related closure of pedestrian routes, the campus shall provide appropriate signage indicating alternative routes, and provide curb cuts and street crossings to assure alternate routes are accessible.	LS	*None required.*	LS
Impact NHIP 4.13-8: Implementation of the NHIP would not result in inadequate emergency access.	*None applicable.*	LS	*None required.*	LS

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Impact NHIP 4.13-9: The NHIP construction would not result in inadequate emergency access.	PP 4.13-9 To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, UCLA shall consult with the UCPD, EH&S, and the LAFD to disclose temporary lane or roadway closures and alternative travel routes. *(This is identical to Hazards and Hazordous Materials PP 4.6-8(b).)*	LS	*None required.*	LS
Impact NHIP 4.13-10: Implementation of the NHIP would not result in inadequate parking capacity during the regular session.	*PP 4.13-1(b) also applies to Impact NHIP 4.13-10.*	LS	*None required.*	LS
Impact NHIP 4.13-11: Implementation of the NHIP would not result in inadequate parking capacity during the summer session.	*MM 4.13-2(a) also applies to Impact NHIP 4.13-11.*	LS	*None required.*	LS
Impact NHIP 4.13-12: The NHIP construction could result in temporary elimination of on-campus parking spaces and could require additional temporary parking for construction workers.	MM 4.13-12 To the extent that construction worker parking demand exceeds historical levels or available supply, off-site construction worker parking shall be provided with shuttle service to the remote parking location.	LS	*None required*	LS
Impact NHIP 4.13-13: Implementation of the NHIP would not conflict with adopted programs, policies, or practices supporting alternative transportation.	*PP 4.13-1(d), PP 4.13-1(c), and MM 4.13-2(a) also apply to Impact NHIP 4.13-13.*	LS	*None required.*	LS

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SU = Significant Unavoidable Impact Requiring a "Statement of Overriding Considerations" Prior to Project Approval

Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
Impact NHIP 4.13-14: Implementation of the NHIP would not increase demand for public transit during the regular session.	*None applicable.*	LS	*None required*	LS
Impact NHIP 4.13-15: Implementation of the NHIP would increase demand for public transit during summer session.	*None applicable.*	LS	*None required.*	LS
UTILITIES AND SERVICE SYSTEMS				
Impact NHIP 4.14-1: Implementation of the NHIP would not require or result in the construction of new or expanded water treatment facilities, the construction of which could cause significant environmental effects.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.14-2: Implementation of the NHIP would generate an additional demand for water, but would not require water supplies in excess of existing entitlements and resources or result in the need for new or expanded entitlements.	PP 4.14-2(a) New facilities and renovations (except for patient care facilities in the Medical Center) shall be equipped with low-flow showers, toilets, and urinals. PP 4.14-2(b) Measures to reduce landscaping irrigation needs shall be used, such as automatic timing systems to apply irrigation water during times of the day when evaporation rates are low, installing drip irrigation systems, using mulch for landscaping, subscribing to the California Irrigation Management Information System Network for current information on weather and evaporation rates, and	LS	*None required.*	LS

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Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures		Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
		incorporating drought-resistant plants as appropriate.			
	PP 4.14-2(c)	The campus shall promptly detect and repair leaks in water and irrigation pipes.			
	PP 4.14-2(d)	The campus shall minimize the use of water to clean sidewalks, walkways, driveways and parking areas.			
	PP 4.14-2(e)	The campus shall avoid serving water at UCLA food service facilities except upon request.			
	PP 4.14-2(f)	The campus shall provide ongoing water treatment programs for campus cooling equipment by adding biodegradable chemicals to achieve reductions in water usage.			
	PP 4.14-2(g)	The campus shall educate the campus community on the importance of water conservation measures.			
Impact NHIP 4.14-3: Implementation of the NHIP would not generate solid waste that exceeds the permitted capacity of landfills serving the campus.	PP 4.14-3	The campus shall continue to implement a solid waste reduction and recycling program designed to limit the total quantity of campus solid waste that is disposed of in landfills during the LRDP plan horizon.	LS	*None required.*	LS
Impact NHIP 4.14-4: Implementation of the NHIP would comply with all applicable federal, State, and local statutes and regulations related to solid waste.	*None applicable.*		LS	*None required.*	LS

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Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures	Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
Impact NHIP 4.14-5: Implementation of the NHIP would not exceed wastewater treatment requirements of the Regional Water Quality Control Board.	*None applicable.*	LS	*None required.*	LS
Impact NHIP 4.14-6: Implementation of the NHIP could require the construction of new or expanded wastewater conveyance systems, the construction of which would not cause significant environmental effects.	PP 4.14-6 As part of the design process for proposed projects, an evaluation of the on-campus sewer conveyance capacity shall be undertaken, and improvements provided if necessary in order to ensure that connections are adequate and capacity is available to accommodate estimated flows. *All relevant 2002 LRDP MMs and PPs shall be applied during construction activities.*	LS	*None required.*	LS
Impact NHIP 4.14-7: Implementation of the NHIP would not increase wastewater generation such that treatment facilities would be inadequate to serve the project's projected demand in addition to the provider's existing commitments.	*PP 4.14-2(a), PP 4.14-2(b), PP 4.14-2(c) PP 4.14-2(d) PP 4.14-2(e) PP 4.14-2(f) and PP 4.14-2(g) also apply to Impact NHIP 4.14-7.*	LS	*None required.*	LS
Impact NHIP 4.14-8: Implementation of the NHIP could increase the demand for electricity, but would not require or result in the construction of new energy production or transmission facilities, the construction of which could cause a significant environmental impact.	*None applicable.*	LS	*None required.*	LS

LS = Less Than Significant
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SU = Significant and Unavoidable Impact Requiring a "Statement of Overriding Considerations" Prior to Project Approval

Table 2-1 Summary of Environmental Effects and Mitigation Measures

Impact	2002 LRDP EIR Mitigation Measures or Campus Programs, Practices, and Procedures		Level of Significance Prior to Mitigation	Northwest Housing Infill Project Mitigation Measure(s)	Level of Significance After Mitigation
Impact NHIP 4.14-9: Implementation of the NHIP could increase the demand for natural gas, but would not require or result in the construction of new gas production or transmission facilities, the construction of which could cause a significant environmental impact.	*None applicable.*		LS	*None required.*	LS
Impact NHIP 4.14-10: Implementation of the NHIP would not result in the wasteful or inefficient use of energy by UCLA.	PP 4.14-10	The campus shall continue to implement energy conservation measures (such as energy-efficient lighting and microprocessor-controlled HVAC equipment) to reduce the demand for electricity and natural gas. The energy conservation measures may be subject to modification as new technologies are developed or if current technologies become obsolete through replacement. *(This is identical to Air Quality PP 4.2-3.)*	LS	*None required.*	LS

LS = Less Than Significant
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S = Significant
SU = Significant Unavoidable Impact Requiring a "Statement of Overriding Considerations" Prior to Project Approval

Table 2-2 Comparison of Alternatives to the Proposed Project

Impact Area	*Alternative 1: No Project*	*Alternative 2: Alternative Site*
Aesthetics	LS (Same)	LS (Same)
Air Quality—Construction	SU (Same)	SU (Greater)
Air Quality—Operation	LS (Greater)	LS (Same)
Biological Resources	LS (Less)	LS (Less)
Cultural Resources	LS (Greater)	LS (Same)
Geology and Soils	LS (Greater)	LS (Same)
Hazards and Hazardous Materials	LS (Greater)	LS (Same)
Hydrology and Water Quality	LS (Same)	LS (Less)
Land Use and Planning	LS (Same)	LS (Greater)
Noise—Construction	SU (Same)	SU (Less)
Noise—Operation	LS (Same)	LS (Less)
Population/Housing	LS (Greater)	LS (Same)
Public Service	LS (Same)	LS (Same)
Recreation	LS (Greater)	LS (Greater)
Transportation—Construction	SU (Same)	SU (Greater)
Transportation—Operation	SU (Greater)	SU (Greater)
Utilities and Service Systems	LS (Same)	LS (Greater)
Relationship to Project Objectives	Less	Less

LS = Less Than Significant
PS = Potentially Significant
S = Significant
SU = Significant and Unavoidable

Refer to Volume 3, Chapter 2 (Text Changes)

Chapter 3 PROJECT DESCRIPTION

3.1 BACKGROUND

3.1.1 Program Description and Need for Project

The 2002 Long Range Development Plan (LRDP) establishes a land-use planning framework for future campus facility needs. It defines the campus goals, program needs, and physical development guidelines, while retaining the flexibility to respond to unanticipated circumstances, as well as accommodate expected student enrollment growth. The 2002 LRDP is based on a planning horizon to 2010–11, and provides the relevant planning context for the implementation of the Northwest Housing Infill Project (NHIP).

UCLA currently has an unmet need of housing inventory for undergraduate students of approximately 733 beds, and it is anticipated that this demand will be increased to 2,229 beds by 2010–11. In order to meet the continuing demand for on-campus housing for undergraduate students with guaranteed housing, the campus has converted some double-occupancy rooms to triple-occupancy rooms. This situation compromises the quality of the residential experience and places considerable strain on the residential facilities. Based on these conditions, the campus has determined that the number of triple rooms should be reduced.

A large component of the increase in demand for housing is anticipated to result from the additional planned student enrollment growth. To respond to the anticipated increases in student enrollment and the expected increase in student housing needs, the campus undertook a comprehensive review and revision of the 1990 Student Housing Master Plan (1990 SHMP). The overarching goal set forth in the 1990 SHMP was to house at least 50 percent of student enrollment in either university-owned housing or in private-sector housing within walking distance of campus by 2005. In academic year 2001–02, approximately 46 percent of the campus student enrollment was accommodated with completion of the Southwest Campus Housing and Parking Project, which was approved in January 2001 and would provide approximately 2,000 beds on campus for single graduate and upper-division students, the 2005 goal of the 1990 SHMP will be met.

A fundamental tenet underlying the 2001 Student Housing Master Plan (2001 SHMP) is the aspiration to continue the progress made to date in transforming UCLA to a residential campus. An important benefit of university-owned housing is the cohesive nature of the community formed by groups of students living

in close proximity, as well as the associated environmental benefit of reducing vehicle trips to and from campus. Students who live in the residential community benefit from the resources offered to them through various on-campus housing programs, such as academic, social, and learning programs. Based on these and other principles articulated in the 2001 SHMP, the goals for guaranteed student housing have increased. The 2001 SHMP goals include

- On-campus housing will be guaranteed to all entering first-year students for a period of four years
- On-campus housing will be guaranteed to all new transfer students for a period of two years
- On-campus housing will be guaranteed to all single graduate students for a period of two years
- Off-campus, University-owned housing will be guaranteed for students with families as long as the student is making normal academic progress to degree

In addition, the 2001 SHMP seeks to increase the percentage of students housed in university-owned or private-sector housing (within walking distance to campus) to 58 percent by 2010–11.

To meet the student housing goals while accommodating the anticipated enrollment growth and reducing the number of triple-room occupancies, the unmet need for on-campus undergraduate bed spaces will increase to 2,229 by 2010–11. In response, the campus has proposed the NHIP to provide up to 2,000 additional bed spaces in the Northwest zone. With completion of the proposed 2,000 bed spaces, the on-campus undergraduate bed space inventory would increase to approximately 9,000 spaces, 229 short of the campus goal by 2010–11. The proposed NHIP is intended to implement the key planning principles and housing goals of the 2001 SHMP by increasing the on-campus housing inventory.

3.2 PROJECT OBJECTIVES

The proposed 2002 LRDP will guide the future growth and physical development of the UCLA campus in support of its academic, research, and public service mission, based upon the academic, physical, and operational objectives listed in Volume 1, Section 3.2 (Project Description, Project Objectives). While the LRDP EIR objectives would also apply, the specific objectives of the proposed NHIP are to

- Provide additional on-campus housing to address current and anticipated demand, consistent with the goals of the 2001 SHMP
- Reduce the number of students who commute by increasing the number of students who reside on campus
- Provide additional recreational opportunities to support the anticipated increase in the student resident population

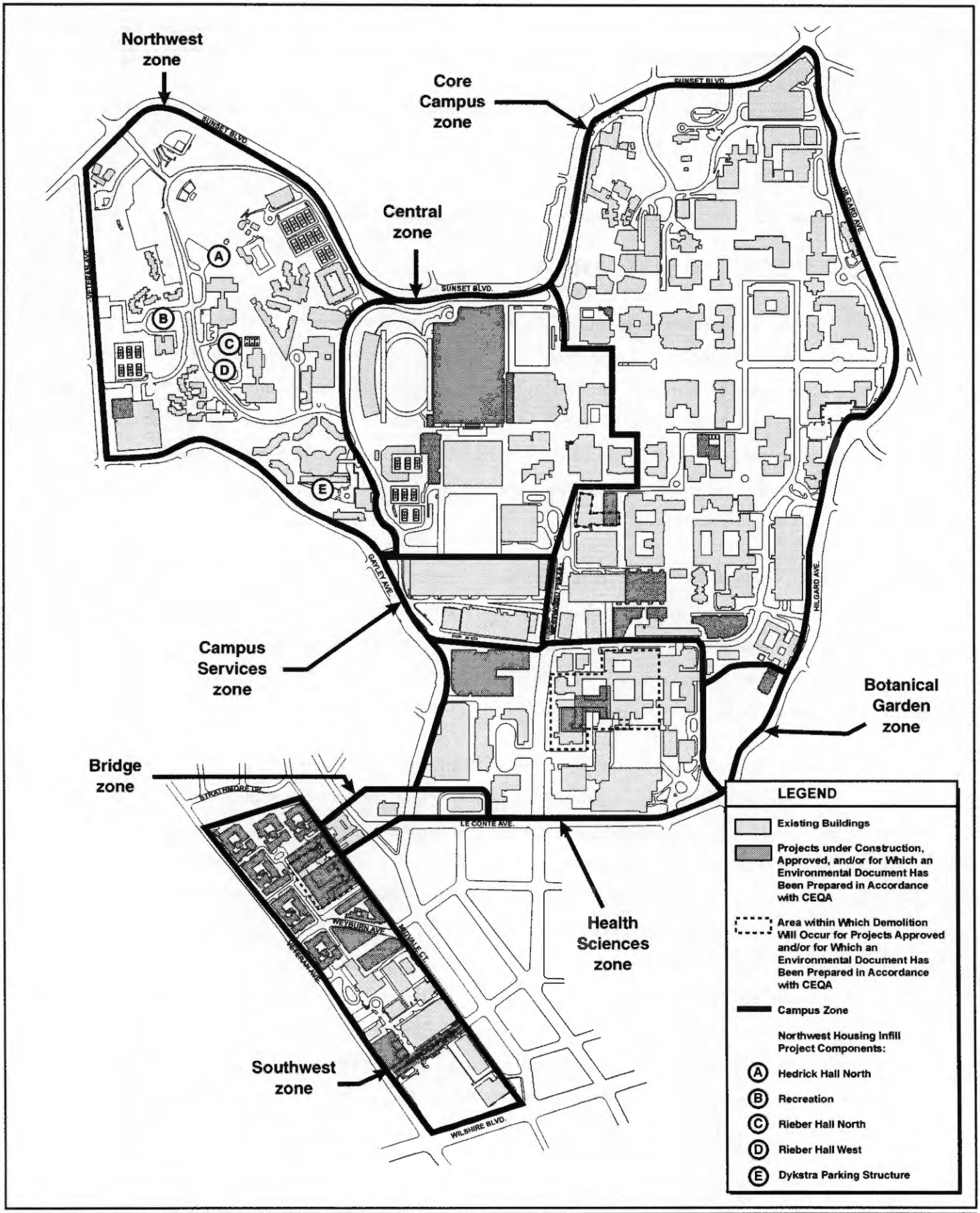
- Provide proximate, convenient parking in the Northwest zone, adjacent to student housing
- Use Northwest zone land resources as efficiently as possible
- Plan, design, and implement the proposed project within the practical constraints of available funding sources, including the need to maintain affordable fees

3.3 PROJECT SITE AREA

The 419-acre UCLA campus is located in the Westwood community in the City of Los Angeles, approximately 12 miles from downtown Los Angeles and 6 miles from the Pacific Ocean. Figure 3-1 (Project Site) provides a map of the UCLA campus and specifically shows the location of the proposed project site area. As shown on Figure 3-1, the project site is located in the Northwest zone, which constitutes approximately 90.5 acres of the 419-acre UCLA campus. The Northwest zone is bounded by Sunset Boulevard on the north, Veteran Avenue on the west, Gayley Avenue on the south, and Charles E. Young Drive West on the east.

The campus edge along Sunset Boulevard and Veteran Avenue in the Northwest zone is heavily landscaped with mature trees and foliage, which visually buffer campus uses from the surrounding area. North and west of the Northwest zone are single-family residential neighborhoods, separated from the campus by Sunset Boulevard and Veteran Avenue. South of the Northwest zone are multi-family residences that are separated from the campus by Gayley Avenue.

Topographically, the Northwest zone consists of hilly terrain characterized by slopes between the existing buildings. The elevation range is between 320 and 560 feet above mean sea level. Figure 3-2 (Existing Conditions: Northwest Zone) depicts existing land use conditions in the Northwest zone, which is primarily residential and recreational in nature. The residential component of the zone is defined by a series of distinct neighborhoods separated by topography: (1) the upper Northwest zone includes Hitch and Saxon Residential Suites and Hedrick and Rieber residence halls; (2) Sunset Village includes Courtside, Canyon Point, Delta Terrace, and Sproul residence halls; and (3) De Neve housing and Dykstra residence hall. The first grouping occupies the northernmost residential region, situated on the highest elevation of the Northwest zone. The second residential neighborhood, Sunset Village, sits at the foot of the slope from the first neighborhood to the south and east and has a more urban, village-like character. De Neve, the newest community on the UCLA campus, is sited south of De Neve Drive, adjacent to Dykstra Hall, which together create an urban enclave in the southern area of the Northwest zone.



Not to Scale

SOURCE: UCLA

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FIGURE **3-1**

Project Site

UCLA Northwest Housing Infill Project

Refer to Volume 3, Chapter 2 (Text Changes)

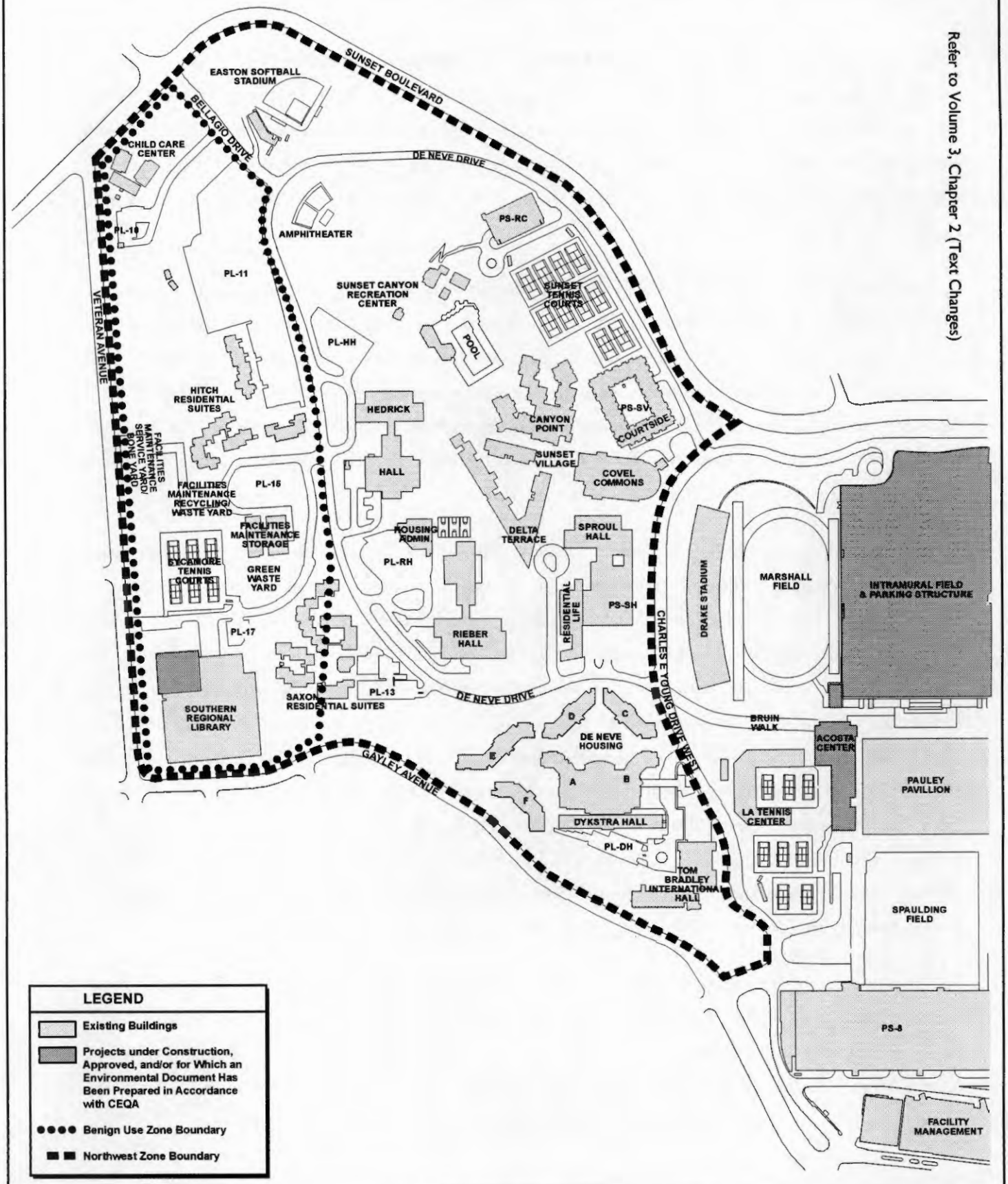

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FIGURE 3-2

Existing Conditions: Northwest Zone

SOURCE: UCLA

UCLA Northwest Housing Infill Project

Both within and among the communities, buildings vary from one another in their housing capacity, density, height, amenities, and architectural character. Hedrick, Rieber, Sproul, and Dykstra Halls represent late-1950s/early-1960s modern architecture and are seven- to ten-story buildings. The Hitch and Saxon Residential Suites are three-story buildings with wood shingle exterior, while Courtside, Canyon Point, Delta Terrace, and De Neve are modern three- to four-story buildings covered with stucco.

To meet residents' dining needs, the Northwest campus area features two types of dining locations: anchor and ancillary. Anchor dining facilities are full service restaurants offering a wide menu and "all-you-care-to-eat" policy that provide seating for between approximately 600 and 850 students. These dining facilities are found in Covel Commons, De Neve housing, Hedrick Hall, and Rieber Hall. Ancillary dining facilities specialize in limited theme-menu options and provide seating for between approximately 35 and 175 students. These facilities are found in Sunset Village Plaza adjacent to Delta Terrace, Sproul Hall, and Tom Bradley International Hall.

The Northwest zone also houses other functions that support housing and the greater academic community. Buildings supporting residential life in the Northwest zone area include the Housing Administration Building, Residential Life Building, Tom Bradley International Hall, and Covel Commons. The Housing Administration Building, adjacent to Rieber Hall, accommodates the administration offices that support the administrative needs of UCLA's housing program. The Residential Life Building, located south of Sproul Hall, includes the offices of the Resident Directors, Area Directors, Judicial Affairs, Program Administrators, and other staff supporting residential life. The Tom Bradley International Hall, located south of Dykstra Hall on Charles E. Young Drive West, houses the Rita and Stanley Dashew International Student Center, the Office of International Students and Scholars, and other support uses, such as a ballroom, cafe, dance studio, study rooms, and UCLA catering. Covel Commons, located within Sunset Village, houses a dining facility, computer lab, meeting rooms, and administrative areas, and serves as a University-wide conference center.

Buildings and uses that support the greater academic community include the Southern Regional Library and the Child Care Center. The Southern Regional Library, located west and down slope of the Saxon Residential Suites, includes space primarily used for processing University-wide lending of books and materials and includes a small reading room. The Child Care Center, located off of Bellagio Drive near Veteran Avenue and Sunset Boulevard, provides childcare services for University employees.

The Northwest zone also includes campuswide recreational facilities, such as the Sunset Canyon Recreation Center, Sunset Canyon Tennis Courts, Sycamore Tennis Courts, and Easton Stadium. The Sunset Canyon Recreation Center, located south and west of De Neve Drive, offers year-round recreation featuring a 50-meter pool, a 25-meter family pool, picnic/barbecue areas, a sand volleyball court and large grass areas, an amphitheater, and various meeting rooms and lounges. The Sunset Canyon Tennis Courts, located west of De Neve Drive adjacent to the Sunset Canyon Recreation Center, includes ten lighted regulation courts. The Sycamore Tennis Courts, located east of Veteran Avenue down slope from the Saxon Residential Suites near the Southern Regional Library, includes six courts for daytime use only. The Northwest zone also includes the Easton Stadium, a softball field for practice and competitive events located southeast of Veteran Avenue and Sunset Boulevard in the northwestern portion of the campus.

Campus Facilities Management operates a green waste and recycling yard and storage facilities in the Northwest zone. These facilities are essential to daily operations within Facilities Management and provide services to the entire campus community. The storage facilities (OHJ and OHM) and adjacent waste yard are located south of surface parking Lot 15, as shown in Figure 3-2. Other yard facilities are located between surface parking Lot 15 and the Veteran Avenue edge of campus.

Circulation within Northwest zone consists of primarily an internal campus loop road, De Neve Drive, which connects at two locations to Charles E. Young Drive West, another internal campus roadway, as illustrated in Figure 3-2. Bellagio Drive, a second campus roadway off of De Neve Drive, connects to Sunset Boulevard. Bruin Walk is the major pedestrian pathway linking the residential and academic communities. Drake Stadium, the Intramural Field, and Los Angeles Tennis Center provide a transition between the Northwest zone and the remaining eastern and southern portions of campus.

There are various parking facilities supporting the housing, administration, academic, and recreation uses in the Northwest zone. Parking structures serve Sunset Village (SV structure) and Sproul Hall (SH structure), and surface lots serve Dykstra Hall (Lot DH), Rieber Hall (Lot RH), and Hedrick Hall (Lot HH). In addition, surface lots 10, 11, 13, 15, 17, parking structure RC (Recreation Center), and on-street parking along portions of Charles E. Young Drive West and De Neve Drive serve the Northwest zone.

3.4 PROJECT CHARACTERISTICS

3.4.1 Project Overview

UCLA proposes to design and construct infill housing in the Northwest zone, consisting of up to 2,000 beds, a 299-space parking structure, and associated recreation facilities. The Northwest zone of the campus does not offer a single, large site that can accommodate 2,000 bed spaces and related support facilities. As previously mentioned, the terrain is hilly with slopes between existing structures. While there is an area between Veteran Avenue and the Saxon and Hitch Residential Suites that is relatively flat, development in this area is restricted to nonresidential uses based upon the Stipulated Use Agreement between The Regents and the Westwood Hills Property Owners Association. Consequently, surface parking lots outside of this restricted area are the only remaining level sites in the Northwest campus that are suitable for new housing. As a result, NHIP proposes an infill development strategy for the needed residential, parking, and recreational facilities.

Potential building sites suitable for infill residential development include a site adjacent to Hedrick Hall and two sites adjacent to Rieber Hall. A site for recreation use was identified on Lot 15. All of these sites involve removing surface parking spaces. To replace these spaces, the NHIP identifies Lot DH, south of Dykstra Hall, as a suitable location for a parking structure to house the replacement spaces. The project would also include renovation of the existing first-floor levels of Hedrick, Rieber, and Sproul Halls.

3.4.2 Project Components

The NHIP involves infill development of new residence halls, recreational amenities, and parking in the Northwest zone. The project would total approximately 550,000 gross square feet (gsf) of net building space as shown in Table 3-1 (Northwest Housing Infill Project Net New Square Footage Summary). In addition, the project includes a new parking structure to replace spaces removed by the project, as well as additional spaces to accommodate future resident population growth.

Table 3-1 Northwest Housing Infill Project Net New Square Footage Summary

Use	Gross Square Feet
New Residence Halls	**552,000**
Hedrick North	*205,000*
Rieber North	*190,000*
Rieber West	*157,000*
Recreation Center	**15,000**

Table 3-1 Northwest Housing Infill Project Net New Square Footage Summary

Use	Gross Square Feet
Ground-Floor Renovations	**9,000**
Facilities Management Storage	**5,000**
Subtotal	*581,000*
Demolition of Existing Uses	**(31,000)**
Total	**550,000**

Source: UCLA, July 2002

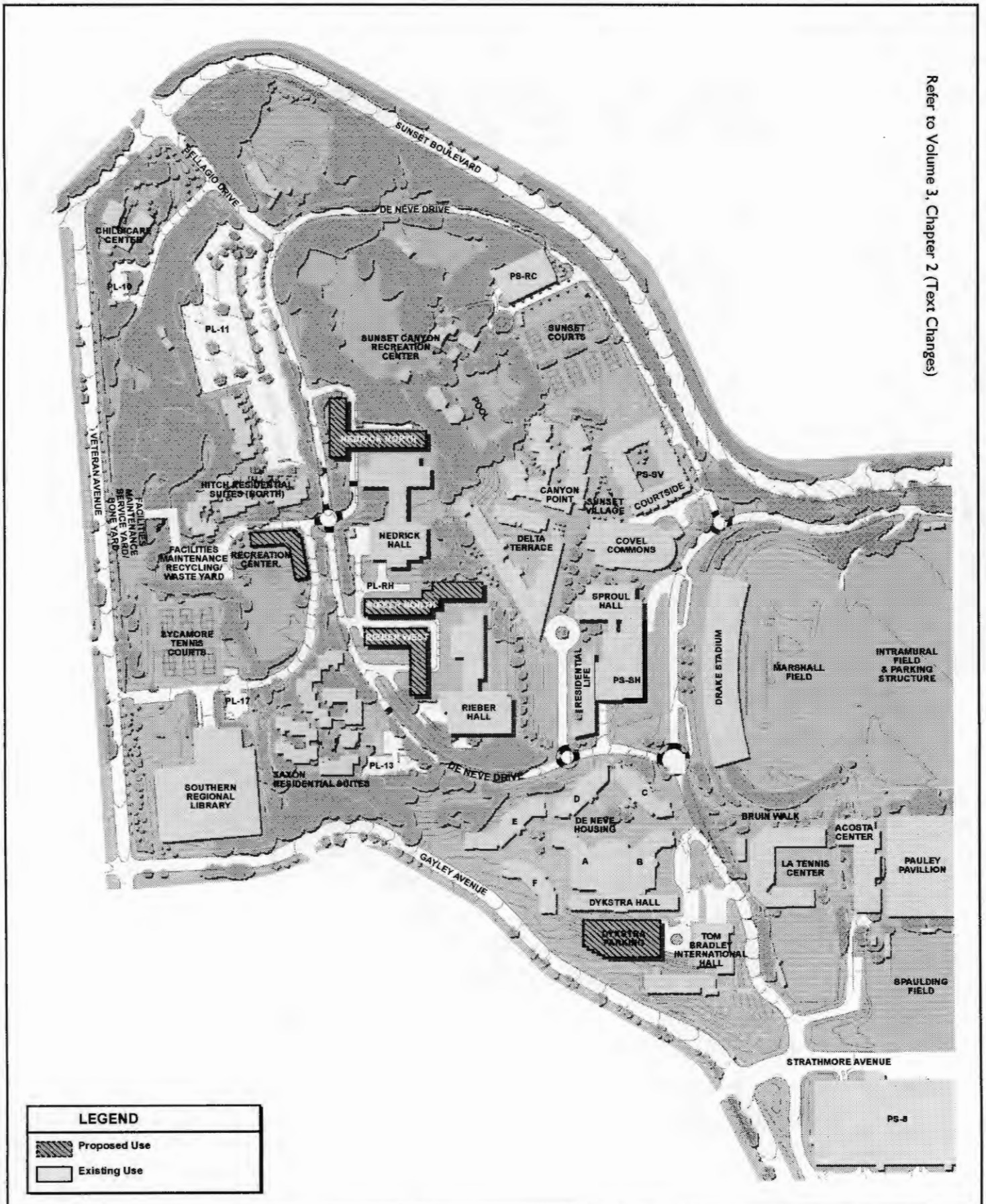
Development of the NHIP would require demolition of approximately 31,000 gsf of existing space, which includes the Housing Administration Building, facilities management buildings (OHJ and OHM) and a vending/storage facility attached to Hedrick Hall. The conceptual site plan is presented in Figure 3-3 (Conceptual Site Plan).

Residential

The new housing would be accommodated within the Northwest zone in three buildings at two locations, known as the Hedrick and Rieber Precincts. Given site constraints, the new residence halls would be multi-level buildings, each nine-stories in height, totaling approximately 552,000 gsf and accommodating up to 2,000 beds.

Hedrick Precinct

The upper Northwest zone residential neighborhood—the Hedrick Precinct—would accommodate the construction of one new residence hall, Hedrick Hall North, totaling approximately 205,000 gsf. The overall height of the new structure would be nine stories and would not exceed that of the existing seven-story Hedrick Hall. The proposed Hedrick Hall North would be located approximately 60 feet north of Hedrick Hall on a currently landscaped area and a portion of parking Lot HH. Site clearance would involve removing portions of the existing landscaping and the parking lot and the existing vending/storage building on the south side of Hedrick Hall. Replacement landscaping would be provided around the building. As shown in Figure 3-4 (Proposed Hedrick Precinct), a courtyard area is proposed between Hedrick Hall North and Hedrick Hall. An expanded courtyard would be developed east of the existing Hedrick Hall. New pedestrian access to the Sunset Canyon Recreation Center would be provided, and a crosswalk on De Neve Drive would ensure access to Hitch Residential Suites and parking Lot 11.



Refer to Volume 3, Chapter 2 (Text Changes)

Not to Scale

SOURCE: UCLA

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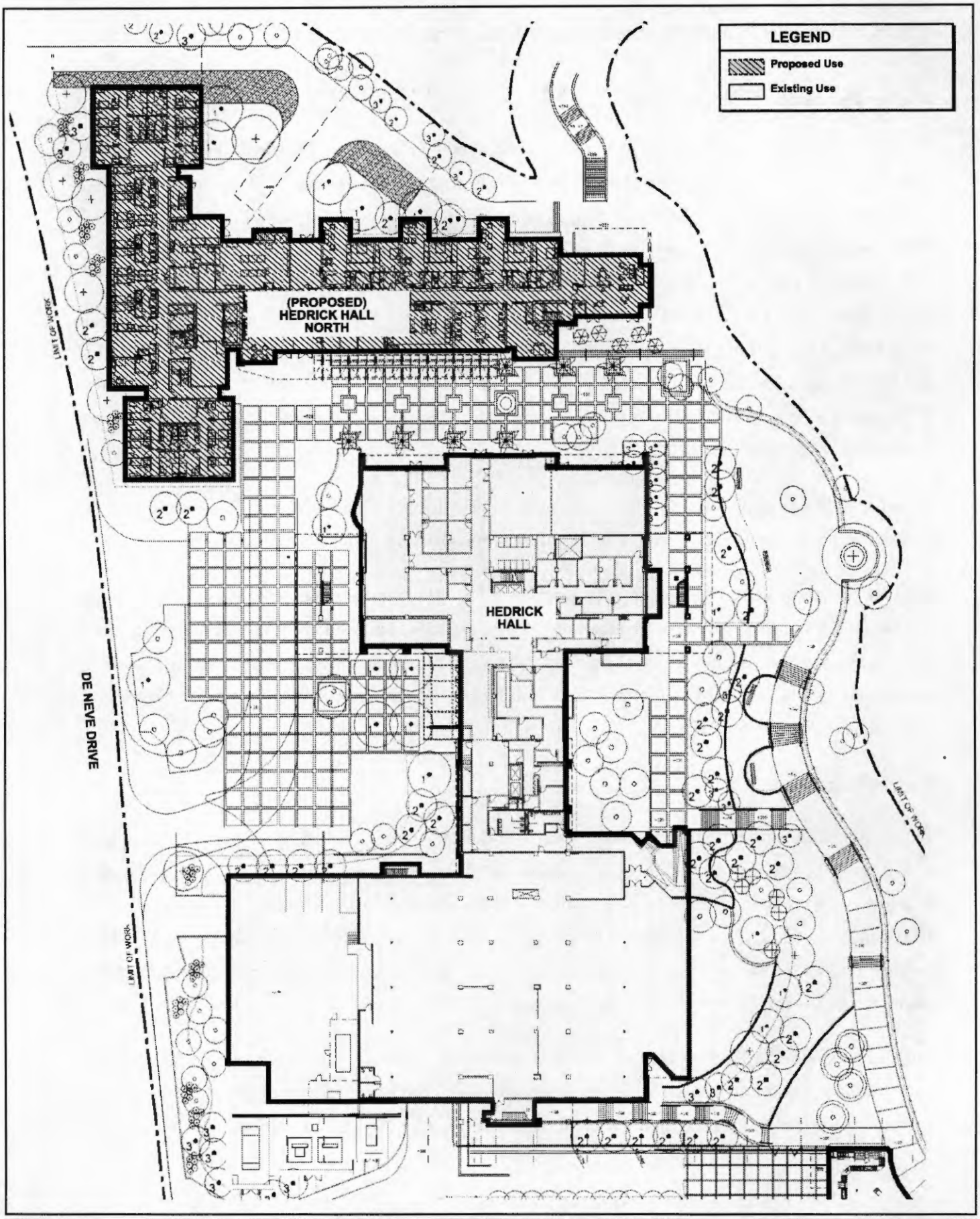
FIGURE **3-3**

Conceptual Site Plan

UCLA Northwest Housing Infill Project



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SOURCE: EIP Associates, 2002

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FIGURE **3-4**

Proposed Hedrick Precinct

UCLA Northwest Housing Infill Project

Rieber Precinct

The Rieber Precinct would include two new structures on the north and west side of the existing Rieber Hall. Rieber Hall North (approximately 190,000 gsf) is proposed approximately 60 feet north of Rieber Hall on the existing Housing Administration Building site and a portion of parking Lot RH. Rieber Hall West (approximately 157,000 gsf) would be built approximately 40 feet west of the existing Rieber Hall on a portion of parking Lot RH. Both of these proposed residential buildings would be nine stories and would not exceed the height of the existing seven-story Rieber Hall. Site clearance would include demolition of the existing Housing Administration building and removal of the surface parking Lot RH and landscaping. Replacement landscaping would be provided around both new buildings. As illustrated in Figure 3-5 (Proposed Rieber Precinct), a courtyard is proposed between the Rieber Hall North, Rieber Hall West, and Rieber Hall.

Rieber Hall North would include a new student dining facility providing additional dining options in the Rieber Precinct. This facility would provide indoor seating for approximately 170 people.

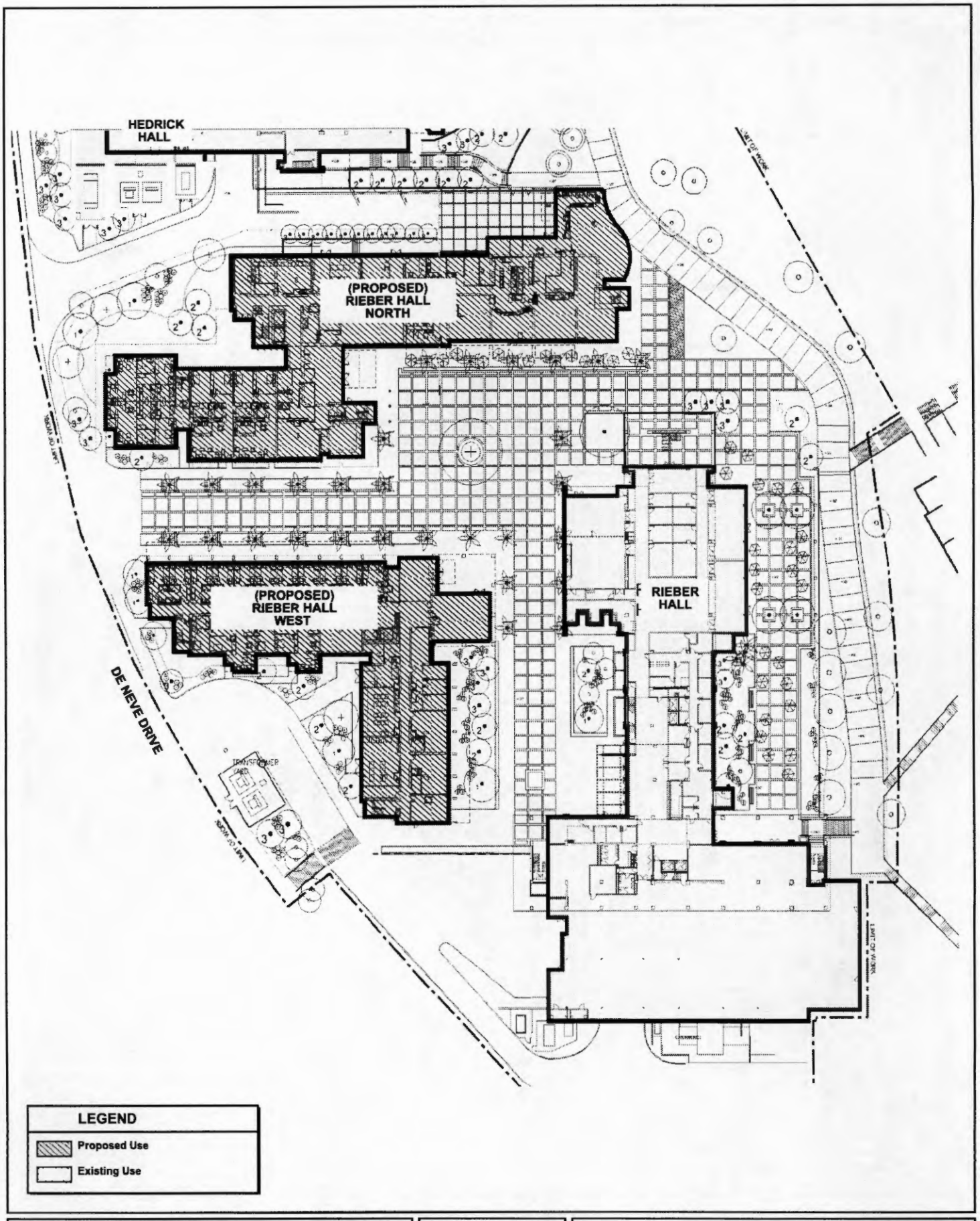
In order to provide vehicle and emergency access to Rieber Hall North, the existing single-story vending storage facility (2,100 gsf)[1] attached to the south side of Hedrick Hall would be removed and the Hedrick Hall docking access would be realigned. A single-story replacement vending/storage building (2,100 gsf)[2] would be constructed with Rieber Hall North and Rieber Hall West and would be adjacent to the south side of Rieber Hall.

Recreation

The proposed recreation facilities would be located at the area south of the Hitch Residential Suites, west of De Neve Drive, and east of an existing Facilities Management green waste yard, as illustrated in Figure 3-3. In order to construct the recreation facilities, existing uses and functions of the Ornamental Horticulture Buildings J and M (OHJ and OHM, respectively) and adjacent green waste yard south of parking Lot 15, would be removed and relocated to other nearby existing facilities (see "Facilities Management Storage," below, for a further discussion).

The main elements of the proposed recreation development include a multi-purpose building, a leisure pool, outdoor basketball courts, outdoor volleyball courts, and lawn area. Figure 3-6 (Conceptual Recreation Site Plan) illustrates the location of the recreation building and leisure pool.

[1] This is part of the total project demolition of 31,000 gsf.
[2] This is subsumed in the total gsf for new residence halls.



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SOURCE: EIP Associates, 2002

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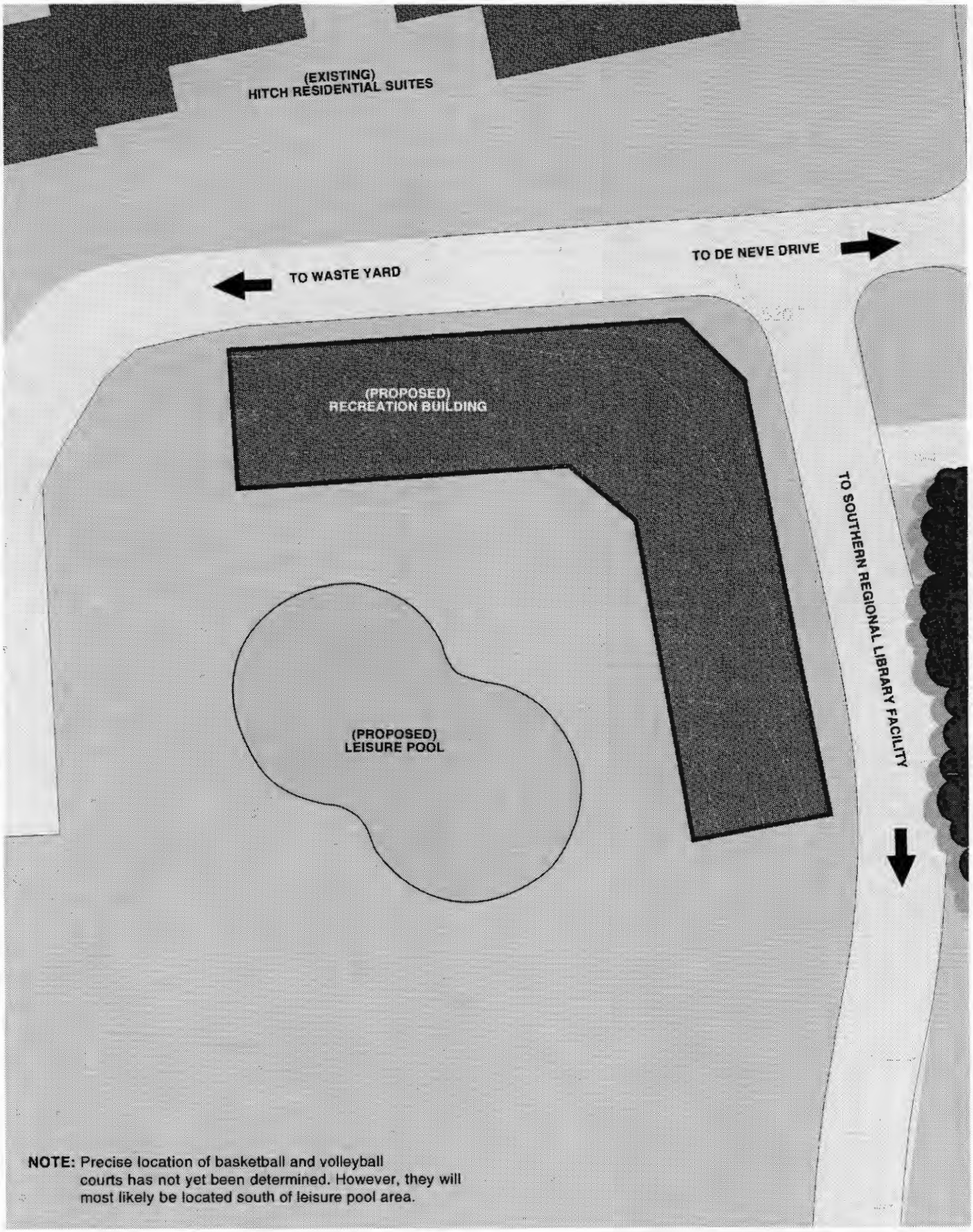
FIGURE **3-5**

Proposed Rieber Precinct

UCLA Northwest Housing Infill Project



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SOURCE: UCLA

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FIGURE **3-6**

Conceptual Recreation Site Plan

UCLA Northwest Housing Infill Project

The approximately 15,000-square-foot multi-purpose building would include an office/storage area, lobby/social area, fitness room, multi-use conference/meeting room, first-aid room, and women's and men's changing/showers/restrooms. The pool would consist of a 25-meter-long free-form leisure pool with a maximum depth of three- to four-feet. An approximately eight-foot high security fence would surround the pool area. No nighttime exterior use of the recreation area is anticipated.

While the recreation area has not been fully designed, the campus envisions construction of basketball and volleyball courts, although the exact number has not yet been determined. However, given the limited size of the proposed recreation area, only two basketball and two volleyball courts could be accommodated.

The outdoor facilities would be limited to use by students in a controlled setting, includeing: no amplified sound (personal head-sets would be permitted); nonspectator daytime use of outdoor courts (i.e., no provision for spectator seating); and no nighttime lighting beyond that required for security purposes. The outdoor facilities would generally be available between the hours of 8:00 A.M. and 9:00 P.M., seven days a week, year round. The recreation center building hours (indoor use) would be consistent with other indoor campus recreation facilities, such as the Wooden Center and the FitCenter South Facility, which are open longer than outdoor facilities.

The NHIP would be consistent with the Stipulated Use Agreement between The Regents and the Westwood Hills Property Owners' Association. As described fully in Section 4.8.1 (Environmental Setting, Land Use), under the terms of the Agreement, new development within the Benign Use Zone "will be reserved for benign uses, which include, but are not limited to, open green space, landscape buffer zones, existing ornamental horticultural buildings and parking facilities, and low-intensity, nonspectator, recreational and athletic space. Benign use excludes, among other things, consideration of a baseball facility in this area."

All residential development proposed as part of the NHIP would be located outside the Benign Use Zone. However, the recreational uses would be provided within the Benign Use Zone. The proposed recreational uses are consistent with the use restrictions in the Agreement and are comparable in nature and in terms of potential impacts with other recreational amenities that presently exist within the Benign Use Zone, such as the Sycamore Tennis Courts. The proposed leisure pool, volleyball courts, and basketball courts are intended for the use of campus students and do not have the character of a baseball facility since they will not be used for spectator sports activity or organized athletic competition. No bleachers or other seating or provisions for spectators will be constructed as part of these recreational amenities. Consistent with the Agreement, no access from off-campus streets would be provided. In

addition, the restriction of the use of these recreational amenities to daytime hours would avoid potential noise impacts during the sensitive nighttime hours.

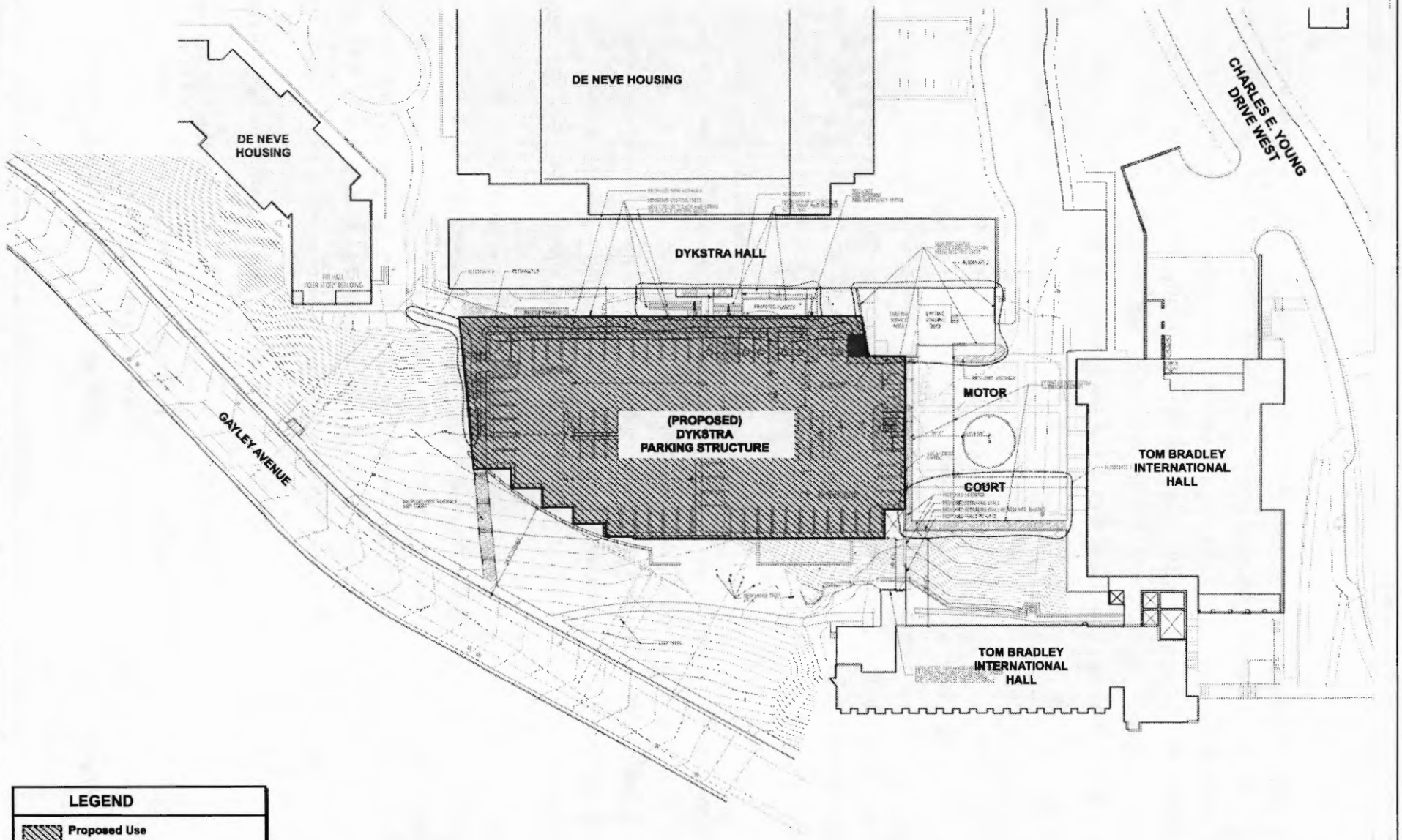
Parking Structure

The NHIP includes a four-level, approximately 86,250-square-foot parking structure accommodating approximately 299 spaces. The parking structure would provide 233 replacement spaces lost due to the construction of new housing and recreational facilities and 66 new spaces to support the new undergraduate student resident beds. The addition of 66 parking spaces would not exceed the 2002 LRDP limit of 25,169 parking spaces (refer also to Section 4.13 [Transportation/Traffic] for a full discussion of project-related and cumulative parking impacts).

The new parking structure would be built into the existing hillside between Dykstra Hall and Tom Bradley International Hall on surface parking Lot DH, as shown in Figure 3-7 (Proposed Dykstra Parking Structure). The four-level structure would be set back from Gayley Avenue by approximately 56 feet and would be set partially into the existing slope. The parking entrance level would be on the top level of the structure, which would be at the same grade level as the Tom Bradley International Hall motor court. There would be three additional levels of parking below. The top deck (entrance level) would be illuminated with approximately 16-foot-tall light fixtures with downcast lighting. The structure would include oil/water separators in the drains. The south end of the structure would be open to allow for the natural ventilation for each parking level. The structure would be designed to accommodate two-way vehicle traffic and 90 degree parking stalls. The facility would be designed in accordance with the requirements of the Americans with Disabilities Act (ADA).

The 2002 LRDP EIR MM 4.1-3(c) requires projects to incorporate walls or barriers to reduce the impact of vehicle headlights to adjacent uses. The project has incorporated this measure and includes parapet walls on each parking level to shield vehicle headlights emanating from the structure.

Vehicle access would be provided from Charles E. Young Drive West through the motor court, which would be controlled by a card access system. The entrance level would be designed to allow fire vehicle access to Dykstra Hall. Pedestrian access would be provided on the north, east and west sides of the structure. Internal stairs would be located on the east and west sides of the structure. A four-stop hydraulic elevator would serve each parking level. New site walkways and stairs would connect the proposed parking structure to Dykstra Hall and Tom Bradley International Hall, as well as to Gayley Avenue.



Not to Scale

SOURCE: Studio Architecture

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FIGURE **3-7**

Proposed Dykstra Parking Structure

UCLA Northwest Housing Infill Project

The proposed parking structure would displace 25 parking spaces from Lot DH. The displaced spaces (which are a part of the 233 replacement spaces) would be temporarily relocated to nearby facilities, such as Parking Structure 8 or Sunset Village Parking Structure SV, or to other nearby Northwest campus parking facilities.

First Floor Renovations

The proposed project would include reconfiguration and renovation of the first floor levels of Hedrick, Rieber, and Sproul Halls so that sufficient space would be available for expanded administrative, community support, and programming functions to accommodate the new and/or existing residents. The first floor of Sproul Hall would accommodate housing administration functions displaced from the demolished Housing Administration Building. The renovations would add a total of approximately 9,000 gsf of new space to these buildings (primarily by enclosing exterior covered areas).

Hedrick and Rieber Halls would serve as central points for student services within each residential Precinct. For example, Rieber Hall would serve Rieber Hall, Rieber Hall North, Rieber Hall West, and Saxon Residential Suites for centralized administrative services and academic programs within the Rieber Precinct. These services are currently located in the ground floor level of Hedrick and Rieber Halls. In order to serve additional students, the first floor spaces would be reconfigured to accommodate expanded services and programs.

Sproul Hall first floor renovation would include space for the relocated administration office functions currently located in the Housing Administration Building. Reconfiguration of the first floor level of Sproul Hall would include efficient use of the existing space along with utilizing space that was recently vacated by the relocation of the housing central commissary and bakery functions to De Neve housing. The vacated space provides an opportunity to accommodate these administrative office functions along with efficient reconfiguration of other space.

Facilities Management Storage

Facilities Management currently has existing storage buildings (OHJ and OHM) and an adjacent green waste yard located south of parking Lot 15. The existing storage facilities are steel-skeleton structures with metal walls and roof panels that store weather-sensitive materials, such as landscaping and planting materials, and miscellaneous items, including classroom and office furniture. The proposed project would relocate and consolidate these facilities into a new 5,000 gsf, one-story shed located on the existing maintenance storage yard ("bone yard") down slope from the Hitch Residential Suites, as shown

in Figure 3-3. The replacement storage structure would be situated adjacent to the existing maintenance yard and accessed by an existing service roadway. The structure would be placed against the hill at the farthest point from inside the Veteran Avenue fence.

The materials currently stored in the existing OHJ and OHM structures would be consolidated into the new storage structure, as well as into other existing facilities on campus. The new storage shed would increase the daily entry into the bone yard by adding approximately three additional truck loads (one half-ton or three-quarter-ton pickup truck) per day to the existing five- to six-truck trips per day. The new facility would include outdoor security lighting, similar to the existing structures, and would be locked and accessible only to authorized personnel. Access to the shed and bone yard would be restricted to daylight hours, except in case of emergency.

The green waste yard functions adjacent to OHJ and OHM would be consolidated and relocated to the existing waste yard located immediately next to parking Lot 15 (see Figures 3-2 and 3-3). Rock and wood waste would no longer be transported to the Northwest zone, but would be collected at the point of production on campus, and the white paper recycling function would be relocated to an undetermined location on campus.

Population

Implementation of the proposed NHIP would accommodate anticipated student enrollment growth and reduce the number of existing triple room occupancies by approximately 325 beds. Consequently, the project would allow for an increase in the student resident population by approximately 1,675 students. In addition to the student population increase, the campus expects an increase in staff to serve the additional housing and students. Approximately 246 new staff would be employed on campus by 2010–11 to provide administrative, recreation, and dining services to the expanded residential population. Of the 246 new staff members, approximately 35 would be students. In addition to the new 246 staff members, three new Community Safety Officers (CSO) would be added to augment the existing safety service in the Northwest zone. This total growth of 249 would be added to the existing staff population of 778, resulting in a total of approximately 1,027 staff members serving the Northwest zone housing and associated functions, as well as recreation and academic services.

3.4.3 Site Improvements

Architectural Style and Landscape Plan

The primary architectural and organizing principle of the NHIP is the continuation of the orthogonal configurations of the existing residential buildings (Hedrick and Rieber Halls). The new buildings would be approximately the same height as these existing buildings and would exhibit a similar architectural style. By placing the new buildings both perpendicular and parallel to the existing buildings, new and improved outdoor spaces would be created where surface parking lots and a building currently exist. This would support a pedestrian-friendly campus with visual links to new and existing spaces and buildings. Each new building would be integrated into the larger complex, forming a visual relationship within the surrounding uses. This concept is realized with the project's Landscape Concept Plan, which reinforces the primary and secondary landscape/hardscape linkages. These linkages would draw people between residences, community/recreation spaces, and the campus, and enhance the indoor/outdoor relationships among the proposed new student housing and the renovated Hedrick, Rieber, and Sproul buildings.

Tree Replacement Plan

The project includes a Tree Replacement Plan that supports the visual relationship with the surrounding uses. This Tree Replacement Plan would involve the provision of one new tree for every two mature trees removed, with minimum 24-inch box size. In addition, the project would provide for relocation of mature trees. Relocating mature trees as part of the project would compensate for the planting of new smaller trees. Given the value of mature trees, the campus considers the removing and relocating of a single mature tree equivalent to the planting of five new smaller trees. Mature trees may be moved from areas within the project site or from the site of other campus construction projects. In the housing area, up to 15 mature trees that otherwise would be removed for construction would be planted around the new residence halls.

For the Dykstra Parking Structure area, up to five existing mature trees that would otherwise be removed for construction would be relocated to the site. It is anticipated that these five relocated trees would be planted along the Gayley Avenue boundary of the parking structure site to screen views of the structure from off-campus areas.

Tree replacement for the recreation area would most likely involve the planting of replacement trees around the periphery of the site in order to maintain the major portion of the area as open space for recreation and leisure activities. Existing trees along the western boundary of the recreation site, as well

as along the western boundary of the adjacent existing waste yard, are to be retained as part of the project.

In summary, the NHIP Tree Replacement Plan provides for the removal and replanting of up to 20 mature trees, each of which would be equivalent to the planting of five new trees (or a total of 100 trees), and the replacement of the remaining mature trees removed by the project on a 2-for-1 basis (2:1), with minimum 24-inch box size or a minimum of 77 new trees.

Utilities

The utility infrastructure (e.g., water, storm drain, electricity, and gas) for the Northwest zone would be capable of supporting the proposed facilities. However, modifications would be necessary to extend utility services to the new building points of connection. In addition, utility line relocations would be required to remove existing lines from within the structural footprint of the proposed buildings and reroute those lines to new connection points in the existing systems.

The NHIP includes the provision of a new sewer line to connect the proposed residence halls to the existing campus sewer system in the Northwest zone that ultimately connects to the City-owned sewer line in Gayley Avenue. In addition, modifications to redirect sewer flows in the campus lines beneath Westwood Plaza (by providing small pipe connections in two locations) are required. These modifications would result in the redirection of existing flows from the Gayley line to the Westwood line, thereby ensuring that conveyance capacity in the Gayley line is maintained. Refer to Impact 4.14-6 for a detailed description.

Fire Access Plan

The NHIP incorporates a Fire Access Plan that provides for fire truck access within 150 feet of all new perimeter-building walls. De Neve Drive provides this access in most instances; in other cases, fire access would be provided by a secondary interior system of fire lanes consisting of grass-crete, designed to current standards for grade, load, and turning requirements. This secondary system would be delineated as required by the Campus State Fire Marshall and would be visually integrated with the landscape of the campus. Fire hydrants would also be provided in accordance with the California Code of Regulations.

Refer to Volume 3, Chapter II (Text Changes)

3.4.4 Project Construction Components

Construction of NHIP is expected to occur beginning in winter/spring 2003 and ending fall/winter 2006–07. The following outlines the major project construction components:

- Design and construction of Hedrick Hall North and Hedrick Hall ground-floor reconfiguration
- Design and construction of Dykstra Parking Structure
- Design and construction of Rieber Hall West, Rieber Hall North, and Rieber Hall ground-floor reconfiguration
- Design and construction of the Recreation Facilities
- Design and construction of Sproul Hall ground-floor reconfiguration

In addition to the areas occupied by new buildings, a staging area is needed to receive, layout, and prepare materials for use in the construction. These staging or layout areas are typically adjacent to the construction site. It is anticipated that the proposed recreational facility site would serve as the staging area for construction of Hedrick Hall North, Rieber Hall North, and Rieber Hall West. The staging for the Dykstra Parking Structure is anticipated to be the existing parking area to the north of the site, and the staging for the Recreation Facilities is anticipated to be the site of the existing small storage area located adjacent to Lot 15. In addition to these staging areas, an existing gated construction worker parking and staging area located off of De Neve Drive and Bellagio Drive would be used on a temporary basis to provide construction parking and equipment staging for construction vehicles.

Specific phasing for construction of project components is under development. However, for the purposes of this environmental analysis, which assesses construction effects, two construction scenarios have been developed to allow a conservative analysis of traffic, air quality, and noise impacts during peak construction activity periods. These peaks could occur if the following simultaneous activities occurred:

- Simultaneous construction of Hedrick Hall North, excavation for the Dykstra Parking Structure, Sproul Hall ground-floor renovations
- Simultaneous construction of Hedrick Hall North, construction of Dykstra Parking; Construction of Rieber Hall North, construction of Rieber Hall West, Hedrick Hall ground-floor renovations.

The construction scenarios are hypothetical and represent a "worst-case" formulated solely for the purpose of evaluating construction-related impacts. The analysis of construction-related impacts also assumes that both peaks could occur over the construction period.

3.5 REFERENCES

California Environmental Quality Act. 2000. *CEQA Guidelines*, January.

University of California, Los Angeles. 1990. *1990 Long Range Development Plan*, November.

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Chapter 4 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

4.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

Sections 4.1 through 4.14 of Chapter 4 of this Environmental Impact Report (EIR) contain a discussion of the possible project-specific environmental effects of the Northwest Housing Infill Project (NHIP). This section is the primary component of the EIR, as it provides information on the type and magnitude of the project's individual environmental impacts, including feasible mitigation measures or project alternatives that could reduce or avoid such impacts.

4.0.1 Scope and Format of the Environmental Impact Analysis

The environmental analysis of the NHIP, which is presented as a Project EIR in this Volume 2 of the 2002 Long Range Development Plan (LRDP) EIR, builds upon the broader programmatic analysis of environmental impacts resulting from implementation of the 2002 LRDP. The organization of the NHIP EIR (Volume 2) replicates the organization of the 2002 LRDP EIR (Volume 1); however, it avoids repetition of information and analysis provided in Volume 1, such as general background and setting information for environmental topic areas, the regulatory context, overall growth-related and growth-inducing issues, issues for which there is no additional information that would require new analysis, cumulative impacts, and broad campus planning alternatives. Instead, the analysis presented in Volume 2 reflects more detailed project-level information regarding the NHIP, as compared to the broader, planning-level information regarding the campus as a whole contained in Volume 1. Analyses of potential environmental effects of the proposed NHIP cover the same issue areas analyzed in Volume 1 for the entire LRDP, including

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning

- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities and Service Systems
- Mandatory Findings of Significance[3]

With respect to agricultural resources, the Initial Study (IS) concluded that the soils on campus are not candidates for listing as prime farmland, unique farmland, or farmland of statewide importance according to the *Soil Candidate Listing for Prime Farmland of Statewide Importance, Los Angeles County*, which was prepared by the U.S. Department of Agriculture Natural Resources Conservation Service (formerly the Soil Conservation Service) in 1995. In addition, no farmland or agricultural activity exists on or in the vicinity of campus, and no portion of the campus is zoned for agricultural use or is under a Williamson Act contract. Therefore, development under the 2002 LRDP would not convert or result in the conversion of agricultural uses to nonagricultural uses, and no additional analysis is required in this EIR.

With respect to mineral resources, the Initial Study determined that implementation of the 2002 LRDP would not result in the loss of availability of either a known mineral resource of value to the state or region, or a locally important mineral resource recovery site, because no such sites exist on the campus. Further, the California Department of Mines and Geology has only identified concrete aggregate as a mineral resource that could potentially be present on the campus. However, no recovery of concrete aggregate occurs or is known to have occurred on campus, and access to such a resource would already have been precluded by previous and current development. Additionally, the City of Los Angeles General Plan does not designate the campus as a mineral resource recovery site. Therefore, the IS concluded that implementation of the 2002 LRDP would not result in the loss of availability of a locally important mineral resource delineated on a local general plan, specific plan, or other land use plan, and no additional analysis is required in this EIR.

[3] Mandatory Findings of Significance are defined in Appendix G of the CEQA Guidelines, and include specific impacts to biological resources, cumulative impacts, and environmental impacts that will cause substantial adverse effects on human beings, either directly or indirectly. Therefore, Mandatory Findings of Significance are addressed throughout the environmental analysis, which is provided in Sections 4.1 through 4.14 of this EIR.

This EIR provides a section for each of the issue areas presented in Volume 1 of the LRDP EIR, and is formatted consistently (e.g., environmental setting, regulatory framework, and impacts and mitigation measures). Accordingly, project-related impacts are assessed in the following manner:

- *Effects Not Found to Be Significant*—Certain environmental impacts were determined to be "Effects Not Found to Be Significant" based upon the analysis provided in the IS for the proposed project. These impacts are disclosed in this section of the environmental document, with detailed analysis provided in Volume 1, in addition to the analysis provided in the revised Notice of Preparation/IS (dated March 20, 2002) for the proposed project, which is included as Appendix 2 of Volume 1 of the 2002 LRDP EIR.
- *Impacts and Mitigation*—Many environmental impacts associated with construction and/or operation of the NHIP were comprehensively addressed in Volume 1 of the 2002 LRDP EIR. Therefore, this section summarizes and discloses these impacts and identifies all applicable 2002 LRDP mitigation measures (MM) and/or campus programs, practices, and procedures (PP) that avoid or reduce environmental impacts. This section also describes project-specific environmental impacts based upon the identified thresholds of significance and recommends feasible mitigation measures to reduce any remaining project-specific impacts to a less-than-significant level, where feasible.

As with Volume 1 of the 2002 LRDP EIR, Volume 2 also uses the following terms, where applicable, to describe the level of significance of adverse impacts identified during the course of the environmental analysis:

- **Significant and Unavoidable Impact (SU)**—Impact that exceeds the defined threshold(s) of significance and cannot be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures
- **Significant Impact (S)**—Impact that exceeds the defined threshold(s) of significance. For purposes of this document, pre-mitigation impacts that exceed the defined threshold(s) of significance are referred to as significant; however, when the impacts cannot be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures, these impacts are referred to as significant and unavoidable.
- **Potentially Significant Impact (PS)**—Impact that exceeds the defined threshold(s) of significance and can be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures
- **Less-Than-Significant Impact (LS)**—Impact that does not exceed the defined threshold(s) of significance

A "significant effect" is defined by Section 15382 of the California Environmental Quality Act (CEQA) Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions

within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment...[but] may be considered in determining whether the physical change is significant."

Refer to Volume 1, Section 4.0 (Introduction to the Environmental Analysis) of the 2002 LRDP EIR for a detailed discussion of the format of the environmental analysis and a definition of the baseline years for the regular session and summer sessions.

4.0.2 Analysis of Cumulative Impacts

Section 15130(a) of the CEQA Guidelines requires that EIRs discuss the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. According to Section 15355 of the CEQA Guidelines:

> "Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.
>
> (a) The individual effects may be changes resulting from a single project or a number of separate projects.
>
> (b) The cumulative impact from several projects is the change in the environment, which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Where a lead agency is examining a project with an incremental effect that is not cumulatively considerable, it need not consider the effect significant but shall briefly describe the basis for its conclusion. As further clarified by Section 15065(c) of the CEQA Guidelines, "cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. Section 15130(a)(1) of the CEQA Guidelines further states that a "cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." If the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, Section 15130(a)(2) of the CEQA Guidelines requires a brief discussion in the EIR of why the cumulative impact is not significant and is not discussed in further detail. Section 15130(a)(3) of the CEQA Guidelines requires supporting analysis in the EIR if a determination is made that a project's contribution to a significant cumulative impact is rendered less than cumulatively considerable and, therefore, is not significant.

CEQA recognizes that the analysis of cumulative impacts need not be as detailed as the analysis of project-related impacts, but instead should "be guided by the standards of practicality and reasonableness" (CEQA Guidelines Section 15130(b)). The discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone. Further, the discussion is guided by the standards of practicality and reasonableness.

The 2002 LRDP, upon which this analysis is tiered, assumes a planning horizon of 2010–11 and the proposed project would be completed by 2006–07. The planning horizon of this project is within the planning horizon of the 2002 LRDP, and the cumulative analysis of the 2002 LRDP EIR (provided in Volume 1 of this EIR), which is hereby incorporated by reference, fully analyzes the cumulative effects of implementing the 2002 LRDP, including the NHIP. As allowed by Section 15168(b)(1)-(4) of the CEQA Guidelines, if a Program EIR adequately addresses general programmatic environmental issues, such as cumulative impacts, no additional analysis is required in a subsequent Project EIR. Therefore, no additional cumulative analysis is provided in this volume of the 2002 LRDP EIR. Accordingly, the cumulative impact analysis for the 2002 LRDP, including the NHIP, is contained in Volume 1 of the 2002 LRDP EIR.

4.1 AESTHETICS

This section hereby incorporates Volume 1, Section 4.1 (Aesthetics) by reference.

4.1.1 Environmental Setting

Visual Characteristics of the Surrounding Area

The neighborhoods surrounding the Northwest zone include the single-family residential areas of Bel-Air to the north and Westwood Hills to the west, and the multi-family residential North Village area to the southwest (refer to Section 4.8 [Land Use] for a detailed discussion of surrounding land uses). These areas have limited views of the Northwest zone due to intervening topography and the landscaped buffer along Sunset Boulevard and Veteran Avenue. The topography of the zone, along with the abundance of trees and landscaping along these edges, effectively screens views of most of the Northwest campus from the surrounding neighborhoods, even at higher elevations. Figure 4.8-1 (Surrounding Land Uses) of Volume 1 of this EIR (provided in Section 4.8 [Land Use]) graphically depicts the surrounding off-campus land uses.

Visual Characteristics of the Northwest Zone

The existing topography in the Northwest zone consists of hilly terrain that includes the highest elevations on the campus. Elevations range from 320 feet above mean sea level to approximately 560 feet above mean sea level, with a general downward slope from northwest to southeast. The highest point on campus is Hedrick Hall, which is located in the central portion of the Northwest zone. The hilly terrain includes large stands of trees, creating long-range views both internal and external to campus.

The residential portion of the zone is defined by a series of distinct residential neighborhoods primarily separated by topography: (1) the upper Northwest zone, located at the highest elevation, includes the three-story Hitch and Saxon Residential Suites and the seven-story Hedrick and Rieber Halls; (2) the eastern area includes Sunset Village, which consists of the three- to four-story Courtside, Delta Terrace and Canyon Point residence halls, and the seven-story Sproul Hall; and (3) the southern area, which includes the De Neve housing complex with four- to six-story buildings and the ten-story Dykstra Hall. These communities are delineated by their location and character. The first grouping is distinguished by its hilltop elevation and stand of trees. The buildings are separated from one another and from other uses by intervening slopes resulting in a semi-pastoral environment. Sunset Village sits at the eastern foot of

the slope from Hedrick and Rieber Halls and has a more urban, village-like character than the adjacent Hedrick and Rieber Hall neighborhood. De Neve housing, the newest community on the UCLA campus, is sited south of De Neve Drive, adjacent to Dykstra Hall, creating an urban environment.

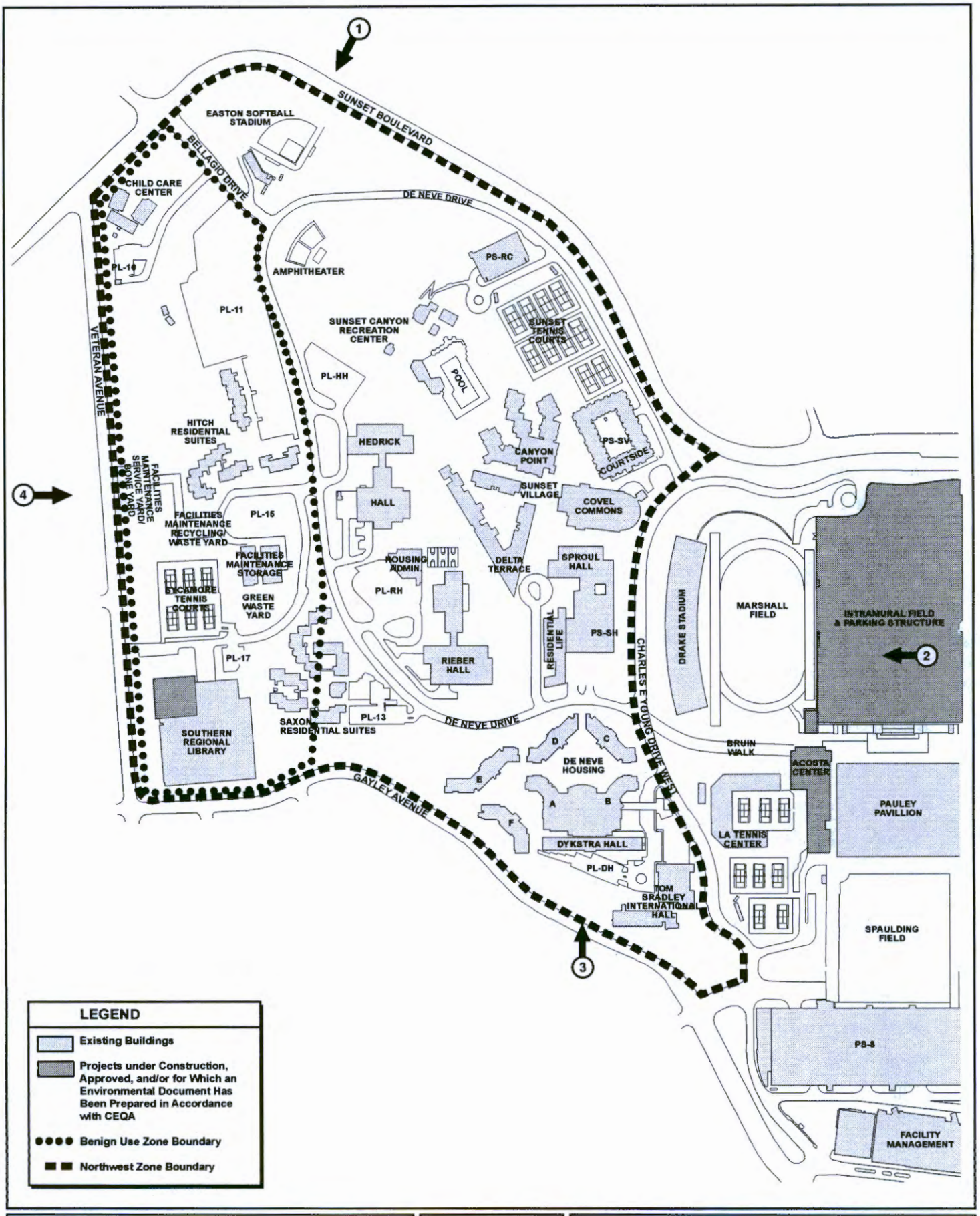
Both within and among the communities, buildings vary from one another in their density and architectural character. Rieber, Sproul, and Hedrick Halls all represent late-1950s/early-1960s modern architecture and are seven- to ten-story buildings with orthogonal configurations, seated on a one-story base. The Hitch and Saxon Residential Suites are of an interpretative shingle style. They are primarily three-story buildings located within an informal landscape setting. Sunset Village contains groupings of three- to four-story modern-style buildings covered with stucco. Hardscape pathways and plazas separate these groupings from one another. De Neve also contains a grouping of four- to six-story buildings surrounding a common landscaped plaza. These buildings are representative of a neo-traditional style, consisting of stucco-covered exterior walls.

Common themes among the communities are visible as well. The residential towers have consistent architectural styles, building heights, and axial relationships. New facilities, such as the collection of buildings within Sunset Village or De Neve, have many design features that support a harmonious architectural community. These structures maintain the pastel palette of residential facades and frame cross views through campus with a distinctive series of archways and covered walkways. The variation of flat and slightly sloped pads and steep slopes between structures adds visual interest to the natural terrain.

Buildings are complemented by an array of plazas and courtyards that help define building edges and soften the transition from interior to exterior. The landscape has both a formal and informal character, consisting of clusters of trees, shaded grassy areas, and flowering plants, while paved pedestrian connections, asphalt circulation hubs, and streetscape treatments emphasize its urbanity.

Public Views and Characteristics of the Northwest Campus

Four locations were chosen along the perimeter of the Northwest Zone to illustrate the public views of the Northwest campus under existing and post-construction conditions. Figure 4.1-1 (Key to View Locations) is a view location key identifying the position of the views as seen from these perspectives. Three locations (northern, southern, and western perimeter) depict views as seen from existing residential neighborhoods, while one location (eastern perimeter) illustrates an internal campus view of the zone. The following descriptions begin at the northern perimeter of the Northwest campus and continue to the eastern perimeter, then along the southern border around to the western side.



Not to Scale

SOURCE: UCLA

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FIGURE **4.1-1**

Key to View Locations

UCLA Northwest Housing Infill Project

Northern Perimeter Visual Characteristics

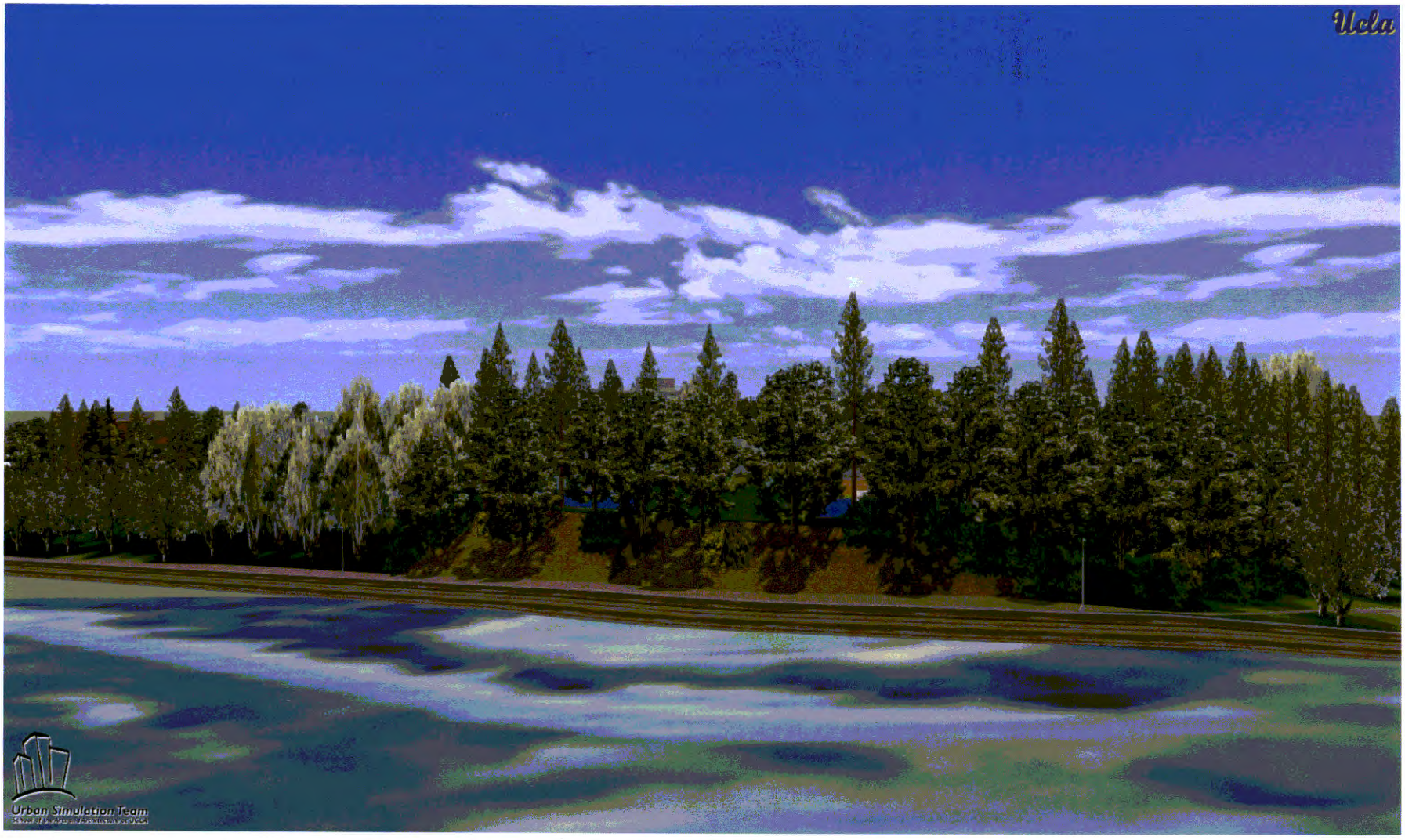
The campus edge along Sunset Boulevard is extensively landscaped with stands of trees and foliage along with a pedestrian path. This landscaping serves to buffer the campus both visually and spatially from the neighborhoods across Sunset Boulevard. Figure 4.1-2 (View of Northern Perimeter—Sunset Boulevard [View 1]) depicts the view from Bel Air looking south towards the campus, across Sunset Boulevard. As shown in the figure, the view illustrates the landscaped buffer on the northern perimeter of the Northwest zone along Sunset Boulevard, near Veteran Avenue. Together, the terrain and trees screen most of the Northwest campus uses and buildings from view. Due to distance, terrain, and landscape, only the rooftop mechanical enclosure of Hedrick Hall is visible in the foreground view from the View 1 location; no other housing structures or other uses are visible from this viewing location.

Due to existing landscaping and topography, single-family residences at the lower elevations north of Sunset Boulevard have very limited views, if any, of the campus structures and uses. Ascending to higher elevations in the Bel Air neighborhood, views of the campus are limited by the homes' orientations, elevation, and landscaping. While the campus landscaped buffer and extensive stands of trees in the zone provide visual separation between the campus and the residential land uses to the north, due to the higher elevation of the north side of Sunset Boulevard relative to the Northwest zone, these landscaped buffers do not completely obscure views of some portions of the project site.

Eastern Perimeter Visual Characteristics

Figure 4.1-3 (View of Eastern Perimeter—Janss Steps [View 2]) depicts the visual characteristics of the eastern perimeter as seen from an internal campus location, Janss Steps. For purposes of this section, the "eastern side" of the Northwest zone is defined as the portion of the Northwest zone south of Parking Structure SV and north of De Neve Drive

The stands of trees and hilly terrain of the Northwest zone are the dominant visual characteristics of View 2 in the long-range view. In this view, Rieber Hall is mostly obstructed by Sproul Hall, which is in full view. Hedrick Hall is surrounded by trees, which partially hide the structure in this view. Downslope from Hedrick Hall, portions of Sunset Village are visible. Mid-range views are of Drake Stadium, Marshall Field, and portions of Wooden Center North. Short-range views from View 2 include Wilson Plaza, framed by trees and the walkway leading to Janss Steps.



Visual Simulation of Existing Conditions from Sunset Boulevard Looking South (View 1)

Not to Scale

SOURCE: Urban Simulations Team 2002

10328-08

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FIGURE **4.1-2**

View of Northern Perimeter–Sunset Boulevard (View 1)

UCLA Northwest Housing Infill Project

Visual Simulation of Existing Conditions from Janss Steps Looking West (View 2)

Not to Scale

SOURCE: Urban Simulations Team 2002

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FIGURE **4.1-3**

View of Eastern Perimeter–Janss Steps (View 2)

UCLA Northwest Housing Infill Project

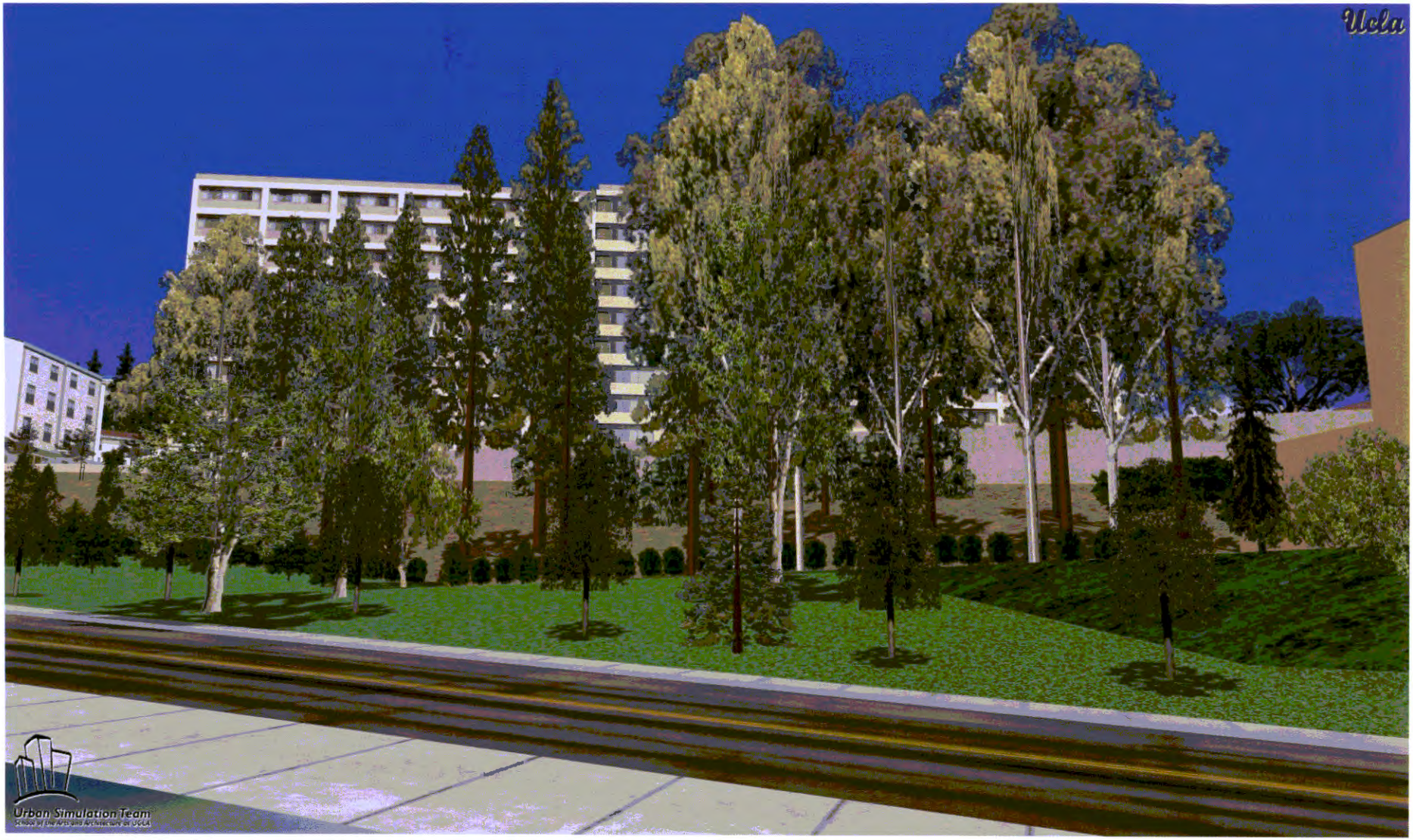
Southern Perimeter Visual Characteristics

The southern portion of the Northwest zone, south of De Neve Drive, is bordered on the east by Charles E. Young Drive West and on the west by Gayley Avenue. Figure 4.1-4 (View of Southern Perimeter—Gayley Avenue [View 3]) depicts the visual characteristics of the southern perimeter of the Northwest zone as viewed from Gayley Avenue near Tom Bradley International Hall. This portion contains views of De Neve housing and Dykstra Hall. Immediately adjacent to Dykstra Hall is the surface parking lot serving this area. Just below the parking lot is a landscaped slope that is primarily covered with grass and trees. This slope is found in the mid-range view and continues into the short-range view from this location. Land uses across Gayley Avenue from this view location are multi-family residential apartments.

Short-range views from the multi-family residential neighborhoods along Gayley Avenue consist of grassy slopes with scattered trees surrounding Tom Bradley International Hall. Beyond View 3 (Figure 4.1-4), north on Gayley Avenue, the easternmost buildings of De Neve housing become the subject of a short-range view. Further north, a fairly steep, ivy- and tree-covered hillside blocks the views of campus buildings from the street. Curving around toward Veteran Avenue on Gayley Avenue, the Southern Regional Library is the subject of the short-range view, as landscaping and recently planted trees partially obscure the structure. The Saxon Residential Suites, near the top of the hillside, are not visible from the residences across Gayley Avenue due to the intervening landscape. The topography of the Northwest zone blocks long-range views to the east from these neighborhoods.

Western Perimeter Visual Characteristics

The western perimeter of the Northwest zone is bounded by Veteran Avenue, between Gayley Avenue and Sunset Boulevard. Figure 4.1-5 (View of Western Perimeter—Veteran Avenue [View 4]) shows the landscaped buffer along the western perimeter of the Northwest zone. The primary visual characteristic in this location is the stands of trees on the hilly terrain. Long-range views from this location include portions of Hedrick Hall, which is partially obscured by trees. Downslope from Hedrick Hall in the mid-range view are the Hitch Residential Suites, which are also camouflaged by trees and landscaping. Moving towards the south, the mid-range allows views of portions of Saxon Residential Suites, which are also mostly hidden by trees. The short-range view consists primarily of trees, with the landscaped, ivy-covered wall and the pedestrian path along Veteran Avenue.



Visual Simulation of Existing Conditions from Gayley Avenue Looking North (View 3)

Not to Scale

SOURCE: Urban Simulations Team 2002

10328-08

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FIGURE **4.1-4**

View of Southern Perimeter–Gayley Avenue (View 3)

UCLA Northwest Housing Infill Project

Visual Simulation of Existing Conditions from Veteran Avenue Looking East (View 4)

Not to Scale

SOURCE: Urban Simulations Team 2002

10328-08

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FIGURE **4.1-5**

View of Western Perimeter–Veteran Avenue (View 4)

UCLA Northwest Housing Infill Project

The following describes views outside of Figure 4.1-5 to the north. Views of the campus from the residential neighborhood of Westwood Hills, to the west across Veteran Avenue, are essentially obscured by the landscaping, as well as a vine-covered fence provided along Veteran. This provides a visual and spatial buffer between the campus and the Westwood Hills neighborhood. Mid-range views across Veteran toward the campus consist of tree-covered slopes and partial views of the residential buildings.

Existing Lighting and/or Glare

With the exception of parking lots, parking structures, and internal campus roadways, illumination in the Northwest zone is generally characterized by low-level lighting, including building accents, lights along pathways and at the entrances of buildings, and security lighting adjacent to buildings and building entrances. Lighted tennis courts (Sunset Courts) are located on the northern portion of the Northwest zone along De Neve Drive.

Existing daytime glare could reflect from windows of the residence halls; however, building finishes are nonreflective stucco or wood shingle and do not provide a significant source of daytime glare. The landscaping around and between buildings, consisting of stands of trees, as well as other foliage, serves as a visual screen that further reduces glare from the existing buildings. Nighttime illumination in the Northwest zone is generally less intense than on the rest of the campus, due to the residential and recreational nature of the land uses. Large areas of the site are minimally illuminated and landscaping screens the potential illumination spillover into adjacent areas.

4.1.2 Regulatory Framework

As reflected in Volume 1, Section 4.1.2 [Aesthetics, Regulatory Framework], there are no State or federal aesthetic regulations.

4.1.3 Project Impacts and Mitigation

Analytic Method

The analysis of visual impacts focuses on the nature and magnitude of changes in the visual character of the campus due to the proposed project, including the visual compatibility of the proposed project with on-campus and adjacent uses and public vantage points where visual changes would be evident, as well as impacts that could occur as a result of construction and the introduction of additional sources of light and glare in the project vicinity. EIP Associates performed Field surveys during June and July 2002 to

determine the existing visual character and context of the campus (e.g., visual compatibility, light and glare conditions, and public views). Visual change that is compatible with existing patterns of development would not be considered to constitute a significant impact.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The following 2002 LRDP EIR MMs related to aesthetics have been incorporated into the proposed project:

2002 LRDP EIR MM 4.1-2 — *In conjunction with CEQA documentation required for each project proposal under the 2002 LRDP, a tree replacement plan shall be prepared and implemented. The tree replacement plan for each project shall determine the appropriate number of replacement trees in relation to the specific project site characteristics. The tree replacement plan would ensure that the appropriate number of new trees is planted within the available site area so that each tree planted has sufficient space to grow and thrive.*

2002 LRDP EIR MM 4.1-3(a) — *Design for specific projects shall provide for the use of textured nonreflective exterior surfaces and nonreflective glass.*

2002 LRDP EIR MM 4.1-3(b) — *All outdoor lighting shall be directed to the specific location intended for illumination (e.g., roads, walkways, or recreation fields) to limit stray light spillover onto adjacent residential areas. In addition, all lighting shall be shielded to minimize the production of glare and light spill onto adjacent uses.*

2002 LRDP EIR MM 4.1-3(c) — *Ingress and egress from parking areas shall be designed and situated so the vehicle headlights are shielded from adjacent uses. If necessary, walls or other light barriers will be provided.*

In addition, the following 2002 LRDP EIR PPs shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.1-1(a) — *The design process shall evaluate and incorporate, where appropriate, factors including, but not necessarily limited to, building mass and form, building proportion, roof profile, architectural detail and fenestration, the texture, color, and quality of building materials, focal views, pedestrian and vehicular circulation and access, and the landscape setting to ensure preservation and enhancement of the visual character and quality of the campus and the surrounding area. Landscaped open space (including plazas, courts, gardens, walkways, and recreational areas) shall be integrated with development to*

encourage use through placement and design. (This is identical to 2002 LRDP Land Use PP 4.8-1(a).)

2002 LRDP EIR PP 4.1-1(c) *New building projects shall be sited to ensure compatibility with existing uses and the height and massing of adjacent facilities.* (This is identical to 2002 LRDP Land Use PP 4.8-1(h).)

2002 LRDP EIR PP 4.1-2(a) *Additions to, or expansions of, existing structures shall be designed to complement the existing architectural character of the buildings.*

2002 LRDP EIR PP 4.1-2(b) *The architectural and landscape traditions that give the campus its unique character shall be respected and reinforced.* (This is identical to 2002 LRDP Land Use PP 4.8-1(f).)

2002 LRDP EIR PP 4.1-2(d) *Projects proposed under 2002 LRDP shall include landscaping.*

2002 LRDP EIR PP 4.1-2(e) *The western, northern, and eastern edges of the main campus shall include a landscaped buffer to complement the residential uses of the surrounding community and to provide an attractive perimeter that effectively screens and enhances future development.* (This is identical to 2002 LRDP Land Use PP 4.8-1(c).)

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on aesthetics if it would result in any of the following:

- Have a substantial adverse effect on a scenic vista
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
- Substantially degrade the existing visual character or quality of the site and its surroundings
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area

Effects Not Found to Be Significant

Threshold	Would the project have a substantial adverse effect on a scenic vista?

Refer to Volume 1, Section 4.1.3 (Aesthetics, Project Impacts and Mitigation) for a discussion of Effects Not Found to Be Significant for scenic vistas (panoramic views).

Threshold	Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Refer to Volume 1, Section 4.1.3 (Aesthetics, Project Impacts and Mitigation) for a discussion of Effects Not Found to Be Significant for scenic resources.

Impacts and Mitigation

Threshold	Would the project have a substantial adverse effect on a scenic vista?

Impact NHIP 4.1-1 **Implementation of the NHIP would not have a substantial adverse effect on a scenic vista (focal views). This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.1-1, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would result in a substantial adverse effect on focal views, which are defined as views of historic buildings, public art spaces, or significant natural landforms, and determined that a less-than-significant impact would occur. Views of scenic vistas may be generally described in two ways: panoramic views (visual access to a large geographic area for which the field of view can be wide and extend into the distance) and focal views (visual access to a particular object, scene, setting, or feature of interest). Panoramic views were determined to be an Effect Not Found to Be Significant in the Initial Study for the 2002 LRDP; therefore, views on campus that may be affected by development under the 2002 LRDP would be limited to focal views. Following 2002 LRDP EIR PP 4.1-1(a) and PP 4.1-1(c) would ensure that impacts to focal views remain less than significant through project design focused on preserving and enhancing the visual character and quality of the campus and surrounding area, including an evaluation of impacts of individual development projects on focal views and the siting of new building projects to ensure the compatibility of existing uses with the height and massing of adjacent uses. Though the hilly terrain of the Northwest zone includes large stands of trees that create long-range views both internal and external to campus, there are no open space preserves (e.g., Dickson Plaza, Wilson Plaza, Mildred E. Mathias Botanical Garden) and no focal views in the Northwest zone as defined above, which may include views of outdoor public art spaces, historic buildings, or natural landforms (e.g., rock outcroppings) in the Northwest zone. Therefore, impacts to open space preserves or focal views as a result of construction or operation of the NHIP would be less than significant, and no project-specific mitigation is required.

Impacts and Mitigation

Threshold	Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Impact NHIP 4.1-2 **Implementation of the NHIP would not substantially degrade the visual character or quality of the campus and the immediately surrounding area. This is considered a *less-than-significant* impact.**

As discussed in Chapter 3 (Projection Description) of this EIR, the proposed NHIP consists of residential, recreational, and parking uses. The Northwest zone of the campus does not offer a single large site that can accommodate the needed 2,000 bed spaces and related support facilities. As previously mentioned, the terrain is hilly with slopes between existing structures. While an area exists between Veteran Avenue and the Saxon and Hitch Residential Suites that is relatively flat, development in this area is restricted to nonresidential uses, based upon the Stipulated Use Agreement between The Regents and the Westwood Hills Property Owners Association (refer to Section 4.8 [Land Use and Planning] for a more detailed discussion of the Stipulated Use Agreement as it pertains to the NHIP). Consequently, surface parking lots outside of this restricted area are the only remaining level sites in the Northwest campus that are suitable for new housing. As a result, the NHIP proposes an infill development strategy for the needed residential, parking, and recreational facilities.

The infill development strategy would not only take advantage of building on flat areas, but would utilize surface parking lots that contain few if any trees. However, project construction would still involve removal of trees in adjacent landscape areas and plazas. The project could result in the removal of approximately 253 mature trees (12-inches or greater in diameter at 4 feet above the ground as defined by the City of Los Angeles). A major defining characteristic of the Northwest zone is tree-covered hills. The trees shield parts of the existing structures as viewed from the residential neighborhoods to the north (Bel Air) and the west (Westwood Hills). The 2002 LRDP EIR MM 4.1-2 requires the campus to prepare and implement a tree replacement plan for each project-specific proposal. The replacement trees would provide landscape around the new structures and provide visual relief from off-campus views of the site and the new structures. In addition, the Tree Replacement Plan would place trees in a manner to shield the new structures, as feasible, from off-campus views. With implementation of the Tree Replacement Plan pursuant to the 2002 LRDP EIR MM 4.1-2, which is incorporated into the NHIP, the impact on trees would be less than significant.

As discussed in Chapter 3 (Project Description), the Tree Replacement Plan would involve the provision of 1 new tree for every 2 mature trees removed, with minimum 24-inch box trees. In addition, the project would provide for relocating up to 15 mature trees in the housing area that otherwise would be removed for construction. Some of these mature trees may be moved from areas within the project site or from sites of other campus construction projects. The mature trees would be planted around the new residence halls. Similarly, up to 5 existing mature trees that would otherwise be removed for construction would be relocated as part of the Dykstra Parking Structure project. It is anticipated that these 5 relocated trees would be planted along the Gayley Avenue boundary of the parking structure site to screen views of the structure from off-campus areas. Relocating mature trees as part of the project would compensate for the planting of new smaller trees. Given the value of mature trees, the campus considers the removing and relocating of a single mature tree equivalent to the planting of 5 new smaller trees. Tree replacement for the Recreation component of the project would most likely involve the planting of replacement trees around the periphery of the site in order to maintain the major portion of the area as open space for recreation and leisure activities. Existing trees along the western boundary of the recreation site, as well as along the western boundary of the adjacent existing waste yard, are to be retained as part of the project. In summary, the NHIP Tree Replacement Plan provides for the removal and replanting of up to 20 mature trees, each of which would be equivalent to the planting of 5 new trees (or a total of 100 trees), and the replacement of the remaining mature trees removed by the project on a 2-for-1 basis, with minimum 24-inch box trees (or a minimum of 77 new trees).

Post-construction landscaping would be provided around all buildings, along with proposed plazas and courtyards, to reinforce the existing system of pedestrian pathways, plazas, and courtyards and to shape new open spaces. Landscaping would create meaningful outdoor spaces on a scale that complements existing and proposed development, while creating an integrated fabric for the Northwest zone.

Open campus spaces created by the positioning of the structures would be enhanced by mature trees, limited lighting for security purposes, pathways, and site furnishings. Spatial diversity would be maintained by balancing the structured landscaping of courtyards and plazas with informal, naturalized landscape in the areas between the buildings, forming links with the natural areas at the perimeter of the site. The more densely landscaped areas would be preserved to the maximum extent feasible, as they soften the visual effect of the residential buildings and the parking structure. A further intent of the proposed landscaping is to enhance the indoor/outdoor relationships among the proposed and existing uses.

Landscaping would continue to be provided along the western and northern boundaries of the campus, as required by 2002 LRDP EIR PP 4.1-2(d) and PP 4.1-2(e), effectively shielding or softening views of development in the Northwest zone from adjacent off-campus lands uses, thereby enhancing visual compatibility. However, because new landscaping could require a number of years to mature, there would be an interim period during which the visual impacts of the proposed parking structure would be shielded or softened to only a limited extent. However, as discussed above and in Chapter 3, the project's Tree Replacement Plan includes mature tree replacement on a 2-for-1 basis, relocation of up to 5 mature trees, to be located at the edge of the Gayley Avenue proposed parking structure, up to 15 mature trees in the residential area and replacement trees planted around the periphery of the recreation site to ensure that impacts related to the visual compatibility of campus development with adjacent off-campus land uses are reduced to a less-than-significant level.

The residential portion of the proposed project consists of new infill residential development adjacent to Hedrick and Rieber Halls, which are seven-story structures constructed in a late 1950s/early 1960s modern style, as well as the first-floor renovation of the existing residential halls. The orthogonal configuration of Dykstra, Hedrick, Rieber, and Sproul Halls creates regularity in patterns of circulation and in the geometry of adjacent plazas. The primary organizing principle of the NHIP is the continuation of the orthogonal configurations of the existing residential towers. By placing the new towers both perpendicular and parallel to the existing buildings, new and improved outdoor spaces are created where surface parking lots and a building currently exists, thereby supporting a pedestrian-friendly campus with seamless visual links to new and existing spaces.

The height of the new buildings would not exceed the height of the existing and adjacent structures, which would preserve architectural unity and limit visual impacts from on- and off-campus locations. As the highest elevation on campus, the Northwest zone is visible from most other areas of the campus and from some off-campus locations. However, each of the new buildings would be integrated into the larger complex, forming a visual relationship with the surrounding uses. Setbacks also ensure appropriate distances between buildings to allow for visual privacy, landscaping, and natural light and airflows.

The main elements of the proposed recreational facility include a multi-purpose building (approximately 15,000 square feet), a 25-meter leisure pool with surrounding eight-foot high security fencing, outdoor basketball and volleyball courts, and a leisure/recreation grass area. The outdoor courts would not be illuminated, except as required for safety/security purposes, and are not intended for nighttime use. Existing trees along the western boundary of the recreation site, as well as along the western boundary of

the adjacent existing waste yard, are to be retained as part of the project (refer to Section 4.3 Biological Resources, Figure 4.3-4).

While construction of the proposed parking structure would result in partial loss of the landscaped slope between Lot DH and Gayley Avenue, the replacement parking structure would be constructed in such a manner as to utilize the slope to minimize the visual impacts of the structure by nestling the structure itself into the hillside. In addition, a 56-foot setback, consisting of landscaping and pedestrian walkways, would be provided from Gayley Avenue to minimize the apparent scale and mass of development with respect to off-campus land uses. The remaining trees within this setback area would be complemented with additional mature and new trees as described above and in Chapter 3. Further, the area immediately adjacent to the proposed parking structure primarily consists of buildings and parking lots, and the height and mass of the proposed structure would not exceed the heights and mass of other structures adjacent to the site, thereby creating visual unity. A discussion of light and/or glare impacts associated with the proposed uses is provided in Impact NHIP 4.1-3 of this EIR.

While the project is currently in the design phase, the architectural details of the new structures would be consistent with existing and adjacent structures, consistent with 2002 LRDP EIR PP 4.1-1(c), PP 4.1-2(a), and PP 4.1-2(d), and the design process will evaluate and incorporate architectural details to preserve and enhance the visual character and quality of the campus as required by 2002 LRDP EIR PP 4.1-1(a).

The proposed recreational facility is located in the Benign Use Zone and is consistent with the use restrictions outlined in the Stipulated Use Agreement (Agreement). The proposed leisure pool, volleyball courts, and basketball courts would not be used for spectator sports activity or organized athletic competition, which is a use restriction outlined in the Agreement. No bleachers or other seating or provisions for spectators will be constructed as part of these recreational amenities. Consistent with the Agreement, no access from off-campus streets will be provided to the recreational use.

Because of the interior location of the residential and recreational uses, the visual compatibility of these uses with surrounding on-campus uses in terms of height, scale, massing, landscaping, and architectural features would be maintained pursuant to 2002 LRDP EIR PPs 4.1-1(a), 4.1-1(c), 4.1-2(a) 4.1-2(b), 4.1-2(d), and 4.1-2(e) and 2002 LRDP MM 4.1-2. Therefore, a less-than-significant impact would occur with respect to the visual character and quality of these uses in relation to the site and its surroundings. While the parking structure would be located along the perimeter of campus, implementation of 2002 LRDP EIR PPs 4.1-1(a), 4.1-1(c), 4.1-2(a), 4.1-2(b), 4.1-2(d), and 4.1-2(e) and 2002 LRDP EIR MMs 4.1-3(a) through 4.1-3(c) will ensure that a less-than-significant impact would

occur with respect to the visual character and quality of this use in relation to the site and its surroundings. No project-specific mitigation is required.

Visual Characterization of the Northwest Zone Perimeter

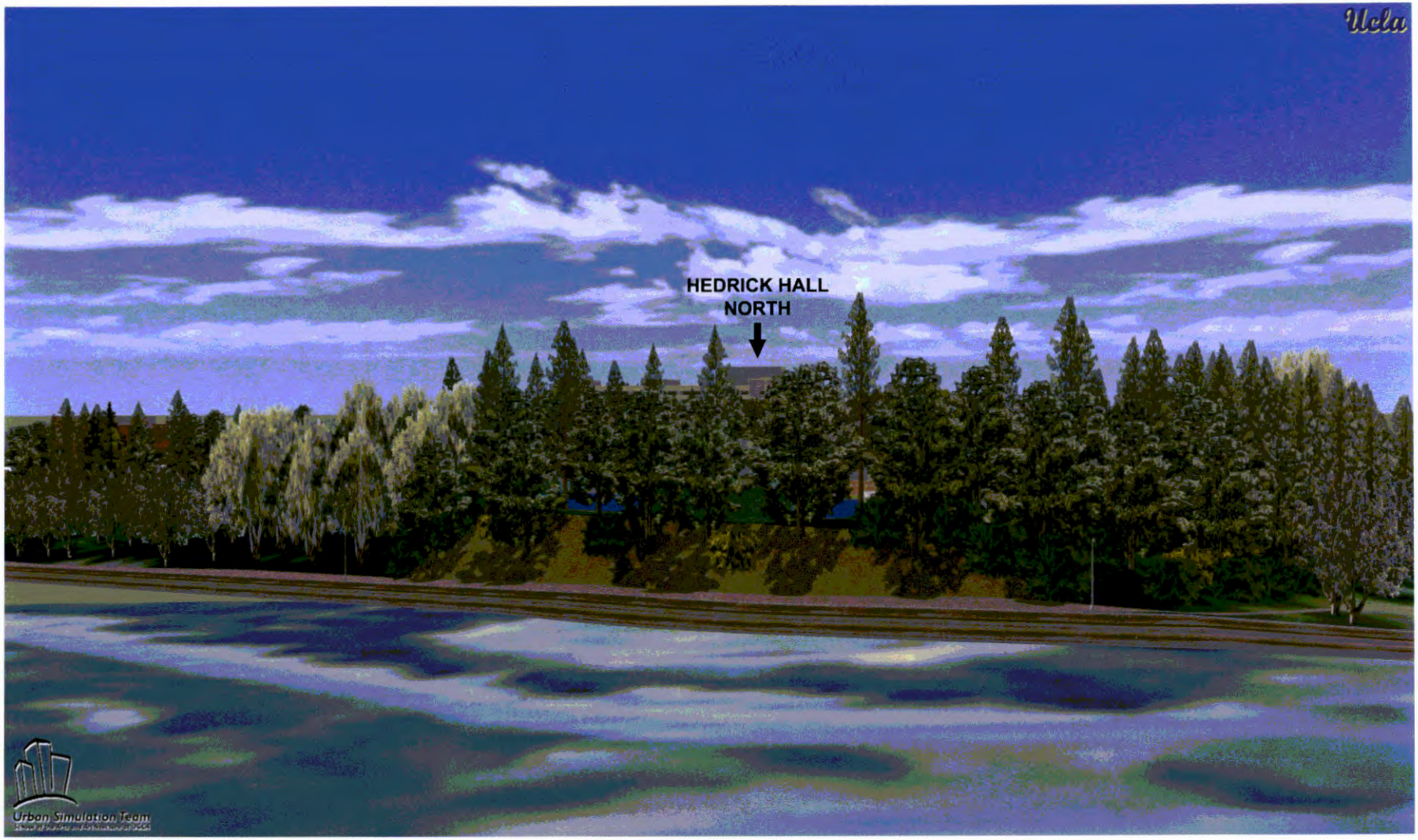
Northern Perimeter

Views along Sunset Boulevard (View 1), the northern perimeter of the Northwest zone, would be minimally altered with project implementation. Under existing conditions, only a partial view of Hedrick North's roof top mechanical enclosure is visible. The long-range view of the Northwest campus from this vantage point, with implementation of the NHIP, would include the mechanical rooftop enclosure of Hedrick Hall North and a partial view of the top floor of that structure, as shown in Figure 4.1-6 (Post-Construction View of Northern Perimeter—Sunset Boulevard [View 1]). As demonstrated in Figure 4.1-6, existing trees would hide most of Hedrick Hall North and the structure occupies only a small portion of this view. Due to topography, landscaping, and trees, the proposed Rieber Hall North and Rieber Hall West, would not be visible from this view.

Single-family residences at lower elevations north of Sunset Boulevard would continue to have limited views of the Northwest zone. At higher elevations in the Bel Air neighborhood, views could include all or parts of some of the new residence halls. The new structures would change the existing viewshed by adding nine-story residence halls clustered among existing seven-story buildings that are surrounded by stands of trees. These trees partially, or in some cases mostly, screen the structures from view. The Tree Replacement Plan would relocate up to 15 mature trees that otherwise may be moved from areas within the project site, or from sites of other campus construction projects and include a 2-for-1 replacement for new trees with minimum 24-inch box-size. The new and mature trees would be planted around the new residence halls. In addition, new trees would be planted around the new structures that would serve to screen the new structures. Because the landscape view of the Northwest campus as seen from the Bel Air neighborhood would be maintained, pursuant to 2002 LRDP EIR PPs 4.1-1(a), 4.1-1(c), 4.1-2(a), 4.1-2(b), 4.1-2 (d), and 4.1-2(e) and 2002 LRDP EIR MM 4.1-2, a less-than-significant impact would occur with respect to the visual quality of this viewshed.

Eastern Perimeter

Public views of the eastern perimeter of the site would be minimally altered. Hilly terrain with stands of trees and the existing Sproul, Rieber, and Hedrick Halls characterize the existing long range views of the Northwest campus as seen from the east. Implementation of the project would add three new residence



Visual Simulation of Proposed Housing–Post-Construction from Sunset Boulevard Looking South (View 1)

Not to Scale

SOURCE: Urban Simulations Team 2002

10328-08

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FIGURE **4.1-6**
Post-Construction View of Northern Perimeter–Sunset Boulevard (View 1)
UCLA Northwest Housing Infill Project

halls clustered between the existing Rieber and Hedrick Halls. Added to the long-range eastern view of the site would be portions of Hedrick Hall North, which occupies only a limited portion of this view as shown in Figure 4.1-7 (Post-Construction View of Eastern Perimeter—Janss Steps [View 2]). Trees would hide most of this structure. Rieber Hall North and Rieber Hall West would not be visible, as views of those structures would be obstructed by Rieber Hall and topography. With incorporation of 2002 LRDP EIR PPs 4.1-1(a), 4.1-1(c), 4.1-2(a), 4.1-2(b), and 4.1-2(d), as well as 2002 LRDP EIR MM 4.1-2, the visual quality impact of the eastern perimeter viewshed would be less than significant, and no project-specific mitigation is required.

Southern Perimeter

Between Veteran Avenue and Strathmore Drive, along Gayley Avenue, existing public views consist of intermittent views of the Southern Regional Library, De Neve Housing, Dykstra Hall, and Tom Bradley International Hall. Landscaping is provided along this perimeter, which shields most of the Southern Regional Library from public view. However, the landscaping does not screen the other buildings along Gayley Avenue, which are separated from the street by a small lawn area and a slope landscaped with a mixture of a few trees and shrubs. Implementation of NHIP would alter this view by adding the proposed parking structure to the cluster of existing buildings. The parking structure would be inset into a portion of the existing slope while preserving the hill on both sides of the building, as well as most of the existing lawn area below. Therefore, the view of the slope would be interrupted by the parking structure that is added to the group of existing buildings as seen from this location on Gayley Avenue. Figure 4.1-8 (Post-Construction View of Southern Perimeter—Gayley Avenue [View 3]) includes two elevation plans that illustrate the height, massing, and style of the structure. The structure would be set back approximately 56 feet from Gayley Avenue and would include landscaping and pedestrian walkways between the structure and Gayley Avenue to partially buffer the use from view. The Tree Replacement Plan would provide for relocating up to five mature trees that otherwise may be moved from areas within the project site, or from sites of other campus construction projects and a 2-for-1 tree replacement plan for new trees. The new and mature trees would be planted along the proposed parking structure to assist in screening the building. Implementation of 2002 LRDP EIR PPs 4.1-1(a), 4.1-1(c), 4.1-2(a), 4.1-2(b), and 4.1-2(d), and 2002 LRDP EIR MM 4.1-2 would ensure that the visual quality impact along Gayley Avenue at this view location would be less than significant.

Visual Simulation of Proposed Housing–Post-Construction from Janss Steps Looking West (View 2)

Not to Scale

SOURCE: Urban Simulations Team 2002

10328-08

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FIGURE **4.1-7**
Post-Construction View of Eastern Perimeter–Janss Steps (View 2)
UCLA Northwest Housing Infill Project

Visual Simulation of Proposed Parking Structure–Post-Construction from Gayley Avenue Looking North (View 3)

Not to Scale

SOURCE: Studios Archtecture

10328-08

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FIGURE **4.1-8**

Post-Construction View of Southern Perimeter–Gayley Avenue (View 3)

UCLA Northwest Housing Infill Project

Western Perimeter

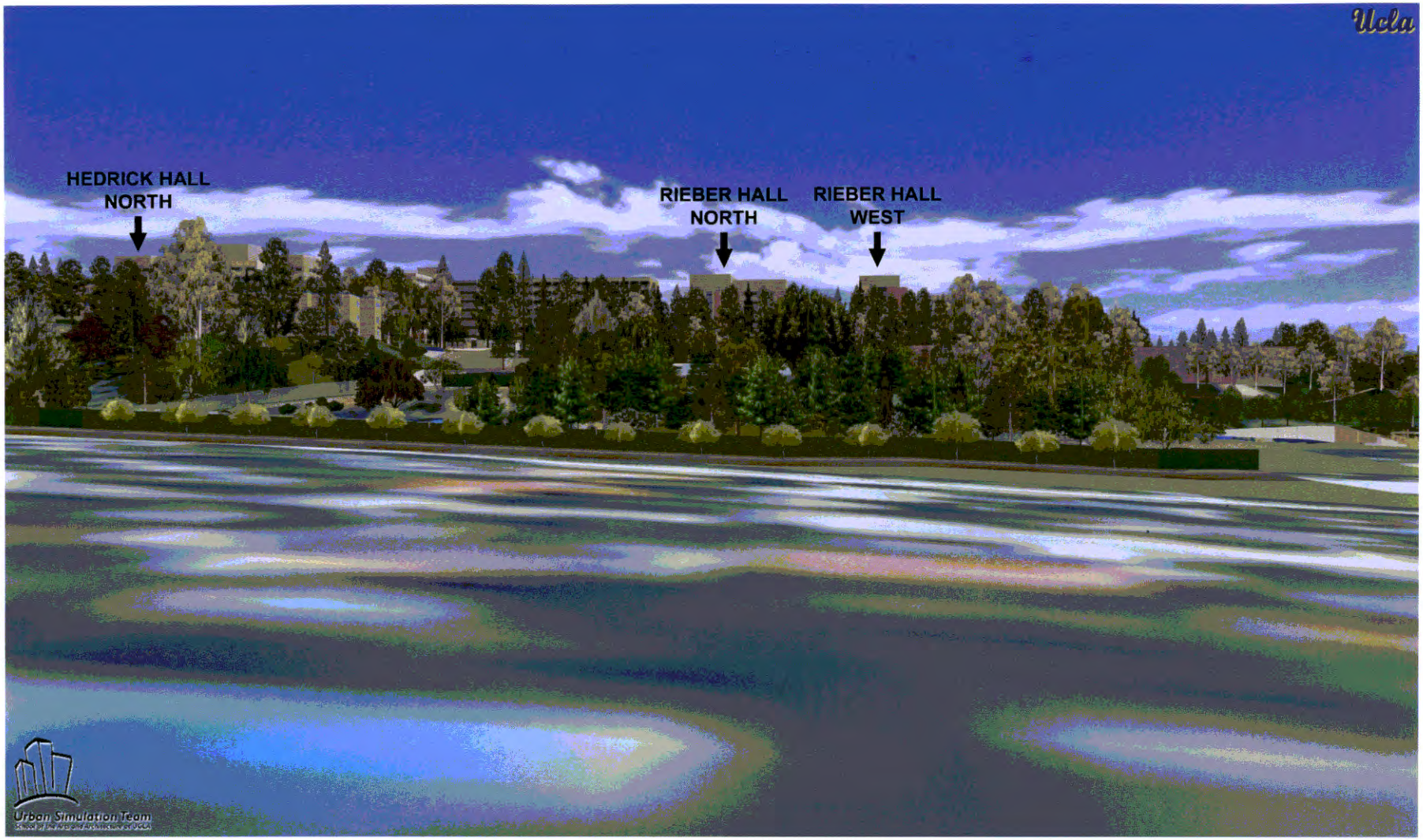
Views along Veteran Avenue of the higher elevation areas of the Northwest campus would be slightly altered. Existing views as seen from higher elevations in the Westwood Hills neighborhood, west of Veteran Avenue, currently have views of the hilly terrain with stands of trees and landscaping with intermittent views of Hedrick Hall and to a lesser degree, Saxon and Hitch Residential Suites, as demonstrated in Figure 4.1-2. From lower elevations, particularly along Veteran Avenue, the campus residential structures are obstructed by topography or landscaping.

Development of the proposed NHIP would result in the construction of Hedrick Hall North, Rieber Hall North, and Rieber Hall West, as well as recreation facilities. As shown in Figure 4.1-9 (Post-Construction View of Western Perimeter—Veteran Avenue [View 4]), portions of Hedrick Hall North, Rieber Hall North, and Rieber Hall West would be added to the long-range view of the Northwest campus as seen from the west. This view would include partial views of the mechanical roof top enclosures of the three new residence halls. As demonstrated in Figure 4.1-9, trees, landscaping, and topography would hide most of the new structures and occupy only a small portion of the view. As previously mentioned, the project's Tree Replacement Plan would involve relocation of up to 15 mature trees to be planted around the new residence halls. The existing trees along with the relocated mature trees and the newly planted trees would assist in screening the new structures from view along the western perimeter. With incorporation of 2002 LRDP EIR PP 4.1-1(a), PP 4.1-1(c), PP 4.1-2(a), PP 4.1-2(b), PP 4.1-2(d), and PP 4.1-2(e) as well as 2002 LRDP EIR MM 4.1-2, the visual quality impact on the western perimeter viewshed would be less than significant.

Threshold	Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Impact NHIP 4.1-3 **Implementation of the NHIP would not create a new source of substantial light or glare on campus or in the vicinity that would adversely affect day or nighttime views in the area. This is considered a *less-than-significant* impact.**

The proposed project includes uses that would result in additional lighting for security purposes and could result in increased glare. As required by 2002 LRDP EIR MM 4.1-3(a), which has been incorporated into the proposed project, building design would incorporate the use of nonreflective exterior surfaces and nonreflective glass to minimize glare impacts on adjacent uses. As required by 2002 LRDP EIR MM 4.1-3(b), which has also been incorporated into the proposed project, all project



Visual Simulation of Proposed Housing–Post-Construction from Veteran Avenue Looking East (View 4)

Not to Scale

SOURCE: Urban Simulations Team 2002

10328-08

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FIGURE **4.1-9**

Post-Construction View of Western Perimeter–Veteran Avenue (View 4)

UCLA Northwest Housing Infill Project

components would provide downward cast and shielded lighting to minimize stray light spillover onto adjacent uses either on or off campus.

The recreational amenities would be limited to daytime use, and no lighting would be provided in order to avoid potential impacts associated with lighting during the sensitive nighttime hours. All project buildings, including the recreation facility, would include security lighting as provided on existing campus structures. Additional security lighting would nominally add to the nighttime lighting of the area, but would have a less-than-significant impact on adjacent residential neighborhoods to the west and south of the Northwest zone.

The heavily landscaped buffers provided along Veteran Avenue and Sunset Boulevard, bordering the Northwest zone, limit outside views of campus buildings, and would further ensure that potential increases in glare would represent a less-than-significant impact to the residential neighborhoods north and west of the project site. While an increase in ambient lighting would occur on the project site, existing and significant sources of light are currently provided throughout the Northwest zone and are intended to provide a safe environment for travel to and from the residence halls. However, most portions of the Northwest zone are not directly visible to the surrounding neighborhoods, and the residential and recreational project sites are located in the interior portion of the Northwest zone, some distance from off-campus residential areas. In addition, the proposed relocated storage shed would be placed against the hill at the farthest point from Veteran Avenue in the existing Facilities Management's bone yard. The new shed would include outdoor security lighting, similar to the existing OHJ and OHM buildings. The continued provision of the landscaped buffer along Veteran Avenue and Sunset Boulevard, as required by 2002 EIR PP 4.1-2(e), would continue to shield and screen light and/or glare on adjacent off-campus residential uses. Impacts would be considered less than significant.

In addition to the other components of the project, a parking structure would be constructed at the current location of Parking Lot DH. The entrance and exit would be constructed to provide access from Charles E. Young Drive West, identical to the existing access pattern, which would minimize impacts from vehicular headlights on adjacent campus uses, as vehicular headlights would still be directed during egress towards Drake Stadium and the Los Angeles Tennis Center, which are not light-sensitive uses. No access to the parking structure would be provided on Gayley Avenue. However, as vehicles enter the parking structure, and circulate within the parking levels, vehicle headlights could be directed towards off-campus residences, thereby introducing a new source of light and glare. The 2002 LRDP EIR MM 4.1-3 (c) requires projects to incorporate walls or barriers to reduce the impact of vehicle headlights to adjacent uses. This mitigation measure has been incorporated into the project and includes parapet walls

on each parking level to shield vehicle headlights emanating from the structure and by design has eliminated, or substantially minimized, light and glare impacts to neighboring residents. Glare impacts on neighboring residential uses from vehicle headlights in the parking structure would, therefore, be considered less than significant.

Exterior building materials would include the use of brick as shown in Figure 4.1-8. The structure would comply with 2002 LRDP EIR MM 4.1-3(a), which requires the use of nonreflective exterior surfaces and nonreflective glass to minimize glare impacts. Additionally, the provision of landscaping along Gayley Avenue, as required by 2002 LRDP EIR PP 4.1-2(e) and tree replacement plan pursuant to 2002 LRDP PP 4.1-2 (which has been incorporated into NHIP), would further shield off-campus uses. Glare impacts from exterior parking structure materials would, therefore, be considered less than significant.

The top deck of the parking structure would be illuminated with approximately 16-foot-tall light fixtures with downcast lighting. This lighting provision in the project is consistent with the 2002 LRDP EIR MM 4.1-3(b), which requires lighting to be directed to a specific location in order to minimize stray light spillover onto adjacent residential areas. As this parking structure would include downcast lighting, impacts to adjacent residential areas would be less than significant.

All impacts of the NHIP on increased sources of light and glare would be mitigated to a less-than-significant level through incorporation of 2002 LRDP PP 4.1-2(e), as well as 2002 LRDP EIR MMs 4.1-3(a) through 4.1-3(c). No project-specific mitigation is required.

4.1.4 Cumulative Impacts

Refer to Volume 1, Section 4.1.4 (Aesthetics, Cumulative Impacts) for a discussion of cumulative aesthetic impacts.

4.1.5 References

Los Angeles, City of. 1996. *Bel Air–Beverly Crest Community Plan.*

University of California, Los Angeles. 1990. *UCLA 1990 Long Range Development Plan.*

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———. 1998. *UCLA Academic Health Center Facilities Reconstruction Plan Final Environmental Impact Report.*

———. 2001. *UCLA Intramural Field Parking Structure Final Environmental Impact Report*.

———. 2001. *UCLA Long Range Development Plan Mitigation Monitoring Program, 2000 Status Report*, May.

———. 2001. *UCLA Northwest Campus Master Plan.*

University of California, Merced. 2002. *University of California Merced Campus Long Range Development Plan Final Environmental Impact Report (SCH No. 2001021065).*

4.2 AIR QUALITY

This section incorporates Volume 1, Section 4.2 (Air Quality) by reference.

4.2.1 Environmental Setting

Refer to Volume 1, Section 4.2.1 (Air Quality, Environmental Setting) for a discussion of the existing regional, local, and campuswide air quality setting, and the air quality controls presently implemented by the UCLA campus.

Existing Campus Emissions

The NHIP site is located within the Northwest zone, which is primarily residential and recreational in nature. Existing air emissions from the Northwest zone are generated by stationary sources such as boilers, landscape maintenance equipment, consumer products, and automobile trips. These emissions are part of the overall emissions inventory of the UCLA campus as estimated in Table 4.2-1 (Existing Daily Campus Operational Emissions). As shown, motor vehicles are the primary source of air pollutant emissions associated with the UCLA campus.

Table 4.2-1 Existing Daily Campus Operational Emissions

Emissions Source	Emissions in Pounds per Day				
	CO	VOC	NOx	SOx	PM_{10}
Regular Session					
Construction Activities	209.6	37.5	298.2	10.8	24.9
Stationary Sources	631.2	44.4	163.3	69.6	73.4
Landscape Maintenance	31.9	4.9	0.2	0.0	0.1
Consumer Products	—	114.2	—	—	—
Motor Vehicles	15,379.3	1,251.4	1,632.9	7.4	785.3
Total Emissions	***16,252.0***	***1,452.4***	***2,094.6***	***87.8***	***883.7***
Summer Session					
Construction Activities	209.6	37.5	298.2	10.8	24.9
Stationary Sources	631.2	44.4	163.3	69.6	73.4
Landscape Maintenance	31.9	4.9	0.2	0.0	0.1
Consumer Products	—	12.2	—	—	—
Motor Vehicles	14,681.5	1,180.6	1563.3	6.6	696.6
Total Emissions	***15,554.2***	***1,279.6***	***2,025.0***	***87.0***	***795.0***

Source: EIP Associates, 2002. Calculation data and results are provided in Appendix 7 of Volume 1 of this EIR.

Existing Toxic Air Contaminants Emissions

Refer to Volume 1, Section 4.2.1 (Air Quality, Environmental Setting) for a discussion of the existing toxic air contaminant emissions generated by the routine operations of the UCLA campus. The Health Risk Assessment (HRA) prepared for the 2002 LRDP, which is provided as Appendix 7 of Volume 1 of this document, concluded that the existing levels of toxic air contaminants generated by campus uses and operations do not exceed thresholds for lifetime cancer risk, cancer burden, and noncancer health effects established by the California Air Pollution Control Officers Association (CAPCOA) and the South Coast Air Quality Management District (SCAQMD) at the maximally exposed individuals (MEIs) on and off campus. The HRA concludes that the off-campus MEI was calculated to be located east of the campus along Hilgard Avenue, and the on-campus MEI was calculated to be located in the southern portion of campus, near Franz Hall. Neither of these locations is proximate to the Northwest zone. Potential risks at all other locations within the campus and surrounding vicinity would be lower. Therefore, existing levels of toxic air contaminants also do not exceed established standards at the NHIP site.

4.2.2 Regulatory Framework

Refer to Volume 1, Section 4.2.2 (Air Quality, Regulatory Framework) for a discussion of the regulatory framework for air quality.

4.2.3 Project Impacts and Mitigation

Analytic Method

The analysis in this section focuses on the nature and magnitude of the change in the air quality environment due to development of the NHIP. Air pollutant emissions associated with the NHIP would result from the increased building space, student population, and campus-related traffic volumes. Construction activities would also continue to generate emissions at the campus. The net increase in campuswide emissions generated by these activities and other secondary sources have been quantitatively estimated and compared to thresholds of significance recommended by the SCAQMD.

Construction Emissions

Construction emissions were calculated by estimating the types and number of pieces of equipment that would be used to demolish and clear the project site, excavate the site areas, construction of the proposed buildings, and plant new landscaping. The type and number of equipment were then multiplied by emissions factors identified by the SCAQMD in the *CEQA Air Quality Handbook*.

Stationary Source Emissions

Stationary source emissions would be generated by heating, ventilation, and air conditioning (HVAC) systems used to provide space heating and cooling, and hot water. The emissions generated by this equipment were estimated by calculating the natural gas demand for this equipment and multiplying it by emissions factors published by the SCAQMD in the *CEQA Air Quality Handbook*.

Landscape Maintenance Emissions

It is assumed that development under of the NHIP could increase the amount of ornamental landscaping within the Northwest zone. This would increase the demand for landscape maintenance operations. The average daily emissions associated with these activities were estimated using emission factors from the URBEMIS 2001 emissions model developed for the California Air Resource Board (ARB). For non-single-family residential units, the URBEMIS 2001 emission factors are based on "business units" rather than individual building numbers. Although the UCLA campus could theoretically be considered one business unit, this would result in an estimation of landscape maintenance equipment emissions that is well below expected levels. Therefore, this analysis considers every 500,000 square feet of building space within the campus to be one business unit for the purpose of estimating landscape maintenance equipment emissions.

Consumer Products

The new on-campus residents associated with the NHIP would generate emissions on a daily basis through the use of consumer products. These consumer products include personal care and cleaning products. The daily emissions were calculated multiplying the 0.0171 pound per resident emissions factor from the URBEMIS 2001 emissions model by the number of new on-campus residents.

Motor Vehicle Emissions

Changes in the amount of air pollutant emissions generated on a daily basis in association with the NHIP project would primarily occur as a result of an increase in the on-campus student population and resulting changes in motor vehicle trips. The emissions associated with these motor vehicle trips were calculated using the URBEMIS 2001 emissions model and the traffic volumes predicted for the project in the UCLA Northwest Campus Housing Infill Project Traffic Analysis prepared for the project by Crain & Associates (included as Appendix 4 of Volume 1 of this EIR).

Localized CO Concentrations

Localized carbon monoxide (CO) concentrations were calculated based on a simplified CALINE4 screening procedure developed by the Bay Area Air Quality Management District and accepted by the SCAQMD. The simplified model is intended as a screening analysis, which identifies a potential CO hotspot. This methodology assumes worst-case conditions and provides a screening of maximum, worst-case CO concentrations. The resulting emissions are compared with adopted national and State ambient air quality standards.

Toxic Air Contaminants

Due to the number of potential toxic air contaminants, their diverse nature, and the lack of specific emissions standards for these pollutants, potential impacts associated with these contaminants are based upon the HRA performed for the 2002 LRDP, which is provided as Appendix 7 of Volume 1 of this document. The HRA assumes that new stationary sources of emissions, such as HVAC systems would be utilized by the NHIP and would provide a new source of toxic air contaminants.

2002 LRDP EIR Mitigation Measures and/or Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The following 2002 LRDP EIR MMs for air quality has been incorporated into the proposed project:

2002 LRDP EIR MM 4.2-2(a) *The campus shall require by contract specifications that construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than five minutes.*

2002 LRDP EIR MM 4.2-2(b) *The campus shall encourage contractors to utilize alternative fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas, and unleaded gasoline) and low-emission diesel construction equipment to the extent that the equipment is readily available and cost effective.*

2002 LRDP EIR MM 4.2-4 *The TDM program will be extended through the student registration process to provide information concerning alternative transportation options to summer session students to increase awareness of, and participation in, alternative transportation programs during the summer session.* (This is identical to Noise and Vibration MM 4.9-6 and Transportation/Traffic MM 4.13-2(a).)

In addition, the following 2002 LRDP EIR PPs shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.2-1(a) *The campus shall continue to provide on-campus housing to continue the evolution of UCLA from a commuter to a residential campus.* (This is identical to Noise and Vibration PP 4.9-5(a) and Transportation/ Traffic PP 4.13-1(c).)

2002 LRDP EIR PP 4.2-1(b) *The campus shall continue to implement a TDM program that meets or exceeds all trip reduction and AVR requirements of the SCAQMD. The TDM program may be subject to modification as new technologies are developed or alternate program elements are found to be more effective.* (This is identical to Noise and Vibration PP 4.9-5(b) and Transportation/Traffic PP 4.13-1(d).)

2002 LRDP EIR PP 4.2-2(a) *The campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation:*

- *Apply water and/or approved nontoxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days)*
- *Replace ground cover in disturbed areas as quickly as possible*
- *Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content*
- *Water active grading sites at least twice daily*
- *Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period*
- *All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code*
- *Sweep streets at the end of the day if visible soil material is carried over to adjacent roads*
- *Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip*

- *Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces*
- *Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads*

2002 LRDP EIR PP 4.2-2(b) *The campus shall continue to require by contract specifications that construction equipment engines will be maintained in good condition and in proper tune per manufacturer's specification for the duration of construction.*

2002 LRDP EIR PP 4.2-2(c) *The campus shall continue to require by contract specifications that construction operations rely on the campus' existing electricity infrastructure rather than electrical generators powered by internal combustion engines to the extent feasible.*

2002 LRDP EIR PP 4.2-3 *The campus shall continue to implement energy conservation measures (such as energy-efficient lighting and microprocessor-controlled HVAC equipment) to reduce the demand for electricity and natural gas. The energy conservation measures may be subject to modification as new technologies are developed or if current technologies become obsolete through replacement.* (This is identical to Utilities and Service Systems PP 4.14-10.)

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on air quality if it would result in any of the following:

- Conflict with or obstruct implementation of the applicable air quality plan
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people

As the agency principally responsible for comprehensive air pollution control in the Basin, the SCAQMD recommends that projects should be evaluated in terms of air pollution control thresholds established by the SCAQMD and published in the *CEQA Air Quality Handbook*. These thresholds were developed by the

SCAQMD to provide quantifiable levels that projects can be compared to. The campus utilizes the SCAQMD's thresholds that are recommended at the time that development projects are proposed to assess the significance of quantifiable impacts. The following quantifiable thresholds are currently recommended by the SCAQMD and are used to determine the significance of air quality impacts associated with the 2002 LRDP and NHIP.

Construction Emissions Thresholds

The SCAQMD currently recommends that projects with construction-related emissions that exceed any of the following emissions thresholds should be considered significant:

- 550 pounds per day of CO
- 75 pounds per day of VOC
- 100 pounds per day of NOx
- 150 pounds per day of SOx
- 150 pounds per day of PM_{10}

Operational Emissions Thresholds

The SCAQMD currently recommends that projects with operational emissions that exceed any of the following emissions thresholds should be considered significant. These thresholds apply to individual development projects only; they do not apply to cumulative development:

- 550 pounds per day of CO
- 75 pounds per day of VOC
- 100 pounds per day of NOx
- 150 pounds per day of SOx
- 150 pounds per day of PM_{10}

In order to assess cumulative impacts, the SCAQMD recommends that projects be evaluated to determine whether they would be consistent with AQMP performance standards and emission reduction targets. If a project shows less than a one percent per year reduction in project emissions of CO, VOC, NOx, SOx, and PM_{10}, then it would result in a cumulatively considerable net increase of criteria pollutants for which the project region is in nonattainment under an applicable federal or State ambient air quality standard.

The SCAQMD also recommends that projects that could emit carcinogenic or toxic air contaminants that exceed the maximum individual cancer risk of 10 in one million be considered significant.

Effects Not Found to Be Significant

The Initial Study did not identify any Effects Not Found to be Significant with respect to air quality; therefore, all potential air quality impacts are discussed in Volume 1 or Volume 2 of this EIR.

Impacts and Mitigation

Threshold	Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact NHIP 4.2-1 **Implementation of the NHIP would not conflict with or obstruct implementation of the Air Quality Management Plan. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.2-1, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would conflict with or obstruct implementation of the Air Quality Management Plan, and determined that impacts would remain less than significant after implementation of 2002 LRDP PP 4.2-1(a) and PP 4.2-1(b). The 2002 LRDP is consistent with the 1997 Air Quality Management Plan (AQMP) and the 1999 Amendment for Ozone. It does not provide for population, housing, or employment growth that exceeds the Southern California Association of Governments (SCAG) forecast for the City of Los Angeles Subregion (of which UCLA is a part). This forecast forms the basis of the land use and transportation control portions of the AQMP. The UCLA campus also successfully implements programs that are consistent with the goals of the AQMP for reducing the emissions associated with new development. Based on this information, the 2002 LRDP, including the NHIP, would neither conflict with nor obstruct implementation of the 1997 AQMP and the 1999 Amendment for Ozone, and this impact was determined to be less than significant. No project-specific mitigation is required.

Threshold	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact NHIP 4.2-2 **The NHIP construction could contribute substantially to an existing or projected air quality violation. This is considered a *significant* impact.**

Construction activities are an existing and ongoing source of emissions at the UCLA campus. Construction of new, previously approved facilities is presently occurring in the Core Campus, Central, Health Sciences, and Southwest Campus zones. It is also the greatest amount of concurrent construction that has occurred within the campus in recent years.

Construction activities associated with the NHIP are expected to begin approximately Winter/Fall 2003 and end Winter 2006–07. Four basic types of activities would be expected to occur and generate emissions during construction. First, some existing buildings within the Northwest campus would be demolished and existing surface features cleared. Following demolition, the development sites would be prepared (graded and/or excavated) to accommodate the new building foundations and surface features. The buildings and surface features would then be constructed and readied for use. Finally, new landscaping would be planted around the new buildings.

The amount of emissions generated on a daily basis would vary, depending on the number of buildings that are being constructed at the same time, and the type of construction activities occurring at the same time. There would be times when several buildings are being constructed and/or renovated simultaneously, and other times when only one building is under construction. For the purpose of this analysis, construction activities and, therefore, the associated emissions, would be greatest under two scenarios. The first peak construction scenario would occur when Hedrick North is being constructed, the Dykstra Parking site is being excavated, and the first floor of Sproul Hall is being renovated. This scenario involves the operation of several trucks to transport excavated earth materials from the campus, along with the dust generation associated with excavations activities (these dust activities are subject to SCAQMD Rule 403). The second peak scenario would occur during the construction of Hedrick North, Dykstra Parking, Rieber North, and Rieber West, and the renovation of the first floor of Hedrick Hall. This scenario involves the greatest use of construction equipment at the campus. These construction activities could occur while construction of other buildings occurs elsewhere within the campus. The other potential campus construction activities are unknown at this time and would vary on a monthly basis, but would never exceed current construction emissions. Development of the NHIP would, however, represent a net increase in construction emissions at the campus.

Table 4.2-2 (Estimated Peak Daily Construction Emissions for the NHIP), identifies the net increase in daily emissions associated with the two peak construction scenarios for the NHIP and compares them with the thresholds of significance recommended for construction projects by the SCAQMD. These emissions would be generated above the campus baseline condition that exists at the time of construction. The calculations assume that appropriate dust control measures would be implemented during each component of development as required by SCAQMD Rule 403—Fugitive Dust. As shown, the net increase in daily construction-related emissions of NOx exceed the thresholds of significance recommended by the SCAQMD during both peak construction scenarios. Therefore, construction of the NHIP would contribute substantially to an existing or projected air quality violation during peak periods and the potential impact would be significant. Peak daily emissions of the other four construction related emissions would not exceed SCAQMD significance thresholds under either peak construction scenario.

Table 4.2-2 Estimated Peak Daily Construction Emissions for the NHIP

Emissions Source	Emissions in Pounds per Day				
	CO	VOC	NOx	SOx	PM_{10}
Peak Construction Scenario 1: Construction of Hedrick North, Excavation for Dykstra Parking, and Renovation of Sproul 1st Floor					
Construction Equipment	62.9	14.2	128.3	10.8	27.7
On-Road Vehicles	101.0	16.8	136.9	0.0	1.2
Site Excavation and Grading	—	—	—	—	50.0
Rule 403 Reduction	—	—	—	—	-34.0
Total Emissions (net increase over other concurrent campus construction activities)	163.9	31.0	265.3	10.8	45.0
SCAQMD Thresholds	550.0	75.0	100.0	150.0	150.0
Significant Impacts?	No	No	Yes	No	No
Peak Construction Scenario 2: Construction of Hedrick North, Dykstra Parking, Rieber North, Rieber West, and Renovation of Hedrick 1st Floor					
Construction Equipment	93.5	21.6	170.6	9.1	46.1
On-Road Vehicles	17.1	3.9	18.9	0.0	0.7
Total Emissions (net increase over other concurrent campus construction activities)	110.6	25.6	189.5	9.1	46.7
SCAQMD Thresholds	550.0	75.0	100.0	150.0	150.0
Significant Impacts?	No	No	Yes	No	No

Source: EIP Associates, 2002. Calculation data and results are provided in Appendix 7 of Volume I of this EIR.

Following LRDP MM 4.2-2(a), MM 4.2-2(b), and PP 4.2-2(a) through PP 4.2-2(c) ensures that construction related air quality impacts are minimized. They would not, however, reduce the net increase in peak construction activities to below the thresholds of significance recommended by the

SCAQMD. Therefore, this impact would be significant and unavoidable, and no additional feasible mitigation is available.

Impact NHIP 4.2-3 **Implementation of the NHIP would not result in daily operational emissions that contribute substantially to an existing or projected air quality violation during the regular session. This is considered a *less-than-significant* impact.**

The NHIP would increase the amount of building space, ornamental landscaping, and number of students living on campus. There would be an associated increase in daily emissions associated with stationary sources for space and water heating, landscape maintenance activities, and use of consumer products. There would also be a change in motor vehicle trips and their associated emissions.

Table 4.2-3 (Future Without and With Project Daily Operational Campus Emissions With NHIP—Regular Session) identifies the total estimated daily operational emissions associated with the campus under the future without project scenario and the future with project scenario during the regular session. The estimated net increase in daily operational campus emissions during the regular session is presented at the bottom of Table 4.2-3. As shown, the net increase in daily campus emissions associated with the NHIP would not exceed the threshold of significance recommended by the SCAQMD. Therefore, implementation of the NHIP would not generate a net increase in daily operational campus emissions during the regular session that contributes substantially to an existing or projected air quality violation. Following LRDP PP 4.2-1(a), PP 4.2-1(b), PP 4.2-2(a) through PP 4.2-2(c), and PP 4.2-3, which have been incorporated into the project, ensures that this impact remains less than significant. No project-specific mitigation is required.

Table 4.2-3 Future Without and With Project Daily Operational Campus Emissions With NHIP—Regular Session

Emissions Source	*Emissions in Pounds per Day*				
	CO	*VOC*	*NOx*	*SOx*	*PM_{10}*
Future Without Project Campus Uses and Operations					
Construction Activities[1]	163.9	31.0	265.3	10.8	45.0
Stationary Sources	699.7	49.2	181.0	77.1	81.4
Landscape Maintenance	35.4	5.4	0.2	0.0	0.1
Consumer Products	—	148.4	—	—	—
Motor Vehicles	12,196.1	1,055.8	1,205.4	6.1	841.6
Total Emissions	13,095.1	1,289.8	1,651.9	94.0	968.1

Table 4.2-3 Future Without and With Project Daily Operational Campus Emissions With NHIP—Regular Session

Emissions Source	Emissions in Pounds per Day				
	CO	VOC	NOx	SOx	PM_{10}
Future With Project Campus Uses and Operations					
Construction Activities[1]	163.9	31.0	265.3	10.8	45.0
Stationary Sources	702.4	49.9	197.2	77.1	81.4
Landscape Maintenance	36.6	5.6	0.2	0.0	0.1
Consumer Products	—	177.0	—	—	—
Motor Vehicles	12,236.8	1,059.3	1,209.4	6.2	844.4
Total Emissions	13,139.7	1,322.8	1,672.1	94.1	970.9
Net Increase in Daily Campus Operational Emissions (Future With Project minus Future Without Project)					
Net Increase in Future Daily Emissions	44.6	33.0	20.2	0.1	2.8
SCAQMD Threshold	550.0	55.0	55.0	150.0	150.0
Significant Impacts?	No	No	No	No	No

1. Construction activities would occur in the future with or without implementation of the 2002 LRDP. The daily emissions shown in this table for construction activities are for example only, but are expected to be the same under the future without project or future with project scenarios. The net increase in daily operational emissions would be the same under this analysis whether or not construction activities are occurring at the campus.

Source: EIP Associates, 2002. Calculation data and results are provided in Appendix 7 of Volume 1 of this EIR and assume a future baseline year of 2006.

Impact NHIP 4.2-4 **Implementation of the NHIP would not result in daily operational emissions that contribute substantially to an existing or projected air quality violation during the twelve-week summer session. This is considered a *less-than-significant* impact.**

The NHIP would also result in an increase in daily emissions during the twelve-week summer session. Table 4.2-4 (Future Without and With Project Daily Operational Campus Emissions With NHIP—Summer Session) identifies the total estimated daily operational emissions associated with the campus under the future without project scenario and the future with project scenario during the summer session. The estimated net increase in daily operational campus emissions during the summer session is presented at the bottom of Table 4.2-4. As shown, the net increase in daily campus emissions associated with the NHIP would not exceed the threshold of significance recommended by the SCAQMD. Therefore, implementation of the NHIP would not generate a net increase in daily operational campus emissions during the summer session that contributes substantially to an existing or projected air quality violation. Following LRDP PP 4.2-1(a), PP 4.2-1(b), PP 4.2-2(a) through 4.2-2(c), PP 4.2-3, and MM 4.2-4, which have been incorporated into the project, ensures that this impact remains less than significant. No project-specific mitigation is required.

Table 4.2-4 Future Without and With Project Daily Operational Campus Emissions With NHIP—Summer Session

Emissions Source	Emissions in Pounds per Day				
	CO	VOC	NOx	SOx	PM_{10}
Future without Project Campus Uses and Operations					
Construction Activities[1]	163.9	31.0	265.3	10.8	45.0
Stationary Sources	699.7	49.2	181.0	77.1	81.4
Landscape Maintenance	35.4	5.4	0.2	0.0	0.1
Consumer Products	—	46.4	—	—	—
Motor Vehicles	10,644.1	921.4	1,052.0	5.4	734.5
Total Emissions	11,543.4	1,053.4	1,498.5	93.3	861.0
Future with Project Campus Uses and Operations					
Construction Activities[1]	163.9	31.0	265.3	10.8	45.0
Stationary Sources	702.4	49.9	197.2	77.1	81.4
Landscape Maintenance	36.6	5.6	0.2	0.0	0.1
Consumer Products	—	49.5	—	—	—
Motor Vehicles	10,975.9	950.1	1,084.8	5.5	757.4
Total Emissions	11,878.8	1,086.1	1,547.5	93.4	883.9
Net Increase in Daily Campus Operational Emissions (Future with Project minus Future without Project)					
Net Increase in Daily Emissions	335.7	32.7	49.0	0.1	22.9
SCAQMD Threshold	550.0	55.0	55.0	150.0	150.0
Significant Impact?	No	No	No	No	No

1. Construction activities would occur in the future with or without implementation of the 2002 LRDP. The daily emissions shown in this table for construction activities are for example only, but are expected to be the same under the future without project or future with project scenarios. The net increase in daily operational emissions would be the same under this analysis whether or not construction activities are occurring at the campus.

Source: EIP Associates, 2002. Calculation data and results are provided in Appendix 7 of Volume 1 of this EIR and assume a future baseline year of 2006.

Threshold	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Impact NHIP 4.2-5 **Implementation of the NHIP would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.2-5, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would result in a cumulatively considerable net increase of any criteria pollutant for which the

project region is in nonattainment under an applicable federal or State ambient air quality standard, and determined that a less-than-significant impact would remain after implementation of 2002 LRDP MM 4.2-4 and PP 4.2-1(a), PP 4.2-1(b), and PP 4.2-3.

The SCAQMD's *CEQA Air Quality Handbook* identifies possible methods to determine the cumulative significance of land use projects (i.e., whether the contribution of a project is cumulatively considerable). These methods differ from the methodology used in other cumulative impact analyses in which all foreseeable future development within a given service boundary or geographical area is predicted and its impacts measured. The SCAQMD has not identified thresholds to which the total emissions of all cumulative development can be compared. Instead, the SCAQMD's methods are based on performance standards and emission reduction targets necessary to attain federal and State air quality standards as predicted in the AQMP. The method employed for this impact is an analysis of consistency with specific AQMP performance standards and emission reduction targets. If the 2002 LRDP shows a one percent per year reduction in project emissions of CO, VOC, NOx, SOx, and PM_{10}, then it would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard.

Volume 1 concluded that the 2002 LRDP would meet the performance standard for annual emissions reductions and would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard. As discussed in Volume 1, Section 4.2.1 (Air Quality, Environmental Setting), the UCLA campus implements numerous programs to reduce air pollutants, energy demand (thereby reducing associated energy generation emissions), and motor vehicle trips. By 2000, the TDM program had exceeded the goal of a 12-percent reduction in faculty/staff parking rates (below 1990 LRDP levels) five years earlier than projected in the 1990 LRDP. In addition, since 1990, when the SCAQMD first required a survey of all employees to determine AVR, the TDM program increased the campuswide AVR from 1.26 to 1.51 by Spring 2000, exceeding the goal of 1.5 set by tbe SCAQMD. The emissions reductions associated with continued implementation of the TDM program under the 2002 LRDP reduce the motor vehicle emissions by 6.7 to 6.8 percent below those that would otherwise be generated if the TDM program were not implemented. The SCAQMD CEQA Air Quality Handbook indicates that energy conservation measures reduce the emissions associated with water heating and space heating and cooling needs by 1.5 to 14 percent. The implementation of Best Available Control Technologies (BACT) for all new stationary sources of emissions reduces the emissions from these sources by the maximum extent feasible. Therefore, continued implementation of the existing TDM program, energy conservation efforts, and BACT programs reduce the emissions that would otherwise be generated by the

campus by substantially more than one percent on an annual basis. As such, this impact was determined to be less than significant. No project-specific mitigation is required.

Threshold	Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact NHIP 4.2-6 **Implementation of the NHIP would not expose sensitive receptors near roadway intersections to substantial localized pollutant concentrations. This is considered a *less-than-significant* impact.**

As was done in Volume 1 to assess localized CO concentrations, the simplified CALINE4 screening procedure was used to predict future CO concentrations at the study intersections in the vicinity of the campus with the addition of traffic generated by the NHIP. The results of air emissions modeling are shown in Table 4.2-5 (Future With Project Localized Carbon Monoxide Concentrations—Regular Session). As shown, future CO concentrations near these intersections would not exceed the national 35.0 ppm and State 20.0 ppm 1-hour ambient air quality standards, or the national 9.5 ppm and State 9.1 ppm 8-hour ambient air quality standards with the addition of NHIP related traffic. Therefore, sensitive receptors located in close proximity to these intersections would not be exposed to substantial pollutant concentrations during regular session and the potential impacts of the NHIP would be less than significant. No project-specific mitigation is required.

Future summer traffic counts are also provided in the NHIP Transportation Systems Analysis (included as Appendix 4). Background CO concentrations in the summer are substantially lower than they are in the winter when surface-based inversions trap the pollutants at ground levels. In source receptor area (SRA) 2 where the UCLA campus is located, 8-hour background concentrations of CO are less than 1.0 ppm in summer as opposed to averaging around 4.0 ppm in winter. In addition, intersection traffic volumes are lower in the summer months. Consequently, localized CO concentrations in the summer months would be lower than the levels shown in Table 4.2-5 and would also not exceed national or State ambient air quality standards. Therefore, localized CO concentrations during the summer session would remain less than significant following implementation of the NHIP, and no project-specific mitigation is required.

Table 4.2-5 Future With Project Localized Carbon Monoxide Concentrations—Regular Session

Intersection	CO Concentrations in Parts per Million[1,2]					
	25 Feet		50 Feet		100 Feet	
	1-Hour	8-Hour	1-Hour	8-Hour	1-Hour	8-Hour
Church Ln./Ovada Pl. and Sepulveda Blvd.	8.9	5.7	8.1	5.1	7.3	4.5
Sunset Blvd. and Church Ln.	9.4	6.0	8.5	5.4	7.6	4.7
Sunset Blvd. and Veteran Ave.	8.1	5.1	7.4	4.7	6.8	4.2
Sunset Blvd. and Bellagio Way	9.3	6.0	8.4	5.3	7.4	4.7
Montana Ave. and Sepulveda Blvd.	8.2	5.2	7.5	4.7	6.9	4.3
Montana Ave. and Levering Ave.	7.1	4.5	6.7	4.1	6.2	3.8
Montana Ave./Gayley Ave. and Veteran Ave.	7.1	4.4	6.7	4.1	6.3	3.8
Strathmore Pl. and Gayley Ave.	6.4	4.0	6.2	3.8	5.9	3.6
Levering Ave. and Veteran Ave.	6.1	3.7	5.8	3.6	5.7	3.4
Le Conte Ave. and Gayley Ave.	6.3	3.9	6.1	3.7	5.8	3.5
Weyburn Ave. and Gayley Ave.	6.6	4.1	6.3	3.9	6.0	3.6
Constitution Ave. and Sepulveda Blvd.	6.5	4.0	6.2	3.8	5.9	3.6
Wilshire Blvd. and Sepulveda Blvd.	12.5	8.2	11.2	7.3	9.6	6.2
Wilshire Blvd. and Veteran Ave.	11.6	7.6	10.4	6.7	9.1	5.8
Wilshire Blvd. and Gayley Ave.	9.0	5.7	8.3	5.2	7.5	4.7

[1] Federal 1-hour standard is 35.0 parts per million. State 1-hour standard is 20.0 parts per million.

[2] Federal 8-hour standard is 9.5 parts per million. State 8-hour standard is 9.1 parts per million.

Source: EIP Associates, 2002. Calculation sheets are provided in Appendix 7 of Volume 1 of this EIR and are based on future ambient CO concentrations predicted by the SCAQMD.

Volume 1, Impact LRDP 4.2-6, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would expose sensitive receptors to substantial pollutant concentrations due to bus activity at the Hilgard Bus Terminal, and determined that a less-than-significant impact would occur. Volume 1 concluded that implementation of the 2002 LRDP would not result in an impact on public transit services during the regular and summer sessions, and no buses would need to be added to the number presently serving the campus and vicinity as a result of the 2002 LRDP. The campus has already worked with the Culver City Bus Company to re-route its No. 6 bus into the campus rather than to the Hilgard Bus Terminal. The campus has also collaborated with the Big Blue Bus line to provide an express bus that drives directly into the Westwood Plaza Ackerman Union turn-around on the campus. Both of these re-routing efforts have reduced the volume of buses at tbe Hilgard Bus Terminal. Therefore, no changes in bus service during the regular and summer session are anticipated as a result of implementation of the 2002 LRDP, and the impact of the 2002 LRDP on air quality associated with public transit (including the Hilgard Bus Terminal) would be less than significant. No project-specific mitigation is required.

Impact NHIP 4.2-7 **Implementation of the NHIP would not expose sensitive receptors on or off campus to substantial pollutant concentrations due to campus-generated toxic air emissions. This is considered a *less-than-significant* impact.**

Toxic air pollutants would be generated by the new heating, ventilation, and air conditioning equipment associated with the new residence halls and by chlorine use for the leisure pool within the proposed recreation facility. These emissions were included in the HRA prepared for the 2002 LRDP.

The theoretical incremental cancer risk as a result of a lifetime exposure to emissions from the routine campuswide operation of all sources under the 2002 LRDP was estimated in the HRA to be 6.4 in one million (6.4×10^{-6}) at the off-campus maximally exposed individual (MEI) and 7.5 in one million (7.5×10^{-6}) at the on-campus MEI. The off-campus MEI was calculated to be located east of the campus along Hilgard Avenue, and the location of the on-campus MEI is calculated to be in the southern portion of campus, near Franz Hall. Potential risks at all other locations within the campus and surrounding vicinity would be lower. Because these risks are less than the CAPCOA and SCAQMD thresholds of 10 in one million, implementation of the 2002 LRDP, including the NHIP, would not generate toxic air emissions that result in excess human cancer risk from stationary sources. Also, the new residents of the NHIP would not be exposed to an excess human cancer risk of 10 in one million. Therefore, this impact is less than significant, and no project-specific mitigation is required.

The maximum chronic Hazard Index (HI) for an organ system was 0.11 at the off-campus MEI and 0.12 at the on-campus MEI. The off-campus MEI was calculated to be located east of the campus along Hilgard Avenue, and the location of the on-campus MEI is calculated to be in the southern portion of campus, near Franz Hall. The maximum chronic HI at all other locations within the campus and surrounding vicinity would be lower.

The maximum acute HI for an organ system was 0.15 at the off-campus MEI and 0.12 at the on-campus MEI. The off-campus MEI was calculated to be located approximately 200 meters west of the campus boundary and the on-campus MEI was calculated to be located at the UCLA Medical Center. The maximum acute HI at all other locations within the campus and surrounding vicinity would be lower.

Because these health effects are substantially less than an HI of 1.0, implementation of the 2002 LRDP, including the NHIP, would not generate toxic air emissions that result in a cumulative acute or chronic noncarcinogenic HI of 1.0 or greater. The new residents of the NHIP would also not be exposed to a cumulative acute or chronic noncarcinogenic HI of 1.0 or greater. Therefore, this impact is less than significant, and no project-specific mitigation is required.

Threshold	Would the project create objectionable odors affecting a substantial number of people?

Impact NHIP 4.2-8 **Implementation of the NHIP would not create objectionable odors affecting a substantial number of people. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.2-8, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would create objectionable odors affecting a substantial number of people, and determined that a less-than-significant impact would occur. Construction activities occurring under the 2002 LRDP would generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust) and the application of architectural coatings. These emissions would occur during daytime hours only and would be isolated to the immediate vicinity of the construction site and activity. As such, they would not affect a substantial number of people.

Potential operational airborne odors could result from cooking activities associated with the NHIP. These odors would be similar to existing housing and food services uses on the campus, and would be confined to the immediate vicinity of the new buildings. The other potential source of odors would be new trash receptacles within the campus. The receptacles would have lids and be emptied on a regular basis, before potentially substantial odors have a chance to develop. Consequently, implementation of the 2002 LRDP, including the NHIP, would not create objectionable odors affecting a substantial number of people and potential impacts would be less than significant. No project-specific mitigation is required.

4.2.4 Cumulative Impacts

Refer to Volume 1, Section 4.2.4 (Air Quality, Cumulative Impacts) for a discussion of cumulative air quality impacts.

4.2.5 References

Bay Area Air Quality Management District. 1996. *BAAQMD CEQA Guidelines.*

Crain & Associates. 2002. *UCLA Long Range Development Plan Transportation Systems Analysis, September.*

South Coast Air Quality Management District. 1993. *CEQA Air Quality Handbook.*

———. 1997. *1997 Air Quality Management Plan.*

———. 1999. *Final 1999 Amendment to the 1997 Ozone SIP Revision for the South Coast Air Basin.*

University of California, Los Angeles. 1990. *UCLA 1990 Long Range Development Plan.*

———. 1990. *UCLA 1990 Long Range Development Plan Final Environmental Impact Report (SCH No. 89072618).*

University of California, Merced. 2002. *University of California Merced Campus Long Range Development Plan Final Environmental Impact Report (SCH No. 2001021065).*

URS Corporation. 2002. *Health Risk Assessment in Support of the Long Range Development Plan Update for the University of California, Los Angeles.*

4.3 BIOLOGICAL RESOURCES

This section hereby incorporates Volume 1, Section 4.3 (Biological Resources) by reference.

4.3.1 Environmental Setting

Refer to Volume 1, Section 4.3.1 (Biological Resources, Environmental Setting) for a discussion of existing regional and campuswide biological resources.

The NHIP Site

The NHIP site is located in the Northwest zone of the campus on and around a four-acre hillside area east of Veteran Avenue and south of Parking Lot 11. Using field data collected by EIP biologists on December 5, 2001, and April 22, 2002, a list of plant and animal species that have been observed within the NHIP sites was compiled. The site contains biological resources that are generally representative of the types of resources present on the campus (refer to Section 4.3.1 [Environmental Setting] and Appendix 2 [Floral and Faunal Lists]), which are also further described below.

Vegetation

A majority of the ground surface area of the project site consists of impervious materials, such as existing surface parking lots. The remaining, pervious land area consists of landscaped courtyards, gardens, lawns, and heavily planted hillsides, with limited native vegetation and introduced exotic species.

Portions of the site remain undeveloped, but as with the entire campus and the majority of its immediate surroundings, have been subject to extensive development and planting, and the site no longer reflects the native chaparral that historically existed on the area that the campus now occupies. A search of the California Natural Diversity Database (CNDDB 2001) revealed that no special-status plant species or communities have been reported to occur within the campus, and according to data collected during the surveys on December 5, 2001, and April 22, 2002, the majority of the vegetation now present consists of introduced nonnative species that are maintained by the University, such as oleander (*Nerium oleander*) and various species of ivy (*Hedera* sp.). Predominant trees include western sycamore (*Platanus racemosa*), and various species of oak (*Quercus* sp.) and pine (*Pinus* sp.). Appendix 2, Table A2-1 (Plant Species Observed within the NHIP Sites) lists the native and nonnative plant species that were observed within the proposed building locations.

Wildlife

Wildlife associated with the proposed NHIP consists of native and nonnative reptiles, birds, and mammals common to highly urbanized areas. According to a search of the CNDDB (2001), no threatened or endangered wildlife species have been reported to occur within the campus.

Using field data collected by EIP biologists on December 5, 2001, and April 22, 2002, as well as three field surveys conducted for the Northwest Campus Development (De Neve) Revised Phase II SEIR (De Neve housing) (November 18 and 26 and December 19, 1996) and an existing biological survey of the Northwest campus zone (Longcore *et al.* 1997, conducted in winter 1995–96), an updated list of wildlife species that have been observed or are expected to occur on the NHIP site was compiled and is provided in Appendix 2, Table A2-2 (Avian Species Observed at the Proposed Project Sites), in this EIR. This list includes examples of wildlife and avian species that are common to an urbanized landscape like the NHIP site. Such species include opossum (*Didephius virginiana*), California ground squirrel (*Spermophilus beecheyi*), fox squirrel (*Sciurus niger*), northern mockingbird (*Mimus polyglottos*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), and various other migrant songbirds (Longcore *et al.* 1997).

As the most common form of wildlife found within the project sites are avian, avian surveys were performed by EIP Associates during the December and April field visits to ensure that both the seasonal migration and nesting periods of avian species would be included within the assessment. Appendix 2, Table A2-2 (Avian Species Observed Within the NHIP Sites) includes the results of these surveys. During the December 5 biological survey, a Cooper's Hawk (*Accipiter cooperi*), which is a California Species of Special Concern, was observed flying over the Northwest campus zone and is known to inhabit the Santa Monica Mountains north of the campus. Also, Longcore *et al.* (1997) reported sighting a sharp-shinned hawk (*Accipiter stiatus*), which is a California Species of Special Concern, in the Northwest campus zone during winter of 1995–96.

The Cooper's hawk and sharp-shinned hawk are categorized as "Third Priority" Species of Special Concern. Third Priority species "are not in any present danger of extirpation and their populations within most of their range do not appear to be declining seriously," but are included because of their small population sizes in California and are vulnerable if a threat to these populations should materialize (http://www.dfg.ca.gov/hcpb/species/ssc/sscbird/sscbird.shtml). Further, neither of these species is listed on the pending Draft (5 July 2001) California Species of Special Concern List (CDFG 2001). However, this draft list has not yet been adopted and is not in effect. Sightings of both of these hawks occurred in winter, when these species exhibit generalized habitat requirements (Baumgardner personal

communication; Johnsgaard 1990). Cooper's hawks are generally associated with woodlots and areas where woodlands occur in patches and groves, which could include the campus, although this species prefers nesting near water (Baumgardner 2002; Johnsgaard 1990, p.172). Also, nesting on the campus is considered to be unlikely given the level of human activity and general noise on the campus, because this species is noise-sensitive (Baumgardner 2002). Sharp-shinned hawk nesting habitat, by contrast, consists primarily of boreal (northern coniferous) forests, mixed coniferous-deciduous forests, and pure coniferous forests (Johnsgaard 1990), which do not occur on campus. Consequently, nesting on the campus by these species is considered unlikely.

4.3.2 Regulatory Framework

Refer to Volume 1, Section 4.3.2 (Biological Resources, Regulatory Framework) for a discussion of the regulatory framework for biological resources.

4.3.3 Project Impacts and Mitigation

Analytic Method

Potential impacts to biological resources resulting from buildout associated with the NHIP were assessed by first conducting a review of the available literature to determine the potential presence of special status biological resources within the project areas. Resources used for this review included

- Data collected for other projects/studies within the Northwest zone
- The California Natural Diversity Database (CNDDB)
- Federal and State agency lists
- Federal, State, and local regulations/policies that applied to the project site

Upon completion of the literature review, a list of species potentially occurring within the project sites was compiled. Field surveys were then conducted to document plant and avian species and assess the adequacy of habitat for potentially occurring species. EIP staff biologists and avian specialists performed field surveys from 6:30 A.M. to 5:30 P.M. on December 5, 2001, and April 22, 2002. Surveys were conducted within the construction footprint of each site, as well as a 250-foot buffer zone surrounding each of the proposed building locations. Surveys consisted of walking transects throughout the entire site and buffer zone and documenting direct observations and vocalizations of avian species, as well as direct observation of plant species and terrestrial wildlife, tracks, and/or droppings. Using this species list, published habitat preferences, and general topographical maps of the campus area, the potential effects of the NHIP on biological resources are assessed using the thresholds of significance outlined below.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The following 2002 LRDP EIR MMs for biological resources have been incorporated into the proposed project:

2002 LRDP EIR MM 4.3-1(a) *Prior to the onset of construction activities that occur between March and mid-August, surveys for nesting special status avian species and raptors shall be conducted on the affected portion of the campus following USFWS and/or CDFG guidelines. If no active avian nests are identified on or within 250 feet of the construction site, no further mitigation is necessary.*

2002 LRDP EIR MM 4.3-1(b) *If active nests for avian species of concern or raptor nests are found within the construction footprint or a 250-foot buffer zone, exterior construction activities shall be delayed within the construction footprint and buffer zone until the young have fledged or appropriate mitigation measures responding to the specific situation have been developed and implemented in consultation with CDFG.*

2002 LRDP EIR MM 4.3-1(c) *In conjunction with CEQA documentation required for each project proposal under the 2002 LRDP, a tree replacement plan shall be prepared and implemented. The tree replacement plan for each project shall determine the appropriate number of replacement trees in relation to the specific project site characteristics. The tree replacement plan would ensure that the appropriate number of new trees is planted within the available site area so that each tree planted has sufficient space to grow and thrive.* (This is identical to Aesthetics MM 4.1-2.)

In addition, the following 2002 LRDP EIR PPs shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.3-1(a) *Mature trees to be retained and protected in place during construction, shall be fenced at the drip-line, and maintained by the contractor in accordance with landscape specifications contained in the construction contract.*

2002 LRDP EIR PP 4.3-1(b) *Trees shall be examined by an arborist and trimmed, if appropriate, prior to the start of construction.*

2002 LRDP EIR PP 4.3-1(c) *Construction contract specifications shall include the provision for temporary irrigation/watering and feeding of these trees during construction, as recommended by the designated arborist.*

2002 LRDP EIR PP 4.3-1(d) *Construction contract specifications shall require that no building material, parked equipment, or vehicles shall be stored within the fence line.*

2002 LRDP EIR PP 4.3-1(e) *Examination of these trees by an arborist shall be performed monthly during construction to ensure that they are being adequately maintained.*

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines, except where noted. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on biological resources if it would result in any of the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations; or by the California Department of Fish and Game; or by the U.S. Fish and Wildlife Service
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations; or by the California Department of Fish and Game; or by the U.S. Fish and Wildlife Service
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan

Effects Not Found to Be Significant

Threshold	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations; or by the California Department of Fish and Game; or by the U.S. Fish and Wildlife Service?

Refer to Volume 1, Section 4.3.3 (Biological Resources, Project Impacts and Mitigation) for a discussion of Effects Not Found to Be Significant for riparian habitat or other sensitive natural communities.

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

Refer to Volume 1, Section 4.3.3 (Biological Resources, Project Impacts and Mitigation) for a discussion of Effects Not Found to Be Significant for federally protected wetlands.

Threshold	Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Refer to Volume 1, Section 4.3.3 (Biological Resources, Project Impacts and Mitigation) for a discussion of Effects Not Found to Be Significant for potential conflicts with local policies or ordinances.

Threshold	Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan?

Refer to Volume 1, Section 4.3.3 (Biological Resources, Project Impacts and Mitigation) for a discussion of Effects Not Found to Be Significant for potential conflicts with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved habitat conservation plan.

Impacts and Mitigation

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

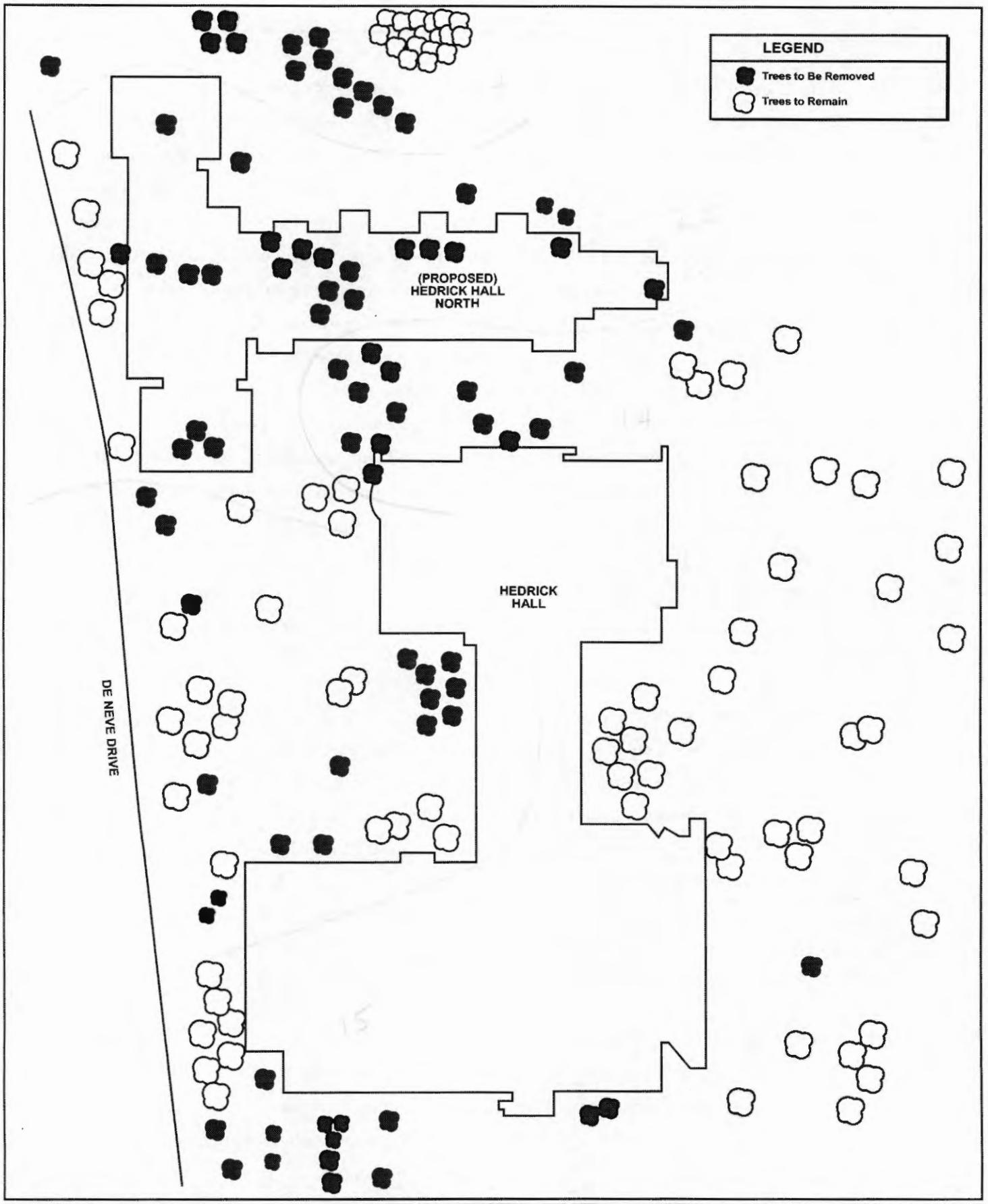
Impact NHIP 4.3-1 **Implementation of the NHIP would not have a substantial adverse effect as a result of the direct loss of nesting habitat for resident and migratory avian species of special concern and raptors. This is considered a *less-than-significant* impact.**

As development of the NHIP occurs, 65,000 square feet of pervious/landscaped surfaces will be replaced by impervious surfaces, and the dominant landscape features of the areas (e.g., trees, shrubs, and herbaceous plants) would potentially be removed, modified, or disturbed. As with most urbanized areas, these landscape features, particularly mature trees, provide nesting opportunities for migratory avian species and raptors during breeding season. No threatened, endangered, sensitive, or rare species have been reported to occur within the NHIP site; however, two California Species of Special Concern

were observed in the vicinity of the project site: a Cooper's hawk was observed on December 5, 2001, and a sharp-shinned hawk was observed by Longcore *et al.* (1997). The campus does not provide suitable nesting habitat for the sharp-shinned hawk, which consists primarily of boreal (northern coniferous) forests, mixed coniferous-deciduous forests, and pure coniferous forests (Johnsgaard 1990). Therefore, the likelihood of that hawk species nesting on the campus is considered extremely low. The noise and activity level on campus also make the likelihood low for the Cooper's hawk nesting on campus, which is particularly noise-sensitive. Further, this species preference for nesting in wooded areas near water indicates that if nesting occurred on the campus, the probable location for this would be the wooded areas surrounding Stone Canyon Creek, an area that would not be subject to development under the NHIP. Disturbance of Cooper's hawk or sharp-shinned hawk nests by construction activities resulting from the NHIP is, therefore, considered unlikely. As described above, both raptors are "Third Priority" species of special concern, which are defined by the CDFG as not being in any present danger of extirpation in California, with no substantial decline in populations, and the pending draft list of Species of Special Concern (July 2001, not yet adopted or in effect), does not include either the Cooper's hawk or sharp-shinned hawk. Development of the NHIP would not have a substantial adverse effect, either directly or through habitat modifications, on either of these species. However, migratory avian species and other raptors may nest in project site and are protected under the Migratory Bird Treaty Act (MBTA).

Implementation of the NHIP could result in the removal of approximately 253 mature trees in the Northwest Zone; 208 trees would be removed in the area of the residence halls, 26 trees on the Dykstra parking structure site and 19 trees on the recreation site. For purposes of this EIR, a mature tree is defined as a tree that measures at least 12 inches in diameter at four feet above the ground, as defined by the City of Los Angeles. Figure 4.3-1 (Proposed Tree Removal Plan—Hedrick Precinct), Figure 4.3-2 (Proposed Tree Removal Plan—Rieber Precinct), Figure 4.3-3 (Proposed Tree Removal Plan—Dykstra Parking Structure), and Figure 4.3-4 (Proposed Tree Removal Plan—Recreation Facilities) identify "trees to be removed" and "trees to remain" within the immediate vicinity of the each project site area (e.g., Hedrick Precinct, Rieber Precinct, Dykstra Parking Structure site, and Recreation site).

Although it is expected "trees to remain" would be retained *in situ*, it is possible that some of these trees could be indirectly impacted by construction activities due to the temporary loss of irrigation and/or other unanticipated construction-related impacts. Continued implementation of 2002 LRDP PP 4.3-1(a) through PP 4.3-1(e), incorporated by the project, would include provisions to protect these trees with fencing, irrigation, and monthly examinations by an arborist.



Not to Scale

SOURCE :EIP Associates, 2002

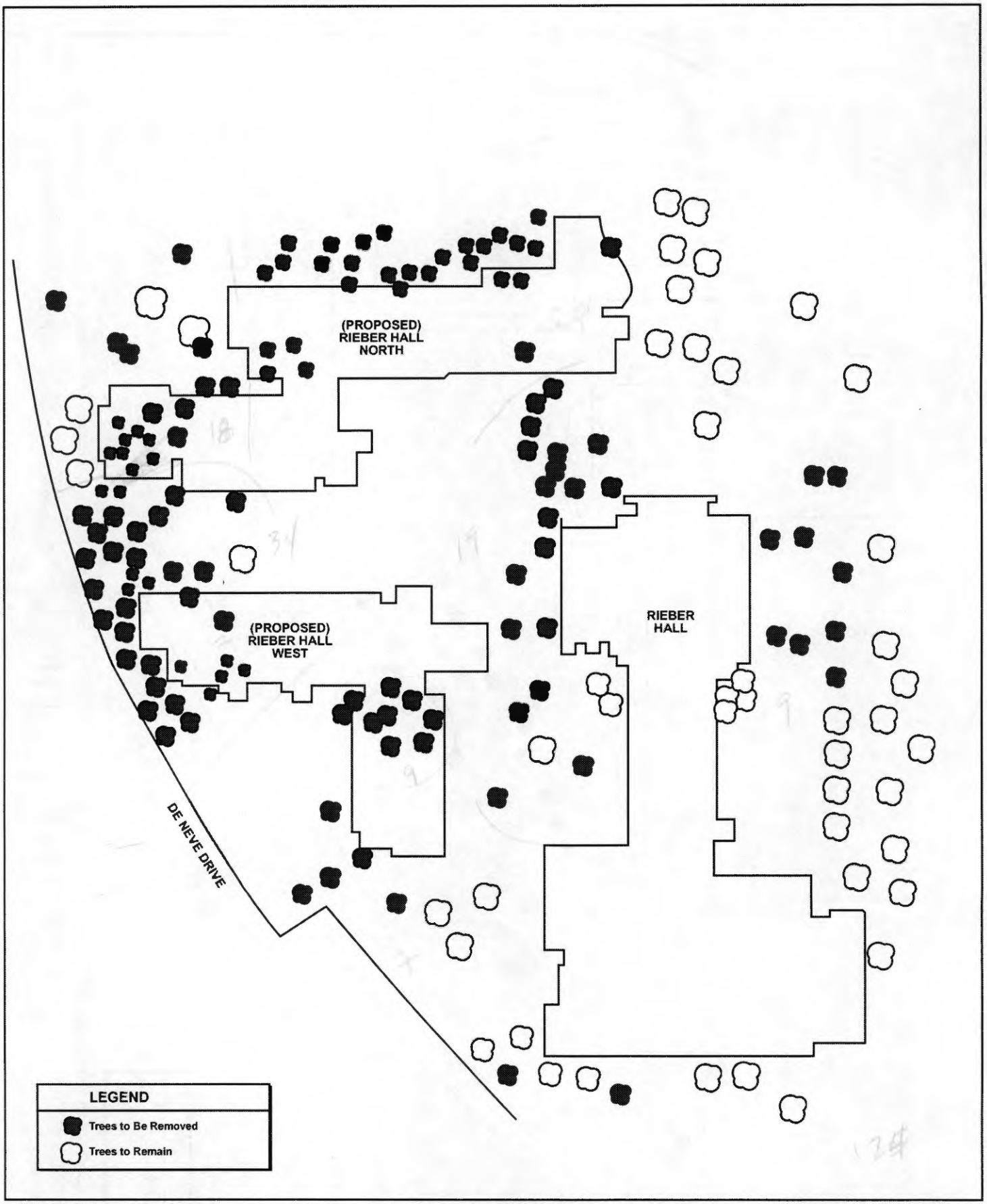
10328-08

EIP ASSOCIATES

FIGURE **4.3-1**

**Proposed Tree Removal Plan–
Hedrick Precinct**

UCLA Northwest Housing Infill Project



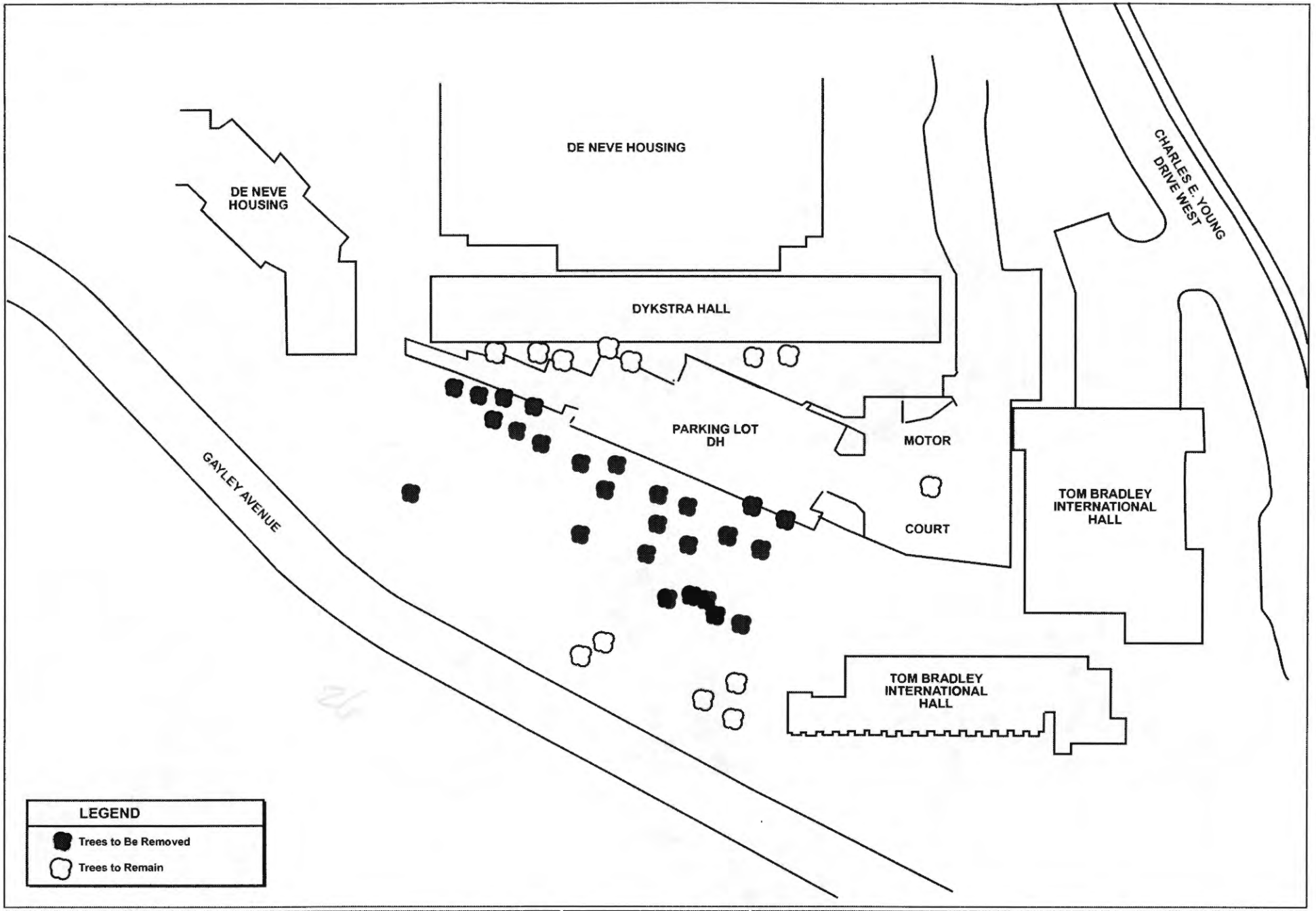
Not to Scale

SOURCE :EIP Associates, 2002

10328-08

FIGURE **4.3-2**
Proposed Tree Removal Plan–
Rieber Precinct

UCLA Northwest Housing Infill Project



Not to Scale

SOURCE: Studios Archtecture

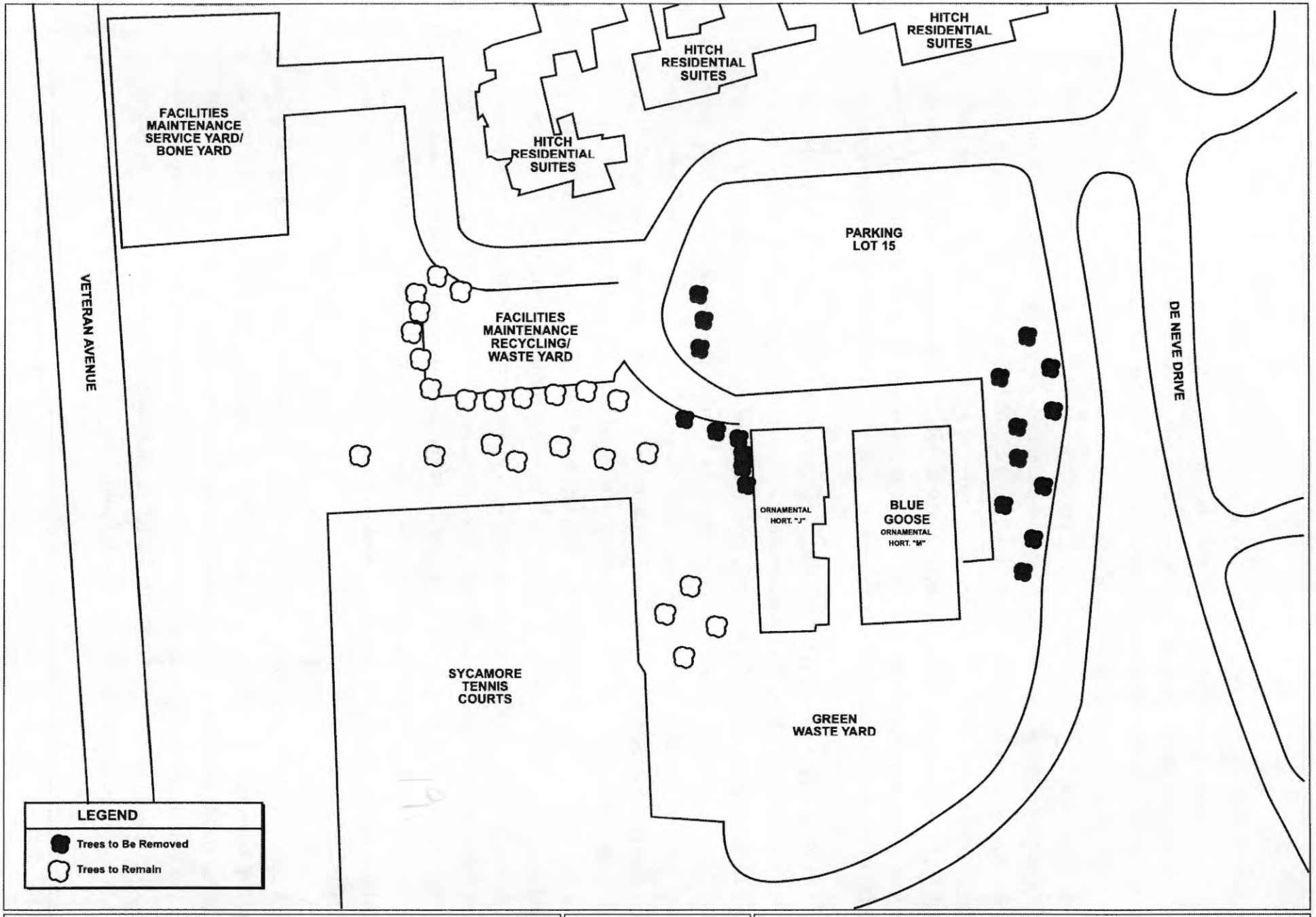
10328-08

EIP ASSOCIATES

FIGURE **4.3-3**

Proposed Tree Removal Plan–Dykstra Parking Structure

UCLA Northwest Housing Infill Project



Not to Scale

SOURCE: UCLA

10328-08

EIP ASSOCIATES

FIGURE **4.3-4**

Proposed Tree Removal Plan–Recreation Facilities

UCLA Northwest Housing Infill Project

Tree removal could occur during the breeding season and could affect active nests of raptors or migratory avian species or species protected under the MBTA. The loss of an occupied nest during the breeding season for raptors or migratory avian species as a result of construction or demolition activities would constitute a substantial adverse effect ("take" or "destruction" under Section 3513 of the Fish and Game Code of California), and, in the case of raptors, would constitute the "take" or "destruction" of the nest or egg under Section 3503.5 of the Fish and Game Code of California. However, 2002 LRDP EIR MM 4.3-1(a) and MM 4.3-1(b), which have been incorporated into the proposed project, would mitigate to a less-than-significant level direct impacts upon nesting activities of raptors or other migratory avian species by requiring pre-construction surveys for active nests, delaying construction if necessary, providing of a buffer zone if occupied nests are found, as well as developing, in consultation with the CDFG, of additional protective measures that respond to the specific circumstances observed. These 2002 LRDP EIR mitigation measures would ensure that no take or destruction of nests or eggs occurs.

The proposed project also includes the following Tree Replacement Plan in accordance with the 2002 LRDP EIR MM 4.3-1(c). The Tree Replacement Plan would involve provision of one new tree for every two mature trees removed with a minimum 24-inch box size. In addition, the project would provide for relocating up to 15 mature trees that otherwise would be removed for construction. Some of these mature trees may be moved from areas within the project site, or from sites of other campus construction projects. The mature trees would be planted around the new residence halls. Similarly, up to five existing mature trees that would otherwise be removed for construction would be relocated as part of the Dykstra Parking Structure project. It is anticipated that these five relocated trees would be planted along the Gayley Avenue boundary of the parking structure site to screen views of the structure from off-campus areas. Relocating mature trees as part of the project would compensate for the planting of new smaller trees. Given the value of mature trees, the campus considers the removing and relocating of a single mature tree to be equivalent to the planting of five new smaller trees. Tree replacement for the Recreation component of the project would most likely involve the planting of replacement trees around the periphery of the site in order to maintain the major portion of the area as open space for recreation and leisure activities.

In summary, the NHIP Tree Replacement Plan provides for the removal and replanting of up to 20 mature trees, each of which would be equivalent to the planting of five new trees (or a total of 100 trees); and the replacement of the remaining mature trees removed by the project on a two-for-one basis with a minimum 24-inch box size (or a minimum of 77 new trees). The NHIP Tree Replacement Plan provided in accordance with LRDP MM 4.3-1(c), in combination with LRDP PPs 4.3-1(a) through 4.3-1(e) incorporated into the NHIP project would ensure that implementation of the NHIP would not,

through habitat modifications, substantially reduce nesting opportunities for resident and migratory avian species of special concern and raptors in the project vicinity. This impact would be less than significant, and no project-specific mitigation is required.

Threshold	Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact NHIP 4.3-2 **The NHIP construction would not interfere with the movement of resident and migratory avian species of special concern and raptors. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.3-2, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would, through habitat modifications, reduce nesting opportunities for raptors or migratory avian species, and determined that a less-than-significant impact would occur after implementation of 2002 LRDP EIR MMs 4.3-1(a) through 4.3-1(c).

Volume 1 of this EIR (Impact 4.3-1) concluded that the campus does not provide any fisheries habitat (the underground flow of Stone Canyon Creek as a box culvert prohibits its use for fisheries resources), and does not operate (in whole or in part) as a native wildlife nursery site, as such sites were not observed during surveys and are generally located in habitat types that are not present on the campus. Further, as described in the Initial Study prepared for the project, the campus does not serve as a connection between natural areas and, consequently, does not serve as a wildlife corridor.

Impact LRDP 4.3-2 also concluded that implementation of the 2002 LRDP could result in the removal or pruning of mature trees on campus, and that such removal or pruning could occur during the nesting season, which could interfere with the movement of raptors or migratory avian species by disrupting breeding activities or reducing nesting, roosting, and foraging opportunities. However, implementation of 2002 LRDP EIR MMs 4.3-1(a) and 4.3-1(b) would mitigate, to a less-than-significant level, direct impacts upon nesting activities of raptors or migratory avian species by surveying for, and actively protecting, occupied nests. Implementation of 2002 LRDP MM 4.3-1(c) would require the preparation of a Tree Replacement Plan for each project proposed under the 2002 LRDP (refer to Impact NHIP 4.3-1 for a discussion of the project's Tree Replacement Plan). Following 2002 LRDP PPs 4.3-1(a) through 4.3-1(e) would also reduce, to a less-than-significant level, indirect impacts on migratory avian species of special concern or raptors by ensuring, through the provision of replacement trees, that the habitat value (nesting, roosting, and foraging opportunities) of the mature trees to be removed from the campus would continue to be provided in the long-term, and would ensure the health of the mature trees to be

retained and relocated by requiring protection of the trees from construction activities, as well as regular care by an arborist throughout the duration of construction activities that could affect the trees.

The NHIP was included in the analysis provided in Volume 1, Section 4.3 (Biological Resources). The biological resources analysis stated that three primary areas of more dense vegetation exist on the campus (Northwest Campus Zone, Stone Canyon Creek, and the Mildred E. Matthias Botanical Gardens). The analysis included surveys of the Northwest campus zone and the impact analysis included consideration of development in this zone and the potential for implementation of the 2002 LRDP to affect biological resources observed in the Northwest campus zone, as well as the other vegetated areas on campus. Therefore, the conclusions in the analysis in Volume 1 (Impact 4.3-2), which included the NHIP, still apply, and this impact would be considered less than significant after implementation of 2002 LRDP MMs 4.3-1(a) through 4.3-1(c), and after following 2002 LRDP EIR PPs 4.3-1(a) through 4.3-1(e), all of which have been incorporated into the proposed project. No project-specific mitigation is required.

4.3.4 Cumulative Impacts

Refer to Volume 1, Section 4.3.4 (Biological Resources, Cumulative Impacts) for a discussion of cumulative biological resources impacts.

4.3.5 References

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University of California, Merced. 2002. *University of California Merced Campus Long Range Development Plan Final Environmental Impact Report (SCH No. 2001021065).*

4.4 CULTURAL RESOURCES

This section incorporates by reference Volume 1, Section 4.4 (Cultural Resources).

4.4.1 Environmental Setting

Historical Resources

Historical structures are those that meet the criteria for eligibility for listing on the National Register of Historic Places (NRHP) or California Register of Historic Resources (CRHR), which are described in Volume 1, Section 4.4.1 (Cultural Resources, Environmental Setting). Volume 1, Table 4.4-1 (Campus Structures 50 or More Years Old) lists the campus structures that are at least 50 years old and provides dates of construction, age, and status with regard to the NRHP or CRHR. No historical or potentially historical buildings are located in the Northwest zone.

Archaeological Resources

The 1990 LRDP EIR anticipated a low probability of the presence of archaeological remains on the campus, and no archaeological remains have been found during excavations for projects since 1990 (1990 LRDP EIR Mitigation Monitoring Program 2000 Status Report, 42–43). Further, no archaeological remains have ever been found on campus. An updated archaeological and historical assessment of the UCLA campus yielded no evidence of archeological remains on the UCLA campus or within half mile of the campus. Additionally, no Native American cultural sites have been identified on the campus. Refer to Volume 1, Section 4.4.1 (Cultural Resources, Environmental Setting) for additional discussion of archaeological resources.

Paleontological Resources

No fossils have been reported from the rock units located within the boundaries of the campus; however, a paleontological study completed for the 2002 LRDP EIR concluded that the rock units that underlie the campus have the potential to contain paleontological resources. Refer to Volume 1, Section 4.4.1 (Cultural Resources, Environmental Setting) for additional discussion of paleontological resources.

4.4.2 Regulatory Framework

Refer to Volume 1, Section 4.4.2 (Cultural Resources, Regulatory Framework) for a discussion of the regulatory framework for cultural resources.

4.4.3 Project Impacts and Mitigation

Analytic Method

Historic Resources

Significant effects upon historic structures or features are evaluated by determining the presence or absence of historic status with respect to the feature in question, and then determining the potential for development to affect the structure or feature if it possesses historic status.

Archaeological Resources and Human Burials

Because surface examination often cannot reveal the presence of archaeological resources at a specific location, this analysis is based on the probability, based on previous studies and excavations, that an archaeological resource would not be affected by activities that disturb the ground surface or subsurface, including grading or excavation.

Paleontological Resources

Surface examination often cannot reveal whether paleontological resources are present at a specific project location. However, as described above, extensive excavation associated with campus development has occurred and continues to occur. This analysis is based on the probability, based on previous studies of rock units that underlie the campus and rock units similar to those under the campus, that paleontological resources could be affected by activities that disturb the ground surface or subsurface, including grading or excavation. For the purposes of this EIR, impacts on paleontological resources are assessed in terms of significance based upon whether these resources meet the definition of a "unique archaeological resource" found in Section 21083.2(g) of CEQA.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The following 2002 LRDP EIR MMs for cultural resources have been incorporated into the proposed project:

2002 LRDP EIR MM 4.4-3(a) *Prior to site preparation or grading activities, construction personnel shall be informed of the potential for encountering unique archaeological resources and taught how to identify these resources if encountered. This shall include the provision of written materials to familiarize personnel with the range of resources that might be expected, the type of activities that may result in impacts, and the legal framework of cultural resources protection. All construction personnel shall*

be instructed to stop work in the vicinity of a potential discovery until a qualified, non-University archaeologist assesses the significance of the find and implements appropriate measures to protect or scientifically remove the find. Construction personnel shall also be informed that unauthorized collection of archaeological resources is prohibited.

2002 LRDP EIR MM 4.4-3(b) *A qualified archaeologist shall first determine whether an archaeological resource uncovered during construction is a "unique archaeological resource" under Public Resources Code Section 21083.2(g). If the archaeological resource is determined to be a "unique archaeological resource," the archaeologist shall formulate a mitigation plan in consultation with the campus that satisfies the requirements of Section 21083.2.*

If the archaeologist determines that the archaeological resource is not a unique archaeological resource, the archaeologist may record the site and submit the recordation form to the California Historic Resources Information System South Central Coastal Information Center.

The archaeologist shall prepare a report of the results of any study prepared as part of a mitigation plan, following accepted professional practice. Copies of the report shall be submitted to the University and to the California Historic Resources Information System South Central Coastal Information Center.

2002 LRDP EIR MM 4.4-4(a) *Prior to site preparation or grading activities, construction personnel shall be informed of the potential for encountering paleontological resources and taught how to identify these resources if encountered. This shall include the provision of written materials to familiarize personnel with the range of resources that might be expected, the type of activities that may result in impacts, and the legal framework of cultural resources protection. All construction personnel shall be instructed to stop work in the vicinity of a potential discovery until a qualified, non-University paleontologist assesses the significance of the find and implements appropriate measures to protect or scientifically remove the find. Construction personnel shall also be informed that unauthorized collection of paleontological resources is prohibited.*

2002 LRDP EIR MM 4.4-4(b) *A qualified paleontologist shall first determine whether a paleontological resource uncovered during construction meets the definition of a "unique archaeological resource" under Public Resources Code Section 21083.2(g). If the paleontological resource is determined to be a "unique archaeological resource," the paleontologist shall formulate a mitigation plan in consultation with the campus that satisfies the requirements of Section 21083.2.*

If the paleontologist determines that the paleontological resource is not a unique resource, the paleontologist may record the site and submit the recordation form to the Natural History Museum of Los Angeles County.

The paleontologist shall prepare a report of the results of any study prepared as part of a mitigation plan, following accepted professional practice. Copies of the report shall be submitted to the University and to the Natural History Museum of Los Angeles County.

In addition, the following 2002 LRDP EIR PP shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.4-5 *In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately, the area of the find shall be protected, and the University immediately shall notify the Los Angeles County Coroner of the find and comply with the provisions of P.R.C. Section 5097 with respect to Native American involvement, burial treatment, and re-burial, if necessary.*

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on cultural resources if it would result in any of the following:

- Cause a substantial adverse change in the significance of a historical resource as defined in the 2002 CEQA Guidelines, Section 15064.5
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to the 2002 CEQA Guidelines, Section 15064.5
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature
- Disturb any human remains, including those interred outside of formal cemeteries

Effects Not Found to Be Significant

The Initial Study did not identify any Effects Not Found to be Significant with respect to cultural resources; therefore, all potential cultural resource impacts are discussed in Volume 1 or Volume 2 of this EIR.

Impacts and Mitigation

Threshold	Would the project cause a substantial adverse change in the significance of a historical resource as defined in the 2002 CEQA Guidelines, Section 15064.5?

Impact NHIPP 4.4-1 **Implementation of the NHIP would not result in a substantial adverse change in the significance of structures that have been designated as eligible or potentially eligible for listing on the NRHP or CRHR. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.4-1 (Cultural Resources), analyzed whether implementation of the 2002 LRDP, which include the NHIP, would result in a substantial adverse change to structures designated as eligible or potentially eligible for listing on the NRHP or CRHR, and determined that a less-than-significant impact would occur. As described in Volume 1, Section 4.4.1 (Cultural Resources, Environmental Setting), several structures on campus have previously been determined to be eligible to the NRHP and/or CRHR, and several structures that have recently reached 50 years of age have been determined to be potentially eligible to the NRHP and/or CRHR. However, none of these structures are in the Northwest zone, as indicated by Volume 1, Table 4.4-1 (Campus Structures 50 or More Years Old), and the historic core of campus is not located in the Northwest zone. The NHIP would not, therefore, require or result in the substantial adverse change to historical or potentially historical structures. Therefore, a less-than-significant impact to historic resources would occur as a result of the NHIP. No project-specific mitigation is required.

Impact NHIP 4.4-2 **Implementation of the NHIP would not result in the demolition of historic or potentially historic structures. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.4-2 (Cultural Resources), analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would result in the demolition of any historic or potentially historic structures, and determined that a less-than-significant impact would occur. As noted previously, no historic structures are located in the Northwest zone, and the NHIP would, therefore, have a less-than-significant impact on historic structures as a result of demolition activities. No project-specific mitigation is required.

Threshold	Would the project cause a substantial adverse change in the significance of an archeological resource pursuant to the 2002 CEQA Guidelines, Section 15064.5?

Impact NHIP 4.4-3 **The NHIP construction would not cause a substantial adverse change in the significance of an archaeological resource. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.4-3 (Cultural Resources), analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would cause a substantial adverse change in the significance of an archaeological resource, and determined that a less-than-significant impact would occur. As described in Volume 1, Sections 4.4.1 and 4.4.3 (Cultural Resources, Environmental Setting and Project Impacts and Mitigation), no archaeological materials have ever been recovered on the campus. Further, development of the proposed project structures would occur on sites that have previously been at least partially excavated and developed with parking lots, courtyards, or buildings. Consequently, the probability of finding an archaeological resource on the campus is extremely low, and this impact is considered to be less than significant. Additionally, 2002 LRDP EIR MM 4.4-3(a) and MM 4.4-3(b), which have been incorporated into the NHIP, require an instructional program to assist construction personnel in identifying archeological resources and include provisional measures if archeological resources are identified. The 2002 LRDP EIR analysis determined that implementation of these 2002 LRDP EIR MMs 4.4-3(a) and 4.4-3(b) would further reduce this less-than-significant impact, and incorporation of these mitigation measures into the NHIP would also further reduce this less-than-significant impact. No project-specific mitigation is required.

Threshold	Would the project directly or indirectly destroy unique paleontological resources or a site or a unique geologic feature?

Impact NHIP 4.4-4 **The NHIP construction would not directly or indirectly result in damage to, or the destruction of, unique paleontological resources on site or unique geologic features. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.4-4 (Cultural Resources), analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would directly or indirectly result in damage to, or the destruction of, previously unknown paleontological resources or unique geologic features, and determined that a less-than-significant impact would occur with incorporation of 2002 LRDP EIR MM 4.4-4(a) and MM 4.4-4(b). As described in Volume 1, Section 4.4.1 (Cultural Resources, Environmental Setting), no fossils have ever been documented on the campus; however, identical rock units to those that underlie

the campus have, in nearby areas, yielded significant paleontological specimens contributing to scientific understanding of the distant past. Therefore, the fossils from these units would be considered significant resources due to the potential to yield information important in history or prehistory, and the rock units on campus must be considered paleontologically sensitive. Although development of the proposed project structures would occur on sites that have previously been at least partially excavated and developed with parking lots, courtyards, or buildings, damage to or destruction of fossils that could occur in these rock units could still result from construction-related excavation, grading, or other earth-disturbing activities. Construction activities associated with implementation of the 2002 LRDP, including the NHIP, could have the potential to destroy or damage fossils, which would constitute a potentially significant impact. However, 2002 LRDP EIR MM 4.4-4(a) and MM 4.4-4(b), which have been incorporated into the NHIP, require an educational program to assist construction personnel in identifying paleontological resources and include provisional measures if paleontological resources are identified. The 2002 LRDP EIR analysis determined that implementation of these 2002 LRDP EIR MMs would reduce this impact to less-than-significant, and no project-specific mitigation is required.

Threshold	Would the project disturb any human remains, including those interred outside of formal cemeteries?

Impact NHIP 4.4-5 **The NHIP construction would not result in the disturbance of human remains, including those interred outside of formal cemeteries. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.4-5, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would result in the disturbance of human remains, and determined that a less-than-significant impact would occur. As stated in Volume 1, Section 4.4.1 (Cultural Resources, Environmental Setting), no formal cemeteries are known to have occupied land that is now associated with the UCLA campus, and any human remains that could be encountered would likely be associated with archeological or historical archeological contexts. No archaeological materials, including human burials, have ever been discovered on the campus and development of the NHIP would occur primarily on sites that have previously been subjected to grading or other earth-disturbing activities. Although a slight potential exists for such resources to be present, and for construction activities involving excavation to disturb these resources, the likelihood of discovery is extremely low and this impact is, therefore, considered to be less than significant.

Human burials, in addition to potentially being considered archaeological resources, are also resources with specific provisions for treatment. These provisions are included in Section 5097 of the California Public Resources Code. However, the 2002 LRDP EIR analysis determined that implementation of

2002 LRDP EIR PP 4.4-5, which has been incorporated into the NHIP and provides measures for the protection and treatment of burials in the event of discovery, would ensure that this impact remains less than significant, and no project-specific mitigation is required.

4.4.4 Cumulative Impacts

Refer to Volume 1, Section 4.4.4 (Cultural Resources, Cumulative Impacts) for a discussion of cumulative cultural resources impacts.

4.4.5 References

California, Department of General Services, State Historical Building Code Board. 1990. Letter from Raymond Girvigian, FAIA, Chairman SHBCB.

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4.5 GEOLOGY AND SOILS

This section hereby incorporates Volume 1, Section 4.5 (Geology and Soils) by reference. Additional site-specific data used in preparation of this section were obtained from the Geotechnical Engineering Investigation for the Proposed Northwest Campus Housing Project (Geotechnologies, Inc. 2002) and the Geotechnical Engineering Investigation for the Proposed De Neve Plaza Housing Project (Jerry Kovacs and Associates, Inc. 1997).

4.5.1 Environmental Setting

Regional and Local Geology and Seismicity

Refer to Volume 1, Section 4.5.1 (Environmental Setting) for a discussion of regional and local geology and seismicity.

Project Site Soil Types and Characteristics

Geotechnical investigations for this site began with a survey by Geotechnologies of historic topographic maps of the Northwest campus zone, as well as a report (Geotechnologies 2001) of previous grading activities in the zone. Physical investigation for the 2002 study consisted of drilling a series of 26 borings, ranging in depth from 20 to 70 feet, on the proposed project sites for Hedrick Hall North, Rieber Hall North, and Rieber Hall West. Previous geotechnical investigations for the De Neve housing project (Jerry Kovacs and Associates 1997) provided data for the proposed Dykstra Parking Structure, and Geotechnologies (formerly Jerry Kovacs and Associates) has stated (Moore 2002), based on their experience on the campus, that the data from each of the reports regarding soil properties for the area west of Charles E. Young Drive West can safely be applied to the site of the proposed recreation facility (Lot 15).

According to Geotechnologies (2002), extensive grading and fill for campus development and landscaping over the last 74 years have resulted in extensive alteration to surface and near-surface natural geologic features, and development of most of the proposed project structures would occur on sites that have previously been at least partially excavated and developed with parking lots, courtyards, or buildings. Fill material at the portion of the NHIP site located north of De Neve Drive was encountered in the borings to depths between one and 35 feet below the existing grade. The majority of fill on the site occurs on the western portion of the proposed Rieber Hall North site and the majority of the proposed Rieber Hall West site, through which a canyon historically ran (Geotechnologies 2001, 2002).

The fill consists primarily of silty and clayey sand, and appears to be a blended mixture of soils derived from nearby areas of the UCLA campus during past grading activities. The fill material in this area ranges from fine- to coarse-grained with highly variable amounts of gravel. With the exception of the upper portion of some planter areas where the fill was loose and/or very moist to wet, the fill appears to have been fairly well compacted, although looser zones may exist between borings or between samples taken.

The native soils encountered below the existing fill material in all the borings in the portion of the site located north of De Neve Drive (the proposed Hedrick, Rieber, and recreation sites) consists of older alluvial soils of Pleistocene age. This material is generally dense or very dense. The older alluvium ranges from fine to coarse grained, and contains highly variable amounts of gravel, consisting mostly of angular slate fragments typical to the area.

Existing soil types and characteristics were also determined from the borings taken from the portion of the project site located south of De Neve Drive (the proposed site of the Dykstra Parking Structure). Minor amounts of fill material, less than five feet in depth, were encountered in most of the borings. In some of the boring samples taken, fill material was encountered to depths between nine and 16 feet below grade. Fill material on this portion of the site ranges from loose and soft to very dense, and fine- to coarse-grained, and contains varying amounts of slate fragments and gravel. An area of soft to medium dense natural residual soil was encountered in some of the boring samples. This area of soils is fine- to coarse-grained and contains varying amounts of gravel and slate fragments.

Older alluvium of Pleistocene age was also encountered below the fill material in the portion of the site located south of De Neve Drive. This material consists of various mixtures of silt, sand, clay, and gravel, with significant amounts of pebble or gravel sized slate fragments. Generally, the older alluvium is dense to very dense and very firm throughout this portion of the site, with scattered hard, cemented zones.

Seismic Hazards

Refer to Volume 1, Section 4.5.1 (Geology and Soils, Environmental Setting) for a discussion of groundshaking. In addition to possible strong ground motion at the site, other secondary effects of a strong nearby earthquake include liquefaction, landsliding, and seismically induced settlement.

Liquefaction

Liquefaction involves a sudden loss in strength of a saturated, cohesionless soil, which is caused by shock or strain, and results in temporary transformation of the solid to a fluid mass. Liquefaction typically occurs in areas where the groundwater is less than 50 feet from the surface and where the soils are

composed of poorly consolidated, fine to medium-grained silty sands and sand. As indicated in Volume 1, Figure 4.5-3 (Potential Seismic Hazard Zones), a small portion of the extreme northwest corner of the Northwest campus zone has been designated by the California Division of Mines and Geology (CDMG) as a liquefaction hazard zone. The project site is not located in this zone, which lies at the corner of Sunset Boulevard and Veteran Avenue. Soil borings were excavated to a depth ranging between 20 and 70 feet below grade. No groundwater was encountered with the exception of one boring location (Boring 4, on the Hedrick Hall North site) in which minor seepage was found at seven feet. The seepage was likely a result of local infiltration from irrigation of the planter in which the boring was located.[4] The soils underlying the NHIP site are very dense in nature and do not exhibit characteristics of soils prone to liquefaction.

Landsliding

Landslides occurring in both rock and soil have been classified on the basis of distinctions in movement, internal disruption, and geologic environment. The most common classification is rock falls, disrupted soil slides, and rock slides. The next most common are lateral soil spreads, soil slumps, soil block slides and soil avalanches. As indicated in Volume 1, Figure 4.5-3 (Potential Seismic Hazard Zones), a small portion of the Northwest campus zone has been designated by the CDMG as a landsliding hazard zone in the event of strong ground shaking. The project sites are not located in this zone: the zone lies generally west of Bellagio Drive and De Neve Drive, approximately beneath Parking Lot 11, about 50 feet from the Hedrick Hall North site.

Earthquake-Induced Flooding

Earthquake-induced flooding is caused by failure of dams or other water-retaining structures due to earthquakes. Review of the County of Los Angeles Flood and Inundation Hazards Map (Geotechnologies 2002; Leighton 1990) indicates that the project site does not lie within any inundation hazard zone. Further, as shown in Volume 1, Figure 4.7-2 (Areas of Flood Hazard and Hypothetical Inundation), the potential inundation path of the Stone Canyon Reservoir does not run through the Northwest campus zone.

Seismically Induced Settlement

Due to generally very dense to hard nature of the soils underlying the site, the possibility of seismically induced settlement affecting the site is considered remote to nonexistent (Geotechnologies 2002).

[4] Irrigation filters into the soil and it can accumulate at less permeable areas below the surface where it may be observed as seepage in borings and excavation (Geotechnologies 2002, pp.9–10).

4.5.2 Regulatory Framework

Refer to Section 4.5.2 (Geology and Soils, Regulatory Setting) of Volume 1 for a discussion of the regulatory framework for geology and soils.

4.5.3 Project Impacts and Mitigation

Analytic Method

Widely available industry sources were examined to document regional and local geology, while more site-specific geologic information was obtained from the geotechnical reports previously cited. Estimated maximum earthquake magnitudes resulting from potential seismic activity on various active faults in the area were obtained from the CDMG (1974). In addition, information related to other seismic hazards, such as landslide and liquefaction zoning, was taken from CDMG maps.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs related to geology and soils. However, the following 2002 LRDP EIR PPs shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.2-2(a) *The campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation:*

- *Apply water and/or approved nontoxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days);*
- *Replace ground cover in disturbed areas as quickly as possible;*
- *Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content;*
- *Water active grading sites at least twice daily;*
- *Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period;*
- *All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance*

between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code;

- *Sweep streets at the end of the day if visible soil material is carried over to adjacent roads;*
- *Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip;*
- *Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces; and*
- *Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads.*

2002 LRDP EIR PP 4.5-1(a) *During project-specific building design, a site-specific geotechnical study shall be conducted under the direct supervision of a California Registered Engineering Geologist or licensed geotechnical engineer to assess detailed seismic, geological, soil, and groundwater conditions at each construction site and develop recommendations to prevent or abate any identified hazards. The study shall follow applicable recommendations of CDMG Special Publication 117 and shall include, but not necessarily be limited to*

- *Determination of the locations of any suspected fault traces and anticipated ground acceleration at the building site*
- *Potential for displacement caused by seismically induced shaking, fault/ground surface rupture, liquefaction, differential soil settlement, expansive and compressible soils, landsliding, or other earth movements or soil constraints*
- *Evaluation of depth to groundwater*

The campus shall incorporate into project design the recommendations for the prevention and abatement of any identified hazards, including landslides and liquefaction, as well as for groundwater dewatering, as necessary, to ensure soil stability during construction and operation of the project.

2002 LRDP EIR PP 4.5-1(b) *The campus shall continue to implement its current seismic upgrade program.*

2002 LRDP EIR PP 4.5-1(c) *The campus shall continue to comply with the University Policy on Seismic Safety adopted on January 17, 1995 or with any subsequent revision to the policy that provides an equivalent or higher level of protection with respect to seismic hazards.*

2002 LRDP EIR PP 4.5-1(d) *Development projects under the 2002 LRDP shall continue to be subject to structural peer review.*

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, development of the NHIP may have a significant adverse impact on geology or soils if it would result in any of the following:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42)
  - Strong seismic ground shaking
  - Seismic-related ground failure, including liquefaction
  - Landslides
- Result in substantial soil erosion or the loss of topsoil
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property
- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater

Effects Not Found to Be Significant

Threshold	Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Refer to Volume 1, Section 4.5.3 (Geology and Soils, Project Impacts and Mitigation) for a discussion of Effects Not Found to Be Significant for the adequacy of soils to support the use of septic tanks or alternative wastewater disposal systems.

Impacts and Mitigation

Threshold	Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: ■ Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ■ Strong seismic ground shaking? ■ Seismic-related ground failure, including liquefaction? ■ Landslides?

Impact NHIP 4.5-1 **Implementation of the NHIP would not expose people and/or structures to potentially substantial adverse effects resulting from rupture of a known earthquake fault, strong seismic ground-shaking, seismic-related ground failure (i.e., liquefaction), or landsliding. This is considered a *less-than-significant* impact.**

Ground Surface Rupture

As described above, the NHIP site is not located in an Earthquake Fault Zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act, and no known active or potentially active faults are located on the site. According to Geotechnologies, there is little probability of surface fault rupture occurring on the site. The closest known active fault to the site is the Hollywood fault, which is located approximately 1.7 miles east-northeast of the Northwest campus. The next closest known active fault to the Northwest campus is the Newport-Inglewood fault, with the northern-most Alquist-Priolo zoned boundary located approximately 5 miles southeast of the campus. The closest potentially active fault to the Northwest campus is the Santa Monica Fault, which is located approximately 1.8 miles south-southeast of the campus. Although, the project site would not be subject to ground surface rupture, continuation of 2002 LRDP EIR PPs 4.5-1 (a) through 4.5-1(d) would ensure that any impacts associated with ground rupture would remain less than significant, and no project-specific mitigation is required.

Groundshaking

The project site lies within a seismically active area bounded on the north and south by two important faults in the Santa Monica Fault zone, and earthquakes on blind thrusts could occur in the project area. Therefore, project implementation would expose on-site structures and people to potentially substantial groundshaking in the event of an earthquake along proximate faults. Consequently, the site-specific

geotechnical investigation prepared for the project included seismic design recommendations to reduce this exposure to a professionally accepted level. Although Geotechnologies has stated that soil properties north of De Neve housing and west of Charles E. Young Drive West are identical to those observed in borings taken at the Hedrick and Rieber Precincts, specific recommendations for seismic design have not been formulated for the recreational facility as part of the current geotechnical study. However, 2002 LRDP EIR PP 4.5-1(a) requires site-specific geotechnical investigations during building design, including the development of recommendations to prevent or abate any identified hazards. In addition, PP 4.5-1(c) requires the campus continue to implement the University Policy on Seismic Safety, which requires, in part, that all new structures must comply with Chapter 23 of the California Building Code or local seismic requirements, whichever is more stringent, and undergo a structural peer review. Following these 2002 LRDP EIR PPs, which have been incorporated into the proposed project, would ensure that soil and seismic hazards would be identified, and that site-specific engineering recommendations would be developed and incorporated into the design of all structures that would be built under the proposed project. By designing the structures to withstand forces that would result from groundshaking, the potential for damage or harm resulting from the exposure of people or structures to strong seismic ground shaking remains less than significant. No project-specific mitigation is required.

Liquefaction

As previously identified, only a small portion of the extreme northwest corner of the Northwest campus zone has been designated a liquefaction hazard zone by the CDMG. Development of the project component buildings and uses are located outside of this hazard zone. The underlying soils are found to be generally dense to very dense in nature and are not characteristic of soils prone to liquefaction. Due to the soil characteristics, the potential for liquefaction occurring beneath the development sites is considered to be remote to nonexistent according to Geotechnologies. Following 2002 LRDP EIR PPs 4.5-1(a) through 4.5-1(d) would ensure that any impacts associated with liquefaction would remain less than significant, and no project-specific mitigation is required.

Landslides

Geotechnologies concluded that the development sites would not be considered prone to seismically induced landslides due to the soil characteristics underlying the area that are dense to very dense in nature. The only area that would be prone to such a hazard is the extreme northwest portion of the Northwest zone, which is outside of the development area for the project. Following 2002 LRDP EIR PPs 4.5-1(a) through 4.5-1(d) would ensure that any impacts associated with landslides would remain less than significant, and no project-specific mitigation is required.

Threshold	Would the project result in substantial soil erosion or the loss of topsoil?

Impact NHIP 4.5-2 **The NHIP construction and operation would not result in substantial soil erosion and the loss of topsoil. This is considered a *less-than-significant* impact.**

As described in Volume 1, Impact LRDP 4.5-2 (Geology and Soils), erosion can occur as a result of, and can be accelerated by, site preparation activities associated with urban development. Vegetation removal in landscaped (pervious) areas, as well as excavation, or grading, may result in erosion during construction activities, irrespective of whether hardscape previously existed at the construction site, as bare soils would be exposed and could be eroded by wind or water.

Earth-disturbing activities associated with construction of the proposed project would include the removal of vegetation and the excavation of up to approximately 21,000 cubic yards (cy) of earth. The majority of grading activities would occur with the Dykstra Parking Structure. It is anticipated that the Hedrick Hall North, Rieber Hall North, and Rieber Hall West sites would involve grading to balance cut and fill across the residential building sites. The recreation facility area would require some grading to provide a level pad for the building and leisure pool area, and some soil import may be necessary. Earth disturbing activities associated with construction activities would be temporary and erosion effects would depend largely on the areas excavated, the quantity of excavation, and the length of time soils are subject to conditions that would be affected by erosional processes. However, the proposed project would be required to comply with Chapters 29 and 70 of the California Building Code (CBC) to ensure that uncovered or uncompacted soils are managed to prevent movement, which would also prevent erosional effects. Potential for soil erosion would be further controlled by campus implementation of dust control measures consistent with SCAQMD Rule 403, as required by 2002 LRDP PP 4.2-2(a), which would stabilize soils and prevent erosion. Additionally, the campus would continue to comply with the NPDES general permit for construction activities, pursuant to which, as part of an erosion control plan, construction site erosion and sedimentation control best management practices (BMPs) would be implemented, and would include such measures as silt fences, watering for dust control, straw bale check dams, hydroseeding, and other measures. Further, the campus would be required to obtain an NPDES Phase II permit by March 10, 2003, that would require runoff management programs, which include BMPs to control erosion and sedimentation. These measures would ensure that substantial soil erosion and/or the loss of topsoil would not occur and that the construction of NHIP would result in a less-than-significant impact.

Additionally, substantial erosion is unlikely to occur on an operational basis. As described in Volume 1, Impact 4.7-3 in Section 4.7.3 (Hydrology and Water Quality, Project Impacts and Mitigation), current flows on the campus do not currently generate substantial erosion or siltation, and flows generated by existing and new uses are, by design, directed immediately into the storm drainage system. Also, according to the geotechnical report prepared for the project (Geotechnologies, 2002), drainage across the project site is directed by sheet flow along existing contours towards adjacent streets and towards drains around the site. According to Capital Programs Engineers (2002), full implementation of the 2002 LRDP is anticipated to result in the conversion of 100,500 square feet of permeable to impermeable surfaces (which is inclusive of the Northwest Housing Infill Project), which would increase impermeable surface area on the campus by 0.85 percent, and would increase the volume of runoff by about one half of one percent. Substantial erosion was not determined to be likely to occur because the increase in surface flows that would occur as a result of implementation of the 2002 LRDP would be insignificant (Capital Programs Engineers 2002), and a less-than-significant impact would occur. The proposed project would convert 65,000 square feet of permeable to impermeable surfaces (representing approximately 65 percent of the total conversion anticipated under the 2002 LRDP), which would increase flows by substantially less than one half of one percent. As described in Impact 4.5-2 in Section 4.5.3 (Geology and Soils, Project Impacts and Mitigation), the addition of such a small proportion of flows would not result in a substantial increase in operational erosion, particularly because major flow patterns would not change and velocity of flows would, consequently, not substantially increase. In addition, the project would include the construction of drainage facilities to direct new flows to existing and proposed storm drainage structures. Also, new slopes would be landscaped, which would stabilize soils and prevent erosion. This impact would, therefore, be considered less than significant, and no project-specific mitigation is required.

Threshold	Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Impact NHIP 4.5-3 **The NHIP construction in areas underlain by soils of varying stability would not subject people and structures to hazards associated with landsliding, lateral spreading, subsidence, liquefaction, collapse, or differential settlement. This is considered a *less-than-significant* impact.**

As described above, the project site is located outside of California Division of Mines and Geology (CDMG)-designated liquefaction and landsliding zones, and the site-specific geotechnical investigation indicates that the project site is not considered prone to seismically induced landslides or liquefaction due

to the generally dense to very dense nature of the alluvial soils underlying the site. This type of soil also precludes seismically induced settlement from occurring on site. The report does not indicate that the site would be subject to lateral spreading or subsidence hazards, and it is anticipated that differences in soil settlement levels would not exceed one-half inch across the site.

The site-specific geotechnical investigation prepared pursuant to 2002 LRDP P 4.5-1(a) concluded that the installation of proper drainage devices in accordance with the Uniform Building Code and planting of the face of all slopes would ensure that soil instability or collapse does not occur. In addition, all development will continue to be subject to structural peer review, as required by 2002 LRDP EIR PP 4.5-1(d). Impacts associated with soil stability hazards would remain less than significant, and no project-specific mitigation is required.

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

Impact NHIP 4.5-4 **Implementation of the NHIP would not result in construction of facilities on expansive soils, and would not create a substantial risk to people and structures. This is considered a *less-than-significant* impact.**

The on-site soil types vary considerably across the site, ranging from sand to clay. Therefore, in any given area, the soils could either be nonexpansive to only slightly expansive (sands and silty sands), or moderately to highly expansive (clayey sand or clay). The geotechnical investigation for the NHIP, prepared pursuant to 2002 LRDP EIR PP 4.5-1(a), indicates that soil borings taken on site were found to be in the very low to moderate expansion range and recommended additional reinforcement of, and site preparation for, floor slabs-on-grade in Hedrick Hall North, Hedrick Hall West, and Rieber Hall North, as well as review of site plans by a geotechnical engineer, to ensure that site preparation and building design accommodate potentially expansive soils, thereby eliminating substantial risks to people and/or structures. If necessary, additional geotechnical investigations would be conducted, as required by 2002 LRDP EIR PP 4.5-1(a), and all development will continue to be subject to structural peer review, as required by 2002 LRDP EIR PP 4.5-1(d). This impact remains less than significant, and no project-specific mitigation is required.

4.5.4 Cumulative Impacts

Refer to Volume 1, Section 4.5.4 (Geology, Cumulative Impacts) for a discussion of cumulative geology impacts.

4.5.5 References

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4.6 HAZARDS AND HAZARDOUS MATERIALS

This section hereby incorporates Volume 1, Section 4.6 (Hazards and Hazardous Materials) by reference.

4.6.1 Environmental Setting

A comprehensive definition of a hazardous material is contained in Volume 1, Section 4.6.1 (Hazards and Hazardous Materials, Environmental Setting). Potentially hazardous substances on campus could include flammable materials such as solvents, oxidizers, and compressed gases; chemicals; corrosives; reactives; toxics; biohazards; radioactive materials typically used in health clinics and research laboratories; fuels; oils and lubricants; antifreeze; cleaners; paints and paint thinners; freons; and pesticides and herbicides.

Some of the older dormitories in the Northwest zone could contain asbestos. In accordance with Sections 25915 through 25916 of the California Health and Safety Code, EH&S maintains an inventory of on-campus buildings that could contain asbestos and provides annual campuswide notification of these locations. All electrical transformers or other PCB-containing materials in campus buildings have been removed, but some equipment containing PCBs may still be present in research labs. All State- and federally mandated procedures are undertaken when materials containing asbestos, PCBs, lead, or mercury are disturbed during construction or renovation.

Hazardous materials transportation and disposal procedures as well as hazardous materials emergency response have been outlined in detail in Volume 1, Section 4.6.1 (Hazards and Hazardous Materials, Environmental Setting) and Volume 1, Section 4.6.2 (Hazards and Hazardous Materials, Regulatory Framework). No hazardous materials transportation route travels through the Northwest zone, and there are no designated hazardous materials storage sites in the project area.

As noted in Volume 1, Section 4.7 (Hydrology and Water Quality), measured depth to groundwater on campus is anticipated to range from 28 to 53 feet below grade, with flow in a generally southerly direction (UCLA 1997; UCLA 2001). No evidence currently exists of groundwater contamination on the campus.

4.6.2 Regulatory Framework

Refer to Volume 1, Section 4.6.2 (Hazards and Hazardous Materials, Regulatory Framework) for a discussion of the regulatory framework for hazards and hazardous materials.

4.6.3 Project Impacts and Mitigation

Analytic Method

The analysis in this section focuses on the use, generation, disposal, transport, or management of hazardous or potentially hazardous materials on campus. The projected volume of hazardous waste generated by the NHIP is described. Disposal options, the probability for risk of upset, and the severity of consequences to people or property associated with the increased use, handling, transport, and/or disposal of hazardous materials associated with implementation of the NHIP are also analyzed.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs related to hazards and hazardous materials. However, the following 2002 LRDP EIR PPs shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.6-1 — *The campus shall continue to implement the same (or equivalent) health and safety plans, programs, practices, and procedures related to the use, storage, disposal, or transportation of hazardous materials during the 2002 LRDP planning horizon, including, but not necessarily limited to, the Business Plan, Hazardous Materials Management Program, Hazard Communication Program, Injury and Illness Prevention Program, Chemical Exposure Monitoring Program, Asbestos Management Program, Respiratory Protection Program, Risk Management Prevention Plan for the use and storage of ammonia in the ESF, EH&S procedures for decommissioning and demolishing buildings that may contain hazardous materials, and the Broadscope Radioactive Materials License. These programs may be subject to modification as more stringent standards are developed or if the programs become obsolete through replacement by other programs that incorporate similar health and safety protection measures.*

2002 LRDP EIR PP 4.6-4 — *While not expected to occur on-campus, if contaminated soil and/or groundwater is encountered during the removal of on-site debris or during excavation and/or grading activities, the construction contractor(s) shall stop work and immediately inform the EH&S. An on-site assessment shall be conducted to determine if the discovered materials pose a significant risk to the public or construction workers. If the materials are determined to pose such a risk, a remediation plan shall be prepared and submitted to the EH&S to comply with all federal and State regulations necessary to clean and/or remove the contaminated soil and/or groundwater. Soil remediation methods could include, but are not necessarily limited to, excavation and on-site treatment, excavation and off-site treatment or*

disposal, and/or treatment without excavation. Remediation alternatives for cleanup of contaminated groundwater could include, but are not necessarily limited to, on-site treatment, extraction and off-site treatment, and/or disposal. The construction schedule shall be modified or delayed to ensure that construction will not inhibit remediation activities and will not expose the public or construction workers to significant risks associated with hazardous conditions.

2002 LRDP EIR PP 4.6-8(a) *To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways. At any time only a single lane is available, the campus shall provide a temporary traffic signal, signal carriers (i.e., flagpersons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway segment, the campus shall provide appropriate signage indicating alternative routes.* (This is identical to Traffic/Transportation PP 4.13-6.)

2002 LRDP EIR PP 4.6-8(b) *To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, UCLA shall consult with the UCPD, EH&S, and the LAFD to disclose temporary lane or roadway closures and alternative travel routes.* (This is identical to Traffic/Transportation PP 4.13-9).

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact with respect to hazards and hazardous materials if it would result in any of the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would result in a safety hazard for people residing or working in the project area

- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildland

Effects Not Found to Be Significant

Threshold	Would the project be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, resulting in a safety hazard for people residing or working in the project area?

Refer to Volume 1, Section 4.6.3 (Hazards and Hazardous Materials, Project Impacts and Mitigation) for a discussion of Effects Not Found to Be Significant for safety hazards associated with the operation of an airport located in proximity to the proposed project.

Threshold	Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildland?

Refer to Volume 1, Section 4.6.3 (Hazards and Hazardous Materials, Project Impacts and Mitigation) for a discussion of Effects Not Found to Be Significant for wildland fires.

Threshold	Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Impact NHIP 4.6-1 **Implementation of the NHIP would not expose campus occupants or the nearby public to a significant hazard due to the routine transport, use, disposal, or storage of hazardous materials (including chemical, radioactive, and biohazardous waste). This is considered a *less-than-significant* impact.**

The NHIP does not include any laboratory or medical uses, which are the primary facilities that handle hazardous materials; however, the NHIP would use materials, some of which are considered hazardous, such as standard cleaning products, chlorine for use in the proposed pool, and pesticides or herbicides used in association with standard campus landscaping and maintenance practices, during the course of routine operations.

Use of Chemical Materials

State, federal, and local regulations and campus programs, practices, and procedures, including the use of safety equipment, ensures that the potential for worker and/or public exposure to hazardous materials from improper or unsafe activities, or from accidents, is less than significant, as demonstrated in the following discussion.

To prevent exposure through skin contact, UCLA requires that protective clothing such as gloves be worn while handling hazardous materials. In addition, proper washing after handling chemicals is required. Eating, drinking, and smoking are prohibited in areas where hazardous materials are used. These procedures are disclosed to all staff that work with hazardous materials, even routinely used materials, and this training increases the safety awareness of UCLA employees and students and further reduces the risks of exposure to hazardous chemicals through inhalation, absorption, ingestion, and injection. Should an accident occur that could cause an individual to be exposed to hazardous material, required emergency equipment, including fire extinguishers, eyewashes, and safety showers, are also available.

Cal/OSHA requires all institutions that use hazardous materials to implement a Hazard Communication Program and train employees that use hazardous chemicals in the safe use of those materials. EH&S offers training for campus departments that includes, for example, a review of the Cal/OSHA regulations, information contained in Material Safety Data Sheets (MSDS), and the proper use of personal protective equipment. The EH&S implements all safety procedures and conducts safety programs to ensure that these procedures are consistently followed. UCLA will continue to implement these (or equivalent) programs, practices, and procedures and, as needed, these programs could be expanded.

Title 8 of the California Code of Regulations (Section 3203 of the General Industry Safety Orders) also requires every California employer to have a written Injury and Illness Prevention Program to provide a safe and healthful workplace. OSHA mandates methods of documenting, investigating, and controlling accidents that result in skin penetration. Evidence presented during OSHA rule-making procedures indicates that these programs and methods are effective in reducing the number and severity of injuries and illness in the workplace.

Disposal of Hazardous Materials

The types of hazardous materials that could be used in association with the NHIP would not require disposal. Chlorine used in the proposed pool would evaporate. Cleaning products would be disposed of

either through the wastewater system (i.e., sinks, laundry) or evaporation. Neither chlorine nor standard cleaning products (i.e., degreasers, window cleaning products) are used in quantities that would result in adverse health effects either through direct exposure to the skin or inhalation. Pesticides and herbicides are directly applied to affected areas using methods that follow State and County laws and/or guidelines.

Transport of Hazardous Materials

The transport of hazardous material is discussed in Impact NHIP 4.6-3.

Safety procedures mandated by federal and State laws and regulations, as previously described in Volume 1, Sections 4.6.1 and 4.6.2 (Hazards and Hazardous Materials, Environmental Setting and Regulatory Framework), as well as following 2002 LRDP EIR PP 4.6-1, would ensure that the use, transport, or disposal of hazardous materials does not expose campus occupants or the nearby public to significant health or safety risks. A less-than-significant impact would occur, and no project-specific mitigation is required.

Impact NHIP 4.6-2 **Implementation of the NHIP would not expose construction workers and campus occupants to a significant hazard through the renovation or demolition of buildings or relocation of underground utilities that contain hazardous materials. This is considered a *less-than-significant* impact.**

Demolition of the Housing Administration Building and Facilities Management structures (OHJ and OHM), as well as renovation of the first floors of the existing residence halls, which were built prior to the ban on use of asbestos as building insulation, could release asbestos-containing materials present in the structures. In addition, activities such as relocation of underground utilities, could release friable asbestos fibers unless proper precautions are taken. The vending storage facility attached to Hedrick Hall is not anticipated to contain asbestos, according to campus EH&S. As noted in Volume 1, Impact LRDP 4.6-2, all applicable federal and State rules and regulations must be followed when asbestos-containing materials are disturbed during construction or renovation. The campus has an established Asbestos Management Program to ensure safe work practices involving asbestos. These programs require the notification of federal and local government agencies prior to beginning any renovation or demolition that could disturb asbestos, as well as the use of precautions and safe work practices to eliminate or reduce the potential for release of asbestos fibers and medical examinations and monitoring of employees engaged in activities that could disturb asbestos.

Compliance with federal and State health and safety laws and regulations, as well as continued implementation of existing (or equivalent) campus programs, practices, and procedures, as required by LRDP PP 4.6-1, would ensure that this impact remains less than significant. No project-specific mitigation is required.

Threshold	Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact NHIP 4.6-3 **Implementation of the NHIP would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. This is considered a *less-than-significant* impact.**

The only hazardous materials handled, used, transported, or disposed of in connection with the NHIP would include standard cleaning products, chlorine for use in the proposed pool, and pesticides or herbicides used in association with standard campus landscaping and maintenance practices. The amount of hazardous materials that are handled at any one time is relatively small, reducing the potential consequences of an accident during handling. Further, UCLA would continue to comply with federal and State laws and existing campus programs, practices, and procedures to eliminate or reduce the consequence of hazardous materials accidents. For example, staff and students who work around routinely used hazardous materials will continue to wear appropriate protective equipment, if necessary, and safety equipment is available in all areas where hazardous materials are used. Further, the routinely used materials are stored or transported in limited quantities. Typically, the materials are stored in gallon containers, with 30 gallons or less stored or transported for use at each building. This procedure limits the potential for a significant hazard to occur to the public or environment through reasonably foreseeable upset and accident conditions. The campus will continue to comply with all applicable federal, State, and local laws and regulations pertaining to the use, transportation, and storage of hazardous materials, which are fully described in Volume 1, Sections 4.6.1 (Hazards and Hazardous Materials, Environmental Setting) and 4.6.2 (Regulatory Framework), including LRDP PP 4.6-1. Compliance with applicable federal and State regulations, along with implementation of LRDP PP 4.6-1 would ensure that impacts associated with upset or accident conditions remain less than significant. No project-specific mitigation is required.

Impact NHIP 4.6-4 **Implementation of the NHIP would not create a significant risk of exposure of campus occupants and construction workers to contaminated soil or groundwater. This is considered a *less-than-significant* impact.**

The Northwest zone consists of residential and recreational uses, along with the Child Care Center and the Southern Regional Library Facility. The types and quantities of hazardous materials typically used in laboratory or medical uses, which are the primary facilities that handle hazardous materials, have not been used in this zone. Instead, hazardous materials are limited to standard cleaning products, chlorine and other pool chemicals, and pesticides and herbicides used in compliance with State and federal laws. Based upon a review of documented hazardous materials sites (Environmental Data Resources 2002) and a site-specific geological study (Geotechnologies Inc. 2002), as well as current campus records, there is no known contaminated soil or groundwater on the project site. However, previously undiscovered underground storage tanks or other undetected soil or groundwater contamination could be exposed as a result of construction activities. As required by 2002 LRDP PP 4.6-4, if any contaminated soil and/or groundwater is discovered, all construction activities shall stop and an assessment shall be made of the nature and extent of contamination and the type (if any) of remediation that is required. The primary purpose of 2002 LRDP PP 4.6-4 is to ensure that the exposure of contaminated soil and/or groundwater, or the remediation activities, if necessary, will not expose the public or construction workers to hazardous conditions. Compliance with all applicable federal, State, and local laws and regulations, as well as following 2002 LRDP PP 4.6-1 and PP 4.6-4, would ensure that impacts associated with the exposure of contaminated soil or groundwater is less than significant. No project-specific mitigation is required.

Threshold	Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact NHIP 4.6-5 **Implementation of the NHIP would not result in hazardous emissions but could require the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. This is considered a *less-than-significant* impact.**

Section 15186 of the CEQA Guidelines establishes requirements for school projects, as well as projects near schools, to ensure that potential health impacts resulting from exposure to hazardous materials, wastes, and substances are examined and disclosed in an environmental document. Section 15186 of the

CEQA Guidelines state that hazardous materials that must be considered a risk are those which may impose a health or safety hazard to persons who would attend or would be employed at the school.

The project site is located within one-quarter mile of the childcare facility at Veteran Avenue and Sunset Boulevard; however, the proposed project consists of residential, recreational, and parking uses, which would not handle acutely hazardous materials, substances, or waste. While other hazardous materials and waste could be handled within one-quarter mile of the childcare facility as a result of implementation of the NHIP as discussed above, these materials would not be handled in such a way or exist in quantities significant enough, to pose a risk to occupants of the school or the campus community, as established by Impact NHIP 4.6-1 through Impact NHIP 4.6-4. As discussed in Impact NHIP 4.6-1 and NHIP 4.6-3, the NHIP would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, including reasonably foreseeable upset and accident conditions. When hazardous materials are handled, used, transported, or disposed of as a result of construction or operation of the NHIP, the campus will continue to comply with all applicable federal, State, and local laws and regulations pertaining to hazardous materials, including following 2002 LRDP PP 4.6-1. A less-than-significant impact would occur, and no project-specific mitigation is required.

Toxic air emissions would be generated by the new heating, ventilation, and air conditioning equipment associated with the new residence halls and by chlorine use for the leisure pool within the proposed recreation facility. These emissions were included in the HRA prepared for the 2002 LRDP and are fully evaluated in Impact NHIP 4.2-5 (Section 4.5, Air Quality) of this document. In summary, the theoretical incremental cancer risk as a result of a lifetime exposure to emissions from the routine campuswide operation of all sources under the 2002 LRDP was estimated in the Health Risk Assessment (HRA) to be 6.4 in one million (6.4×10^{-6}) at the off-campus maximally exposed individual (MEI) and 7.5 in one million (7.5×10^{-6}) at the on-campus MEI. The off-campus MEI was calculated to be located east of the campus along Hilgard Avenue, and the location of the on-campus MEI is calculated to be in the southern portion of campus, near Franz Hall. Potential risks at all other locations within the campus and surrounding vicinity would be lower. Because these risks are less than the CAPCOA and SCAQMD thresholds of 10 in one million, implementation of the 2002 LRDP, including the NHIP, would not generate toxic air emissions that result in excess human cancer risk from stationary sources. Also, the new residents of the NHIP would not be exposed to an excess human cancer risk of 10 in one million. Therefore, impacts associated with toxic air contaminants would be less than significant, and no project-specific mitigation is required.

Threshold	Would the project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

Impact NHIP 4.6-6 **Implementation of the NHIP would not result in construction of facilities on sites containing hazardous materials, and thus would not create a significant hazard to the public or environment. A *less-than-significant* impact would occur.**

Appendix 9 of Volume 1 of the 2002 LRDP identifies the locations of known or hazardous materials sites based upon a review of federal, State, and County hazardous waste lists and databases pursuant to Government Code Section 65962.5 (Environmental Data Resources [EDR] 2002), as updated by current campus records. The lists and databases include, but are not limited to, the Department of Toxic Substances Control Hazardous Waste and Substances Site List (Cortese List, the Resource Conservation and Recovery Act database, and the California Hazardous Material Incident Report System. These lists and databases contain information about asbestos waste, underground storage tanks, photoprocessing chemicals, PCBs, unspecified solvent and organic mixture wastes, unspecified aqueous solution, metal sludge, other hazardous materials monitored by statute or regulation, known releases of hazardous substances, and locations where radioactive or other hazardous materials are stored or used. According to this information, the project site does not contain any documented hazardous materials sites listed by Government Code Section 65962.5 hazardous substances, and locations where radioactive or other hazardous materials are stored or used. A less-than-significant impact would occur, and no project-specific mitigation is required.

Threshold	Would the project be located within the vicinity of a private airstrip, resulting in a safety hazard for people residing or working in the project area?

Impact NHIP 4.6-7 **Implementation of the NHIP would not result in a safety hazard for an increased number of people residing or working on campus due to its proximity to the UCLA Medical Center helipad. This is considered a *less-than-significant* impact.**

The Medical Center complex currently operates a heliport for the emergency transport of critically ill patients and, as previously analyzed in the 1998 Academic Health Center Facilities Reconstruction Project Final EIR (AHCFRP EIR); the helipad will be relocated to the new medical center that is now under construction. Three flight paths are proposed as part of the new heliport for the AHCFRP—northwest, northeast, and southwest (Refer to Page IV.J-34 of the AHCFRP EIR). While relocation of the flight paths is part of the AHCFRP, and was analyzed in the AHCFRP EIR, the NHIP would be constructed in proximity to the new flight path, which could result in a potential safety hazard for the

new population that would reside in the area. The AHCFRP EIR concluded that impacts to existing campus uses as a result of the relocation of the flight path was less than significant (AHCFRP EIR, page IV.J-41), and no mitigation was required.

Flight activities are limited to emergency patient transport and to support the organ transplant program; and nonemergency flights are not allowed. The distribution of helicopters using the approach flight paths is assumed to be approximately 50 percent from the northeast, 25 percent from the northwest, and 25 percent from the southwest. The flight path departures are assumed to be 70 percent to the southwest, 15 percent to the northwest, and 15 percent to the northeast. There are an average of five to six flights per week, and only a portion of those flights would arrive and/or depart over the Northwest zone, as described above. As a conservative estimate, up to two helicopter flights per day could occur. Previous campus environmental analysis (AHCFRP EIR, page IV.J-40) determined that the northwest flight track could result in up to one helicopter arrival every two days and one helicopter departure could occur every three days over residences to the northwest.

According to the National Transportation Safety Board (NTSB), there were approximately 10,000 helicopters in the United States as of 2000. Between 1990 and 2000, a total of 2,211 helicopter accidents were reported to and investigated by the NTSB (NTSB Helicopter Accident Study, June 2001). The NTSB analyzes helicopter operations in five different categories: general aviation, air taxi/commercial, rotorcraft external-load, agricultural, and unknown. Of the total, 164 accidents were reported over the ten-year period in the category of commercial helicopter operations, yielding an average of 16.4 accidents per year nationwide. Commercial uses include business, executive/corporate, or other work use. While emergency medical operations are not specifically categorized, the operations at UCLA Medical Center would correlate best to an air taxi/commercial use for purposes of this analysis. The ratio of 16.4 accidents per 10,000 helicopters in the United States is very small; therefore, the risk of accident from the maximum of six flights per week for UCLA hospital operations would also be extremely remote. The campus will continue to comply with all regulations promulgated by the Federal Aviation Administration (FAA) for aircraft safety, which will further reduce potential safety hazards from emergency helicopter operations by using the flight path least impacting residential areas, whenever feasible. The infrequency of helicopter arrivals and departures, along with the low rate of helicopter accidents nationwide and compliance with all FAA regulations related to aircraft and pilot safety, such as pilot training, aircraft inspection and certification, and air traffic control, would ensure that this impact is less than significant. No project-specific mitigation is required.

Threshold	Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact NHIP 4.6-8 **Implementation of the NHIP would not impair implementation of, or physically interfere with, an adopted emergency response or emergency evacuation plan. This is considered a *less-than-significant* impact.**

Construction of additional housing would accommodate an approximate increase in resident population of 1,675 persons. This increase in population would result in increased traffic on the roadways throughout the Northwest zone, which could lead to greater roadway congestion. In addition, construction associated with the NHIP may require temporary construction barricades or other obstructions that could affect emergency access on campus. However, as required by 2002 LRDP PP 4.6-8(a), multiple emergency access or evacuation routes are provided on-campus to ensure that in the event one roadway or travel lane is temporarily blocked, another may be utilized. In addition, 2002 LRDP PP 4.6-8(a) establishes specific construction practices to properly control traffic and inform the public of alternate transportation routes during construction activities. Furthermore, ongoing coordination between the UCPD, LAFD, and UCLA pursuant to 2002 LRDP PP 4.6-8(b) ensures that roadway or travel lane closures will be coordinated with emergency response personnel to ensure that construction of the NHIP would not impair implementation of, or physically interfere with, emergency response and evacuation efforts. Further, the emergency evacuation location for all buildings in the Northwest zone is the Sunset Canyon Recreation area, which would not be affected by construction activities associated with the NHIP. Therefore, the impact of construction and operation of the NHIP on emergency response and emergency evacuation plans, including the Campus Emergency Response Plan, the Disaster Response Plan, the Disaster Initial Response Plan, or the Hazardous Materials Response Plan, would be less than significant. No project-specific mitigation is required.

Volume 1, Impact LRDP 4.6-8 determined that ongoing construction activities are routine on the UCLA campus and could require temporary road closures or other construction barriers. As required by 2002 LRDP PP 4.6-8(a), whenever possible, one lane of travel in both directions is to be maintained. At any time only a single lane is available, the campus would provide a temporary traffic signal, signal carriers (i.e., flagpersons), or other appropriate traffic controls to allow travel in both directions. If construction activities require closure of a roadway segment, the campus would provide appropriate signage indicating alternative routes. The campus will continue to coordinate between the University Police, the campus EH&S, and the Los Angeles City Fire Department to ensure the accurate communication of any temporary on-campus lane or roadway closures pursuant to PP 4.6-8(b). Following 2002 LRDP PPs 4.6-8(a) and 4.6-8(b), the proposed project would not impair or physically interfere with the

Campus Emergency Response Plan, Disaster Response Plan, Disaster Initial Response Plan, or the Hazardous Materials Response Plan. A less-than-significant impact would occur, and no project-specific mitigation is required.

4.6.4 Cumulative Impacts

Refer to Volume 1, Section 4.6.4 (Hazards, Cumulative Impacts) for a discussion of cumulative hazards impacts.

4.6.5 References

Geotechnologies, Inc. 2002. *Geotechnical Engineering Investigation, Proposed Northwest Campus Housing Project, University of California, Los Angeles Campus, East of Charles E. Young Drive West, Westwood*, February 13.

National Transportation Safety Board. 2001. Helicopter Accident Study. www.ntsb.gov, June.

University of California, Los Angeles. 1990. *UCLA 1990 Long Range Development Plan.*

———. 1990. *UCLA 1990 Long Range Development Plan Final Environmental Impact Report (SCH No. 89072618).*

———. 1998. *UCLA Academic Health Center Facilities Reconstruction Plan, Final Environmental Impact Report.*

———. 2000. *UCLA LRDP EIR Mitigation Monitoring Program, 2000 Status Report.*

———. 2001. *UCLA Intramural Field Parking Structure Final Environmental Impact Report.*

———. Office of Research & Occupational Safety. 1999. *UCLA Business Plan.*

4.7 HYDROLOGY AND WATER QUALITY

This section hereby incorporates Volume 1, Section 4.7 (Hydrology and Water Quality) by reference. Data used in preparation of this section were obtained from various sources, including the Geotechnical Engineering Investigation for the proposed Northwest Housing Infill Project (Geotechnologies, Inc. 2002) and the Geotechnical Engineering Investigation for the Proposed De Neve Plaza Housing Project (Jerry Kovacs and Associates, Inc., 1997). This section also incorporates Volume 1, Section 4.7 (Hydrology and Water Quality) by reference. Impacts of the NHIP on existing and future water supply sources and wastewater treatment are described in Section 4.14 (Utilities and Service Systems), whereas impacts related to groundwater contamination are described in Section 4.6 (Hazards and Hazardous Materials).

4.7.1 Environmental Setting

Surface Water Drainage

As described in Volume 1, Section 4.7.1 (Hydrology and Water Quality, Environmental Setting), little groundwater recharge occurs on campus, and the majority of runoff through the campus originates upstream of the campus. Flows generally run from the northwest and northeast portions of campus to the south, and an extensive campus storm drain system controls surface runoff as it enters the downstream Los Angeles City storm drainage system and, ultimately, the County storm drainage system near Wilshire Boulevard. As described in Volume 1, Section 4.7.1 (Hydrology and Water Quality, Environmental Setting), the campus storm drains have adequate capacity for the majority of rainfall events; however, at times, some locations on campus (Westwood Plaza and Stone Canyon Creek) experience temporary, limited shallow ponding during major storm events, though this is primarily due to localized topography and drainage issues (UCLA Facilities Management, 2002). For additional discussion of surface water drainage, refer to Volume 1, Section 4.7.1 (Hydrology and Water Quality, Environmental Setting).

Surface/Stormwater Water Quality

Stormwater quality on the project site is typical of most urban areas in that it includes a variety of common contaminants. These pollutants consist primarily of suspended sediments, limited fertilizers, and pesticides used in grounds maintenance, and contaminants that are commonly associated with automobiles (e.g., oil, grease, and hydrocarbons) (UCLA 2001). Refer to Volume 1, Section 4.7.1

(Hydrology and Water Quality, Environmental Setting) for an additional discussion of surface/ stormwater quality.

Flood Hazards

As stated above, the current capacity of the storm drain system on site and in the project area is adequate for the runoff generated by most storm events. No flooding occurs in the Northwest campus zone, which is high ground on the campus. For an additional discussion of flood hazards on the campus, refer to Volume 1, Section 4.7.1 (Hydrology and Water Quality, Environmental Setting).

Mudflows

As described above in Section 4.5.1 (Geology and Soils, Environmental Setting), a portion of the Northwest campus zone has been designated by the California Division of Mines and Geology (CDMG) as a landslide hazard zone during strong seismic groundshaking. During periods of heavy rainfall, inundation or areas of exposed soil that are subject to landsliding could result in mudflows. However, the proposed project is not located within this designated zone, and as stated in the geotechnical report prepared for this project, the soils underlying the project site range from dense to very dense, and are not considered prone to seismically induced landslides (Geotechnologies 2002) or, therefore, mudflows. Further, the slopes in the Northwest campus zone are covered with hardscape or heavy landscaping. As stated in Volume 1, Section 4.7.1 (Hydrology and Water Quality, Environmental Setting), the likelihood of mudflows is considered remote.

Groundwater

Depth to groundwater measured for construction projects in the campus has ranged from approximately 28 to 53 feet below grade, with flow in a generally southerly direction (UCLA 1997; UCLA 2001). For the NHIP, soil borings were excavated to a depth ranging between 20 and 70 feet below grade. No groundwater was encountered with the exception of one boring (Boring 4, near the proposed Hedrick North site) in which groundwater was found at seven feet below ground surface. However, as described in Section 4.5.1 (Geology and Soils, Environmental Setting), this seepage is likely the result of infiltration from irrigation of the landscape planter in which the boring was drilled. As irrigation filters into the soil, it can accumulate at less permeable areas below the surface, where it may be encountered as seepage, which is limited and is not anticipated to affect project implementation (Geotechnologies 2002, pp. 9-10). No evidence currently exists of groundwater contamination on the campus: refer to Volume 1, Sections 4.6.1 (Hazards and Hazardous Materials, Environmental Setting) and 4.7.1 (Hydrology and Water Quality, Environmental Setting) for additional discussion of groundwater beneath the campus.

4.7.2 Regulatory Framework

Refer to Volume 1, Section 4.7.2 (Hydrology and Water Quality, Regulatory Framework) for a discussion of the regulatory framework for hydrology and water quality.

4.7.3 Project Impacts and Mitigation

Analytic Method

Analyses of potential impacts to surface flows in the project area were assessed by reviewing available hydrological literature, identifying existing drainage patterns, quantifying existing impermeable surface area, and determining the increases in flows attributable to the proposed project. These flows were then compared to increases in flows predicted at full implementation of the 2002 LRDP (Volume 1, Section 4.7.3 [Hydrology and Water Quality, Project Impacts and Mitigation]) to evaluate the potential for the NHIP to modify drainage patterns and to increase runoff beyond the capacity of existing or planned storm drain facilities.

Impacts to surface water quality were analyzed by reviewing existing surface water quality literature as it pertains to the project area, identifying existing drainage patterns, determining the potential for groundwater impacts, and evaluating existing and potential sources of water quality pollutants based on the type of land uses proposed. Additionally, the applicability of federal and State regulations, ordinances, and/or standards to the surface water quality of the campus and subsequent receiving waters was assessed. Impacts were determined by evaluating the potential of the proposed development to exceed the thresholds of significance outlined below.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs related to hydrology and water quality. However, the following 2002 LRDP EIR PP shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP PP 4.7-5 — *Project design shall include measures to upgrade and expand campus storm drain capacity where necessary. Design of future projects will include measures to reduce runoff, including the provision of permeable landscaped areas adjacent to structures to absorb runoff and the use of pervious or semi-pervious paving materials.*

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines, unless otherwise noted. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on hydrology or water quality if it would result in any of the following:

- Violate any water quality standards or waste discharge requirements
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects[5]
- Otherwise substantially degrade water quality
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map
- Place within a 100-year flood hazard area structures, which would impede or redirect flood flows
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam
- Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow[6]

[5] While this threshold of significance appears in Section XVI (Utilities and Service Systems) of Appendix G of the CEQA Guidelines, all impacts associated with storm drain capacity or stormwater quantity or quality are presented in this Section of the EIR.

[6] This threshold was modified to include the same introductory clause as the immediately preceding threshold.

Effects Not Found to Be Significant

Threshold	Would the project expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?

Refer to Volume 1, Section 4.7.3 (Hydrology and Water Quality, Project Impacts and Mitigation) for a discussion of Effects Not Found to Be Significant regarding seiches and tsunamis.

Impacts and Mitigation Measures

Threshold	Would the project violate any water quality standards or waste discharge requirements?

Impact NHIP 4.7-1 **Implementation of the NHIP would not violate existing water quality standards or waste discharge requirements. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.7-1 (Hydrology and Water Quality) analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would violate existing water quality standards or waste discharge requirements (WDRs), and determined that a less-than-significant impact would occur. The campus is not considered a point-source for regulatory purposes and is not subject to WDRs. While the campus has an industrial wastewater permit for sewer discharge associated with food service and laboratory uses on the campus (as discussed in Volume 1, Section 4.14 [Utilities and Service Systems]), no hazardous waste is discharged into the sewer or storm drainage system on the campus.

As described in Volume 1, Impact 4.7-1 (Hydrology and Water Quality), implementation of the 2002 LRDP would negligibly increase impermeable surface areas: the anticipated increase in impermeable surface area only represents about 0.85 percent of the total existing impervious surface area on campus. According to the campus (Capital Program Engineers, 2002), the introduction of additional impervious surface area to the campus would increase by only 0.53 percent the volume of runoff generated by the campus over an 8- to 10-year period. Further, because the majority of flows through the campus (58 percent) originate from upstream areas, the proportional contribution of these new campus flows to the City and, ultimately, County storm drainage systems would be 42 percent of 0.53 percent, or 0.23 percent, which would be a negligible increase to either system, and a less-than-significant impact would occur.

Of the calculated conversion of permeable to impermeable surfaces from implementation of the 2002 LDRP, the NHIP would account for about 65,000 square feet, or 65 percent of the total conversion.

The NHIP would, therefore, increase surface runoff on the campus by less than one half of one percent (65 percent of the 0.53 percent increase under the 2002 LRDP, or about 0.34 percent), which is considered insignificant (Capital Program Engineers, 2002). The contribution of the NHIP to City storm drainage system would represent a percentage increase of 42 percent of this amount, or 0.15 percent. The NHIP would, therefore, not represent a substantial increase in the volume of runoff entering the campus, City, or, ultimately, County storm drain system and would not contribute substantially to erosion or sedimentation effects.

Further, as discussed in Volume 1, Impact LRDP 4.7-1 (Hydrology and Water Quality), implementation of the 2002 LRDP would result in the development of uses that are substantially similar to those that exist on the campus. Similarly, the NHIP proposes uses that are identical in character to those that currently exist in the Northwest campus zone: residential, residential support, recreational, and parking uses. None of these uses would contribute different types of pollutants than those currently generated by existing uses of the same type in the Northwest campus zone. Additionally, the project proposes an infill development strategy whereby buildings are constructed primarily on space occupied by surface parking lots (Lot HH, Lot RH, Lot DH, and Lot 15). Parking spaces removed would be consolidated into the proposed Dykstra Parking Structure, which would reduce the amount of surface parking and associated urban runoff. Further, the project includes the installation of oil separators in the Dykstra Parking Structure, which would improve the runoff quality in comparison to existing surface parking lots on the project site. Finally, as described in Volume 1 (Impact LRDP 4.7-1) of the 2002 LRDP EIR, the campus currently complies with, would continue to comply with, NPDES Phase I (general construction permit) requirements and would be required to apply for a permit under NPDES Phase II by March 10, 2003, based upon current information, which would include implementation of a Stormwater Management Program. Compliance with these statutes and regulations and installation of oil separators in the proposed parking structure would ensure that storm water quality standards would not be violated by requiring discharges to continue to meet the requirements of the SWRCB and RWQCB, and by preventing discharges from construction sites. This impact would be considered less than significant, and no project-specific mitigation is required.

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

Impact NHIP 4.7-2 **Implementation of the NHIP would not substantially deplete groundwater supplies or interfere with groundwater recharge. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.7-2 (Hydrology and Water Quality), analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would substantially deplete groundwater supplies or interfere with groundwater recharge, and determined that a less-than-significant impact would occur. As discussed in Volume 1, Impact LRDP 4.7-2 (Hydrology and Water Quality), the UCLA campus uses water provided by the Los Angeles Department of Water and Power (DWP), which relies on some groundwater supplies. Consequently, the NHIP could indirectly result in the increased use of groundwater. However, as described in Volume 1, Impact LRDP 4.14-2 (Utilities and Service Systems), implementation of the 2002 LRDP would not require water supplies in excess of existing entitlements and resources or result in the need for new or expanded entitlements. Further, as described in Section 4.14.3 (Utilities and Service Systems, Project Impacts and Mitigation), the NHIP would not result in a demand for water that would exceed estimated demand under full implementation of the 2002 LRDP. The provision of water for the proposed project would, therefore, be within the established projections of the DWP. Additionally, as discussed in Volume 1, Impact LRDP 4.7-2 (Hydrology and Water Quality), implementation of the 2002 LRDP, including the NHIP, would not result in the extraction of groundwater on an operational basis. Further, dewatering is not anticipated as a result of construction of any element of the NHIP. Consequently, implementation of the NHIP would not substantially deplete groundwater supplies.

Also, as described in Volume 1, Impact LRDP 4.7-2 (Hydrology and Water Quality), the campus is not a designated groundwater recharge area for the 4,800-acre Santa Monica groundwater basin. Development under the 2002 LRDP is anticipated to result in an increase of less than 1 percent of the existing impervious surface area on the campus and would not constitute substantial interference with groundwater recharge. The NHIP would develop an estimated 65,000 square feet of impervious surfaces, approximately 65 percent of the anticipated increase in impervious surfaces under the 2002 LRDP, which was not considered a substantial interference with groundwater recharge in Volume 1 of this EIR. This impact would, therefore, be less than significant, and no project-specific mitigation is required.

Threshold	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on or off site?

Impact NHIP 4.7-3 **Implementation of the NHIP would not substantially alter site drainage patterns and would not result in substantial erosion or siltation on- or off- site. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.7-3 (Hydrology and Water Quality) concluded that implementation of the 2002 LRDP, which includes the NHIP, would not substantially alter drainage patterns or result in substantial erosion or siltation, and that compliance with applicable provisions of NDPES Phases I and II, including the implementation of applicable Best Management Practices (BMPs), would ensure that this impact remains less than significant. While the NHIP would not result in substantial changes to the broad drainage patterns of the campus, project development would result in new buildings and a parking facility that could result in minor, localized alterations of existing drainage patterns on the project site; however, these alterations would not be substantial, as flows from the new uses would continue to be directed to the existing storm drain system. Further, project implementation would not involve the alteration of the course of a stream or river. Altered drainage patterns could increase runoff volume on the campus by approximately 0.34 percent over existing conditions, as described above in Impact NHIP 4.7-1 (Hydrology and Water Quality). This increase is negligible and would not expose soil to substantially increased rates of erosion during construction and project operation. Additionally, the NHIP would be required to comply with all applicable NPDES Phase I and II requirements during construction, as well as over the operational life of the project, to ensure that stormwater discharges protect sensitive downstream areas. NPDES Phase I regulations require the incorporation of appropriate BMPs primarily during construction, while NPDES Phase II regulations require the preparation of a storm water management plan that addresses post-construction storm water management. Therefore, compliance with the applicable requirements of NPDES Phases I and Phase II would ensure that impacts associated with erosion and sedimentation on or off site would be less than significant, and no project-specific mitigation is required.

Threshold	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site?

Impact NHIP 4.7-4 **Implementation of the NHIP would not substantially alter site drainage patterns or substantially increase the rate or amount of surface runoff and would not result in flooding either on or off site. This is considered a *less-than-significant* impact.**

As stated above, implementation of the NHIP would not alter the course of a stream or river: the only earthen drainage course on campus is Stone Canyon Creek, which would not be affected, either directly or indirectly, by the proposed project.

While the NHIP would not result in substantial changes to the broad drainage patterns of the campus, construction activities and development of new buildings and a parking facility on the project site could result in localized alterations of drainage patterns; however, localized drainage patterns would not be substantially altered, as flows from the new uses would continue to be directed to the existing storm drain system. As described in Section 3.4.3 (Project Description, Site Improvements), improvements to the storm drain system will be necessary to extend connections to the existing 24-inch storm drain along De Neve Drive, the 33-inch storm drain along the lower portion of De Neve Drive, near its intersection with Charles E. Young Drive West, and the 42-inch storm drain underlying Charles E. Young Drive West. This project improvement would prevent flooding on site by ensuring that flows from the project site would continue to enter the campus storm drainage system.

As previously discussed, project implementation would convert approximately 65,000 square feet of pervious surfaces to impervious surfaces on site, and would increase the runoff volume entering the campus drainage system by approximately 0.34 percent and would increase flows into the City storm drain system by about 0.15 percent. The proportional increase of flows from the City system into the County system would constitute an even smaller proportion. This increase in runoff volume is insignificant and would not exceed the capacity of the campus, City, or County storm drainage systems. Further, the campus would be required to implement BMPs to control the rate and volume of construction and operational stormwater runoff, as required to achieve compliance with NPDES Phases I and II. The NHIP would not, therefore, result in a substantial increase in the rate or amount of surface runoff, and would not cause flooding on or off the site. This impact would be considered less than significant, and no project-specific mitigation is required.

Threshold	Would the project create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Impact NHIP 4.7-5 **Implementation of the NHIP would not result in runoff that exceeds the capacity of existing storm drain systems or provides substantial additional sources of polluted runoff. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.7-5 (Hydrology and Water Quality), analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would result in runoff that exceeds the capacity of the campus storm drain system, and determined that a less-than-significant impact would occur. Full implementation of the 2002 LRDP, of which the proposed project is a part, would increase the impermeable surface area on the campus by 0.85 percent, which would result in an increase of 0.53 percent in surface runoff. As described above in Impact NHIP 4.7-1, the NHIP constitutes 65 percent of this increase, and would increase the total volume of campus runoff by 0.34 percent, which would have an insignificant effect on the campus storm drain system (UCLA Capital Programs Engineers 2002). And as described above in Impact NHIP 4.7-1, the increase by NHIP of campus stormwater flows to the City storm drain system would be 0.15 percent, and the increase in flows to the County system would be proportionally even less. As described above, these volumes are negligible (UCLA Capital Programs Engineers 2002), and a less-than-significant impact on storm drainage systems would occur. No project-specific mitigation is required.

Additionally, as required by 2002 LRDP PP 4.7-5, and as described in Section 3.4.3 (Project Description, Site Improvements), improvements to the storm drain system will be implemented to extend connections to the existing 24-inch storm drain along De Neve Drive, the 33-inch storm drain along the lower portion of De Neve Drive, near its intersection with Charles E. Young Drive West, and the 42-inch storm drain underlying Charles E. Young Drive West. As also described in Section 3.4.2 (Project Description, Project Components), the project will also include permeable landscaped areas to reduce runoff generated by the project.

Volume 1, Impact LRDP 4.7-5 (Hydrology and Water Quality) further determined that the insignificant increases in runoff from implementation of the 2002 LRDP (including the NHIP) would not constitute a substantial source of polluted runoff, particularly with implementation of a Storm Water Management Program that complies with applicable provisions of NPDES Phase II. This impact would, therefore, be less than significant, and no project-specific mitigation is required.

Threshold	Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Impact NHIP 4.7-6 **Implementation of the NHIP would not require the construction of new stormwater conveyance systems or the expansion of existing stormwater conveyance systems. This is considered a *less-than-significant* impact.**

Implementation of the proposed 2002 LRDP would increase the amount of impermeable surface on the campus, but would result in insignificantly higher volumes of stormwater runoff and would not require the expansion of storm drainage conveyance systems. As described above in Impacts NHIP 4.7-1 and NHIP 4.7-5, the estimated project-related increase in stormwater flows to the campus drainage system would be less than one-half of one percent, and the project-related increase in flows to the City storm drainage system is estimated to be less than one-quarter of one percent. This increase in runoff is negligible to existing storm drainage systems, and would not exceed the capacity of the campus, City, or County storm drain system, and no new or expanded facilities would be required. Further, as required by 2002 LRDP PP 4.7-5 and 2002 LRDP PP 4.1-2(d), landscaping will provided as part of the NHIP, which would absorb some project-related runoff. A less-than-significant impact would occur, and no project-specific mitigation is required.

Threshold	Would the project otherwise substantially degrade water quality?

Impact NHIP 4.7-7 **Implementation of the NHIP would not otherwise substantially degrade water quality. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.7-7 (Hydrology and Water Quality), determined that potential impacts to water quality have been addressed in the other impact statements in this analysis and no other sources of water quality degradation are anticipated in association with implementation of the 2002 LRDP, which includes implementation of the NHIP, with implementation of 2002 LRDP PP 4.7-5. All new development would comply with applicable State and federal regulations governing water quality, and all potential water quality impacts were fully analyzed either in Volume 1, Section 4.7 (Hydrology and Water Quality) of the 2002 LRDP EIR or in this project-specific analysis. This impact is considered less than significant, and no project-specific mitigation is required.

Threshold	Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Impact NHIP 4.7-8 **Implementation of the NHIP would not place housing within a 100-year flood hazard area. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.7-8, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would place housing within a 100-year flood hazard area and determined that a less-than-significant impact would occur. The analysis determined that no new development, including development in the Northwest zone, would occur within Zone AO, an area of 100-year shallow flooding, as determined by FEMA, the only flood hazard area identified on the campus (refer to Volume 1, Figure 4.7-2 [Areas of Flood Hazard and Hypothetical Inundation]). Further, as shown in the same figure, the entire Northwest campus zone is located in Zone C, outside the 500-year floodplain. Because no structures would be placed within a 100-year flood hazard area, a less-than-significant impact would occur, and no project-specific mitigation is required.

Threshold	Would the project place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

Impact NHIP 4.7-9 **Implementation of the NHIP would not place structures within a 100-year flood hazard area, which would impede or redirect flood flows. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.7-9, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would place structures within a 100-year flood hazard area and impede or redirect flood flows, and determined that a less-than-significant impact would occur. As no structures would be placed within a 100-year flood hazard area, the proposed project would not expose people or property to flooding hazards and would not impede or redirect 100-year flood flows. Therefore, a less-than-significant impact would occur, and no project-specific mitigation is required.

Threshold	Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

Impact NHIP 4.7-10 **Implementation of the NHIP would not expose people or structures to a significant risk involving flooding due to the failure of Stone Canyon Reservoir. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.7-10, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would expose people or structures to a significant risk involving flooding, due to the failure of Stone Canyon Reservoir, and determined that a less-than-significant impact would occur.

As described in Volume 1, Section 4.7.1 (Environmental Setting), the Stone Canyon Reservoir is located north of the campus. Volume 1, Impact LRDP 4.7-10 (Hydrology and Water Quality) determined that, in the event of a catastrophic failure, the central portions of the campus could be flooded. However, the Northwest zone is not located in this hypothetical path of inundation (refer to Volume 1, Figure 4.7-2 [Areas of Flood Hazard and Hypothetical Inundation]), and the NHIP would not, therefore, directly expose people or structures to increased risk involving the failure of Stone Canyon Reservoir. Additionally, the failure of Stone Canyon Reservoir was determined by DWP to be extremely remote and speculative. This impact would be less than significant and no project-specific mitigation is required.

Threshold	Would the project expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow?

Impact NHIP 4.7-11 **Implementation of the NHIP would not expose people or structures to a significant risk of mudflows. This is considered a *less-than-significant* impact.**

Impacts from seiches and tsunamis were analyzed as an Effect Not Found to Be Significant. As discussed in Volume 1, Impact LRDP 4.7-11 (Hydrology and Water Quality), an area of the UCLA campus in the Northwest zone is identified by the California Department of Conservation, Division of Mines and Geology as potentially subject to landsliding, and could potentially represent a risk for mudflows during periods of heavy rainfall. However, the geotechnical engineering study completed for the NHIP concluded that the soils present on the project site would not be subject to landsliding. Further, no mudflows have ever been documented in this area, likely because the majority of the Northwest zone is covered with landscaping, natural vegetation, and hardscape, and the natural topography consists of gently sloping hillsides rather than steep, sheer embankments. Therefore, the potential for mudflows to occur would be considered remote, and engineering studies performed for campus projects would

continue to ensure that slopes remain stable during and after construction of these projects. Impacts associated with mudflows would, therefore, be less than significant, and no mitigation is required.

4.7.4 Cumulative Impacts

Refer to Volume 1, Section 4.12.4 (Hydrology and Water Quality, Cumulative Impacts) for a discussion of cumulative hydrology and water quality impacts.

4.7.5 References

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4.8 LAND USE AND PLANNING

This section hereby incorporates Volume 1, Section 4.8 (Land Use) by reference.

4.8.1 Environmental Setting

Surrounding Land Uses

Land uses to the north of the Northwest zone are the single-family residential neighborhood of Bel-Air. To the south and west is the North Village multi-family residential neighborhood, which primarily consists of fraternity houses and apartment buildings. West of Veteran Avenue is the single-family residential neighborhood of Westwood Hills and the Los Angeles National Cemetery. East of the Northwest zone is the Central zone, which contains most of the campus recreational and athletic facilities and playing fields. Figure 4.8-1 of Volume 1 of this EIR (provided in Section 4.8, Land Use) graphically depicts the surrounding land uses.

Existing Northwest Zone Land Use

As illustrated by Figure 3-2 (Existing Conditions: Northwest Zone) (provided in Chapter 3 [Project Description], the project site is located in the 90.5-acre Northwest zone of the campus. It is bounded by Sunset Boulevard on the north, Charles E. Young Drive West on the east, Gayley Avenue on the south, and Veteran Avenue on the west. The Northwest zone primarily contains residential facilities and support functions for undergraduate students, as well as recreational land uses.

Circulation roadways within the Northwest zone consist of two main roads and two campus access points. De Neve Drive, an internal loop road, connects to Charles E. Young Drive West, which connects to Strathmore Drive and, ultimately, to Gayley Avenue. Bellagio Drive, a second road off De Neve Drive, connects to Sunset Boulevard. Bruin Walk, which is located to the south of Drake Stadium, begins at Charles E. Young Drive West and is the major pedestrian pathway linking the residential and academic areas. Drake Stadium, the Intramural Field, and Los Angeles Tennis Center provide a transition between the Northwest zone and the eastern and southern portions of the campus. The Northwest zone has an existing built environment of approximately 2.1 million gross square feet.

As previously mentioned, housing is the primary use in the Northwest zone. Figure 3-2 (Existing Conditions: Northwest Zone) in Chapter 3 (Project Description, Existing Conditions in the Northwest Zone) depicts existing conditions in the Northwest zone. Existing housing facilities include Sproul, Rieber, Hedrick, and Dykstra Halls, as well as Sunset Village, De Neve housing, and Saxon and Hitch

Residential Suites. In addition to residential uses, the Northwest zone provides other functions that support the housing uses and the greater academic community, which are described in detail in Chapter 3 (Project Description) of this document. The Housing Administration building is situated between Rieber and Hedrick Halls. Campus Facilities Management operates maintenance storage yards, storage buildings. and a green waste and recycling yard in the Northwest zone. The storage facilities (OHJ and OHM) and the adjacent green waste and recycling yard are located south of Parking Lot 15. Other yard facilities are located between Parking Lot 15 and the Veteran Avenue edge of campus.

The Northwest zone also has recreational facilities, including Sunset Canyon Recreation Center, Sunset Canyon Tennis Courts, Sycamore Tennis Courts, and Easton Stadium. The Sunset Canyon Recreation Center, located south and west of De Neve Drive, offers year-round recreation featuring a 50-meter pool, a 25-meter family pool, picnic/barbeque areas, a sand volleyball court and large grass areas, an amphitheater, and various meeting rooms and lounges. The Sunset Canyon Tennis Courts, located west of De Neve Drive adjacent to the Sunset Canyon Recreation Center, includes ten lighted regulation courts. The Sycamore Tennis Courts, located east of Veteran Avenue, down slope from the Saxon Residential Suites near the Southern Regional Library Facility (SRLF), includes six courts for daytime use only. The Northwest zone also includes the Easton Stadium, located east of Veteran Avenue and south of Sunset Boulevard, in the northwest portion of the zone.

Various parking facilities support the housing, administration, academic, and recreation uses in the Northwest campus. Parking structures serve Sunset Village (SV) and Sproul Hall (SH), and surface lots serve Dykstra Hall (Lot DH), Rieber Hall (Lot RH), Hedrick Hall, (Lot HH), as well as surface Lots 10, 11, 15, 17, and parking structure RC (Recreation Center).

Stipulated Use Agreement with the Westwood Hills Property Owners' Association

A Stipulated Agreement of Compromise (Agreement) was filed February 6, 1978, in the matter of *Westwood Hills Property Owners Association v. The Regents of the University of California* (L.A. Superior Court Case No. C180760). This Agreement identifies a Benign Use Zone in the Northwest zone of campus that will be reserved for uses that include, but are not limited to, open green space, landscape buffer zones, existing ornamental horticultural buildings and parking facilities, and low-intensity, nonspectator, recreational and athletic space. Figure 3-2 (Existing Conditions: Northwest Zone) (provided in Chapter 3 [Project Description]) depicts the limits of the Benign Use Zone. The Benign Use Zone excludes, among other things, consideration of a baseball facility in this area. Lighting for this area will be provided only as appropriate to, and in keeping with, these benign uses. No access to the campus from existing City streets adjacent to the Benign Use Zone will be provided or permitted except for emergency

purposes. The Benign Use Zone extends between Bellagio Drive and Sunset Boulevard to the north, De Neve Drive to the east until Hedrick Hall where the eastern boundary extends due south to Gayley Avenue near Landfair Avenue, Gayley Avenue to the south, and Veteran Avenue to the west.

Further provisions of the Agreement call for the campus to examine the potential for construction noise and to take necessary steps within practical technological capabilities and consistent with normal building practices for wood frame construction to ensure compliance with local noise ordinances and regulations and to reduce construction noise to the maximum extent feasible. Noise-producing construction work is to be prohibited prior to 7:00 A.M. Monday through Friday, 8:00 A.M. on Saturday, and throughout the day on Sundays and national holidays, except for emergencies.

4.8.2 Project Impacts and Mitigation

Analytic Method

The analysis in this section focuses on the compatibility of land uses identified in the NHIP with existing and planned land uses within and adjacent to the Northwest zone, including off-campus uses, as well as the project's consistency with any applicable land use plans, policies, or regulations. The analysis also considers the consistency of the proposed project with the development allocation for the Northwest zone identified in the 2002 LRDP.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The following 2002 LRDP EIR MM for land use has been incorporated into the proposed project:

2002 LRDP EIR MM 4.3-1(c) *In conjunction with CEQA documentation required for each project-specific proposal under the 2002 LRDP, a tree replacement plan shall be prepared and implemented. The tree replacement plan for each project shall determine the appropriate number of replacement trees in relation to the specific project site characteristics. The tree replacement plan would ensure that the appropriate number of new trees is planted within the available site area so that each tree planted has sufficient space to grow and thrive.* (This is identical to Aesthetics MM 4.1-2.)

In addition, the following 2002 LRDP EIR PPs shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.8-1(a) *The design process shall evaluate and incorporate, where appropriate, factors including, but not necessarily limited to, building mass and form, building proportion, roof profile, architectural detail and fenestration, the texture, color, and quality of building materials, focal views, pedestrian and vehicular circulation and access, and the landscape setting in order to ensure preservation and enhancement of the visual character and quality of the campus and the surrounding area. Landscaped open space (including plazas, courts, gardens, walkways, and recreational areas) shall be integrated with development to encourage use through placement and design.* (This is identical to Aesthetics PP 4.1-1(a).)

2002 LRDP EIR PP 4.8-1(c) *The western, northern, and eastern edges of the main campus shall include a landscaped buffer to complement the residential uses of the surrounding community and to provide an attractive perimeter that effectively screens and enhances future development.* (This is identical to Aesthetics PP 4.1-2(e).)

2002 LRDP EIR PP 4.8-1(f) *The architectural and landscape traditions that give the campus its unique character shall be respected and reinforced.* (This is identical to Aesthetics PP 4.1-2(b).)

2002 LRDP EIR PP 4.8-1(h) *New building projects shall be sited to ensure compatibility with existing uses and the height and massing of adjacent facilities.* (This is identical to Aesthetics PP 4.1-1(c).)

2002 LRDP EIR PP 4.8-1(i) *Facilities shall be sited and designed to enhance spatial development of the campus while maximizing use of limited land resources.*

In addition, all of the relevant 2002 LRDP MMs and PPs that ensure consistency with applicable land use plans, policies, or regulations (as presented in Impact LRDP 4.8-2 [policy consistency analysis]) shall be applied during the LRDP planning horizon.

Thresholds of Significance

The following thresholds of significance are primarily based on Appendix G of the 2002 CEQA Guidelines, unless otherwise noted. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on land use if it would result in any of the following:

- Result in land use incompatibilities between campus development and adjacent community land uses[7]

[7] This threshold is not provided in Appendix G of the CEQA Guidelines, but was added to address the compatibility of proposed land uses with adjacent land uses.

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

Effects Not Found to Be Significant

Threshold	Would the project physically divide an established community?

Refer to Volume 1, Section 4.8.3 (Land Use, Project Impacts, and Mitigation) for a discussion of Effects Not Found to be Significant related to division of an established community.

Threshold	Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Refer to Volume 1, Section 4.8.3 (Land Use, Project Impacts and Mitigation) and Section 4.3 (Biological Resources) for a discussion of Effects Not Found to be Significant related to a potential conflict with any applicable habitat conservation plan or natural community conservation plan.

Threshold	Would the project result in potential incompatibilities between campus development and adjacent community land uses?

Impact NHIP 4.8-1 **Implementation of the NHIP would not result in potential incompatibilities between campus development and adjacent land uses. This is considered a *less-than-significant* impact.**

As discussed in Chapter 3 (Projection Description) of this EIR, the proposed NHIP consists of residential, recreational, and parking uses. The residential uses would be located in the interior of the Northwest zone, adjacent to existing residential dormitories. The recreational facility would be located closer to the perimeter of campus, approximately at the location of existing Parking Lot 15. The parking structure would be located along Gayley Avenue, just south of Dykstra Hall, nestled into the hillside.

The primary focus of the NHIP is to provide on-campus housing and associated support facilities to enhance the educational experience for students and continue the evolution of UCLA from a commuter to a residential campus. The project is proposed in the campus Northwest zone, which provides residential and associated uses in a single zone of campus. Accordingly, the proposed land uses are internally compatible.

The residential portion of the proposed project consists of infill residential development adjacent to Hedrick and Rieber Halls, which are seven-story structures constructed in a late-1950s/early-1960s modern style. Their orthogonal configuration creates regularity in patterns of circulation and in the geometries of adjacent plazas. The primary organizing principle of the NHIP is the continuation of the orthogonal configurations of the existing residential buildings, consistent with 2002 LRDP EIR PP 4.8-1(i). New construction, courtyards, and plazas will support a pedestrian-friendly campus, with links to new and existing indoor and outdoor spaces. Renovation of the first floors of Hedrick and Rieber Halls is further intended to transform the ground level of both buildings to provide expanded administrative, community support, and programming functions that accommodate additional residents from the new and existing residence halls. Ground-floor renovations at Sproul Hall would provide space for the Housing Administration offices displaced by construction of the NHIP.

The height of the new buildings will not exceed the height of existing and adjacent structures, which preserves architectural unity and tradition as required by 2002 LRDP EIR PP 4.8-1(h). Each of the buildings in the Hedrick and Rieber Precincts, whether new or existing, has been sited to function as an integral part of the larger complex, rather than as isolated structures with little or no relationship to the adjacent campus residential community. Similarly, the proposed recreational facilities are designed to complement existing facilities in the Northwest zone.

As required by 2002 LRDP EIR PP 4.8-1(i), the proposed parking structure provides a limited project footprint to utilize limited land resources wisely, while simultaneously ensuring the adequate provision of convenient parking adjacent to the student housing facilities. The parking structure would be built into an existing hillside between Dykstra Hall and Tom Bradley International Hall on surface parking Lot DH. The four-level structure would be set back from Gayley Avenue by approximately 56 feet and would include landscaping and a pedestrian walkway.

While no new roads would be provided as part of the NHIP, pedestrian pathways would be provided to accommodate new construction and ensure connections to existing campus uses. All access to the proposed uses would be provided from interior campus roadways. Access to the Dykstra Parking Structure would be temporarily provided from Gayley Avenue during the approximate 12-month construction period. Once construction is complete, access to the parking structure would be provided only from interior campus roadways. Pedestrian pathways and vehicular circulation routes have been designed to clarify way-finding and promote safety.

The proposed residential component of the project would be compatible with the residential land uses located north, west, and south of the Northwest zone. The height, scale and mass of the proposed

residential buildings are similar to the height, scale, and massing of the existing buildings located within the Northwest zone. The residential areas to the north and west of the Northwest zone are single-family residential, and the uses to the south consist of multi-family, multi-level structures. The new residential structures are separated from the off-campus residential uses by existing on-campus buildings and uses, intervening topography, and surrounding roadways that include Veteran Avenue, Gayley Avenue, and Sunset Boulevard. Therefore, impacts related to incompatibilities between campus development and adjacent uses are considered less than significant.

The proposed site for the recreation component would be separated from adjacent off-campus uses by Veteran Avenue and topography. As discussed below, the uses associated with the recreation component would be limited to leisure activities (nonspectator sports), which would be compatible with residential land uses. Given the type of uses proposed and placement of the use on site, the recreation component would be compatible from a land use perspective with surrounding uses. Following the 2002 LRDP EIR PP 4.8-1(c) and 4.8-1(f) will ensure that the positioning of infill development is designed to reinforce and enhance existing landscaping within the campus and along its perimeter, particularly along the western and northern edges of the campus, thereby creating a buffer between campus development and off-campus residential uses. Therefore, impacts related to incompatibilities between campus development and adjacent uses are considered less than significant.

The land uses south of the Northwest zone are characterized by medium- to high-density multi-family residential uses. While there is no intervening topography between the parking structure proposed adjacent to Dykstra Hall and the residential uses along Gayley Avenue, design features of the structure include provision of a 56-foot setback from Gayley Avenue from these existing off-campus uses with permanent access available only from internal campus roadways. In addition, the project would reinforce and enhance the existing landscaping along Gayley Avenue, which includes a Tree Replacement Plan that involves relocation of five existing mature trees, replacement of mature trees removed on the project on a two-for-one basis, to screen views of the structure from off-campus areas. Following 2002 LRDP EIR PP 4.8-1(a), PP 4.8-1(c), PP 4.8-1(f), PP 4.8-1(h), and PP 4.8-1(i), which includes proposed setback, the provision of landscaping, a Tree Replacement Plan, and project design that recognizes surrounding land uses, would ensure that this impact is less than significant.

As previously mentioned, the NHIP has been designed to ensure the preservation and enhancement of the character and quality of the campus by considering on-campus and off-campus adjacent land uses with respect to type, mass, scale, landscaping, and architectural detail. The NHIP would also be consistent with the Stipulated Use Agreement between The Regents and the Westwood Hills Property Owners'

Association. As described above in Section 4.8.1 (Environmental Setting), under the terms of the Agreement, new development within the Benign Use Zone "will be reserved for benign uses, which include, but are not limited to, open green space, landscape buffer zones, existing ornamental horticultural buildings and parking facilities, and low-intensity, nonspectator, recreational and athletic space. Benign use excludes, among other things, consideration of a baseball facility in this area."

The storage facilities (OHJ, OHM, and the adjacent waste yard) would be relocated and consolidated into a new shed located on the existing maintenance storage yard (bone yard) located down slope from the Hitch Residential Suites within the area of the Stipulated Use Agreement. The outdoor yard functions would be consolidated and relocated to the existing waste yard adjacent to parking Lot 15. The uses are allowed according to the Agreement and would be considered consistent with that document.

All residential development proposed as part of the NHIP will be located outside the Benign Use Zone. However, as discussed in Chapter 3 (Project Description), an area within the Benign Use Zone south of the Hitch Residential Suites, west of De Neve Drive, would be redeveloped for informal recreational amenities to serve the on-campus student resident population. The main elements of the proposed recreational development include a 15,000-square-foot multi-purpose building, a leisure pool, outdoor basketball and volleyball courts, and a leisure/recreation grass area with benches, barbeque grills, and picnic tables. The leisure pool is proposed as a 25-meter free-form leisure recreational pool, with a maximum depth of three to four feet, which would preclude diving. The proposed basketball and volleyball courts have not yet been designed; however, based upon space limitations, it is assumed for the purposes of this analysis that two basketball courts and two volleyball courts would be developed. These outdoor courts would be for daytime use only and would not be illuminated except as required for safety/security purposes.

The proposed recreational uses are consistent with the use restrictions in the Agreement and are comparable in nature and in terms of potential impacts with other recreational amenities that presently exist within the Benign Use Zone, such as the Sycamore Tennis Courts. The proposed leisure pool, volleyball courts, and basketball courts are intended for the use of campus residents, and do not have the character of a baseball facility, since they will not be used for spectator sports activity or organized athletic competition. No bleachers or other seating or provisions for spectators would be constructed as part of these recreational amenities. In addition, the restriction of the use of these recreational amenities to daytime hours will avoid potential noise impacts during the nighttime hours.

Consistent with the Agreement, no access from off-campus streets will be provided except for emergency purposes. As discussed in Section 4.1 (Aesthetics) of this document, and as promulgated by 2002 LRDP EIR PP 4.8-1(c), landscaping will continue to be provided along the western and northern boundaries of campus. In addition, a Tree Replacement Plan is provided in compliance with 2002 LRDP EIR MM 4.3-1(c).

The project's proposed uses are consistent with the Agreement as the proposed uses are within the parameters of uses permitted in the Agreement and, as stipulated, residential uses are located outside of the Benign Use Zone. Therefore, impacts related to incompatibilities between campus and adjacent uses, as defined in the Agreement, are considered less than significant.

Implementation of the NHIP would not result in potential incompatibilities between campus development and adjacent community land uses, nor would it conflict with the Stipulated Use Agreement. Therefore, iinpacts related to land use compatibility would be less than significant, and no project-specific mitigation would be required.

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

Impact NHIP 4.8-2 **Implementation of the NHIP would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. This is considered a *less-than-significant* impact.**

As required by Section 15125(d) of the CEQA Guidelines, Volume 1, Impact LRDP 4.8-2 discusses the consistency of the 2002 LRDP with applicable regional plans. The regional plans relevant to the proposed project, and for which a consistency analysis was provided in Volume 1 of this EIR, include the Regional Comprehensive Plan and Guide (Southern California Association of Governments 1995), the Los Angeles Water Quality Control Plan for the Los Angeles Region (California Regional Water Quality Control Board, Los Angeles Region, 1995), and the Air Quality Management Plan (South Coast Air Quality Management District 1997 and 1999). Volume 1 of this EIR (Impact LRDP 4.8-2) determined that implementation of the 2002 LRDP, which includes the NHIP, would not result in any inconsistencies with applicable regional plans, and a less-than-significant impact would result. No project-specific mitigation is required.

UCLA is a part of the University of California, a constitutionally created entity of the State of California. As a constitutional entity, the University of California is not subject to municipal regulations, such as the local General Plans. However, the campus seeks to maintain an ongoing exchange of ideas and information and to pursue mutually acceptable solutions for issues that confront both the campus and the community. To foster this process, UCLA participates in, and communicates with, City and community organizations, and sponsors various meetings and briefings to keep local organizations, associations, and elected representatives apprised of ongoing planning efforts. Campus planning, design, and local relations staff have conducted several meetings to discuss the NHIP. Site visits have occurred to involve local homeowners and provide information. In response to concerns regarding increases in ambient noise west of the campus, off-site noise monitoring measurements have been conducted and incorporated into the noise analysis section of this Draft EIR. For discussion of noise impacts, refer to Volume 2, Section 4.9 (Noise and Vibration).

4.8.3 Cumulative Impacts

Refer to Volume 1, Section 4.12.4 (Land Use, Cumulative Impacts) for a discussion of cumulative land use impacts.

4.8.4 References

Los Angeles, City of. 1988. *North Westwood Village Specific Plan.*

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———. 1998. *UCLA Academic Health Center Facilities Reconstruction Plan Final Environmental Impact Report, (SCH No. 97061016),* November.

———. 2001. *UCLA Intramural Field Parking Structure Final Environmental Impact Report (SCH No. 1999091001),* Vol. 1.

University of California, Merced. 2002. *University of California Merced Campus Long Range Development Plan Final Environmental Impact Report (SCH No. 2001021065).*

4.9 NOISE AND VIBRATION

This section incorporates Volume 1, Section 4.9 (Noise) by reference.

4.9.1 Environmental Setting

Refer to Volume 1, Section 4.9.1 (Noise, Environmental Setting) for a discussion of the fundamentals of sound, environmental noise, and environmental vibration; existing on- and off-campus noise levels and vibration levels; and the noise controls presently implemented by the UCLA campus.

Existing NHIP Site Ambient Daytime Noise Levels

The NHIP site is located within the Northwest zone, which is primarily residential and recreational in nature. Although other noise sources occur in the vicinity, vehicular traffic is the primary source of noise within, and around, the campus. As part of the 2002 LRDP EIR, existing ambient daytime noise levels were measured at three selected locations within the Northwest Zone and one location in the residential area located west of the Northwest zone. As part of this NHIP EIR, existing daytime noise levels were also measured at six locations within the Northwest zone. Existing 24-hour noise levels were also measured within the backyard of one residence located along Tilden Avenue on May 22, 2002. These locations are identified in Figure 4.9-1 (Noise Measurement Locations). The noise levels were measured using Larson-Davis Model 720 and 814 precision sound level meters, which satisfy the American National Standards Institute (ANSI) for general environmental noise measurement instrumentation. The average noise levels and sources of noise measured at each location are identified in Table 4.9-1 (Existing Daytime Noise Levels at Selected On- and Off-Campus Locations). These daytime noise levels are characteristic of an urban residential environment. The 24-hour average noise levels at the residence are identified in Table 4.9-2 (Existing 24-Hour Noise Levels at a Selected Residential Location).

Table 4.9-1 Existing Daytime Noise Levels at Selected On- and Off-Campus Locations

Noise Measurement Location	*Primary Noise Sources*	*Noise Level Statistics*		
		L_{eq}	L_{min}	L_{max}
1. (2002 LRDP EIR Location 1) University Day Care Center—Northwest zone	Traffic on Sunset Blvd., children playing	68.4	50.1	88.1
2. (2002 LRDP EIR Location 8) Veteran Ave. at Cashmere St. (single-family residence)	Traffic on Veteran Ave.	73.9	48.2	84.0
3. (2002 LRDP EIR Location 9) UCLA campus—Northwest zone	Traffic on Gayley Ave.	67.4	52.9	86.5

Table 4.9-1 Existing Daytime Noise Levels at Selected On- and Off-Campus Locations

Noise Measurement Location	Primary Noise Sources	Noise Level Statistics		
		L_{eq}	L_{min}	L_{max}
4. (2002 LRDP EIR Location 12) UCLA campus—Northwest zone	Traffic on Sunset Blvd., Charles E. Young Dr. North, and Charles E. Young Dr. East	66.9	56.8	84.3
5. UCLA Campus—south side of Dykstra Hall	Traffic on Gayley Ave.	54.0	50.2	67.9
6. UCLA campus—north side of De Neve Housing	Traffic on De Neve Drive	58.2	50.8	76.2
7. UCLA campus—southeast side of Rieber Hall	Traffic on De Neve Drive and pedestrians	57.4	50.7	70.6
8. UCLA campus—northeast side of Hedrick Hall	Traffic on De Neve Drive and pedestrians	57.9	51.0	76.1
9. UCLA campus—southeast side of Hedrick Hall	Human activity including a freshman orientation barbeque	54.2	51.0	76.1
10. UCLA campus—southern side of Hitch Residential Suites	Traffic on De Neve Drive and trucks accessing the Facilities Maintenance Yard	60.3	49.7	75.0
11. UCLA campus—northeastern side of Saxon Residential Suites	Traffic on De Neve Drive	59.4	49.7	74.9

Source: EIP Associates, 2001 and 2002.

Table 4.9-2 Existing 24-Hour Noise Levels at a Selected Residential Location

Noise Measurement Location	Primary Noise Sources	Noise Level Statistics		
		CNEL	L_{min}	L_{max}
12. Residence along Tilden Avenue	Traffic on Sunset Blvd. and Veteran Ave., neighborhood activities.	55.1	41.3	78.4

Source: EIP Associates, 2001 and 2002.

Existing Roadway Noise Levels on Site

Existing 24-hour noise levels have been calculated for various roadways around and within the NHIP site. This task was accomplished using the Federal Highway Administration Highway Noise Prediction Model (FHWA-RD-77-108) and traffic volumes from the UCLA Northwest Campus Housing Infill Project Traffic Analysis (included as Appendix 4). The model calculates the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site environmental conditions. The average vehicle noise rates (energy rates) utilized in the FHWA Model have been modified to reflect average vehicle noise rates identified for California by Caltrans (Hendriks 1987). The Caltrans data show that California automobile noise is 0.8 to 1.0 dBA higher than national levels and medium and heavy truck noise is 0.3 to 3.0 dBA lower than national levels (Hendriks 1987). The

Not to Scale

SOURCE: UCLA

10328-08

EIP ASSOCIATES

FIGURE **4.9-1**

Noise Measurement Locations

UCLA Northwest Housing Infill Project

calculated noise levels are presented in Table 4.9-3 (Existing Roadway Noise Levels On Campus—Regular Session) along with the distances to various noise level contours for the regular session. Table 4.9-4 (Existing Roadway Noise Levels On Campus—Summer Session) identifies the existing roadway noise levels and noise level contours on the campus during the summer session. These roadway noise levels include truck and automotive traffic associated with existing construction activities occurring at the UCLA campus.

Table 4.9-3 Existing Roadway Noise Levels On Campus—Regular Session

Roadway Segment	CNEL at 75 Feet[1]	Distance to Noise Contour[1]		
		70 CNEL	65 CNEL	60 CNEL
Sunset Boulevard, Veteran Avenue to Bellagio Road	68.0	55	118	255
Sunset Boulevard, Bellagio Road to Westwood Boulevard	67.5	51	110	238
Gayley Avenue, Strathmore Place to Veteran Avenue	61.7	21	45	97
Veteran Avenue, Sunset Boulevard to Gayley Avenue	63.0	26	56	120
Bellagio Road, south of Sunset Boulevard	57.7	—[2]	24	53

1. Distances are in feet from roadway centerline.
2. Noise contour is located within the roadway lanes.

Source: EIP Associates, 2002. Calculation data and results are provided in Appendix 3.

Table 4.9-4 Existing Roadway Noise Levels On Campus—Summer Session

Roadway Segment	CNEL at 75 Feet[1]	Distance to Noise Contour[1]		
		70 CNEL	65 CNEL	60 CNEL
Sunset Boulevard, Veteran Avenue to Bellagio Road	67.9	54	117	253
Sunset Boulevard, Bellagio Road to Westwood Boulevard	67.3	50	107	230
Gayley Avenue, Strathmore Place to Veteran Avenue	62.2	23	49	106
Veteran Avenue, Sunset Boulevard to Gayley Avenue	63.7	29	62	133
Bellagio Road, south of Sunset Boulevard	56.7	—[2]	21	45

1. Distances are in feet from roadway centerline.
2. Noise contour is located within the roadway lanes.

Source: EIP Associates, 2002. Calculation data and results are provided in Appendix 3.

Helicopter Noise

Noise is generated by helicopter operations serving the UCLA Medical Center from its present helipad location on the roof of the Marian Davies Children's Center northeast of the Le Conte Avenue and Hilgard Avenue intersection. These operations presently average five to six flights per week and are limited to emergency patient transport and to support the medical center's organ transplant program. Nonemergency flights are not allowed. In late 2004/early 2005, the helipad will be relocated to the roof of the Academic Health Center replacement hospital facility northeast of the Gayley Avenue and Le Conte Avenue intersection. The estimated annual and daily 24-hour average noise level contours for

the relocated helicopter operations are illustrated in Figure 4.9-2 (Estimated Average Helicopter Noise Contours). These contours assume an average of two arrivals and two departures per day, which is more than the current average of five to six flights per week. A shown, the helicopter flight pattern crosses the NHIP site. The noise impacts associated with the relocation of the helipad were analyzed in the certified EIR for the UCLA Academic Health Center Facilities Reconstruction Plan (UCLA 1998).

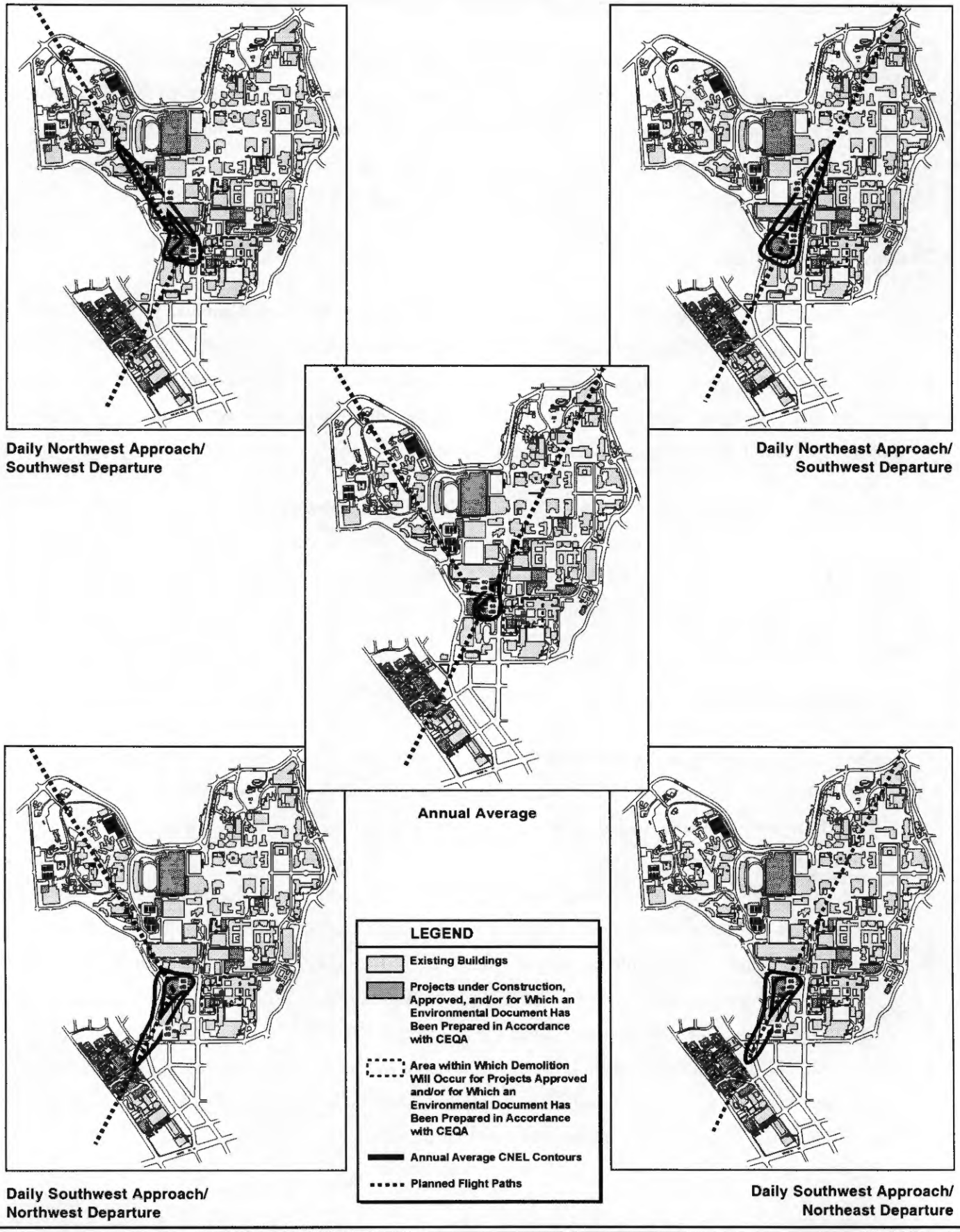
Construction Noise

Construction of several new facilities is presently occurring in the Core Campus, Central, Health Sciences, and Southwest Campus zones. Noise is generated on a daily basis by these activities, although it is primarily isolated in the immediate vicinity of each construction site. The actual noise levels generated by construction varies by site and on a daily and hourly basis, depending on the activity that is occurring, and the types and number of pieces of equipment that are operating.

The closest construction area to the NHIP site is the Intramural Athletic Field Parking Structure Project and the Acosta Center Project located to the east in the Central Zone. The roadway noise levels identified previously in Table 4.9-3 and Table 4.9-4 include truck and automotive traffic associated with existing construction activities at both the Intramural Athletic Field Parking Structure and Acosta Center project sites.

Special Event Noise

Noise is also generated by occasional special events at the UCLA campus. These include daytime special events, such as athletic meets at Drake Track & Field Stadium and the "Festival of Books" in the spring, and nighttime special events, such as outdoor concerts at the Sunset Canyon Recreation Center within the Northwest Zone. The loudest of these special events are the outdoor concerts. Specific noise levels for each concert event cannot be defined since sound level expectations are different for various types of music, each act provides their own sound equipment, and each act selects the location of the speakers. In general, country music is presented at average sound levels in audience areas of approximately 90 dBA L_{eq}, while rock music typically averages sound levels of approximately 105 dBA L_{eq}. The noise levels generated by the special events primarily affect the residential uses within the Northwest zone and could also be audible from residential neighborhoods to the north and west. The operating practice for events at the Sunset Canyon Recreation Center is that amplified sound is not permitted past 9:00 P.M. Sunday through Thursday, or past 10:00 P.M. on Friday and Saturday.



Not to Scale

SOURCE: EIP Associates

10328-08

EIP ASSOCIATES

FIGURE **4.9-2**
Estimated Average Helicopter Noise Contours
UCLA Northwest Housing Infill Project

Existing Vibration Environment

Aside from seismic events, the greatest regular sources of groundborne vibration at the UCLA campus and within the immediate vicinity are construction activities and roadway truck traffic. At the time that this EIR was prepared, no construction activities likely to generate high groundborne vibration velocity levels (i.e., demolition, pile driving, or blasting) were occurring. Heavy trucks are currently transporting materials to and from the construction sites within the UCLA campus. Because of the constrained nature of access to and from the campus (i.e., due to the presence of residential streets, a cemetery, the Santa Monica Mountains, and Westwood Village) as a practical matter, two roadways, Wilshire Boulevard and Sunset Boulevard, provide the primary access routes for construction vehicles. These trucks typically generate groundborne vibration velocity levels of around 63 VdB. These levels could reach 72 VdB where trucks pass over bumps in the road.

4.9.2 Regulatory Framework

Refer to Volume 1, Section 4.9.2 (noise, Regulatory Framework) for a discussion of the regulatory framework for noise and vibration.

4.9.3 Project Impacts and Mitigation

Analytic Method

The analysis in this section focuses on the nature and magnitude of the change in the noise environment associated with implementation of the NHIP. The primary sources of noise associated with the NHIP would be construction activities for the proposed buildings and increased campus-related traffic volumes associated with the additional students housed at the site. Secondary sources of noise would include new stationary sources (such as heating, ventilation, and air conditioning units) and increased human activity throughout the Northwest zone. The net increase in noise levels generated by these activities and other sources have been quantitatively estimated and compared to applicable noise standards and thresholds of significance.

Construction Noise Levels

Construction noise levels were estimated by data published by the U.S. EPA. Potential noise levels are identified for on- and off-campus locations that are sensitive to noise, including residences, medical buildings, and school facilities.

Roadway Noise Levels

Roadway noise levels for on- and off-campus locations were calculated using the FHWA Highway Noise Prediction Model and traffic volumes from the Northwest Housing Infill Project Transportation Systems Analysis (included as Appendix 4). The average vehicle noise rates (energy rates) utilized in the FHWA Model have been modified to reflect average vehicle noise rates identified for California by Caltrans.

2002 LRDP Mitigation Measures and/or Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The following 2002 LRDP EIR MM for noise and vibration has been incorporated into the proposed project:

2002 LRDP EIR MM 4.9-6 — *The TDM program will be extended through the student registration process to provide information concerning alternative transportation options to summer session students to increase awareness of, and participation in, alternative transportation programs during the summer session.* (This is identical to Air Quality MM 4.2-4 and Transportation/Traffic MM 4.13-2(a).)

In addition, the following 2002 LRDP EIR PPs shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.9-1 — *The campus shall continue to evaluate ambient noise conditions when placing new student housing near regular sources of noise such as roadways and stationary equipment and design the new buildings to ensure that interior noise levels would be less than 45 dBA CNEL.*

2002 LRDP EIR PP 4.9-5(a) — *The campus shall continue to provide on-campus housing to continue the evolution of UCLA from a commuter to a residential campus.* (This is identical to Air Quality PP 4.2-1(a) and Transportation/Traffic PP 4.13-1(c).)

2002 LRDP EIR PP 4.9-5(b) — *The campus shall continue to implement a TDM program that meets or exceeds all trip reduction and AVR requirements of the SCAQMD. The TDM program may be subject to modification as new technologies are developed or alternate program elements are found to be more effective.* (This is identical to Air Quality PP 4.2-1(b) and Transportation/Traffic PP 4.13-1(d).)

2002 LRDP EIR PP 4.9-7(a) — *The campus shall continue to shield all new stationary sources of noise that would be located in close proximity to noise-sensitive buildings and uses.*

2002 LRDP EIR PP 4.9-7(b) — *The campus shall continue to provide a landscaped buffer along the western, northern, and eastern edges of the main campus in order to maximize the distance*

between the roadways and new buildings and provide an acoustically soft environment. At a minimum, this environment can be provided by planting grass and other low landscaping.

2002 LRDP EIR PP 4.9-8(a) *To the extent feasible, construction activities shall be limited to 7:00 A.M. to 9:00 P.M. Monday through Friday, 8:00 A.M. to 6:00 P.M. on Saturday, and no construction on Sunday and national holidays, as appropriate, in order to minimize disruption to area residences surrounding the campus and to on-campus uses that are sensitive to noise.*

2002 LRDP EIR PP 4.9-8(b) *The campus shall continue to require by contract specifications that construction equipment be required to be muffled or otherwise shielded. Contracts shall specify that engine-driven equipment be fitted with appropriate noise mufflers.*

2002 LRDP EIR PP 4.9-8(c) *The campus shall continue to require that stationary construction equipment material and vehicle staging be placed to direct noise away from sensitive receptors.*

2002 LRDP EIR PP 4.9-8(d) *The campus shall continue to conduct regular meetings with on-campus constituents to provide advance notice of construction activities in order to coordinate these activities with the academic calendar, scheduled events, and other situations, as needed.*

2002 LRDP EIR PP 4.9-9 *The campus shall continue to conduct meetings, as needed, with off-campus constituents that are affected by campus construction to provide advance notice of construction activities and ensure that the mutual needs of the particular construction project and of those impacted by construction noise are met, to the extent feasible.*

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the UCLA 2002 LRDP may have a significant adverse impact on noise if it would result in any of the following:

- Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- Expose persons to or generate excessive groundborne vibration or groundborne noise levels
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project

- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airstrip, expose people residing or working in the project area to excessive noise levels
- For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels

The applicable federal and State interior noise standards for helicopter noise levels within residential dwellings are both 45 dBA CNEL. The State standard for interior noise levels within new dwellings other than detached single-family dwellings (such as dormitories) is also 45 dBA CNEL.

The CEQA Guidelines do not define the levels at which groundborne vibration or groundborne noise are considered "excessive." This analysis uses the Federal Railway Administration's vibration impact thresholds for sensitive buildings, residences, and institutional land uses. These thresholds are 65 VdB at buildings where vibration would interfere with interior operations (e.g., sensitive on-campus research buildings), 80 VdB at residences and buildings where people normally sleep (e.g., student housing buildings and nearby residences), and 83 VdB at other institutional buildings (FRA 1998).

The CEQA Guidelines also do not define the levels at which permanent and temporary increases in ambient noise are considered "substantial." For the purposes of this analysis, noise impacts would be considered significant if the project resulted in the following:

- A permanent (i.e., long term operational) increase of 5 dBA CNEL over ambient noise levels at any on-campus or off-campus noise-sensitive land use. This threshold is consistent with the City of Los Angeles' *Draft CEQA Thresholds Guide* thresholds for operational noise (City of Los Angeles 1998).
- A permanent (i.e., long term operational) increase of 3 dBA CNEL over ambient noise levels at any on-campus or off-campus noise-sensitive land use location where the future resulting noise level would exceed 70 dBA CNEL (i.e., the noise levels would be considered unacceptable by the City of Los Angeles). This threshold is consistent with the City of Los Angeles' *Draft CEQA Thresholds Guide* thresholds for operational noise (City of Los Angeles 1998).
- Construction activities lasting more than one day that increase the ambient noise levels by 10 dBA or more at any on-campus or off-campus noise-sensitive location. This is consistent with the City of Los Angeles' *Draft L.A. CEQA Thresholds Guide* threshold for construction noise impacts (City of Los Angeles 1998).

As discussed previously in this section, a noise level increase of 3 dBA is barely perceptible to most people, 5 dBA increase is readily noticeable, and a difference of 10 dBA would be perceived as a doubling of loudness.

Effects Not Found to Be Significant

Threshold	If the project is located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airstrip, would it expose people residing or working in the project area to excessive noise levels?

The campus is not located within two miles of a public airport or public use airport, and has not been included in an airport land use plan. The Initial Study consequently concluded that no impacts associated with implementation of the 2002 LRDP and NHIP would occur with respect to noise associated with any public use airport, and no additional analysis would be required in this EIR. However, noise impacts resulting from operation of the Medical Center heliport are addressed in Impacts NHIP 4.9-1 and 4.9-11.

Impacts and Mitigation Project-Specific Impacts and Mitigation

Threshold	Would the project result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact NHIP 4.9-1 **Implementation of the NHIP would not expose new on-campus student residential uses to noise levels in excess of the State's 45 dBA CNEL interior noise standard. This is considered a *less-than-significant* impact.**

Future noise levels within the NHIP site would continue to be dominated by vehicular traffic on the nearby roadways. Other sources of noise would include new stationary sources (such as rooftop mechanical equipment) and increased human activity throughout the campus. The exterior-to-interior reduction of newer residential units constructed in California is generally 30 dBA or more; noise levels within the NHIP student housing buildings could exceed the State's 45 dBA CNEL standard if the exterior noise levels average 75 dBA CNEL or more.

Table 4.9-5 (Future Roadway Noise Levels On Campus—Regular Session) and Table 4.9-6 (Future Roadway Noise Levels On Campus—Summer Session) presents the future average daily noise levels associated with these roadways during both the regular and summer sessions, respectively. All of the

NHIP residential buildings are proposed in areas located beyond the 70 dBA CNEL noise contours. These buildings are also located beyond the 65 dBA CNEL noise contours for the relocated Academic Health Center helipad, as previously identified in Figure 4.9-2.

Table 4.9-5 Future Roadway Noise Levels On Campus—Regular Session

Roadway Segment	CNEL at 75 Feet[1]	Distance to Noise Contour[1]		
		70 CNEL	65 CNEL	60 CNEL
Sunset Boulevard, Veteran Avenue to Bellagio Road	68.2	57	123	264
Sunset Boulevard, Bellagio Road to Westwood Boulevard	67.9	54	116	251
Gayley Avenue, Strathmore Place to Veteran Avenue	62.2	23	49	106
Veteran Avenue, Sunset Boulevard to Gayley Avenue	62.9	25	54	116
Bellagio Road, south of Sunset Boulevard	58.0	—[2]	19	40

1. Distances are in feet from roadway centerline.
2. Noise contour is located within the roadway lanes.

Source: EIP Associates, 2002. Calculation data and results are provided in Appendix 3.

Table 4.9-6 Future Roadway Noise Levels On Campus—Summer Session

Roadway Segment	CNEL at 75 Feet[1]	Distance to Noise Contour[1]		
		70 CNEL	65 CNEL	60 CNEL
Sunset Boulevard, Veteran Avenue to Bellagio Road	68.4	59	127	274
Sunset Boulevard, Bellagio Road to Westwood Boulevard	67.8	53	114	247
Gayley Avenue, Strathmore Place to Veteran Avenue	62.9	25	54	117
Veteran Avenue, Sunset Boulevard to Gayley Avenue	63.5	28	60	128
Bellagio Road, south of Sunset Boulevard	57.5	—[2]	24	51

1. Distances are in feet from roadway centerline.
2. Noise contour is located within the roadway lanes.

Source: EIP Associates, 2002. Calculation data and results are provided in Appendix 3.

Mechanical equipment (HVAC equipment and boilers) would be located on the rooftop of each new building. The type of equipment currently installed on new buildings within the campus generates noise levels that average around 66 dBA L_{eq} on the air inlet side and 62 dBA L_{eq} on the other sides when measured at 50 feet from the source. As discussed in Volume 1, Section 4.9.1, 24 CNEL noise levels are about 6.7 dBA greater than 24-hour L_{eq} measurements. This means that this equipment could generate noise levels that average 69 to 73 dBA CNEL at 50 feet when the equipment is operating constantly for 24 hours. Based on observations of the existing equipment at existing campus buildings, the shielding installed around all new equipment at the campus reduces these noise levels by at least 15 dBA.

Based on this information, exterior noise levels around the NHIP student housing buildings would not approach 75 dBA CNEL and, therefore, interior noise levels within these proposed new residence hall buildings would not exceed 45 dBA CNEL. This impact would be less than significant. Following 2002

LRDP EIR PP 4.9-1, which is incorporated in the project, ensures that this impact remains less than significant. No project-specific mitigation is required.

Threshold	Would the project result in the exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Impact NHIP 4.9-2 **The NHIP construction could generate and expose persons on campus to excessive groundborne vibration or groundborne noise levels. This is considered a *significant* impact.**

Construction activities that would occur for the NHIP have the potential to generate low levels of groundborne vibration. This analysis uses the Federal Railway Administration's vibration impact thresholds for sensitive buildings, residences, and institutional land uses. These thresholds are 65 VdB at buildings where vibration would interfere with interior operations (e.g., sensitive on-campus research buildings), 80 VdB at residences and buildings where people normally sleep (e.g., student housing buildings), and 83 VdB at other institutional buildings (FRA 1998). Groundborne vibration velocity levels of less than 100 VdB would not, however, result in any potential damage to existing buildings.

Table 4.9-7 (Vibration Source Levels for Construction Equipment) identifies various vibration velocity levels for the types of construction equipment that would operate at the campus during construction. This table does not show groundborne vibration velocity levels for actions such as pile driving or blasting since they would not occur as part of the NHIP construction activities. Construction activities would primarily impact existing buildings in the Northwest zone, including Hedrick Hall, Rieber Hall, Sproul Hall, De Neve Housing, Dykstra Hall, and Tom Bradley International Hall. Construction of Hedrick Hall North would be constructed as close as 50 feet to existing residence halls. Based on the information presented in Table 4.9-7, vibration levels could reach up to 81 VdB at these buildings. Although these levels would not cause any damage to the existing residence halls, they would exceed the thresholds for residences when large bulldozers and loaded trucks are operating within 50 feet of the residence halls. The primary effect of these vibration velocity levels is that residents would notice them and possibly be annoyed when trying to sleep, study, or relax when construction activities are occurring between 7:00 A.M. and 9:00 P.M. on weekdays, and 8:00 A.M. and 6:00 P.M. on Saturdays and national holidays. Therefore, this impact is significant.

Table 4.9-7 Vibration Source Levels for Construction Equipment

Equipment	Approximate VdB			
	25 Feet	50 Feet	75 Feet	100 Feet
Large Bulldozer	87	81	77	75
Loaded Trucks	86	80	76	74
Jackhammer	79	73	69	67
Small Bulldozer	58	52	48	46

Source: Federal Railroad Administration 1998 and EIP Associates 2002.

The following mitigation measure shall be implemented:

NHIP MM 4.9-2 *The campus shall notify on-campus residential and administrative users in the Northwest zone when construction activities that could produce excessive groundborne vibration (such as the use of large bulldozers and loaded trucks) are anticipated to occur within 50 feet of the residence halls.*

Implementation of NHIP MM 4.9-2, which is incorporated in the project, represents the best management practice to minimize the impact of groundborne vibration near residence halls during construction. They would not, however, ensure that groundborne vibration do not exceed the identified thresholds of significance for sensitive buildings located in close proximity to the construction sites. Therefore, this impact would be significant and unavoidable. No additional feasible mitigation is available.

Impact NHIP 4.9-3 **The NHIP construction would not generate and expose persons off campus to excessive groundborne vibration or groundborne noise levels. This is considered a *less-than-significant* impact.**

The nearest off-campus residential uses are located at least one hundred feet from the nearest potential NHIP construction site, in this case the proposed Dykstra Parking structure. Based on the information presented in Table 4.9-7, vibration levels from on-campus construction activities would be 75 VdB or less at these residential uses.

Heavy trucks would continue to transport materials to and from the campus when construction activities occur. Because of the constrained nature of access to and from the campus, these trucks are expected to continue using Wilshire Boulevard, Sunset Boulevard, Gayley Avenue, Veteran Avenue, and Hilgard Avenue as the primary access routes to and from the campus. These trucks typically generate groundborne vibration velocity levels of around 63 VdB. These levels could reach 72 VdB where trucks pass over bumps in the road.

In both instances, the resulting groundborne vibration velocity levels would be less than the Federal Railway Administration's 80 VdB vibration impact threshold for residences. Therefore, NHIP construction would not expose off-campus persons to excessive groundborne vibration or groundborne noise levels and this impact would be less than significant. No project-specific mitigation is required.

Impact NHIP 4.9-4 **Implementation of the NHIP would not generate and expose persons on or off campus to excessive groundborne vibration or groundborne noise levels. This is considered a *less-than-significant* impact.**

When construction activities are not occurring at the campus, background operational vibration levels would be expected to average around 50 VdB, as discussed in Section 4.8.1 (Noise and Vibration, Environmental Setting) of Volume 1 of this EIR. This is substantially less than the 65 VdB threshold for sensitive on-campus research buildings, 80 VdB at residences and student housing buildings, and 83 VdB at other institutional buildings. Therefore, operational activities during implementation NHIP would not expose on- or off-campus persons to excessive groundborne vibration or groundborne noise levels, and this impact would be less than significant. No project-specific mitigation is required.

Threshold	Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact NHIP 4.9-5 **Implementation of the NHIP would generate increased local traffic volumes, but would not cause a substantial permanent on- or off-campus increase in ambient roadway noise levels in the project vicinity during the regular session. This is considered a *less-than-significant* impact.**

Locations in the vicinity of the campus could experience slight changes in noise levels as a result of an increase in the student and faculty population and resulting changes in motor vehicle trips during the regular session. The changes in future noise levels at the selected noise-sensitive locations along the study-area roadway segments are identified in Table 4.9-8 (Roadway Noise Impacts—Regular Session). As shown, the changes in motor vehicle trips and circulation patterns during the regular session would increase local noise levels by a maximum of 2.4 dBA CNEL, which is inaudible/imperceptible to most people. The noise levels along several roadway links would be reduced in association with the reallocation of parking and access points that would occur under the NHIP. Although roadway noise levels for specific on-campus locations are not identified in Table 4.9-8, the increase in noise levels identified for the roadway segments that border the main campus would be identical to those identified for the selected off-campus analysis locations in this table.

Table 4.9-8 Roadway Noise Impacts—Regular Session

Roadway Segment	Noise Levels in dBA CNEL		
	Future Without Project Traffic Volumes	Future With Project Traffic Volumes	Increase
Sunset Boulevard, west of Church Street	66.8	66.8	0.0
Sunset Boulevard, Church Street to Sepulveda Boulevard	66.2	66.2	0.0
Sunset Boulevard, Sepulveda Boulevard to Veteran Avenue	66.1	65.9	-0.2
Sunset Boulevard, Veteran Avenue to Bellagio Road	66.2	66.2	0.0
Gayley Avenue, Weyburn Avenue to Le Conte Avenue	65.5	65.5	0.0
Gayley Avenue, Le Conte Avenue to Strathmore Place	66.8	66.8	0.0
Gayley Avenue, Strathmore Pl. to Veteran Avenue	64.9	64.9	0.0
Strathmore Place, west of Gayley Avenue	61.1	61.1	0.0
Levering Avenue, Montana Avenue to Veteran Avenue	58.9	58.9	0.0
Levering Avenue, Veteran Avenue to Le Conte Avenue	58.8	58.8	0.0
Levering Avenue, Le Conte Avenue to Weyburn Avenue	66.3	66.4	0.1
Veteran Avenue, Sunset Boulevard to Gayley Avenue	62.8	62.8	0.0
Veteran Avenue, Gayley Avenue to Levering Avenue	62.4	62.4	0.0
Veteran Avenue, Levering Avenue to Wilshire Boulevard	60.6	60.6	0.0
Montana Avenue, Veteran Avenue to Levering Avenue	65.6	63.4	-2.2
Montana Avenue, Levering Avenue to Sepulveda Boulevard	63.8	66.2	2.4
Montana Avenue, west of Sepulveda Boulevard	62.1	62.1	0.0
Sepulveda Boulevard, Ovada Place to Sunset Boulevard	73.0	73.0	0.0
Sepulveda Boulevard, Sunset Boulevard to Montana Avenue	61.6	61.6	0.0
Bellagio Road, Chalon Road to Sunset Boulevard	61.8	61.8	0.0

Source: EIP Associates, 2002. Calculation data and results are provided in Appendix 3.

Because the roadway noise levels at all on- and off-campus locations would increase by less than 5 dBA CNEL, and by less than 3 dBA CNEL where the resulting noise level is 70 dBA CNEL or more, the NHIP would not generate increased local traffic volumes that cause a substantial permanent on- or off-campus increase in ambient noise levels in the project vicinity during the regular session. This impact would be less than significant. On-campus housing reduces the number of people that otherwise would need to commute to and from the campus to attend class, and the TDM program reduces the number of motor vehicle trips for campus employees.

Following 2002 LRDP PPs 4.9-5(a) and 4.9-5(b), which are incorporated in the project, ensures that motor vehicle trips to and from the campus are reduced to the maximum extent feasible and that this impact remains less than significant. No project-specific mitigation is required.

Volume 1, Impact LRDP 4.9-5, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would cause a substantial permanent off-campus increase in ambient noise levels due to bus activity at the Hilgard Bus Terminal, and determined that a less-than-significant impact would occur. Volume 1 concluded that implementation of the 2002 LRDP would not result in an impact on public transit services during the regular and summer sessions, and no buses would need to be added to the number presently serving the campus and vicinity as a result of the 2002 LRDP. No project-specific mitigation is required.

Impact NHIP 4.9-6 **Implementation of the NHIP would generate increased local traffic volumes, but would not cause a substantial permanent on- or off-campus increase in ambient roadway noise levels during the summer session. This is considered *a less-than-significant* impact.**

During the summer session, the UCLA campus would experience a substantial increase in the number of students attending classes over the baseline condition. The changes in roadway noise levels associated with the NHIP during the summer session are presented in Table 4.9-9 (Roadway Noise Impacts—Summer Session). As shown, the changes in motor vehicle trips and circulation patterns during the regular session would increase local noise levels by a maximum of 1.8 dBA CNEL, which is inaudible/imperceptible to most people. The noise levels along several roadway links would be reduced as a result of the reallocation of parking and access points that would occur under the NHIP. Although roadway noise levels for specific on-campus locations are not identified in Table 4.9-9, the increase in noise levels identified for the roadway segments that border the main campus would be identical to those identified for the selected off-campus analysis locations in this table.

Because the roadway noise levels at all on- and off-campus locations would increase by less than 5 dBA CNEL, and by less than 3 dBA CNEL where the resulting noise level is 70 dBA CNEL or more, the NHIP would not generate increased local traffic volumes that cause a substantial permanent on- or off-campus increase in ambient noise levels in the project vicinity during the summer session. This impact would be less than significant. Following LRDP EIR MM 4.9-6 and PPs 4.9-5(a) and 4.9-5(b), which are incorporated into the project, ensures that motor vehicle trips to and from the campus are reduced to the maximum extent feasible and that this impact is less than significant. No project-specific mitigation is required.

Table 4.9-9 Roadway Noise Impacts—Summer Session

Roadway Segment	Noise Levels in dBA CNEL		
	Future Without Project Traffic Volumes	Future With Project Traffic Volumes	Increase
Sunset Boulevard, west of Church Street	67.4	67.4	0.0
Sunset Boulevard, Church Street to Sepulveda Boulevard	66.4	66.4	0.0
Sunset Boulevard, Sepulveda Boulevard to Veteran Avenue	65.9	66.0	0.0
Sunset Boulevard, Veteran Avenue to Bellagio Road	67.7	66.2	-1.5
Gayley Avenue, Weyburn Avenue to Le Conte Avenue	65.4	65.6	0.2
Gayley Avenue, Le Conte Avenue to Strathmore Place	66.6	66.8	0.2
Gayley Avenue, Strathmore Place to Veteran Avenue	65.3	65.5	0.2
Strathmore Place, west of Gayley Avenue	58.9	59.3	0.4
Levering Avenue, Montana Avenue to Veteran Avenue	58.8	58.8	0.0
Levering Avenue, Veteran Avenue to Le Conte Avenue	58.5	58.5	0.0
Levering Avenue, Le Conte Avenue to Weyburn Avenue	66.8	67.0	0.2
Veteran Avenue, Sunset Boulevard to Gayley Avenue	64.7	63.3	-1.4
Veteran Avenue, Gayley Avenue to Levering Avenue	62.8	62.8	0.0
Veteran Avenue, Levering Avenue to Wilshire Boulevard	60.8	62.6	1.8
Montana Avenue, Veteran Avenue to Levering Avenue	64.6	64.9	0.3
Montana Avenue, Levering Avenue to Sepulveda Boulevard	63.6	63.9	0.3
Montana Avenue, west of Sepulveda Boulevard	61.8	62.0	0.2
Sepulveda Boulevard, Ovada Place to Sunset Boulevard	73.3	73.3	0.0
Sepulveda Boulevard, Sunset Boulevard to Montana Avenue	61.9	61.9	0.0
Bellagio Road, Chalon Road to Sunset Boulevard	62.6	62.6	0.0

Source: EIP Associates, 2002. Calculation data and results are provided in Appendix 3.

As discussed in Impact 4.9-5, no changes in bus service during the regular and summer session are anticipated as a result of implementation of the 2002 LRDP, and the impact of the 2002 LRDP on noise levels associated with public transit at the Hilgard Bus Terminal would be less than significant. No project-specific mitigation is required.

Impact NHIP 4.9-7 **Implementation of the NHIP could add new stationary sources of noise, but would not cause a substantial permanent on- or off-campus increase in ambient noise levels. This is considered a *less-than-significant* impact.**

New stationary sources of noise, such as rooftop mechanical equipment (HVAC equipment and boilers) would be installed at the buildings proposed under the NHIP. This equipment would be shielded and appropriate noise muffling devices installed to reduce noise levels that affect nearby on- and/or off-

campus noise-sensitive uses. The type of equipment currently installed on new buildings within the campus generates noise levels that average around 66 dBA L_{eq} on the air inlet side and 62 dBA L_{eq} on the other sides when measured at 50 feet from the source. Based on observations of the existing equipment at existing campus buildings, the shielding installed around all new equipment at the campus reduces these noise levels by at least 15 dBA. Because existing noise levels in the vicinity of the NHIP site currently average 54 to 60 dBA L_{eq}, the resulting equipment noise levels of less than 51 dBA L_{eq} at nearby buildings would not expected to cause a substantial permanent increase in noise levels on campus of 5 dBA CNEL or more. Off-campus uses would be located several hundred feet from any potential site of new stationary equipment and would be separated from the campus by landscaped buffers and roadways. As such, it would not cause a substantial increase in noise levels of 5 dBA CNEL or more. This impact would be less than significant. Following 2002 LRDP EIR PPs 4.9-7(a) and 4.9-7(b), which are incorporated in the project, reduces the noise levels generated by mechanical equipment and audible from noise-sensitive uses, and ensures that this impact remains less than significant. No project-specific mitigation is required.

Noise levels would be generated by activities within the proposed recreation facility. As discussed in Chapter 3 (Project Description) of this EIR, the exterior recreation areas would primarily be limited to daytime use, although the Housing Administration could sponsor occasional evening activities. Noise levels from typical ball courts average around 54.0 to 56.0 dBA L_{eq} at a distance of about 50 feet. Noise levels were monitored near an existing pool where people were swimming and talking, and the results indicate that noise levels from that type of facility average around 51 dBA L_{eq} at a distance of about 50 feet. When the basketball courts, volleyball courts, and swimming pool area would be used at the same time, aggregate noise levels would average around 57 dBA L_{eq}.

The nearest on-campus residence hall would be located at least 100 feet from the recreation facility and the nearest off-campus residence would be located more than 400 feet from this use. Although some aspects of the recreational activities could be audible to on- and off-campus receptors (i.e., they could hear a bouncing ball or peoples voices), the resulting source-specific noise levels would be 51 dBA L_{eq} or less at the on-campus receptor and less than 40 dBA L_{eq} at the off-campus locations. These noise levels would not increase noise levels at on- or off-campus locations by 5 dBA L_{eq} or more. Therefore, operation of the recreation facility would not cause a substantial increase in on- or off-campus ambient noise levels, and this impact would be less than significant. No project-specific mitigation is required.

Noise levels would also be generated by activities within the proposed Dykstra Parking Structure. Noise sources would include tires squealing, engines accelerating, doors slamming, car alarms, and people

talking. Noise levels within parking structures average around 60.0 to 70 dBA L_{eq}. The nearest off-campus residence would be located approximately 100 feet from this parking structure. Existing daytime noise levels at this location, as monitored and shown in Table 4.9-1 for monitoring location 3, are around 67.4 dBA L_{eq}. Therefore, activities within the Dykstra Parking Structure would not increase noise levels at off-campus locations by 5 dBA L_{eq} or more and this impact would be less than significant. No project-specific mitigation is required.

Threshold	Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact NHIP 4.9-8 **The NHIP construction would result in substantial temporary or periodic increases in ambient noise levels at on-campus locations. This is considered a *significant* impact.**

Construction activities are an existing and on-going source of noise at the UCLA campus. Construction of several new facilities is presently occurring in the Core Campus, Central, Health Sciences, and Southwest zones.

Construction activities associated with the NHIP are expected to occur over a period of several years. Four basic types of activities would be expected to occur and generate noise during construction. First, some existing buildings within the campus would be demolished and existing surface features cleared. Following demolition, the development sites would be prepared (graded and/or excavated) to accommodate the new building foundations and surface features. The buildings and surface features would then be constructed and readied for use. Finally, the area around the new buildings would be landscaped. During each stage of development there would be a different mix of equipment operating, and noise levels would vary based on the amount of equipment in operation and the location of the activity.

The U.S. Environmental Protection Agency (U.S. EPA) has compiled data regarding the noise generating characteristics of specific types of construction equipment and typical construction activities. These data are presented in Table 4.9-10 (Noise Ranges of Typical Construction Equipment) and Table 4.9-11 (Typical Outdoor Construction Noise Levels). Noise levels diminish rapidly with distance from the construction site at a rate of approximately 6 to 7.5 dBA per doubling of distance. For example, a noise level of 84 dBA L_{eq} measured at 50 feet from the noise source to the receptor would reduce to 78 dBA L_{eq} at 100 feet from the source to the receptor, and reduce by another 6 dBA to 72 dBA L_{eq} at 200 feet

from the source to the receptor. These tables do not show noise levels for pile driving or blasting operations since they will not occur at the site during the implementation of the NHIP.

Table 4.9-10 Noise Ranges of Typical Construction Equipment

Equipment	Noise Levels in dBA L_{eq} at 50 Feet[1]
Front Loader	73–86
Trucks	82–95
Cranes (moveable)	75–88
Cranes (derrick)	86–89
Vibrator	68–82
Saws	72–82
Pneumatic Impact Equipment	83–88
Jackhammers	81–98
Pumps	68–72
Generators	71–83
Compressors	75–87
Concrete Mixers	75–88
Concrete Pumps	81–85
Back Hoe	73–95
Pile Driving (peaks)	95–107
Tractor	77–98
Scraper/Grader	80–93
Paver	85–88

1. Machinery equipped with noise control devices or other noise-reducing design features does not generate the same level of noise emissions as that shown in this table.

Source: U.S. EPA, 1971

Table 4.9-11 Typical Outdoor Construction Noise Levels

Construction Phase	Noise Level at 50 Feet dBA L_{eq}	Noise Level at 50 Feet with Mufflers dBA L_{eq}
Ground Clearing	84	82
Excavation, Grading	89	86
Foundations	78	77
Structural	85	83
Finishing	89	86

Source: U.S. EPA, 1971

Construction activities would primarily impact existing buildings in the Northwest zone, including Hedrick Hall, Rieber Hall, Sproul Hall, De Neve Housing, Dykstra Hall, and Tom Bradley International Hall. Construction of Hedrick North would be constructed as close as 50 feet to existing residence halls. Based on the information presented in Table 4.9-1, construction noise levels could reach up to 89 dBA

L_{eq} during the daytime at these buildings. This would be an increase of more than 10.0 dBA L_{eq} over the existing daytime noise levels at the existing noise sensitive uses. Noise levels would also increase within the dormitory units that face the construction sites, although by a lesser amount since the buildings would reduce exterior noise levels by 20 to 25 dBA L_{eq}. The primary effect of these noise levels is that residents would notice them and possibly be annoyed when trying to sleep, study, or relax when construction activities are occurring between 7:00 A.M. and 9:00 P.M. on weekdays, and 8:00 A.M. and 6:00 P.M. on Saturdays and national holidays. Therefore, this impact is significant.

Following 2002 LRDP EIR PPs 4.9-8(a) through 4.9-8(d), which are incorporated in the project, minimizes construction noise impacts to on-campus locations. They would not, however, ensure that noise levels do not increase by less than 10 dBA at noise sensitive uses located in close proximity to the construction sites. Therefore, this impact would be significant and unavoidable. No feasible mitigation is available.

Impact NHIP 4.9-9 **The NHIP construction would result in substantial temporary or periodic increases in ambient noise levels at off-campus locations. This is considered a *significant* impact.**

Off-campus residential uses that are located at least 100 hundred feet from NHIP construction sites (such as those near the proposed Dykstra Parking site) are separated from the campus by sufficient distance and with intervening roadways (e.g., Gayley Avenue) such that the construction noise levels identified in Table 4.9-11 would be reduced by at least 6 dBA. Therefore, in these situations, construction noise levels would be less than 77 dBA L_{eq} at these nearest residential uses. Further, existing daytime noise levels would not increase by more than 10 dBA, and in these instances, construction noise would not result in substantial temporary periodic increases in ambient noise levels at off-campus residential locations.

Off-campus residential uses that are located less than 100 hundred feet from NHIP construction sites could experience ambient noise levels that are increased by 10 dBA or more. Furthermore, construction work could include infrastructure improvements and utility connections in off-campus roadways. Such infrastructure and/or utility work may need to be scheduled outside of the typical hours of construction in order to avoid traffic impacts from temporary road, lane, or intersection closures. However, as required by 2002 LRDP PP 4.9-9, which is incorporated into the NHIP, UCLA Capital Programs conducts meetings, as needed, with off campus constituents that are affected by campus construction in order to provide advance notification of construction activities and ensure that the mutual needs of the

particular construction project and those impacted by construction noise are met, to the maximum extent feasible.

Following 2002 LRDP PPs 4.9-8(a) through PP 4.9-8(d) and PP 4.9-9 minimizes construction noise impacts to off-campus locations. They would not, however, ensure that noise levels do not increase by less than 10 dBA at noise sensitive uses located in close proximity to the NHIP construction sites. Therefore, this impact would be significant and unavoidable. No feasible mitigation is available.

Impact NHIP 4.9-10 **Implementation of the NHIP would not result in substantial temporary or periodic increases in ambient noise levels due to special events. This is considered a *less-than-significant* impact.**

Under the 2002 LRDP, which includes the NHIP, noise would continue to be generated by occasional special events at the UCLA campus, such as athletic events at Drake Track & Field Stadium and outdoor concerts within the Northwest Zone. The loudest of these would continue to be the outdoor concerts. These special events are no different than those that occur under the existing baseline conditions. The operating practice for events at the Sunset Canyon Recreation Center is that amplified sound is not permitted past 9:00 P.M. Sunday through Thursday, or past 10:00 P.M. on Friday and Saturday. Implementation of the 2002 LRDP and, therefore, the NHIP would increase the number of students living at the campus within Northwest zone, but would not increase the number of these events. As such, these events would not result in substantial temporary or periodic increases in ambient noise levels. This is a less-than-significant impact, and no mitigation is required.

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

Impact NHIP 4.9-11 **Implementation of the NHIP would not expose additional students, faculty, and visitors within the Northwest zone to excessive noise levels generated by helicopter operations. This is considered a *less-than-significant* impact.**

Students, faculty, and visitors to UCLA are currently exposed to short-term noise levels generated by helicopter operations to and from the Academic Health Center. These helicopter operations occur an average of five to six times per week and people are exposed to helicopter noise for less than 30 seconds of each flight.

Implementation of the NHIP would not increase the number of helicopter flights, but would increase the number of students, faculty, and visitors within the Northwest zone that are exposed to helicopter noise levels. Any number of these people could be exposed to short-term helicopter noise levels if they are on

campus, outdoors, and under the flight path of the helicopter. At most, these people would be exposed to the helicopter noise for less than 30 seconds. Therefore, implementation of the NHIP would not expose additional students, faculty, and visitors within the Northwest zone to excessive noise levels generated by helicopter operations. This is a less-than-significant impact, and no mitigation is required.

4.9.4 Cumulative Impacts

Refer to Volume 1, Section 4.12.4 (Noise, Cumulative Impacts) for a discussion of cumulative noise impacts.

4.9.5 References

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4.10 POPULATION AND HOUSING

This section hereby incorporates Volume 1, Section 4.10 (Population and Housing) by reference.

4.10.1 Environmental Setting

Refer to Volume 1, Section 4.10.1 (Population and Housing, Environmental Setting) for a discussion of existing population and housing characteristics on the campus and in the City of Los Angeles Subregion, the City of Los Angeles, and the Westwood Community Plan area.

4.10.2 Project Impacts and Mitigation

Analytic Method

This analysis considers population and household growth that would occur with implementation of the 2002 LRDP and the NHIP, and whether this growth is within regional forecasts and/or whether it would result in the displacement of housing or people.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs or PPs related to population and housing.

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on population and housing if it would result in any of the following:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)[8]
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere

[8] Indirect population and housing impacts are considered significant if the scale of growth associated with the project would exceed growth forecasted by SCAG for the Los Angeles City Subregion, the geographic area used by SCAG for determining conformity with its Regional Comprehensive Plan and Guide.

Effects Not Found to Be Significant

Threshold	Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The Initial Study determined that implementation of the 2002 LRDP would not require the demolition of any existing on-campus housing as part of the proposed project. Instead, 2,000 additional beds of housing would be provided. Implementation of the 2002 LRDP would neither displace existing housing units nor reduce the capacity of existing units and, therefore, would not require construction of replacement housing elsewhere. Consequently, the Initial Study concluded that no additional analysis of this issue would be required in this EIR.

Threshold	Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The Initial Study determined that implementation of the 2002 LRDP would not result in significant impacts by displacing people. No existing housing would be demolished as part of the proposed project. Instead, 2,000 beds of housing would be provided. Although there may be a conversion of some triple-occupancy dormitory rooms to double-occupancy dormitory rooms, these students will be accommodated in other on-campus housing. The project would not, therefore, displace substantial numbers of people and would not require construction of replacement housing elsewhere. Consequently, the Initial Study concluded that no additional analysis of this issue would be required in this EIR.

Impacts and Mitigation

Threshold	Would the project induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure)?

Impact NHIP 4.10-1 **Implementation of the NHIP would accommodate population growth on the UCLA campus. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.10-1, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would accommodate population growth on the UCLA campus, and determined that a less-than-significant impact would occur. While accommodating growth of 4,000 full-time equivalent (FTE) students as mandated by the California State Legislature, the 2002 LRDP does not propose any new development beyond that already approved in the 1990 LRDP. Instead, the increased population at

UCLA would be accommodated within the remaining approved physical development capacity of 1.71 million gsf previously allocated in the approved 1990 LRDP. In addition, the growth in UCLA population is well below regional and local growth projections. Considering all of these factors, the scope of the 2002 LRDP, which includes the NHIP, has been fully considered and evaluated by local and regional plans and policies developed by the City of Los Angeles and SCAG, and the 2002 LRDP accommodates, rather than induces, population growth. Therefore, a less-than-significant impact related to the inducement of population growth in the area would occur, and no project-specific mitigation is required.

Impact NHIP 4.10-2 Implementation of the NHIP would not result in a substantial increase in demand for housing. This is considered a *less-than-significant* impact.

Volume 1, Impact LRDP 4.10-2, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would result in a substantial increase in the demand for housing, and determined that a less-than-significant impact would occur. While the increase in student enrollment is anticipated to result in an increased demand for, and use of, campus housing, the NHIP, as part of the development included in the 2002 LRDP, would accommodate the housing needs attributable to a portion of the enrollment increase. The NHIP would reduce the number of existing triple room occupancies and allow for an increase in the student resident population. In addition, the NHIP would result in an increase in staff to serve the additional housing and students. Approximately 249 new staff would be employed on campus by 2010–11 to provide administrative, recreation, and dining services to the expanded residential population associated with the NHIP. Of the 249 new staff members, approximately 35 would be students this includes three additional Community Safety Officers to augment the existing safety service in the Northwest zone. This growth would be added to the existing staff population of 778, resulting in a total of approximately 1,027 staff members serving the Northwest zone housing and associated functions, as well as recreation and academic services.

As further discussed in Impact LRDP 4.10-2, the 2002 LRDP, of which the NHIP is a part, envisions an increase in approximately 1,895 academic and staff employees during the regular session and 2,041 academic and staff employees during the summer session. In addition, based on the direct-to-indirect employment impact ratio used in the *UCLA Economic Impact Study* (e.g., 0.68 direct and indirect jobs for every direct job), the 2002 LRDP's 1,895 total additional academic and staff employees could be expected to generate 1,288 indirect jobs distributed throughout Los Angeles County. SCAG forecasts that 448,000 additional jobs will be created in Los Angeles County over about the same 10 year period, making the increase in jobs attributable to the LRDP approximately 0.7 percent of the total (SCAG,

2001 Regional Transportation Plan). A portion of these employees already reside in the area (or are also enrolled as students at UCLA) and would not require new housing. It is possible that staff added as a result of the NHIP may seek housing opportunities in the Westwood Community Plan area, as well as other areas, such as West Los Angeles, Santa Monica, Culver City, and/or the San Fernando Valley. However, the specific distribution of faculty and staff housing in these and other areas is speculative and is driven by many factors, such as housing, cost, choice of school district, and personal preferences that are outside of the control or influence of UCLA. As discussed in Section 4.11-3 of Volume 1 of this EIR (Public Services, Schools), if the project's 1,895 additional employees distribute their households in the same patterns as existing employee households, about two-thirds (1,321) would be expected to locate in the City of Los Angeles, and a large portion of these (658) would choose neighborhoods on the Westside. About another one-quarter (432) would reside in other Los Angeles County cities, and the balance (84) would locate in other areas outside Los Angeles County. As indicated above, the current vacancy rate for housing in the City of Los Angeles is 4.7 percent, or 62,294 units. In addition, it is expected that additional new housing stock will be constructed in the City of Los Angeles, including low and moderate income housing, in accordance with housing goals and policies set forth in the City of Los Angeles General Plan Housing Element and state law. SCAG's Regional Housing Needs Assessment (2000) has identified that the City of Los Angeles is to provide an additional 60,280 housing units between 1998 and 2005 to accommodate anticipated demand from population growth. While the number of new housing units to be constructed and future vacancy rates are unknown, the relatively small population increases associated with the 2002 LRDP, and, therefore, the NHIP, are included within SCAG projections, and thus are imbedded within the anticipated future demand identified by SCAG for housing in the City of Los Angeles. As a result, neither the 2002 LRDP nor the NHIP, as a project-specific component of the 2002 LRDP, will place an additional burden on the ability of the City of Los Angeles to satisfy its share of regional housing needs during the period of the 2002 LRDP. Therefore, a less-than-significant impact on housing supply would occur. It should further be considered that most staff positions (which are the additional jobs that would be added as a result of the NHIP) involve vocational opportunities that are generally found in most communities, and may not offer a unique enough opportunity to induce job-seekers to relocate to the area for the sole purpose of filling these positions. Due to the existing unemployment rate in Los Angeles County, which has averaged 7.5 percent over the last ten years (Annual Average Labor Force Data for Counties, State of California, Employment Development Department, 1992–2002), it is expected that qualified area residents will fill the vast majority of additional staff positions. Accordingly, it is anticipated that most of the new staff positions associated with the NHIP would be filled by persons already residing in the area, and would not create new demand for additional housing.

As indicated above, SCAG forecasts that an additional 448,000 additional jobs will be created in Los Angeles County by 2010, making the increase in jobs attributable to the 2002 LRDP approximately 0.7 percent of the total. Since the growth attributable to the LRDP, and, therefore, the NHIP, is included in the SCAG forecasts, it will not result in employment growth in excess of SCAG projections. Impacts related to a substantial increase in demand for housing are less than significant for the NHIP, and no project-specific mitigation is required.

4.10.3 Cumulative Impacts

Refer to Volume 1, Section 4.10.4 (Population and Housing, Cumulative Impacts) for a discussion of cumulative population and housing impacts.

4.10.4 References

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4.11 PUBLIC SERVICES

This section hereby incorporates Volume 1, Section 4.11 (Public Services) by reference. Parks and recreation impacts are addressed in Section 4.12 (Recreation), and impacts related to emergency access (during construction or operation) are addressed in Section 4.13 (Transportation/Traffic) and Section 4.6 (Hazards and Hazardous Materials).

4.11.1 Fire Protection

Environmental Setting

The Los Angeles City Fire Department (LAFD) provides fire suppression and rescue operations for the UCLA campus. Fire alarm calls on campus are received by the University of California Police Department (UCPD) command center staff, who screen calls, determine the call location, and then alert the LAFD. Fire Station Nos. 37, 71, and 92 have primary responsibility to provide first response to campus alarms. Fire Station No. 37 is the closest, and is located in the Southwest zone approximately 1.3 miles from the furthest part of the campus. Additional information regarding off-campus fire stations serving the campus, as well as on-campus fire prevention programs and policies, are described in Volume 1, Section 4.11 (Public Services) of this EIR.

Regulatory Framework

While there are no federal regulations pertaining to fire protection, State fire regulations are set forth in Sections 13000 *et seq.* of the California Health and Safety Code, which include regulations concerning building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training. The State Fire Marshal enforces these regulations and building standards in all State-owned buildings, State-occupied buildings, and State institutions throughout California, including the University of California.

Project Impacts and Mitigation

Analytic Method

Significant impacts on fire protection services would result from an increase in population or building area that results in lengthened response times, inadequate fire flows, and/or the need for new or altered facilities. The LAFD determines adequacy of fire protection services by utilization of response times as

performance objectives (personal communication, Captain Carlson, LAFD, 2001). Therefore, the following analysis is based on this performance objective rather than service ratios, which are not utilized by the LAFD. The LAFD has an average response time of three to six minutes (personal communication, Captain Carlson, LAFD, 2001). The standard for an urban level of service requires that an engine company arrive on the scene within five minutes, 90 percent of the time, with four fire fighters per Engine Company.

2002 LRDP EIR Mitigation Measure and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs related to fire protection services. However, the following 2002 LRDP EIR PP shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.11-1 *Fire alarm connections to the University Police Command Center shall continue to be provided in all new and renovated buildings to provide immediate location information to the Los Angeles Fire Department to reduce response times in emergency situations.*

Thresholds of Significance

The following threshold of significance is based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on fire protection if it would

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection

Effects Not Found to Be Significant

The Initial Study did not indicate any Effects Not Found to Be Significant with respect to fire protection services; therefore, all potential impacts are discussed in Volume 1 or Volume 2 of this EIR.

Impacts and Mitigation

Threshold	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection?

Impact NHIP 4.11-1 **Implementation of the NHIP could increase the demand for fire protection services, but would not require the construction of new or physically altered facilities to accommodate the increased demand and maintain acceptable response times and fire flows. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.11-1, analyzed how the implementation of the 2002 LRDP would result in acceptable fire protection response times, distances, and staffing levels and determined that a less-than-significant impact would occur after implementation of applicable 2002 LRDP MMs and/or PPs. The UCLA campus is served by Fire Station No. 37, which is located in the Southwest zone, approximately 1.3 miles from the furthest part of the campus. The Los Angeles City Fire Department has an average response time of three to six minutes to campus, which meets the service goal of five minutes or less at least 90 percent of the time (personal communication, Captain Carlson, LAFD, 2001). Furthermore, as required by the Los Angeles Municipal Code (Section 57.09.06, as amended, June 1997), the furthest point on campus is not located more than 1.5 miles from the nearest engine company (Fire Station No. 37), which is within the maximum response distance allowed by Code for commercial, industrial, and/or high-density residential uses. The Code allows response distances to exceed 1.5 miles if new structures are constructed with automatic fire sprinkler systems, which is standard practice for all campus buildings. Because development under the 2002 LRDP would occur entirely within campus boundaries, which can be adequately served within the established response times and distances, no new, expanded, or altered fire protection services or facilities are required to maintain acceptable response times or distances.

As of 2001, Fire Station No. 37 is staffed by a battalion chief, twelve sworn fire personnel, two paramedics, and a staff assistant, ensuring that four fire fighters can be provided per Engine Company. In addition to LAFD paramedics, campus emergency technicians from the Medical Center respond to a number of emergency calls both on and off campus. Personal communication with the LAFD (Captain Carlson, LAFD Operation Control Division, 2002) determined that current staffing and equipment levels are adequate to maintain an appropriate level of service to the campus under the 2002 LRDP, including the NHIP. In addition, following 2002 LRDP EIR PP 4.11-1 would further facilitate

emergency response by continuing to provide fire alarm connections to the University Police Command Center in all new and renovated buildings, thereby providing immediate location information to the fire department.

The NHIP incorporates a fire access plan that provides for fire truck access to within 150 feet of all new perimeter buildings walls. The Northwest zone loop road (De Neve Drive) primarily provides this access. However, in other cases, fire access will be provided by a secondary interior system of fire lanes consisting of grass-crete, which is designed to current standards for grade, load, and turning requirements. This secondary system will be delineated as required by the LAFD and will be visually integrated with the landscape of the campus. Fire hydrants will also be provided in accordance with the requirements of the National Fire Protection Association (NFPA) Standard No. 24, 1977 Edition, as incorporated into the California Code of Regulations.

Water connections would be extended from the existing 12-inch water line located under De Neve Drive, which ultimately connects to the DWP's 36-inch-diameter water main at the intersection of Sunset Boulevard and Bellagio Drive. The water supply station (DWP #67961) at Sunset Boulevard and Bellagio Drive has a capacity to provide 5,000 gallons per minute (gpm) at a pressure of 110 pounds per square inch (psi). Existing fire flow to Hedrick and Rieber Halls is 2,250 gpm, 3,000 gpm to Sproul Hall, 2,000 gpm to Dykstra Hall, and 4,250 gpm to the De Neve housing, all delivered at 20 psi. The proposed buildings would demand a fire flow of 1,500 gpm at 20 psi (Master Plan Building Mechanical Consultant [Ideas for the Built Environment], 2000), which can be provided by the existing fire flows. The Campus Fire Marshal will review and approve the NHIP plans to ensure that (1) adequate fire flows will be maintained (including localized pipe upgrades or connections that might be required to connect new buildings to the system); (2) an adequate number of fire hydrants will be provided in the appropriate locations; and (3) circulation and design features will allow adequate emergency vehicle access in compliance with the Los Angeles Municipal Code. In addition, the NHIP would comply with all regulations of California Health and Safety Code Sections 13000 *et seq.* pertaining to fire protection systems, including provision of State-mandated smoke alarms, fire extinguishers, appropriate building access, and emergency response notification systems.

Because emergency access and fire flows are adequate to serve the proposed project, the impact of the NHIP on fire protection services would be less than significant, and no project-specific mitigation is required.

4.11.2 Police Protection

Environmental Setting

The University of California Police Department (UCPD) is part of the California State Police force, and its jurisdictional responsibilities are articulated in Section 92600 of the State of California Education Code. As with other University campuses, the UCPD has primary responsibility for the campus and all off-campus properties owned and operated by UCLA. Within a one-mile radius of University-owned property, the UCPD has concurrent jurisdiction with the Los Angeles Police Department (LAPD). UCPD is often the first responder at properties around the campus and may take primary responsibility for student-oriented events off campus.

As a part of the UCLA Community Safety Department, the UCPD force currently consists of 60 sworn officers (personal communication, Nancy Greenstein, UCPD, 2002). Personnel are used in crime prevention, investigations, and administration. All sworn officers are available on an on call basis to respond, as needed, in emergency situations. In addition, although not formally part of the UCPD, there are 29 full-time employees in the Parking Patrol Division, and the Community Safety Department trains and employs approximately 65 to 100 students on a part-time basis as Community Service Officers (CSO) to provide escort, ambulance, hospital security, equipment security services, and patrol assistance.

The UCPD station is located on campus adjacent to the Energy Systems Facility, at the northwest corner of Charles E. Young Drive South and Westwood Plaza. In addition to the main headquarters, the UCPD also operates a substation on Broxton Avenue at the Westwood Village Community Services Center. A detailed description of UCPD and LAPD jurisdiction and staffing is contained in Volume 1, Section 4.11 (Public Services) of this EIR.

Regulatory Framework

There are no federal or State regulations pertaining to police services applicable to the proposed project.

Project Impacts and Mitigation

Analytic Method

Significant impacts on police services would be caused by an increase in campus population that resulted in inadequate staffing levels and/or the need for new or altered facilities. The LAPD and UCPD utilize a service ratio as its performance standard to determine adequacy of police protection services, rather than

response times (personal communication, LAPD, 2001). To estimate the number of police officers required to serve the increased population, a ratio is applied to a population level. Estimated staffing-to-population ratios for 2001 at all University of California campuses range from 0.7 to 1.6 sworn officers per 1,000 population. UCLA currently provides a ratio of approximately 1 sworn officer per 1,000 population. Based upon an anticipated average weekday campus population of 61,540 in 2010–11, which includes the growth associated with the NHIP, and using the existing UC staffing-to-population ratios, UCLA would need to provide between 43 and 98 sworn officers, in addition to CSOs and parking patrol officers, in order to continue to provide adequate police services to the campus population.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs related to police protection services. However, the following 2002 LRDP EIR PPs shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.11-2(a) *Police staffing levels and equipment needs shall continue to be assessed on an ongoing basis as individual development projects are proposed and on an annual basis during the campus budgeting process to ensure that the appropriate service levels will be maintained to protect an increased campus population and an increased level of development.*

2002 LRDP EIR PP 4.11-2(b) *Annual meetings shall continue to be attended by the Director of UCLA Housing and the UCPD to evaluate the adequacy of police protection service for University-owned housing, assess institutional priorities and budgetary requirements, and identify and implement appropriate actions to ensure the continued adequacy of police protection services for resident students.*

Thresholds of Significance

The following threshold of significance is based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on police services if it would

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.

Effects Not Found to Be Significant

The Initial Study did not indicate any Effects Not Found to Be Significant with respect to police protection services; therefore, all potential impacts are discussed in Volume 1 or Volume 2 of this EIR.

Impacts and Mitigation

Threshold	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection?

Impact NHIP 4.11-2 **Implementation of the NHIP could increase the demand for police services, but would not require new or physically altered facilities to maintain acceptable service ratios for police protection services. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.11-2, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would result in acceptable levels of police protection service and/or require new or physically altered governmental facilities, and determined that a less-than-significant impact would occur after implementation of 2002 LRDP EIR PP 4.11-2(a) and PP 4.11-2(b). Based on a campus population of 61,540 in 2010–11, the provision of between 43 and 98 sworn officers would continue to serve the campus population at the same level of service as currently provided, including the increase in the resident population of 1,675 students and an estimated 249 staff attributable to the NHIP. The campus currently provides 60 sworn officers, as well as CSOs and parking patrol officers, which is well within the range to serve the campus under full implementation of the 2002 LRDP, including the NHIP. In addition, as provided by 2002 LRDP PP 4.11-2(a), staffing and equipment levels are assessed on an ongoing basis as campus development progresses to ensure that adequate police protection continues to be provided.

While response times are not utilized by the LAPD or UCPD to measure performance, all campus buildings will continue to feature direct fire alarm connections in all new and renovated campus buildings to facilitate emergency response by providing immediate location information to the fire department, as required by 2002 LRDP PP 4.11-1. No new or altered facilities are anticipated to accommodate the increased demand from implementation of the 2002 LRDP. If any such facilities are required in the future, they will be subject to subsequent environmental review pursuant to CEQA. This impact would, therefore, be considered less than significant, and no mitigation is required.

While police protection services have been determined to be adequate to serve growth envisioned under the 2002 LRDP to 2010–11, a project-specific analysis of police protection elements of the NHIP is provided in the following section.

UCLA Housing contracts with the UCPD to provide seven sworn police officers who provide police protection for UCLA-owned housing facilities. The Northwest zone, including the area that will accommodate the proposed NHIP, is served by at least two dedicated sworn patrol officers. In addition, approximately six Community Safety Officers (CSOs) are assigned to provide foot patrol around the housing facilities during the evening, night, and early morning hours. Security for UCLA housing is constantly monitored by several existing campus practices. These include (1) key-card restricted entry to all buildings; (2) ongoing education of student residents on safety and security issues; (3) provision of twenty-four-hour, seven days a week staff presence at the front desks of Hedrick Hall, Rieber Hall, Sproul Hall, and De Neve housing; and (4) provision of staff and faculty (who live in each building along with the students) to be responsible for student safety and building security.

Due to the proximity of the NHIP to existing housing facilities in the Northwest Campus zone, and the adequacy of police staffing levels, additional police officers would not be required for the proposed NHIP. However, the project includes three additional CSOs to augment the existing service in the area, bringing the total number of CSOs in the Northwest zone of campus to approximately nine. Current security practices would also continue to be implemented to ensure the safety and security of the student residents. Finally, as provided by 2002 LRDP PP 4.11-2(b), annual meetings are attended by the Director of UCLA Housing and the UCPD to evaluate the adequacy of police protection service for on-campus housing. Through this mechanism, existing police and CSO service is evaluated, institutional priorities and budgetary requirements are assessed, and appropriate actions are identified and implemented to ensure the continued adequacy of police protection services.

No new or altered police facilities are required in connection with the NHIP and impacts associated with the provision of police protection services are considered less than significant. No project-mitigation is required.

4.11.3 Schools

Environmental Setting

The UCLA campus is located within Local District "D" of the Los Angeles Unified School District (LAUSD), which includes a total of 93 elementary, junior high, and high schools, and other educational

facilities. Volume 1, Section 4.11 (Public Services) describes the locations of schools serving the UCLA area, enrollment totals, capacities, and distribution of UCLA employees by households.

Regulatory Framework

There are no federal or State regulations pertaining to schools applicable to the proposed project.

Project Impacts and Mitigation

Analytic Method

Impacts on schools are determined by analyzing the projected increase in demand as a result of the proposed project and comparing the projected increase with the remaining capacity to determine whether new or altered facilities would be required.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs or PPs related to schools.

Thresholds of Significance

The following standard of significance is based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on schools if it would

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools.

Effects Not Found to Be Significant

The Initial Study did not indicate any Effects Not Found to Be Significant with respect to schools; therefore, all potential impacts are discussed in Volume 1 or Volume 2 of this EIR.

Impacts and Mitigation

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

Impact NHIP 4.11-3 Implementation of the NHIP would not require new or physically altered facilities to accommodate additional students in LAUSD schools. This is considered a *less-than-significant* impact.

Volume 1, Impact LRDP 4.11-3, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would result in the need to accommodate additional students in LAUSD schools, either exceeding the capacity of existing classrooms or requiring new or altered school facilities, and determined that a less-than-significant impact would occur. As described in Chapter 3 (Project Description), the project proposes to construct dormitory-style housing for single undergraduate students; therefore, the project will not create any direct demand for public school facilities. However, the project would employ an estimated 249 staff by 2010–11, which could result in an indirect demand for public school facilities. Volume 1 of this EIR (Impact LRDP 4.11-3) analyzed the indirect demand on schools that would result from full implementation of the 2002 LRDP, of which the NHIP is a part.

The analysis determined that the highest concentration of students (257) associated with full implementation of the 2002 LRDP would be located in the 56 schools on the Westside, including 122 elementary students (equivalent to 4.1 classrooms) distributed across 41 elementary schools, 64 students (equivalent to 2.1 classrooms) across seven middle schools, and 71 students (equivalent to 2.4 classrooms) across eight high schools. LAUSD projects that the operating capacity of these 56 schools will far exceed the enrollment. It is recognized that other areas of the City of Los Angeles served by the LAUSD currently are experiencing overcrowded conditions at various locations, particularly within the South Central, Northeast, East Valley, and Downtown areas of Los Angeles. While the number of existing and projected employee households residing in each of these areas is relatively small when compared to West Los Angeles (see Table 4.11-2 [Current and Projected Enrollment and Classroom Capacity of Los Angeles Unified School District Schools Serving the Highest Concentrations of Employee Households] provided in Volume 1, Section 4.11.3 [Public Services, Schools] of this EIR), the impacts of 2002 LRDP employee household growth (which includes growth associated with the NHIP) in these areas could be greater due to current overcrowded conditions. However, according to the LAUSD's adopted Strategic Execution Plan, dated December 18, 2001, the LAUSD will add an additional 76,831 seats in 158 separate capital projects (including 78 new schools and

additional space at 60 additional existing schools) by 2007. According to the Strategic Execution Plan, over $3.1 billion from Proposition BB, Proposition 1A, and other state funds and bonds will be allocated to fund this construction program during this same period. The vast majority of this new construction to provide additional capacity will be in those areas of the LAUSD that are currently operating under overcrowded conditions.

As shown in Table 4.11-1 (Distribution of Employee Households by School District), which is provided in Volume 1, Section 4.11.3 (Public Services, Schools) of this EIR, the percentage of UCLA employee households residing in any single school district other than the LAUSD is very low, and thus the impact of the 2002 LRDP (which includes the NHIP) on other districts will be less than the impact on the LAUSD.

It should also be noted that the foregoing estimates assume that all new employee households are net new households when, in fact, the staff employees, which constitute most of the 2002 LRDP employment growth, and are the only employment growth associated with the NHIP, are probably already located in the region. Moreover, the foregoing assumes that all of these households have school-age children and that all of these school-age children (elementary, middle school, and high school students) will attend public schools, when it can be anticipated that some percentage of these students will attend private schools.

As indicated above, the 2002 LRDP will result in a relatively small increase in the number of students throughout the LAUSD as a whole, with the largest area of student growth concentrated in West Los Angeles, where school capacity is adequate to serve this increase in population. The 2002 LRDP will direct a much smaller percentage of students to each of the areas of the LAUSD that are currently above enrollment capacity, and the LAUSD will direct extensive resources toward reducing over-enrollment in these areas during the period of the 2002 LRDP. Therefore, the incremental increase in demand associated with additional faculty and staff as a result of the 2002 LRDP, which includes the NHIP, could be accommodated by the LAUSD, and a less-than-significant impact would occur. No project-specific mitigation is required.

4.11.4 Cumulative Impacts

Refer to Volume 1, Section 4.12.4 (Public Services, Cumulative Impacts) for a discussion of cumulative public services impacts.

4.11.5 References

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4.12 RECREATION

This section hereby incorporates Volume 1, Section 4.12 (Recreation).

4.12.1 Environmental Setting

City Parks and Recreation Facilities

Please refer to Volume 1, Section 4.12 (Recreation) for a complete description of city parks and recreation facilities that serve the UCLA campus.

Northwest Zone Recreational Facilities

The Northwest zone offers recreation facilities and programs that are available for use by students, faculty, and staff, as well as by other persons who wish to purchase a UCLA recreational card. Table 4.12-1 (Recreation Space and Multi-Use Facilities—Northwest Zone [November 2001]) lists recreational facilities in the Northwest zone. Volume 1 of this EIR (Table 4.12-1 [Recreation Space and Multi-Use Facilities (November 2001)]) describes recreational facilities that are available campuswide. Survey results presented in the 1987 UCLA Recreational Space Master Plan, which is currently in the process of being updated, shows that approximately two-thirds of UCLA students and 20 percent of faculty and staff participate regularly in recreational activities at UCLA.

Table 4.12-1 Recreation Space and Multi-Use Facilities—Northwest Zone (November 2001)

Facility/Space	*Space Allocation*[1]	*Programs*
	Cultural and Recreational Affairs Facilities	
Sunset Canyon Recreation Center	9.0 acres	One 50-meter swimming pool with diving facilities; one 25-yard family swimming pool; picnic and barbecue areas; open lawn area for free play; sand volleyball court; outdoor amphitheater; meeting rooms and lounges; ten lighted tennis courts, including two that can be reconfigured for multi-use (e.g., for use as six basketball courts); challenge (ropes) course
Sycamore Canyon Recreation Center	0.65 acre and tennis courts	Lawn area and golf green; six (nonlighted) tennis courts
Gaston Stadium	3.0 acres	Women's softball field
Rieber Hall	0.125 acre	Three outdoor basketball courts
	Proposed Recreation Space	
Northwest Campus Recreation Zone	3.0 acres	15,000 actual square footage for co-ed fitness/recreation center with noncompetition swimming pool for use by residents

1. All figures are approximate

Source: UCLA Cultural Recreational Affairs, February 2002; Northwest Campus Master Plan, December 2001

4.12.2 Project Impacts and Mitigation

Analytic Method

Neither the City of Los Angeles nor the UCLA campus has established minimum standards for the provision of parkland or recreational facilities, reflected in acres per population; however, existing data for the Westwood Community Plan and the City of Los Angeles (reflected in acres of parkland per 1,000 residents) are used to compare with on-campus data (also as reflected in acres of parkland per 1,000 population).

Another method of determining the amount of parkland or recreation facilities provided by UCLA is to utilize the Quimby Act (Government Code Section 66477(a)) calculation methodology. Although not applicable to the University of California, the Quimby Act allows a legislative body of a city or county to require the dedication of land or impose a requirement of the payment of in-lieu fees, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative map or parcel map for residential development. When calculating the amount of parkland, the acreage contribution by development as well as improvements or in-lieu fees, would be collectively considered to compare to any established standards.

Impacts on recreational facilities are considered significant if an increase in population would result in either the substantial physical deterioration of existing recreational facilities or increased demand that would require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs related to recreation. However, the following 2002 LRDP EIR PPs shall be continued throughout the 2002 LRDP planning horizon:

PP 4.12-1(a) — *The campus shall continue to provide, operate, and maintain recreational facilities for students, faculty, and staff on campus.*

PP 4.12-1(b) — *The campus shall continue to integrate landscaped open space (including plazas, courts, gardens, walkways, and recreational areas) with development to encourage use through placement and design.*

In addition, all relevant 2002 LRDP MMs and PPs shall be applied during construction activities.

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines, unless otherwise noted. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on recreation if it would result in any of the following:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment

Effects Not Found to Be Significant

Threshold	Would the project affect existing recreational opportunities?

The Initial Study contained a threshold not included in Appendix G that asks whether the project would affect existing recreational opportunities. The Initial Study indicated that as the NHIP includes additional recreational opportunities and is not anticipated to reduce, eliminate, or otherwise affect recreational opportunities, impacts on existing recreational facilities would be less than significant, and no further analysis is required in this Draft EIR.

Impacts and Mitigation

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

Impact NHIP 4.12-1 **Implementation of the NHIP would increase the campus population but would not result in the increased use of parks and recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. This is considered a *less-than-significant* impact.**

Volume 1, Impacts LRDP 4.12-1 and LRDP 4.12-2, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would result in a substantial deterioration of parks or other recreational facilities on campus or in the surrounding area, or be accelerated, and determined that a less-than-significant impact would occur after implementation of applicable 2002 LRDP EIR PPs. Currently, the West Los Angeles Community Plan Area contains 54.7 acres of parkland and the Westwood Community Plan Area contains 37.5 acres. The three public parks near UCLA total 52.2

acres, or 0.8 acre of parkland per 1,000 residents. This is slightly less than the existing citywide ratio of 1 acre per 1,000 persons.

Existing and proposed recreational areas on campus total approximately 55 acres, and the projected average weekday population during the regular session (the period of highest campus population) for 2010–11 is 61,541 persons, which includes the population accommodated by the NHIP. Utilizing these figures yields a parkland-to-population ratio of 0.89 acre per 1,000 campus population. This ratio falls within the range of parkland provided by the City of Los Angeles of approximately 1 acre per 1,000 persons and the 0.8 acre per 1,000 persons contained within the Westwood Community Plan Area.

In addition, the campus has made significant capital improvements to existing recreational facilities, including Pauley Pavilion, the Wooden Center, Sunset Canyon Recreation Center, and the Los Angeles Tennis Center, as well as numerous pools and tennis courts, and the campus remains committed to the provision, operation, and maintenance of recreational facilities and open space, as required by the 2002 LRDP PP 4.12-1(a) and 2002 LRDP PP 4.12-1(b). The major campus recreational capital improvements total approximately $132.5 million, as adjusted for inflation in 2002 dollars. Commercial land values in the Westwood area typically range from $5.2 million to $6.5 million per acre, for an average of $5.87 million per acre (personal communication, Bruce Kaufer, Grubb & Ellis Commercial Real Estate, 2002). UCLA has, therefore, made capital improvements equivalent to 22.6 acres of parkland or recreational facilities. Thus, a total of 74.7 acres of recreational facilities, or the equivalent thereof, have been, or will be, provided by the campus using the Quimby Act calculation methodology. Utilizing the population figures described above and 74.7 acres of recreational facilities yields a parkland-to-population ratio of 1.21 acres per 1,000 campus population with full development under the 2002 LRDP, including the population accommodated by the NHIP. This ratio exceeds the range of parkland provided by the City of Los Angeles of approximately 1 acre per 1,000 persons and the 0.8 acres per 1,000 persons contained within the Westwood Community Plan Area. The increased campus population, including the population associated with the NHIP, can be adequately served by existing on-campus recreational facilities.

The NHIP also proposes new recreational facilities on a 2- to 3-acre site, including a multi-purpose recreational/fitness facility, two basketball and two volleyball courts, a 25-meter leisure pool, and a leisure/recreation grass area. These facilities are fully described in Chapter 3 (Project Description) of this document. The inclusion of the NHIP recreational facilities which are assumed in the acreage of on-campus recreational facilities previously described, would provide a direct benefit to the students housed

in the Northwest zone of campus, as well as the campus general population, by providing increased recreational opportunities. Impacts associated with the physical deterioration of existing parks or other recreational facilities are considered less than significant due to the availability of considerable on- and off-campus recreational facilities, which ensures that any increase in demand is absorbed by multiple facilities. In addition, UCLA actively continues to maintain and enhance campus recreational facilities, and recognizes the importance of recreation to the health and well-being of the campus community. No project-specific mitigation is required.

Threshold	Would the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Impact NHIP 4.12-2 **The NHIP would include recreational facilities, the construction of which would not have an adverse physical effect on the environment. This is considered a *less-than-significant* impact.**

The construction impacts anticipated to result from implementation of the NHIP are comprehensively analyzed in Sections 4.2 (Air Quality), 4.9 (Noise and Vibration), and 4.13 (Transportation/Traffic) of this EIR. While significant, unavoidable construction impacts would occur in each of these issue areas as a result of construction of the entire NHIP (even with implementation of all relevant 2002 LRDP MMs and PPs related to construction activities), the recreational component of the project is not considered likely to result in significant construction-related impacts by itself.

The proposed facility consists of a 15,000 gsf multipurpose center, leisure pool, outdoor basketball courts and volleyball courts, and a lawn area. The facility would be constructed on a paved site currently occupied by Lot 15 and by a Facilities Management green waste yard that contains Ornamental Horticulture Buildings J and M (which are steel-skeleton structures with metal walls and roof panels). Construction of this facility would not require substantial demolition—only removal of existing asphalt surfaces—nor would it require significant excavation, as the leisure pool would be shallow wading-depth and not intended for use as a lap pool. Consequently, following 2002 LRDP EIR PPs 4.2-2(a), which would be followed throughout the planning horizon of the 2002 LRDP, would require implementation of fugitive dust control measures according to SCAQMD Rule 403, would further reduce any air quality impact associated with grading activities to a less-than-significant level.

Construction activities would be limited, and construction traffic would, therefore, also be limited and considered less than significant. This would limit emissions from construction equipment to less-than-significant levels. Implementation of 2002 LRDP EIR PP 4.2-2(b) and 2002 LRDP EIR PP 4.2-2(c)

would require maintenance and tuning of construction engines, as well as the use of existing electricity infrastructure on the campus, rather than generators powered by internal combustion engines. Following these programs, practices, and procedures would ensure that construction–related impacts to air quality would be less than significant. This less-than-significant impact would be further reduced with implementation of 2002 LRDP EIR MMs 4.2-2(a) and 4.2-2(b), which have been incorporated into the proposed project and would require that all construction equipment not in use for more than five minutes be turned off and would also require, to the extent feasible, the use of alternative fuel construction equipment.

The limited amount and type of construction activity, the minimal demolition, and the low amount of construction traffic would ensure that construction-related noise effects would also be less than significant with respect to on and off campus uses. In addition, following 2002 LRDP EIR PPs 4.9-8(a) to 4.9-8(d), and 4.9-9 would limit, to the extent feasible, hours of construction to nonsensitive time periods, require muffling of construction equipment, placement of construction staging areas away from sensitive receptors, and coordination with other campus uses and the academic calendar regarding construction activities as well as coordination with off-campus uses. These programs, practices, and procedures would ensure that construction-related noise generated by construction of the recreational facility would remain less than significant.

Construction of the recreational component of the NHIP alone would be less than significant, and no specific mitigation would be required. However, all relevant 2002 LRDP MMs and PPs related to construction of the entire NHIP shall be applied to reduce overall construction impacts to the maximum extent feasible.

4.12.3 Cumulative Impacts

Refer to Volume 1, Section 4.12.4 (Recreation, Cumulative Impacts) for a discussion of cumulative recreational impacts.

4.12.4 References

Los Angeles, City of. 1995. Los Angeles Citywide General Plan Framework Draft Environmental Impact Report.

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———. 2002. Department of Parks and Recreation.

University of California, Los Angeles. 1990. *UCLA 1990 Long Range Development Plan.*

———. 1990. *UCLA 1990 Long Range Development Plan Final Environmental Impact Report (SCH No. 89072618).*

———. 1998. *UCLA Academic Health Center Facilities Reconstruction Plan Final Environmental Impact Report, (SCH No. 97061016)*, November.

University of California, Merced. 2002. *University of California Merced Campus Long Range Development Plan Final Environmental Impact Report (SCH No. 2001021065).*

4.13 TRANSPORTATION/TRAFFIC

This section hereby incorporates Volume 1, Section 4.13 (Transportation/Traffic) by reference. This section of the EIR evaluates the potential for implementation of the proposed Northwest Housing Infill Project (NHIP) to result in impacts to parking, access, traffic, circulation, and other transportation modes, including the potential for the proposed project to increase local and regional traffic volumes, exceed a level of service standard, increase hazards due to a design feature, interfere with emergency access, result in inadequate parking supply, or conflict with applicable alternative transportation plans or policies.

Data used in preparation of this section is taken from the UCLA NHIP Analysis conducted for the project by Crain & Associates (included as Appendix 4 [Traffic Technical Report] of this document). The full bibliographic entry for this reference material is provided in Section 4.13.4 (References) of this section. This traffic study evaluates existing traffic conditions at the project site, future traffic conditions at the project site (without implementation of the NHIP), and estimates traffic conditions following implementation of the NHIP, for both regular and summer sessions.

A comment letter issued in response to a revised Notice of Preparation (NOP) circulated for the UCLA 2002 LRDP and NHIP in March 2002 was received from the California Department of Transportation (Caltrans). The Caltrans comment letter requested the DEIR consider the most recent possible conditions and behavioral information and a traffic study incorporate the following information: (1) assumption and methods used to develop trip generation/distribution percentages and assignments; (2) an analysis of ADT, A.M., and P.M. peak hour volumes for both the existing and future (expected project build-out) conditions; (3) Discussions of mitigation measures appropriate to alleviate anticipated traffic impacts; and (4) any assessment fees for mitigation should be of such proportion as to cover mainline highway deficiencies that occur as a result of the additional traffic generated by the project. In addition, the circulation of the Revised Notice of Preparation also drew comment letters from Caltrans and a variety of homeowners in the vicinity of the UCLA campus. The Caltrans comment letter requested that the most recent possible conditions and behavioral information be utilized for the traffic impact analysis in the EIR. Comment letters from various homeowners generally expressed concerns over existing transportation and traffic conditions in their neighborhoods and quality of life. Specific concerns over existing traffic, air quality and noise impacts from buses at the Hilgard Avenue bus terminal were also expressed. This issue is addressed in the Transportation/Traffic, Air Quality, and Noise sections in the LRDP EIR Volume 1.

A scoping meeting was held with LADOT to discuss the base traffic data, key assumptions, and technical methodologies to be used in the traffic analysis for NHIP. As a result of the discussion, the study area street system was further refined.

4.13.1 Environmental Setting

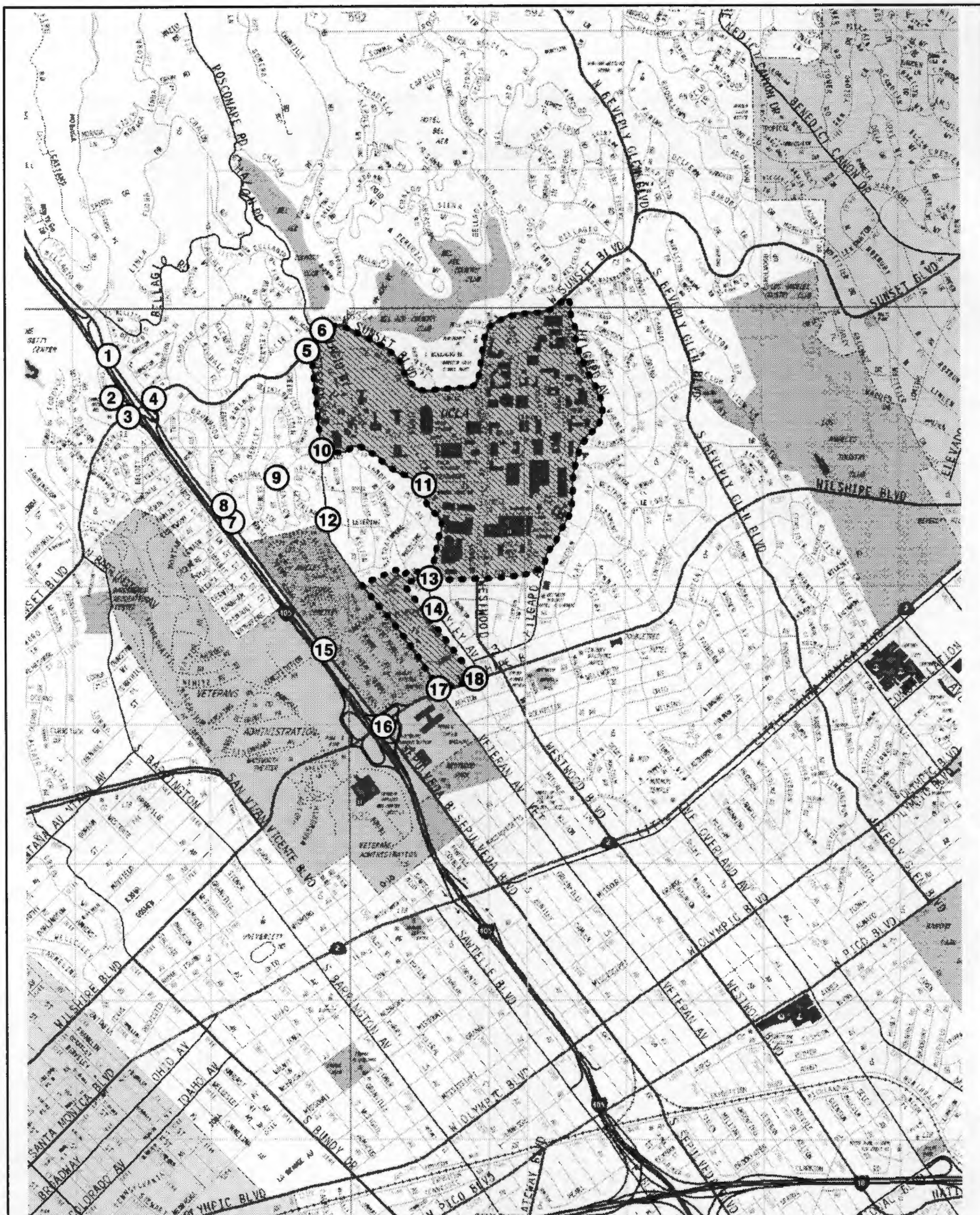
Refer to Volume 1, Section 4.13.1 (Transportation/Traffic, Environmental Setting) for a discussion of existing regional and local traffic conditions, which is summarized below.

The site of this project is the northwest portion of the UCLA campus, which is located within the community of Westwood, in the City of Los Angeles (see Figure 4.13-1 [Site Vicinity Map] in Volume 1).

The project site is located approximately 0.7 mile east of the San Diego Freeway (I-405), which is a north/south freeway that provides regional access throughout and beyond the western portion of Los Angeles County. Access to and from the surface street network immediately surrounding the project site is provided by northbound and southbound freeway on- and off-ramps located at Wilshire Boulevard, Santa Monica Boulevard and at Sunset Boulevard, and a northbound off-ramp and southbound on-ramp located near Montana Avenue. The major surface streets in the vicinity of the project include Wilshire Boulevard, Sunset Boulevard, Le Conte Avenue, Strathmore Drive, Levering Avenue, Veteran Avenue, Montana Avenue, Sepulveda Boulevard, Church Lane, Weyburn Avenue, and Bellagio Way.

The traffic impact analysis performed by Crain & Associates examined eighteen study intersections that would most likely be affected by the vehicle trips generated by the NHIP. Figure 4.13-1 (Study Intersections) shows the location of the eighteen study intersections in the context of the surrounding street network. Table 4.13-1 (Study Intersections and Existing [2001] Traffic Conditions—Regular Session) and Table 4.13-2 (Study Intersections and Existing [2001] Traffic Conditions—Summer Session) show the existing traffic conditions at each of the study intersections for the regular and summer session, respectively.

In addition, the impact analysis in this study also incorporates portions of two freeways, the San Diego (I-405) Freeway and the Santa Monica (I-10) Freeway, for which seven freeway segments within the general project vicinity were examined. Table 4.13-2 (Existing [2001] Freeway Volumes and Levels of Service) in Volume 1 identifies the freeway segments and their existing condition.



SOURCE: Crain & Associates

EIP ASSOCIATES

FIGURE 4.13-1

Study Intersection Locations

UCLA Northwest Housing Infill Project

Table 4.13-1 Study Intersections and Existing (2001) Traffic Conditions—Regular Session

	Intersection	A.M. Peak Hour		P.M. Peak Hour	
		CMA	LOS	CMA	LOS
1	Church Ln./Ovada Pl. and Sepulveda Blvd.	0.925	E	0.960	E
2	San Diego Fwy. S/B On/Off-Ramps and Church Ln.	0.950	E	0.953	E
3	Sunset Blvd. and Church Ln.	0.884	D	0.814	D
4	Sunset Blvd. and San Diego Fwy. N/B On/Off-Ramps	0.823	D	0.544	A
5	Sunset Blvd. and Veteran Ave.	0.892	D	0.820	D
6	Sunset Blvd. and Bellagio Way	0.941	E	1.008	F
7	San Diego Fwy. N/B off-ramp and Sepulveda Blvd.	0.506	A	0.564	A
8	Montana Ave. and Sepulveda Blvd.	0.931	E	0.890	D
9	Montana Ave. and Levering Ave.	1.012	F	0.837	D
10	Montana Ave./Gayley Ave. and Veteran Ave.	0.866	D	0.999	E
11	Strathmore Pl. and Gayley Ave.	0.697	B	0.625	B
12	Levering Ave. and Veteran Ave.	0.491	A	0.637	B
13	Le Conte Ave. and Gayley Ave.	0.646	B	0.548	A
14	Weyburn Ave. and Gayley Ave.	0.421	A	0.691	B
15	Constitution Ave. and Sepulveda Blvd.	0.415	A	0.590	A
16	Wilshire Blvd. and Sepulveda Blvd.	1.056	F	1.065	F
17	Wilshire Blvd. and Veteran Ave.	0.934	E	1.361	F
18	Wilshire Blvd. and Gayley Ave.	0.689	B	0.785	C

Source: Crain and Associates, Northwest Campus Infill Housing Traffic Study, October 2002

Table 4.13-2 Study Intersections and Existing (2001) Traffic Conditions—Summer Session

	Intersection	A.M. Peak Hour		P.M. Peak Hour	
		CMA	LOS	CMA	LOS
1	Church Ln./Ovada Pl. and Sepulveda Blvd.	0.779	C	0.971	E
2	San Diego Fwy. S/B On/Off-Ramps and Church Ln.	0.973	E	1.193	F
3	Sunset Blvd. and Church Ln.	0.767	C	0.927	E
4	Sunset Blvd. and San Diego Fwy. N/B On/Off-Ramps	0.760	C	0.413	A
5	Sunset Blvd. and Veteran Ave.	0.812	D	0.867	D
6	Sunset Blvd. and Bellagio Way	0.939	E	1.042	F
7	San Diego Fwy. N/B off-ramp and Sepulveda Blvd.	0.434	A	0.509	A
8	Montana Ave. and Sepulveda Blvd.	0.668	B	0.850	D
9	Montana Ave. and Levering Ave.	0.859	D	0.748	C
10	Montana Ave. / Gayley Ave. and Veteran Ave.	0.778	C	0.969	E
11	Strathmore Pl. and Gayley Ave.	0.623	B	0.466	A
12	Levering Ave. and Veteran Ave.	0.489	A	0.633	B

Table 4.13-2 Study Intersections and Existing (2001) Traffic Conditions—Summer Session

	Intersection	A.M. Peak Hour		P.M. Peak Hour	
		CMA	LOS	CMA	LOS
13	Le Conte Ave. and Gayley Ave.	0.567	A	0.519	A
14	Weyburn Ave. and Gayley Ave.	0.420	A	0.779	C
15	Constitution Ave. and Sepulveda Blvd.	0.376	A	0.531	A
16	Wilshire Blvd. and Sepulveda Blvd.	0.973	E	1.000	E
17	Wilshire Blvd. and Veteran Ave.	0.847	D	1.292	F
18	Wilshire Blvd. and Gayley Ave.	0.647	B	0.742	C

Source: Crain and Associates, Northwest Campus Infill Housing Traffic Study, October 2002

The UCLA campus area is served by six public transit operators: Santa Monica Municipal Bus Lines (SMMBL), Culver City Bus (CCB), the Los Angeles County Metropolitan Transportation Authority (LACMTA), the Los Angeles Department of Transportation (LADOT), the Antelope Valley Transit Authority (AVTA), and Santa Clarita Transit (SCT), which together provide a total of eighteen bus routes through the Westwood area. Figure 4.13-3 (Public Transit Routes) in Volume 1 shows the public transit routes serving the UCLA campus, and Tables 4.13-3 (Current Estimated Bus Capacity [SMMBL and Culver City Lines Serving UCLA]) and 4.13-4 (Current Estimated Bus Capacity [MTA Lines Serving Westwood]) in Volume 1 show the current capacity of bus lines serving the campus.

The Transportation Demand Management (TDM) Program, which began at UCLA in 1984 to achieve cost-effective reductions in campus trip generation and parking demand, has evolved since that time into a more comprehensive program that offers a broad range of services to encourage and assist UCLA commuters in utilizing alternatives to the single-occupancy vehicle. The TDM program has reduced faculty and staff parking demand by more than 12 percent (below 1990 LRDP levels). In addition, since 1990, when the SCAQMD first required a survey of all employees to determine Average Vehicle Ridership[9] (AVR), the TDM program increased the campuswide AVR from 1.26 to 1.51 by the Spring 2000, exceeding the goal of 1.5 set by the SCAQMD. A comprehensive description of all elements of the campus current TDM program is provided in the UCLA Northwest Housing Infill Project Traffic Analysis, which is included in Appendix 4 of this document.

Vehicular parking on the UCLA campus is provided in a variety of parking lots and structures. The current (Fall 2001) on-campus parking inventory has approximately 21,020 marked spaces and 1,310 stack parking spaces, as shown on Table 4.13-3 (Current [Fall Quarter 2001] On-Campus Parking

[9] The AVR is the ratio of employees arriving between 6 AM and 10 AM to the motor vehicles they drive to campus.

Inventory). Figure 4.13-4 (Campus Parking Facility Locations) in Volume 1 shows the location of these parking areas. With completion of under construction and previously approved projects and adjustments to the supply of stack parking, the on-campus parking supply would remain at or under the 1990 LRDP parking cap of 25,169 spaces.

Table 4.13-3 Current (Fall Quarter 2001) On-Campus Parking Inventory

Parking Location	Marked Spaces	Stack Spaces	Total
Structures			
1	1,697	110	1,807
2	2,257	–	2,257
3	2,040	–	2,040
4	1,672	300	1,972
5	746	–	746
6	753	–	753
8	2,776	900	3,676
9	1,929	–	1,929
32	924	–	924
(Center for Health Sciences) CHS/G/MC	1,075	–	1,075
E/ER (Emergency Room)	155	–	155
MB/MP (Medical Plaza)	1,144	–	1,144
RC (Recreation Center)	147	–	147
Sproul Hall	64	–	64
SV (Sunset Village housing)	722		722
Structure Subtotals	*18,101*	*1,310*	*19,411*
Surface Lots			
Northwest (10, 11, 13, 15, 17, Dykstra/Bradley, Hedrick, Rieber, & Sproul)	872	–	872
Central (Lot A, Dickson Court, Fowler Dock, & Lot J)	306	–	306
North (Anderson School meters & Seeds Elementary School—UES/R)	89	–	89
Southwest—North End (30 & 31)	311	–	311
Southwest—Other (32, MR, V-32, V-33 & V-34)	849	–	849
South Medical (Doris/Jules Stein)	131	–	131
Miscellaneous (D, S, PVUB & W., University Extension)	40	–	40
Surface Lots Subtotals	*2,598*	–	*2,598*
Streets	321	–	321
Parking Inventory Total	***21,020***	***1,310***	***22,330***

Source: Crain & Associates, UCLA Long Range Development Plan Transportation Systems Analysis, October 2002

The 1990 LRDP established a limit of 25,169 parking spaces to limit the generation of vehicle trips and balance the need to accommodate vehicle trips to campus and promote alternative transportation modes,

as encouraged by the campus' TDM program. As acknowledged by the *CEQA Air Quality Handbook* published by the South Coast Air Quality Management District, a reduction in air quality impacts can be achieved by constricting the availability of parking spaces and implementing a tiered pricing structure for parking and thereby increasing the attractiveness of alternative means of transportation. The combination of on-campus parking and the wide variety of available alternative transportation methods and programs makes UCLA accessible to faculty, staff, students, and visitors.

Parking Allocation

Use of the parking spaces on the UCLA campus is controlled through a permit system, which allocates a number of parking spaces to faculty, staff, students, university guests, emeritus faculty, vendors (including construction workers), medical center patients, and visitors. Current parking allocations for the regular and summer sessions are provided in Table 4.13-4 (Current Parking Allocation—Regular Session [Fall 2001]) and Table 4.13-5 (Current Parking Allocation—Summer Session [2000]).

Table 4.13-4 Current Parking Allocation—Regular Session (Fall 2001)

Permit Group	*Number*	*Parking Permits*	*Parking Spaces*
Faculty/Staff			
Health Sciences	5,617	4,655	3,329
General Campus	12,986	10,186	7,341
Residents			
Undergraduate Students	7,334	839	559
Commuter Students			
Academic Student Employees	4,005	2,578	1,854
Other Commuter Students	22,971	6,498	3,951
Other Permits			
Quarterly Guests/Emeritus	5,671	5,671	2,552
University Extension	4,875	4,875	0
Daily Permit Sales	6,155	6,155	2,196
Other Spaces (Meters/Loading Zones)	—	—	548
Total		***41,457***	***22,330***

Source: Crain and Associates, UCLA LRDP Transportation Systems Analysis, October 2002

Table 4.13-5 Current Parking Allocation—Summer Session (2000[1])

Permit Group	Number	Parking Permits	Parking Spaces
Faculty/Staff			
Health Sciences	5,617	4,655	3,329
General Campus	12,986	10,186	7,341
Residents			
Undergraduate Students	715	223	149
Conference/Program Attendees[2]	1,395	697	433
Commuter Students			
Academic Student Employees	2,562	1,649	1,186
Other Commuter Students	7,796	2,934	1,785
Other Permits			
Quarterly Guests/Emeritus	5,671	5,671	2,552
University Extension	4,875	4,875	0
Daily Permit Sales	6,155	6,155	2,196
Other Spaces (Meters/Loading Zones)	—	—	548
Unsold Spaces[3]			2,811
Total		***37,045***	***22,330***

1. The baseline year for the summer session is academic year 2000–01 (Summer 2000) in order to account for an increase in summer session enrollment that occurred in Summer 2001 in response to State funding incentives designed to increase summer enrollment.
2. Residential attendance at summer conferences and other programs varies throughout the summer. This number represents peak conditions on an average weekday.
3. During the summer, a number of spaces remain unsold and are not occupied.

Source: Crain and Associates, UCLA LRDP Transportation Systems Analysis, October 2002

By using the number of parking spaces allocated for each group, and the number of individuals (or population) in that group, per person permit and parking space allocation ratios have been developed, which are shown in Table 4.13-6 (Current Parking Allocation Ratios).

Table 4.13-6 Current Parking Allocation Ratios

	Permits per Person[1]		Spaces per Person[2]	
Permit Group	Regular Session[3]	Summer Session[4]	Regular Session[3]	Summer Session[4]
Faculty/Staff				
Health Sciences	0.829		0.593	
General Campus	0.784		0.565	
Residents				
Undergraduate Students	0.114	0.312	0.076	0.208
Commuter Students				
Academic Student Employees	0.644		0.463	
Other Commuter Students	0.283	0.376	0.172	0.229

Table 4.13-6 Current Parking Allocation Ratios

Permit Group	Permits per Person[1]		Spaces per Person[2]	
	Regular Session[3]	Summer Session[4]	Regular Session[3]	Summer Session[4]
Other Permits				
Quarterly Guests/Emeritus	1.000		0.450	
University Extension	1.000			
Daily Permit Sales[5]	1.000		0.357	

1. Permit group divided by the number of parking permits issued
2. Permit group divided by the number of allocated parking spaces
3. Fall 2001
4. Summer 2000. Because more parking spaces are available during the summer, student ratios are different in the summer.
5. Daily permit sales include attendees of summer programs, including conferences.

Source: Crain and Associates, UCLA LRDP Transportation Systems Analysis, October 2002

4.13.2 Project Impacts and Mitigation

In accordance with CEQA, the University of California, which is the lead agency for the project, must identify significant project-related traffic impacts at the pertinent study intersections and freeway segments around the vicinity of the UCLA Northwest campus. For the Northwest campus, the University uses the City of Los Angeles significance criteria. Impacts that are identified as being significant would require the implementation of mitigation measures that could help avoid or reduce the magnitude of those significant impacts.

Analytic Method

The methodology used in this study for the analysis and evaluation of traffic operations at each study intersection is based on procedures outlined in Circular Number 212 of the Transportation Research Board.[10] In the discussion of Critical Movement Analyses for signalized intersections, procedures are outlined for determining operating characteristics of an intersection in terms of the Level of Service (LOS) provided for different levels of traffic volume and other variables, such as the number of traffic signal phases. The term "Level of Service" describes the quality of traffic flow. LOS A to C operate quite well. LOS D typically is the level for which a metropolitan area street system is designed. LOS E represents volumes at or near the capacity of the highway, which will result in possible stoppages of momentary duration and fairly unstable flow. LOS F occurs when a facility is overloaded, and is characterized by stop-and-go traffic with stoppages of long duration.

A determination of the LOS at an intersection, where traffic volumes are known or have been projected, can be obtained through a summation of the critical movement volumes at that intersection. Once the

[10] *Interim Materials on Highway Capacity*, Circular Number 212, Transportation Research Board, Washington, D.C., 1980.

sum of critical movement volumes has been obtained, the values indicated in Table 4.13-7 (Critical Movement Volume Ranges for Determining Levels of Service) can be used to determine the applicable LOS.

Table 4.13-7 Critical Movement Volume Ranges for Determining Levels of Service

	Maximum Sum of Critical Volumes (VPH)		
Level of Service	Two Phase	Three Phase	Four or More Phases
A	900	855	825
B	1,050	1,000	965
C	1,200	1,140	1,100
D	1,350	1,275	1,225
E	1,500	1,425	1,375
F	Not Applicable		

For planning applications only (i.e., not appropriate for operations and design applications).

Source: Crain and Associates, UCLA LRDP Transportation Systems Analysis, October 2002

Capacity is defined herein to represent the maximum total hourly movement volume that has a reasonable expectation of passing through an intersection under prevailing roadway and traffic conditions. For planning purposes, capacity equates to the maximum value of LOS E, as indicated in Table 4.13-8 (Level of Service As a Function of CMA Values). The Critical Movement Analysis (CMA) indices used in this study were calculated by dividing the sum of critical movement volumes by the appropriate capacity value for the type of signal control present or proposed at the study intersections. Thus, the LOS corresponding to a range of CMA values is shown in Table 4.13-8.

Table 4.13-8 Level of Service As a Function of CMA Values

Level of Service	Range of CMA Values
A	≤ 0.60
B	0.601 to 0.700
C	0.701 to 0.800
D	0.801 to 0.900
E	0.901 to 1.000
F	>1.000

Source: Crain and Associates, UCLA LRDP Transportation Systems Analysis, October 2002

Analysis of Freeway Conditions

Recent (year 2000) traffic volumes on freeway segments were primarily obtained from the most current Caltrans data. A.M. and P.M. peak hour directional splits were taken from the Los Angeles County 1999 Congestion Management Program (CMP). Traffic volumes from 2000 were growth-factored by one

percent to reflect year 2001 traffic conditions, as suggested by CMP traffic forecasting procedures. Existing freeway geometrics (e.g., number of mainline travel lanes) for each of the segments analyzed were determined from CMP data, aerial photographs, and field surveys.

Segment peak hour traffic capacities were computed for each direction using established Highway Capacity Manual (HCM) methodology. Potential future project-related impacts were analyzed using HCM methodology and CMP criteria (which identifies an increase of two percent or more on a segment with LOS of E or F as significant).

Campus Population Estimates

The population projections used in the 2002 LRDP include two primary types of campus population: headcount of number of individuals enrolled and employed at UCLA and average weekday population of other individuals. Although average weekday population is a more accurate estimate of the number of persons that are physically present on the campus during a typical weekday (based on reductions due to less than full time work and class schedules, vacations, sick days, sabbaticals, etc.), for the purposes of this analysis, headcount is used to produce a conservative analysis. However, for summer student enrollment, average weekday attendance is used, which is more representative of actual student attendance during the summer. The variation between headcount and average weekday attendance is reflected in the campus parking permit over-issue factor, where the number of parking permits allocated exceeds the physical number of spaces.

Previously Adopted Mitigation Measures

UCLA has adopted and implemented a range of transportation-related mitigation measures, in conjunction with the approval of the 1990 LRDP and other recently approved projects (including the Academic Health Center Facilities Reconstruction Plan, the Intramural Field Parking Structure, and the Southwest Campus Housing and Parking Project). For the purposes of this study, it is assumed that the measures previously adopted for specific projects will be implemented in conjunction with the development of those projects.

Campus Vehicle Trip Generation

In accordance with the Traffic Mitigation Monitoring Agreement (TMMA), the weeklong "Cordon Count" (conducted during the third week of October 2001) estimated that approximately 121,799 average daily vehicle trips were generated during the regular session. Based on the 2001 vehicle trip count and counts conducted at individual parking lots and structures during two other academic years, a linear regression analysis was used to disaggregate vehicle trips to and from each lot or structure into trip

generation rates for each population (or user) group. Daily permit sales and parking meter revenue data was also analyzed to estimate trip generation characteristics of other population segments, such as medical center patients and campus visitors. The results of this analysis are shown in Table 4.13-9 (Current Vehicle Trip Rates per Space [2001–02]).

Table 4.13-9 Current Vehicle Trip Rates per Space (2001–02)

Permit Group	Daily	A.M. Peak Hour[1]	P.M. Peak Hour[2]
Faculty/Staff			
Health Sciences	2.538	0.320	0.329
General Campus	3.293	0.284	0.383
Resident Students			
Undergraduate Students	2.444	0.034	0.202
Commuter Students			
Academic Student Employees	2.913	0.304	0.356
Other Commuter Students	3.715	0.247	0.334
Other Permits			
Quarterly Guest/Emeritus	3.789	0.400	0.198
University Extension	—	—	—
Daily Permit Sales	8.546[1]	0.493	0.432

1. The A.M. Peak Hour is the 1 hour period between 7:00 and 9:00 A.M. with the highest traffic volumes
2. The P.M. Peak Hour is the 1 hour period between 4:00 and 6:00 P.M. with the highest traffic volumes.
3. Because of the high turnover associated with visitor parking, visitor spaces generate approximately 8.5 vehicle trips per day.

Source: Crain and Associates, UCLA LRDP Transportation Systems Analysis, October 2002

Utilizing the estimated current campus population numbers (for each user group), vehicle trip rates (per space) were converted into per-person trip rates, which are shown on Table 4.13-10 (Current Vehicle Trip Rates per Person [2001–02]).

Table 4.13-10 Current Vehicle Trip Rates per Person (2001–02)

Permit Group	Regular Session			Summer Session		
	Daily	A.M. Peak Hour	P.M. Peak Hour	Daily	A.M. Peak Hour	P.M. Peak Hour
Faculty & Staff						
Health Sciences	1.504	0.190	0.195	1.354	0.171	0.175
General Campus	1.861	0.163	0.216	1.675	0.147	0.195
Residents						
Undergraduate Students	0.198	0.003	0.016	0.508	0.007	0.042
Conference/Program Attendees[1]	—	—	—	0.814	0.011	0.067
Commuter Students						
Academic Student Employee	1.348	0.141	0.165	1.213	0.126	0.148
Other Commuter Students	0.639	0.042	0.057	0.850	0.056	0.076

Table 4.13-10 Current Vehicle Trip Rates per Person (2001–02)

Permit Group	Regular Session			Summer Session		
	Daily	A.M. Peak Hour	P.M. Peak Hour	Daily	A.M. Peak Hour	P.M. Peak Hour
Other Permits						
Quarterly Guest/Emeritus	1.705	0.180	0.089	1.705	0.180	0.089
University Extension	1.705	0.000	0.000	1.705	0.000	0.000
Daily Permit Sales	3.049	0.176	0.154	3.049	0.176	0.154

1. Attendees of summer programs and conferences that reside on campus during their stay.

Source: Crain and Associates, UCLA LRDP Transportation Systems Analysis, October 2002

Using the per person trip rates and current allocations of parking spaces (for each population group), an estimate of how each population group contributes to overall campus trip generation was developed, as shown in Table 4.13-13 in the LRDP EIR (Volume 1) for regular session and Table 4.13.14 in the LRDP EIR (Volume 1) for summer session. Future "Without Project" Conditions

To develop an estimate of future traffic conditions in the vicinity of the campus, a list of off-campus related projects and their characteristics was developed, as shown in Table 4.13-11 (Off-Campus Related Projects). The location of these off-campus projects is depicted by Figure 4.13-2 (Off-Campus Related Project Location Map). To estimate future traffic volumes from the UCLA campus, a list of projects that have been previously approved and/or analyzed in an environmental document prepared in accordance with CEQA document was developed, as provided in Table 4.13-12 (UCLA Projects). These projects were analyzed to determine how they would impact the parking inventory and vehicle trip generation for the campus.

Table 4.13-11 Off-Campus Related Projects

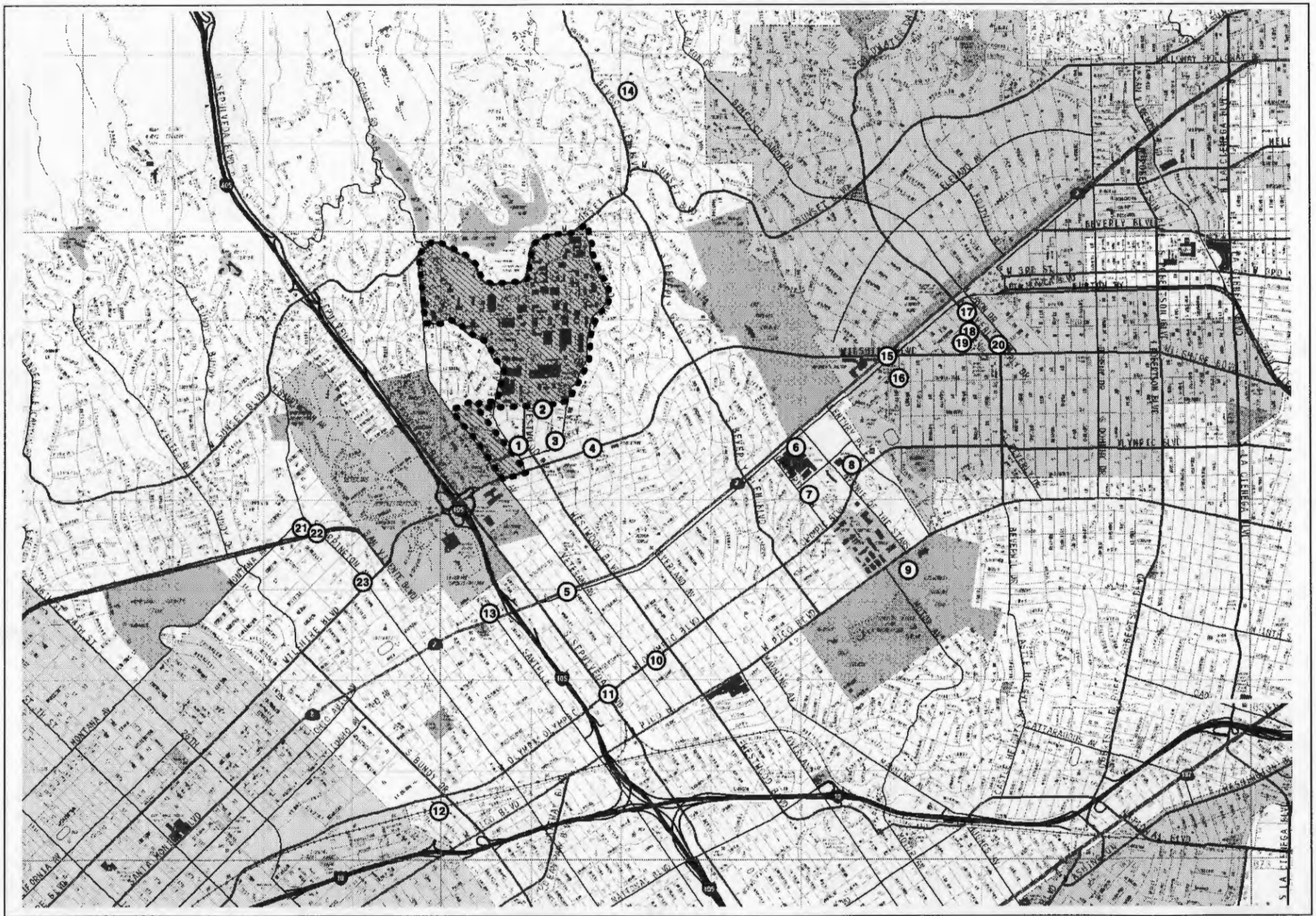
No.	Description	Location	MDU[1]	Retail Employees	Nonretail Employees	Total Employees
1	19,000 sf Whole Foods Supermarket	1050 Gayley Ave.	0	235	0	235
	937 seat Movie Theater (Previous Use)		0	(28)	0	(28)
	10,500 sf Restaurant (Previous Use)		0	(23)	0	(23)
			0	*184*	*0*	*184*
2	115,000 sf Shopping Center	1001 Tiverton Ave.	0	253	0	253
	350 DU Apartment		350	0	0	0
			350	*253*	*0*	*253*
3	19 DU Apartment	10852 Lindbrook Ave.	19	0	0	0
	6,100 sf Specialty Retail		0	13	0	13
	16,100 sf Specialty Retail (Previous Use)		0	(35)	0	(35)
			19	*(22)*	*0*	*(22)*
4	107 DU Condominium	10804 Wilshire Blvd.	107	0	0	0

Table 4.13-11 Off-Campus Related Projects

No.	Description	Location	MDU[1]	Retail Employees	Nonretail Employees	Total Employees
5	6 Pump Gas Station w/ Convenience Market	10991 Santa Monica Blvd.	0	22	0	22
6	71,000 sf Century City Shopping Center	10250 Santa Monica Blvd.	0	156	0	156
7	791,000 sf General Office	10270 Constellation Blvd.	0	0	3,164	3,164
8	ABC Entertainment Center	2000 Avenue of the Stars	0	(487)	1,724	1,238
9	360,000 sf Fox Studio Expansion (remainder est.)	10201 W. Pico Blvd.	0	0	1,440	1,440
10	2,300 sf Fast-Food Restaurant w/ Drive-thru	11021 W. Pico Blvd.	0	5	0	5
11	74,653 sf Office Building	11110 W. Pico Blvd.	0	0	299	299
12	330,000 sf Office	12233 W. Olympic Blvd.	0	0	1,320	1,320
	41,000 sf Office (Previous Use)		0	0	(164)	(164)
	6,000 sf Specialty Retail (Previous Use)		0	(13)	0	(13)
	16 Pump Gas Station (Previous Use)		0	(66)	0	(66)
			0	*(79)*	*1,156*	*1,077*
13	1,140 sf Retail (Alcohol Permit)	11305 Santa Monica Blvd.	0	(3)	0	(3)
14	Harvard-Westlake Middle School	700 N. Faring Rd.				
	24 students (net), 15 employees (net)		0	0	15	15
15	95,000 sf Office	Wilshire Bl. and	0	0	380	380
	9,633 sf Retail (Previous Use)	Santa Monica Bl.	0	(21)	0	(21)
			0	(21)	380	359
16	20 du Condominium	137-147 Spalding Dr.	20	0	0	0
17	15,000 sf Shopping Center	421-427 N. Beverly Dr.	0	33	0	33
	15,000 sf Office		0	0	60	60
			0	33	60	93
18	15,000 sf Shopping Center	339 N. Rodeo Dr.	0	33	0	33
19	5,000 sf Shopping Center	360 N. Rodeo Dr.	0	11	0	11
20	41,500 sf Office	233-269 N. Beverly Dr.	0	0	166	166
21	54,313 sf Shopping Center	11711 San Vicente Bl.	0	119	0	119
22	1,900 sf Fast-Food Restaurant w/ Drive-thru	11712 San Vicente Bl.	0	4	0	4
23	146,708 sf Office	11677 Wilshire Bl.	0	0	587	587

1. Multiple Dwelling Units

Source: Crain and Associates, UCLA LRDP Transportation Systems Analysis, October 2002



Not to Scale

SOURCE: Thomas Guide Map, 2002

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EIP ASSOCIATES

FIGURE **4.13-2**

Off-Campus Related Project Location Map

UCLA Northwest Housing Infill Project

Table 4.13-12 UCLA Projects[1]

Project	Net New Gross Square Feet (gsf)	Population Change
Men's Gym Staging Bldg (Wooden West)	33,025	0
Intramural Field Parking (Storage Space)	3,600	0
Physics and Astronomy	101,900	6
Luck Research Center	95,000	45
Southwest Campus Staging Building	75,000	0
Acosta Training Center	33,325	0
Glorya Kaufman Hall (Garden Dance Theater)	3,600	0
NanoSystems Engineering Facilities Plan	166,000	174
Southwest Campus Housing and Parking	882,000	37
Total Net New GSF	*1,393,450*	*262*
Seismic Renovation	**Renovation or Replacement GSF**	
Academic Health Center Replacement (Hospital, SRB1, 2 & 3)	1,710,000	
Broad Art Center	146,000	
Kinsey Hall	142,000	
Men's Gym	103,300	
Glorya Kaufman Hall (Dance)	81,000	

1. Includes projects that were not completed at the time of LRDP traffic counts, or that are reasonably foreseeable (i.e., approved, under construction or analyzed in an environmental document prepared in accordance with CEQA).

Source: UCLA, May 2002

To account for the effect of under-construction or previously approved UCLA projects (including the Southwest Campus Housing and Parking and the Intramural Field Parking Structure projects), trip generation rates were estimated to determine future UCLA trip rates for 2010–11 (that would occur if these projects were completed, no additional projects were approved, and the NHIP was not implemented), as shown in Table 4.13-13 (Future Without Project Vehicle Trip Rates per Person).

The trip rates in the table indicate that development of the Southwest Campus Housing and Parking project would result in a new population "user group," of graduate student residents. In addition, due to an increase in the supply of on-campus parking (associated with the previously approved projects, including the Intramural Field Parking Structure), the per-person trip rate for students would increase in the future (compared to current conditions, because more student permits would be available, and, therefore, more student trips would be generated). These future trip rates were used to estimate future vehicle trip generation that would occur if all of the previously approved projects (listed in Table 4.13-12) were developed, and no new projects were approved or developed.

Table 4.13-13 Future Without Project Vehicle Trip Rates per Person

Permit Groups	Regular Session			Summer Session		
	Daily	A.M. Peak Hour	P.M. Peak Hour	Daily	A.M. Peak Hour	P.M. Peak Hour
Faculty & Staff						
Health Sciences	1.504	0.190	0.195	1.354	0.171	0.175
General Campus	1.861	0.163	0.216	1.675	0.147	0.195
Residents						
Undergraduate Students	0.186	0.003	0.018	0.508	0.007	0.042
Graduate Students	0.959	0.091	0.101	0.958	0.092	0.100
Graduate Employed Off-Campus	N/A	N/A	N/A	3.350	0.280	0.400
Conference/Program Attendees	N/A	N/A	N/A	0.814	0.011	0.067
Commuter Students						
Academic Student Employee	1.348	0.141	0.164	1.213	0.126	0.148
Other Commuter Students	0.974	0.065	0.088	0.851	0.056	0.076
Other Permits						
Quarterly Guest/Emeritus	1.705	0.180	0.089	1.705	0.180	0.089
University Extension	1.705	0.000	0.000	1.705	0.000	0.000
Daily Permit Sales	3.049	0.176	0.154	3.049	0.176	0.154

Source: Crain and Associates, UCLA LRDP Transportation Systems Analysis, October 2002

Future Traffic Conditions

Future traffic volumes for the project study area were projected using a microcomputer version of the Southern California Association of Government's (SCAG) Transportation Model. This model projects future traffic conditions (for academic year 2010–11)[11] assuming current trends in regional growth. For this study, various changes were incorporated into the model to account for future highway improvements, and implementation of mitigation measures (including those adopted for the 1990 LRDP and recently approved UCLA projects). In addition, key assumptions about campus transportation programs (such as continued implementation of TDM programs, the parking cap, and maintenance of the Average Vehicle Ridership at 1.5) were factored into future projections of campus parking demand and trip generation.

Because the transportation model used for this traffic study is based on a regional model developed by SCAG to cover a five-county region, the following changes were incorporated into the model to more accurately replicate the roadway conditions of the study area. Additional roadway "links" were added to represent the streets and highways in and around the project vicinity, including the UCLA campus and

[11] To provide a conservative analysis, although the LRDP is based on academic year 2010–11, the future year modeled for this study was 2011. Throughout this document, future traffic conditions, or future year 2011 conditions is intended to reflect traffic conditions during the academic year 2010/11.

Westwood area. Field surveys were used to document roadway geometrics, turning restrictions, traffic signal phasing, on-street parking, and other factors that may affect vehicle travel speeds and routes. The model was also refined to account for future highway improvements that are now under construction or for which implementation is reasonably foreseeable (including High-Occupancy Vehicle or "carpool" lanes on the San Diego Freeway, a reversible traffic lane on Sepulveda Boulevard north of Wilshire Boulevard, and the Santa Monica Boulevard Transitway between the San Diego Freeway and Century City). The capacity of some roadways was modified to reflect previously installed signal system upgrades (such as the Automated Traffic Surveillance and Control, or "ATSAC" system). Both land use data and future socio-economic projections were disaggregated to smaller zones in the study area to better replicate traffic access patterns and provide a finer level of detail.

To provide an estimate of future traffic conditions, for each zone in the study area, traffic volumes that would result from the SCAG socioeconomic data was compared to the volumes that would result after implementation of the previously- approved on-campus projects and the off-campus related projects (identified for that zone). The larger of the traffic volumes (from the SCAG data or the list of UCLA and off-campus projects) was added to the existing traffic volumes to estimate future traffic conditions. This was conservative in that the highest potential traffic volumes were used for each zone. These estimates of future traffic conditions were then used as the basis upon which the traffic impacts of the NHIP can be determined.

Refer to Volume 3, Chapter II (Text Changes)

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The following 2002 LRDP EIR MMs for traffic and transportation (not related to proposed improvements at specific intersections) have been incorporated into the proposed project:

2002 LRDP EIR MM 4.13-2(a) *The TDM program will be extended through the registration process to provide information concerning alternative transportation options to summer session students to increase awareness of, and participation in, alternative transportation programs during the summer session.* (This is identical to Air Quality MM 4.2-4 and Noise and Vibration MM 4.9-6.)

2002 LRDP EIR MM 4.13-12 *To the extent that construction worker parking demand exceeds historical levels or available supply, off-site construction worker parking shall be provided with shuttle service to the remote parking location.*

In addition, the following 2002 LRDP EIR programs, practices, and procedures shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.13-1(a) *The campus shall continue to maintain the 1990 LRDP vehicle trip cap of 139,500 average daily trips.*

2002 LRDP EIR PP 4.13-1(b) *The campus shall continue to maintain the 1990 LRDP parking cap of 25,169 spaces.*

2002 LRDP EIR PP 4.13-1(c) *The campus shall continue to provide on-campus housing to continue the evolution of UCLA from a commuter to a residential campus.* (This is identical to Air Quality PP 4.2-1(a) and Noise and Vibration PP 4.9-5(a).)

2002 LRDP EIR PP 4.13-1(d) *The campus shall continue to implement a TDM program that meets or exceeds all trip reduction and AVR requirements of the SCAQMD. The TDM program may be subject to modification as new technologies are developed or alternate program elements are found to be more effective.* (This is identical to Air Quality PP 4.2-1(b) and Noise and Vibration 4.9-5(b).)

2002 LRDP EIR PP 4.13-3 *UCLA Capital Programs will assess construction schedules of major projects to determine the potential for overlapping construction activities to result in periods of heavy construction vehicle traffic on individual roadway segments, and adjust construction schedules, work hours, or access routes to the extent feasible to reduce construction-related traffic congestion.*

2002 LRDP EIR PP 4.13-6 *To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways. At any time only a single lane is available, the campus shall provide a temporary traffic signal, signal carriers (i.e., flagpersons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway segment, the campus shall provide appropriate signage indicating alternative routes.* (This is identical to Hazards and Hazardous Materials PP 4.6-8(a).)

2002 LRDP EIR PP 4.13-7 *For any construction-related closure of pedestrian routes, the campus shall provide appropriate signage indicating alternative routes, and provide curb cuts and street crossings to assure alternate routes are accessible.*

2002 LRDP EIR PP 4.13-9 *To ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, UCLA shall consult with the UCPD, EH&S, and the LAFD to disclose temporary lane or roadway closures and*

alternative travel routes. (This is identical to Hazards and Hazardous Materials PP 4.6-8(b).)

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For the purposes of this EIR, implementation of the NHIP may have a significant adverse impact on transportation/traffic if it would result in any of the following:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio, or congestion at intersections)
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- Result in inadequate emergency access
- Result in inadequate parking capacity
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)

For the purposes of this study, a substantial increase in traffic is defined consistent with City of Los Angeles criteria, where a significant impact is identified as an increase in the CMA value of 0.010 or more, when the final ("With Project") LOS is E or F; a CMA increase of 0.020 or more when the final LOS is D, or an increase of 0.040 or more at LOS C. No significant impacts are deemed to occur at LOS A or B, as these operating conditions exhibit sufficient surplus capacities to accommodate large traffic increases with little effect on traffic delays.

Effects Not Found to Be Significant

Threshold	Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The Initial Study determined that development associated with the 2002 UCLA LRDP, including the proposed Northwest Housing Infill Project, would not result in a change in air traffic patterns or an

increase in traffic levels. No impact to air traffic patterns would occur as a result of the project and no additional analysis is required in this EIR.

Impacts Analyzed in Volume I of the 2002 LRDP EIR

Impacts associated with the NHIP are either addressed as an Effect Not Found to Be Significant or in a project-specific analysis, which is provided below.

Project Impacts and Mitigation

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

Impact NHIP 4.13-1 **Implementation of the NHIP would result in additional vehicular trips during the regular session, which would not result in a substantial degradation in intersection levels of service. This is considered a *less-than-significant* impact.**

The NHIP would increase on-campus student housing and permit approximately 1,635 existing undergraduate commuter students to become resident students. Approximately 249 persons would be employed to staff the NHIP, of which about 35 would be students. Using the future (without LRDP) trip generation rates provided in Table 4.13-13, the NHIP Analysis estimated the impact of the NHIP on trip generation rates as shown in Table 4.13-14 (Future With Northwest Housing Infill Project Campus Trip Generation Rates—Regular Session). Table 4.13-15 (Future With Northwest Housing Infill Project Campus Trip Generation—Regular Session) provides an estimate of how the change in trip generation rates (as modified by the NHIP) would contribute to overall campus trip generation.

Table 4.13-14 Future With Northwest Housing Infill Project Campus Trip Generation Rates—Regular Session

Permit Group	Regular Session			Summer Session		
	Daily	A.M. Peak Hour	P.M. Peak Hour	Daily	A.M. Peak Hour	P.M. Peak Hour
Faculty & Staff						
Health Sciences	1.504	0.190	0.195	1.354	0.171	0.175
General Campus	1.861	0.163	0.216	1.675	0.147	0.195
Residents						
Undergraduate Students	0.186	0.003	0.015	0.508	0.007	0.043
Graduate Students	0.959	0.091	0.101	0.958	0.092	0.100
Not Enrolled/Employed Off Campus	—	—	—	3.350	0.280	0.400
Conference/Program Attendees	—	—	—	0.814	0.011	0.068

Table 4.13-14 Future With Northwest Housing Infill Project Campus Trip Generation Rates—Regular Session

Permit Group	Regular Session			Summer Session		
	Daily	A.M. Peak Hour	P.M. Peak Hour	Daily	A.M. Peak Hour	P.M. Peak Hour
Commuter Students						
Academic Student Employee	1.348	0.141	0.164	1.213	0.126	0.148
Other Commuter Students	1.041	0.069	0.094	1.253	0.083	0.112
Other Permits						
Quarterly Guest/Emeritus	1.705	0.180	0.089	1.705	0.180	0.089
University Extension	1.705	0.000	0.000	1.705	0.000	0.000
Daily Permit Sales	3.049	0.176	0.154	3.049	0.176	0.154

Source: Crain and Associates, UCLA LRDP Transportation Systems Analysis, October 2002

Table 4.13-15 Future With Northwest Housing Infill Project Campus Trip Generation—Regular Session

Permit Group	Number	Daily Trips	A.M. Peak Hour Trips	P.M. Peak Hour Trips
Faculty & Staff				
Health Sciences	5,617	8,449	1,066	1,094
General Campus	13,285	24,730	2,168	2,876
Resident Students				
Undergraduate	9,009	1,678	243	139
Graduate	2,000	1,917	182	201
Not Enrolled/Employed Off Campus	0	0	0	0
Commuter Students				
Student Academic Employee	3,219	4,339	453	529
Other Commuter Students	20,082	20,912	1,388	1,879
Other Permits				
Quarterly Guest/Emeritus	5,671	9,670	1,021	505
University Extension	5,336	9,099	0	0
Daily Permit Sales	6,155	18,768	1,083	948
Other Parking		3,931	85	327
Two-Wheeled/Through Vehicles		22,042	1,345	1,169
Shuttles		2,948	229	245
Main/Southwest Campus		*128,483*	*9,044*	*9,913*
Wilshire Center		1,768	155	206
Cordon Total		**130,251**	**9,199**	**10,119**

Source: Crain and Associates, Northwest Campus Infill Housing Traffic Study, October 2002

As shown in Table 4.13-15, total campus future trip generation with the NHIP for the regular session would be approximately 130,251 average daily trips, an increase of approximately 428 average daily

trips, 21 A.M. peak hour trips and 47 P.M. peak hour trips over future "Without Project" traffic conditions. Although overall trip generation would increase slightly (as a result of the increase in employees), as shown in Appendix 4, Table 22(a), no CMA increases would occur as a result of the proposed project that would exceed the identified significance threshold levels. Further, 2002 LRDP PP 4.13-1(a) and 2002 LRDP PP 4.13-1(b) would extend the 1990 limits on parking supply and total campus trip generation through 2010–11. Implementation of the NHIP would be consistent with 2002 LRDP PP 4.13-1(c) by providing on-campus housing that would reduce vehicle trips made by commuter students, and 2002 LRDP PP 4.13-1(d) commits the campus to continue implementation of appropriate TDM strategies in order to meet the trip reduction and AVR targets established by the SCAQMD. Surface street impacts would, therefore, be less than significant during the regular session and no project-specific mitigation is required.

Impact NHIP 4.13-2 **Implementation of the NHIP would result in additional vehicular traffic during the twelve-week period of summer instruction, which would result in a substantial degradation in intersection levels of service. This is considered a *significant* impact.**

Although the NHIP would expand on-campus student housing capacity, because of substantially lower demand during the summer session, the NHIP may not substantially increase the number of resident students during the summer session. However, as a conservative assumption, it was assumed that an increase in housing supply could increase the number of resident students (by 163) during the summer. Similarly, the number of residential participants in summer conferences and programs was also assumed to increase (by 348), along with an increase in staff employment (of 249, of which 35 would be students). The NHIP traffic analysis estimated future trip generation for the summer session with the assumption that only 90 percent of faculty and staff would be on campus due to vacations, off-campus summer research activities, and sabbaticals. Generation rates for other population groups and uses were the same as regular session generation values, except for students, for which summer-specific generation rates were developed. The trip generation estimates for the summer session with the NHIP are provided in Table 4.13-16 (Future With Northwest Housing Infill Project Campus Trip Generation—Summer Session).

Table 4.13-16 Future With Northwest Housing Infill Project Campus Trip Generation—Summer Session

Permit Group	Number	Daily Trips	A.M. Peak Hour Trips	P.M. Peak Hour Trips
Faculty & Staff				
Health Sciences	5,617	7,604	959	985
General Campus	13,285	22,257	1,951	2,589

Table 4.13-16 Future With Northwest Housing Infill Project Campus Trip Generation—Summer Session

Permit Group	Number	Daily Trips	A.M. Peak Hour Trips	P.M. Peak Hour Trips
Resident Students				
Undergraduate	87894	446	6	38
Graduate	599	574	55	60
Not Enrolled/Employed Off Campus	1,401	4,694	392	560
Conference/Program Attendees	1,713	1,395	20	118
Commuter Students				
Student Academic Employee	2,049	2,469	259	303
Other Commuter Students	7,531	9,313	618	837
Other Permits				
Quarterly Guest/Emeritus	5,671	9,670	1,021	505
University Extension	5,336	9,099	0	0
Daily Permit Sales	6,155	18,768	1,083	948
Other Parking		3,931	85	328
Two-Wheeled/Through Vehicles		22,042	1,345	1,169
Shuttles		3,947	229	224
Main/Southwest Campus		*115,367*	*8,032*	*8,694*
Wilshire Center		1,768	155	206
Cordon Total		***117,135***	***8,187***	***8,900***

Source: Crain and Associates, Northwest Campus Infill Housing Traffic Study, October 2002

As shown in Table 4.13-16, total campus future trip generation with the NHIP for the summer session would be approximately 117,135 average daily trips, an increase of approximately 3,592 average daily trips, 228 A.M. peak hour trips and 331 P.M. peak hour trips over future "Without Project" traffic conditions. By adding the estimated traffic volumes to the future "Without Project" traffic volumes, traffic volumes that would occur with implementation of the NHIP were estimated, and a CMA conducted to identify future traffic conditions (for the year 2011) with implementation of the NHIP. Summaries of the CMA and LOS "Future Without Project" and "Future With Project" conditions at the eighteen study intersections are shown in Appendix 4, Table 22(b).

As indicated in Appendix 4, Table 22(b), with projected future traffic conditions and based on the identified significance thresholds, implementation of the NHIP would result in significant impacts at one intersection during the A.M. peak hour, one intersection during the P.M. peak hour, and two intersections at both the A.M. and P.M. peak hours during the twelve-week summer session, at a time when overall traffic volumes are lower (as indicated by lower CMA values and/or levels of service).

(Note: All four of these intersections would also be significantly impacted during the summer session by implementation of the 2002 LRDP.) These intersections are listed below:

6. Sunset Boulevard and Bellagio Way (A.M. and P.M. peak)
9. Montana Avenue and Levering Avenue (A.M. and P.M. peak)
10. Montana Avenue/Gayley Avenue and Veteran Avenue (P.M. peak)
11. Strathmore Place and Gayley Avenue (A.M. peak)

Continuation of 2002 LRDP EIR PPs 4.13-1(a) through 4.13-1(d) would extend the 1990 limits on parking supply and total campus trip generation through 2010–11. Implementation of the NHIP would be consistent with PP 4.13-1(c) and would reduce vehicle trips by commuter students. PP 4.13-1(d) would continue the implementation of the TDM program to reduce parking demand and vehicle trip generation throughout the planning horizon of the 2002 LRDP.

In addition, to further reduce parking demand and trip generation during the summer session, 2002 LRDP EIR MM 4.13-2(a), which has been incorporated into the proposed project, will also be implemented to expand distribution of TDM information to summer session students, many of whom are not regularly enrolled students.

Although traffic volumes are lower during the summer (as discussed in Volume 1 [Impact 4.13-2]), to determine the feasibility of mitigating impacts at intersections that would be impacted during the summer, various mitigation options were identified. The potential to further expand the TDM program, or to reduce overall campus parking supply were discussed in Volume 1 (Section 4.13, Impact 4.13-1) and was determined to be infeasible. The NHIP project includes a parking structure which would provide approximately 299 parking spaces, of which 233 would be replacement spaces and 66 would be new spaces. Elimination of the approximately 66 new spaces would reduce trip generation. However, provision of some parking spaces is necessary to accommodate parking demand from new staff and provide parking for students that have mobility impairments. Thus, provision of a net increase of 1,675 student beds without an increase of 66 net new parking spaces is not considered feasible.

A reduction in the utilization of on-campus housing by attendees of summer programs and conferences could also reduce trip generation. However, the option of residential accommodations for program and conference attendees reduces trip generation, as conference program attendees that reside on campus have substantially lower trip generation than persons than commute to campus each day. A reduction in the number and/or size of summer educational programs and conferences would also reduce trip generation. However, the income earned from summer programs and conferences is used to reduce housing rates during the regular session. Elimination or reduction of this subsidy could increase the cost

of housing, and reduce demand for or utilization of on-campus housing. Since students that reside on-campus generate substantially fewer vehicle trips than commuter students, a reduction in summer programs and conferences could have an indirect effect on regular session traffic, by increasing housing costs and decreasing the number of on-campus residents. Thus, reduction of the utilization of on-campus housing, or a reduction in the size and/or number of summer programs and conferences is not considered a feasible mitigation measure to reduce vehicle trips.

Beyond measures which could reduce overall trip generation various mitigation options at individual intersections were considered, as discussed below. These include installation of the Adaptive Traffic Control System (ATCS), which was described in Volume 1 (Impact 4.13-1). Because the potential impacts associated with the implementation of the NHIP during the summer session would occur at a limited number of intersections, the City of Los Angeles may not be willing to upgrade selected intersections, and instead defer the upgrade until such time as the City can fund a comprehensive installation of ATCS in the Westwood area.

Physical modifications, including re-striping and widening, have also been evaluated, including those mitigation options identified in conjunction with the environmental review of previous projects, which were described in Volume 1 (Impact LRDP 4.13-1). At some locations, it may be possible to re-stripe the existing roadway to create a dedicated turn lane and no street widening would be required. Re-striping may not be possible on some roadways because it would result in substandard lane widths. At those locations, roadway widening may be possible within the existing right-of-way, including flaring (a minor widening of lanes near an intersection) or installation of a new turn lane (e.g., up to 200 feet in length). At some locations, the roadways are fully improved within the existing right-of-way, and therefore widening would require acquisition of land by the City of Los Angeles, and therefore is beyond the jurisdiction of The Regents to implement. Because widening would typically result in the loss of landscaping and/or mature trees and this reduction of the landscaped buffer between vehicular traffic and private residences could increase traffic-related noise, air quality and light and glare impacts (associated with headlights) on adjacent residences, street widening is generally opposed by the local community.

Mitigation options are described below.

Intersection No. 6—Sunset Boulevard and Bellagio Way

As discussed more fully in Volume 1 (Impact 4.13-1), ATCS has already been proposed for installation at this intersection and is therefore unavailable as mitigation for the NHIP. The previously-approved Intramural Field Parking Structure project included a mitigation measure to slightly widen Sunset

Boulevard (on UCLA property) and modify the signal phasing for traffic on Bellagio. To further improve the intersection's capacity, further widening of either Sunset Boulevard or Bellagio Way/Place was also evaluated. Because the identified physical modifications would result in the loss of landscaping, which may include mature trees, could increase light, glare, air and noise impacts on adjacent land uses, and could result in adverse cultural resource impacts to the Bel-Air west gate, none of the identified modifications are considered feasible. No other feasible mitigation options have been identified at this intersection.

Intersection No. 9—Montana Avenue and Levering Avenue

As discussed more fully in Volume 1 (Impact 4.13-1), this intersection is currently controlled by a STOP sign, therefore ATCS is not available as mitigation for the NHIP. Community representatives have expressed opposition to the installation of a signal light at this intersection and is therefore considered infeasible. No other feasible mitigation options have been identified at this intersection.

Intersection No. 10—Montana Avenue/Gayley Avenue and Veteran Avenue

As discussed more fully in Volume 1 (Impact 4.13-1), this intersection is currently controlled by a signal light, and ATCS has not been installed, nor is it currently planned for installation at this location. Thus, as discussed in 2002 LRDP MM 4.13-1, installation of ATCS is available as mitigation at this location.

MM 4.13-1 — *The campus shall provide fair share funding to the City of Los Angeles for installation of ATCS at the intersection of Montana Avenue/Gayley Avenue and Veteran Avenue.*

With installation of ATCS at this intersection, the impact of NHIP implementation during the summer session would be mitigated to a less-than-significant level.

Beyond ATCS installation at this location, physical modification of the intersection could also be used to mitigate potential impacts, such as widen Gayley Avenue, east of Veteran Avenue, to create a dedicated right turn lane for westbound vehicles turning north onto Veteran Avenue. However, due to the potential loss of landscaping, including mature trees, the costs associated with relocation of utility vault and the potential loss of on-street parking, this measure has been identified as infeasible. Except for installation of ATCS, no other feasible mitigation measures have been identified to mitigate the potentially significant impact at this location.

Intersection No. 11—Strathmore Place and Gayley Avenue

As discussed more fully in Volume 1 (Impact 4.13-1), this intersection is currently controlled by a signal light, and ATCS has not been installed, nor is it currently planned for installation at this location. Thus, as discussed in 2002 MM 4.13-2(c), installation of ATCS is available as mitigation at this location.

MM 4.13-2(c) *The campus shall provide fair share funding to the City of Los Angeles for installation of ATCS at the intersection of Strathmore Place and Gayley Avenue.*

With installation of ATCS at this intersection, the impact of implementation of the 2002 LRDP during the summer session would be mitigated to a less-than-significant level.

Physical modification of the intersection could also be used to mitigate potential impacts, such as restriping or widening to create additional lanes. However, because restriping and/or widening would result in the loss of parkway landscaping and/or could on-street parking, and could increase light, glare, air and noise impacts on adjacent land uses, the identified modifications are considered infeasible. No other feasible mitigation measures have been identified at this location.

Residual Impacts

As described previously, mitigation measures are recommended for two of the significantly impacted study intersections. However, even with implementation of all identified feasible mitigation measures, impacts of the NHIP would remain significant and unavoidable during the summer session at the following study intersections:

6. Sunset Boulevard and Bellagio Way
9. Montana Avenue and Levering Avenue

As noted in Volume I (Impact 4.13-1), LADOT has identified 51 intersections as candidates for a comprehensive ATCS installation in the Westwood area. Because the potential impacts associated with the NHIP would occur at only two intersections (where ATCS is available), the City of Los Angeles may not be willing to upgrade only those intersections, and instead defer the upgrade until such time as the City can fund a comprehensive installation of ATCS at all of the 51 intersections identified by LADOT. The University if is willing to contribute a "fair or appropriate share" towards a comprehensive ATCS installation, meaning the University will negotiate for a contribution to the upgrade pursuant to procedures similar to those described in Government Code 54999 *et seq.* for contributions to utilities. In addition, the University will pay its fair share only if the City of Los Angeles has established a mechanism to collect funds from other developers or entities that are contributing to traffic impacts and implements the traffic signal upgrade. Because installation of ATCS is beyond the jurisdiction of The Regents to

implement, installation of ATCS may not therefore be available to mitigate the impacts associated with LRDP implementation during the regular session. However, installation of ATCS is technically feasible, and the University is willing to fund ATCS installation at those intersections that would be significantly impacted by the NHIP.

As the signal improvements described above are beyond the control of the University of California, Board of Regents, if the City of Los Angeles elects not to install ATCS at the identified intersections, the impact of the NHIP would remain significant and unavoidable at the four identified intersections during the summer session.

Impact NHIP 4.13-3 **Implementation of the NHIP would result in the generation of construction-related vehicle trips, which would impact traffic conditions along roadway segments and at individual intersections. This is considered a *significant* impact.**

Construction associated with the NHIP would occur at five locations in the Northwest zone, including a site adjacent to Hedrick Hall, two sites adjacent to Rieber Hall, on surface parking Lot 15 and south of Dykstra Hall. Demolition, excavation, site grading, and construction activities would result in the generation of construction vehicle trips. As described in Section 4.2 (Air Quality, Volume 2) and Section 4.9 (Noise, Volume 1), two potential construction scenarios have been identified for the NHIP. The number of vehicle trips generated on a daily basis would vary, depending on the number of buildings that are being constructed at the same time, and the type of construction activities occurring at the same time. There would be times when several buildings are being constructed and/or renovated simultaneously, and other times when only one building is under construction. For the purpose of this analysis, construction activities and, therefore, the associated vehicle trips, would be greatest under two scenarios. The first peak construction scenario would occur when Hedrick Hall North is being constructed, the Dykstra Parking Structure site is being excavated, and the first floor of Sproul Hall is being renovated. This scenario involves the operation of several trucks to transport excavated earth materials from the campus. The second peak scenario would occur during the construction of Hedrick Hall North, Dykstra Parking, Rieber Hall North, and Rieber Hall West, and the renovation of the ground floor of Hedrick Hall. This scenario involves the greatest level of construction material delivery for the NHIP. Based on these scenarios, construction truck volume is estimated to vary between 1 truck per day to a peak of approximately 68 per day during construction of the Dykstra Parking Structure. Based on the peak conditions, 68 trucks per day could generate 136 truck trips per day. Using the conservative assumption that all of these trips would be generated by a tractor-trailer combination (for which each truck trip is equivalent to 2.5 vehicle trips) peak construction traffic of approximately 340 car

equivalent trips could result. Because these trips would occur over a typical 8-hour construction day approximately 42.5 trips would be generated during an average hour. With a typical construction day starting at 7 A.M., approximately 42.5 equivalent trips would be generated during the A.M. peak hour during the period of heaviest construction activity. (Construction would typically be completed each day prior to the P.M. peak hour; therefore, no P.M. peak hour impacts are anticipated.)

Construction vehicles would access the site via I-405 freeway along a route that would include Wilshire Boulevard, Veteran Avenue, Weyburn Avenue, Gayley Avenue, Strathmore Place, Young Drive West and De Neve Drive. The generation of up to 42.5 equivalent trips during the A.M. peak hour could result in traffic delays along this route, which could degrade intersection levels of service at some locations along the access route. Although the addition of 42.5 trips during the A.M. peak hour may not degrade intersection levels of service sufficiently to exceed the identified significance criteria, because truck trips may not be spread out over the peak hour, and could at times occur in a relatively short timeframe, the impact of construction traffic could be significant at some locations along the identified access route.

Implementation of 2002 LRDP EIR PP 4.13-3, which has been incorporated into the project, would require an assessment by the campus of construction schedules of major projects and to adjust construction schedules, work hours, or access routes to the extent feasible, to reduce construction related traffic congestion. Although this would reduce potential impacts associated with the NHIP, because of existing traffic conditions along the expected haul routes, construction impacts could remain significant.

Beyond the identified programs, practices, and procedures identified above, no feasible mitigation measures have been identified to further reduce this potentially significant impact. Limiting construction activity (e.g., allowing construction to occur at only one or two sites simultaneously), or limiting the frequency of construction deliveries or export of construction debris (e.g., to several trips per hour) would substantially delay the construction schedule, as construction would occur over a much longer period. Delaying completion of the project would impede the ability of the campus to make additional on-campus housing available, deferring the reduction in triple-occupancy rooms and the conversion of commuter students to residential students. Therefore, constraining construction activities or restricting the frequency of construction vehicle traffic is considered infeasible. No other feasible mitigation measures have been identified to reduce this impact. This impact would remain significant and unavoidable.

Threshold	Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Impact NHIP 4.13-4 **Implementation of the NHIP would result in additional vehicular traffic volumes, but would not exceed established service levels on roadways designated by the Los Angeles Congestion Management Program. This is considered a *less-than-significant* impact.**

The Land Use Analysis program of the Congestion Management Program (CMP) provides decision-makers with the project-specific traffic impacts created by large projects on the CMP highway network. In order to analyze the impact of the NHIP on the regional transportation system (e.g., the freeway network), the results of the computerized transportation model were examined. Similar to the forecast performed for the surface street study intersections, the freeway volumes in year 2011 were determined. The future year 2011 freeway volumes for summer session are found in Tables 23(a) and 23(b) of Appendix 4. The CMP defines regional project impacts as significant if the D/C ratio increases by 0.020 or more and the final (With Project) LOS is F. Although all of the analyzed freeway segments would be operating at LOS E or F in one or both peak hours, the I-405 and I-10 would not experience a significant impact as a result of the construction of the NHIP. Therefore, based on the identified significance thresholds, impacts would be less than significant and no project-specific mitigation is required.

Threshold	Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact NHIP 4.13-5 **Implementation of the NHIP would not substantially increase hazards due to design features or incompatible uses. This is considered a *less-than-significant* impact.**

Implementation of the NHIP would not result in the need for any new roadway segments. Access to the proposed parking structure adjacent to Dykstra Hall would continue to be provided via the existing driveway to the site (currently occupied by a surface lot). Thus, development of the project would not result in any hazards due to features such as sharp curves or dangerous intersections. Further, development of the NHIP would provide additional student housing within an area already occupied by housing, and thus no traffic hazards would result from land use incompatibilities. A less-than-significant impact would occur, and no project-specific mitigation is required.

Impact NHIP 4.13-6 **The NHIP construction would not substantially increase vehicular hazards due to closure of traffic lanes or roadway segments. This is considered a *less-than-significant* impact.**

Construction associated with the NHIP would occur at five locations in the Northwest campus, including a site adjacent to Hedrick Hall, two sites adjacent to Rieber Hall, on surface parking Lot 15 and south of Dykstra Hall. Construction activities associated with the NHIP could result in temporary closure of on-campus traffic lanes or roadway segments along De Neve Drive to permit the delivery of construction materials or to provide adequate site access. The reduction of roadway capacity, the narrowing of traffic lanes, and the occasional interruption of traffic flow could pose hazards to vehicular traffic due to localized traffic congestion, decreased turning radii, or the condition of roadway surfaces. Following 2002 LRDP EIR PP 4.13-6, which has been incorporated into the project and would require maintenance of one travel lane in each direction (to the extent feasible) and/or the provision of signal carriers (i.e., flagpersons) when only a single lane can be maintained, would ensure that this impact would be less than significant, and that no project-specific mitigation is required.

Impact NHIP 4.13-7 **The NHIP construction would not substantially increase pedestrian hazards due to the closure of sidewalks or paths. This is considered a *less-than-significant* impact.**

Construction of the NHIP would occur at a site adjacent to Hedrick Hall, two sites adjacent to Rieber Hall, on surface parking Lot 15 and south of Dykstra Hall. Construction activities could require the closure of some pedestrian sidewalks and paths adjacent to these construction locations to ensure pedestrian safety. Following 2002 LRDP EIR PP 4.13-7, which has been incorporated into the project and will require provision of temporary signage indicating alternate pedestrian routes and modifications as warranted to make alternate routes accessible, would ensure that this impact would be less than significant and that no project-specific mitigation is required.

Threshold	Would the project result in inadequate emergency access?

Impact NHIP 4.13-8 **Implementation of the NHIP would not result in inadequate emergency access. This is considered a *less-than-significant* impact.**

Implementation of the NHIP would increase employment on campus and could increase the number of summer resident students and attendees at summer programs and conferences, which would result in the generation of additional vehicle trips. Implementation of the NHIP would result in the generation of approximately 428 average daily trips, 21 A.M. peak hour trips and 47 P.M. peak hour trips during the

regular session and approximately 3,592 average daily trips, 228 A.M. peak hour trips and 331 P.M. peak hour trips during the summer session. The increase in campus-related vehicle trip generation would increase traffic volumes on the local street and regional highway network, which would degrade intersection levels of service at four intersections during the 12-week summer session. With implementation of the identified mitigation measures, impacts would remain significant and unavoidable at two intersections, however, those impacts would occur at intersections where traffic volumes are approximately 4.5 percent lower than during the regular session during the A.M. peak hour and between 5.2 and 11.6 percent lower during the P.M. peak hour (as shown on Table 4.13-27 in Volume 1 (Impact 4.13-2). In addition, implementation of the proposed project will not impair or otherwise restrict access to the campus. Thus implementation of the proposed project would not result in a substantive increase in traffic volumes that would impede the ability of emergency vehicles to provide emergency police, fire, or medical services and a less-than-significant impact would occur. In addition, as described above under Impact NHIP 4.13-5, implementation of the 2002 LRDP would not result in hazards due to design features or land use incompatibilities, which could impair emergency access. This impact would be less-than-significant, and no project-specific mitigation is required.

Impact NHIP 4.13-9 **The NHIP construction would not result in inadequate emergency access. This is considered a *less-than-significant* impact.**

Construction activities associated with the NHIP could result in temporary closure of on-campus traffic lanes or roadway segments, to permit the delivery of construction materials or to provide adequate site access. The reduction of roadway capacity, the narrowing of traffic lanes, and the occasional interruption of traffic flow on campus streets could impair emergency access on campus. Implementation of 2002 LRDP EIR PP 4.13-9, which has been incorporated into the project, will require consultation with emergency service providers in the event of lane or street closures and would ensure that this impact would be less than significant. No project-specific mitigation is required.

Threshold	Would the project result in inadequate parking capacity?

Impact NHIP 4.13-10 **Implementation of the NHIP would not result in inadequate parking capacity during the regular session. This is considered a *less-than-significant* impact.**

The NHIP would increase on-campus student housing and allow approximately 1,675 undergraduate commuter students to become on-campus residents. Approximately 249 persons would be employed to staff the NHIP, of which about 35 would be students. Thus, the NHIP project would increase parking

demand for resident students and staff (associated with the NHIP) and decrease parking demand for commuter students (as 1,675 former commuter students would be able to reside on campus).

Implementation of the NHIP would involve removal of approximately 233 surface parking spaces from Lot 15 (57 spaces), Hedrick Hall Lot (69 spaces); Rieber Hall Lot (82 spaces) and Dykstra Hall Lot (25 spaces). In response to surface parking removal, the proposed project would include a parking structure of approximately 299 spaces, which would result in a net increase of approximately 66 spaces.

Assuming completion of previously approved projects, and the NHIP, approximately 24,630 physical spaces would be provided on campus. With continued implementation of stack parking, it is anticipated that the campus parking inventory would be at or below the parking cap of 25,169 spaces, as required by 2002 LRDP PP 4.13-1(b). Assuming that parking continues to be supplied to the various campus population groups (e.g., faculty/staff, resident students, emeriti faculty, visitors) at current rates, the estimated future campus parking is shown in Table 4.13-17 (Future On-Campus Parking Allocation With Northwest Housing Infill Project—Regular Session).

Table 4.13-17 Future On-Campus Parking Allocation With Northwest Housing Infill Project—Regular Session

Permit Group	*Number*	*Parking Permits*	*Spaces*
Faculty & Staff			
Health Sciences	5,617	4,655	3,231
General Campus	13,285	10,421	7,289
Resident Students			
Undergraduate	9,009	1,031	667
Graduate	2,000	1,917	1,917
Not Enrolled/Employed Off Campus	0	0	0
Commuter Students			
Student Academic Employee	3,219	2,072	1,446
Other Commuter Students	20,082	9,254	5,463
Other Permits			
Quarterly Guest/Emeritus	5,671	5,671	2,477
University Extension	5,336	5,336	0
Daily Permit Sales	6,155	6,155	2,131
Total Spaces			***25,169***

Source: Crain and Associates, Northwest Campus Infill Housing Traffic Study, October 2002

With completion of the NHIP, although the total supply of parking would remain unchanged, the number of spaces allocated to faculty/staff, resident students, and commuter students would all increase. As parking availability would increase for faculty/staff, commuter students, and resident students during

the regular session, implementation of the NHIP would not result in inadequate parking capacity, and this impact would be less than significant. No project-specific mitigation is required.

Impact NHIP 4.13-11 **Implementation of the NHIP would not result in inadequate parking capacity during the summer session. This is considered a *less-than-significant* impact.**

As discussed in Volume 1 (Section 4.13.1), during the summer session, with an on-campus parking inventory of approximately 22,010 spaces (not including stack parking), the available supply of parking currently exceeds demand by approximately 2,811 spaces, which remain unsold during the summer (per Table 4.13-7, Current Summer Session Parking Allocation, Volume 1). With completion of previously approved projects and the NHIP, the on-campus parking inventory would increase to approximately 24,630 physical spaces, which could increase the number of unsold spaces during the summer. The NHIP would increase staff employment by 249 (of which 35 would be students) and could increase the number of on-campus summer resident students (by 163) and the number of residential participants in summer conferences and programs (by 348). Even with a potential net increase of 757 persons on-campus during the summer, given the projected future number of unsold parking spaces (shown in Table 4.13-18 [Future On-Campus Parking Allocation With Northwest Housing Infill Project—Summer Session]), the NHIP would not result in inadequate parking capacity during the summer. Further, 2002 LRDP MM 4.13-2(a) shall be implemented to expand notification of campus TDM programs to summer session students through the registration process. This impact is less than significant, and no project-specific mitigation is required.

Table 4.13-18 Future On-Campus Parking Allocation With Northwest Housing Infill Project—Summer Session

Permit Group	*Number*	*Parking Permits*	*Spaces*
Faculty & Staff			
Health Sciences	5,617	4,655	3,231
General Campus	13,285	10,421	7,289
Resident Students			
Undergraduate	894	279	180
Graduate	599	574	574
Not Enrolled/Employed Off Campus	1,401	1,343	1,343
Day Conference Attendees	1,744	872	541

Table 4.13-18 Future On-Campus Parking Allocation With Northwest Housing Infill Project—Summer Session

Permit Group	Number	Parking Permits	Spaces
Commuter Students			
Student Academic Employee	2,049	1,319	920
Other Commuter Students	7,531	4,121	2,433
Other Permits			
Quarterly Guest/Emeritus Permits	5,671	5,671	2,477
University Extension Permits	5,336	5,336	0
Daily Permit Sales[1]	6,155	6,155	2,131
Other Parking			548
Unsold Spaces			3,205
Total Spaces			***25,169***

1. Daily permit sales include conference attendees.

Source: Crain and Associates, Northwest Campus Infill Housing Traffic Study, October 2002

Impact NHIP 4.13-12 **The NHIP construction could result in temporary elimination of on-campus parking spaces and could require additional temporary parking for construction workers. This is considered a *less-than-significant* impact.**

Construction of the NHIP would eliminate approximately 233 parking spaces in existing surface parking lots. Construction of the NHIP is estimated to require a peak workforce of approximately 200 construction workers. Assuming a worst-case scenario where each construction worker drove alone, a maximum of 200 construction-employee parking spaces would be needed for the total of 200 workers at the construction peak. Combined with the short-term loss of parking, construction of the NHIP would increase parking demand by approximately 433 spaces.

Completion of under-construction and previously approved parking facilities would increase the on-campus parking inventory by approximately 1,710 spaces. Thus, the short-term loss of 233 parking spaces (from removal of surface lots by the NHIP) would not result in an inadequate parking supply.

As part of the proposed project, construction staging areas and employee parking would be provided on site at each of the five locations that would be impacted by the project. Construction employee equipment staging areas would be moved around the project site, depending on the phase or stage of construction activity. Due to site constraints, on-site parking may not be available. Construction worker parking would be dispersed at nearby parking facilities such as part of Lot 11, part of Lot 13, part of Lot 15 and part of Intramural Field Parking Structure (when completed). If sufficient spaces are not available on-campus, then off-campus construction worker parking would be provided pursuant to 2002

LRDP MM 4.13-12. Therefore construction of NHIP would not result in an inadequate parking supply, and the impact would be less than significant. No project-specific mitigation is required.

Threshold	Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Impact NHIP 4.13-13 Implementation of the NHIP would not conflict with adopted programs, policies, or practices supporting alternative transportation. This is considered a *less-than-significant* impact.

As noted above in the Environmental Setting section and in Volume 1 (Section 4.13.1), the UCLA TDM program is a comprehensive program that offers a broad range of services to encourage and assist UCLA commuters in utilizing alternatives to the single-occupancy vehicle. Elements of the TDM program were incorporated into the 1990 LRDP and included as mitigation measures in the LRDP EIR. The TDM program will continue throughout the planning horizon of the 2002 LRDP (pursuant to 2002 LRDP EIR PP 4.13-1(d)) and notification of TDM program will be expanded to summer session students through the registration process (pursuant to 2002 LRDP MM 4.13-2(a)).

The 1990 LRDP and LRDP EIR also included measures to expand the supply of on-campus housing, in recognition of the potential for on-campus housing to reduce trips and commuter students and increase the use of alternative modes, including walking, bicycles and campus shuttles. Implementation of the NHIP would be consistent with 2002 LRDP PP 4.13-1(c), which requires the provision of additional on-campus housing to continue the evolution of UCLA from a commuter to a residential campus. Thus, the NHIP would not conflict with adopted polices, plans or programs supporting alternative transportation, and the impact would be less than significant. No project-specific mitigation is required.

Impact NHIP 4.13-14 Implementation of the NHIP would not increase demand for public transit during the regular session. This is considered a *less-than-significant* impact.

The NHIP would increase on-campus student housing and allow approximately 1,675 currently enrolled undergraduate commuter students to become on-campus residents. Approximately 249 persons would be employed to staff the NHIP, of which about 35 would be students. Thus, overall the NHIP project would decrease the number of commuters to campus. As shown in Table 4.13-19 (Current and Future Commuters), compared to future "Without Project" conditions, the future number of other commuters (e.g., those without parking permits) with implementation of the NHIP would decrease by approximately 1,507 persons.

Table 4.13-19 Current and Future Commuters

Permit Group	Number	Parking Permits	Other Commuters
Existing Commuters			
Faculty & Staff	18,603	14,841	3,762
Commuter Students	26,976	9,076	17,900
Total	***45,579***	***23,917***	***21,662***
Future (2011) Commuters Without Project			
Faculty & Staff	18,691	14,910	3,781
Commuter Students	24,976	11,449	13,527
Total	***43,667***	***26,359***	***17,308***
Future (2011) Commuters with Northwest Housing Infill Project			
Faculty & Staff	18,902	15,076	3,826
Commuter Students	23,301	11,326	11,975
Total	***42,203***	***26,402***	***15,801***

Source: Crain and Associates, Northwest Campus Infill Housing Traffic Study, October 2002

Because the number of commuters to campus would decrease, the number of persons that could ride public transit would also decline. Currently approximately half of UCLA commuters receive parking permits. The other half must therefore utilize other means to get to campus, including public transit, carpools, vanpools, bicycles, and walking. A net decrease of approximately 1,507 commuters could result in a reduction of up to 1,507 public transit riders (assuming all those persons would utilize public transit). The potential decline in public transit ridership is not substantial and any decline in fare revenue is not anticipated to have any adverse effects on the transit providers. The impact of the NHIP on public transit during the regular session would be less than significant. No project-specific mitigation is required.

Impact NHIP 4.13-15 Implementation of the NHIP would increase demand for public transit during summer session. This is considered a *less-than-significant* impact.

Although the NHIP would expand on-campus student housing capacity, because of substantially lower demand during the summer session, the NHIP is not anticipated to substantially increase the number of resident students during the summer session. However, as a conservative assumption, it was assumed that an increase in housing supply could increase the number of resident students (by 163) during the summer. Similarly, the number of residential participants in summer conferences and programs was also assumed to increase (by 348), along with an increase in staff employment (of 249, of which 35 would be students). Thus, the impact of the NHIP during the summer could result in an increase of the campus

population of up to 757 persons during the summer. With approximately 3,205 unsold parking spaces during the summer (as discussed above for Impact NHIP 4.13-11), parking would be available for all of the additional persons that could be on campus as a result of the NHIP. However, as the NHIP is estimated to increase staff employment, assuming that the 211 (nonstudent) staff would obtain parking permits at current ratios (of about 83 percent), then approximately 17 percent of staff would use alternative means to travel to campus. Thus, the NHIP could result in an increase of approximately 36 commuters during the summer. Given the capacity of bus lines serving the campus (discussed in Volume 1, Section 4.13.1), an increase of 36 commuters would have a less-than-significant impact on public transit. No project-specific mitigation is required.

4.13.3 Cumulative Impacts

Refer to Volume 1, Section 4.13.4 (Transportation/Traffic, Cumulative Impacts) for a discussion of cumulative transportation/traffic impacts.

4.13.4 References

City of Los Angeles. 1996. *Los Angeles General Plan Framework Draft Environmental Impact Report (SCH No. 94071030).*

Crain & Associates. 2002. *UCLA Long Range Development Plan Transportation Systems Analysis*, October.

———. 2002. *UCLA Northwest Campus Housing Infill Project Traffic Analysis*, October

University of California, Los Angeles. 1996. *Parking Structure 4 Expansion, Final Environmental Impact Report (SCH No. 96041018).*

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———. 2001. *UCLA Intramural Field Parking Structure, Final Environmental Impact Report (SCH No. 1999091001).*

———. 2001. *UCLA Southwest Campus Housing and Parking, Final Environmental Impact Report (SCH No. 200005104).*

University of California, Merced. 2002. *University of California Merced Campus Long Range Development Plan Final Environmental Impact Report (SCH No. 2001021065).*

4.14 UTILITIES AND SERVICE SYSTEMS

This section hereby incorporates by reference Volume 1, Section 4.14 (Utilities and Service Systems).

4.14.1 Water Supply

Environmental Setting

UCLA is served by the City of Los Angeles Department of Water and Power (LADWP), as described in the Volume 1, Section 4.14.1 (Utilities and Service Systems, Environmental Setting). The LADWP has indicated in its Year 2000 Urban Water Management Plan (LADWP 2000) that it will provide adequate water supplies to meet current and future growth until at least 2020, including the treatment of all water in compliance with prevailing laws and regulations. Refer to Volume 1, Section 4.14.1 (Utilities and Service Systems, Environmental Setting) for an additional discussion of water treatment facilities, campus water demand, and campus water conservation programs.

Project Impacts and Mitigation

Analytic Method

As described in Volume 1 of the 2002 LRDP EIR, projected water demand for the proposed project may be analyzed and calculated by one of three methods: (1) using demand factors that correlate the type of land use with a water demand rate; (2) determining a demand factor specific to the campus by dividing the total existing campus water usage by the total developed gross square feet; or (3) applying a 2 percent annual growth factor to the total existing campus water usage, which has been determined by the LADWP in the Urban Water Management Plan to be a reasonable projection of future water demand growth. In preparing this EIR, projected water use was calculated using all three methods, and the results were analyzed to determine which method yielded data closest to actual campus water use, given existing demand and existing campus land uses. Based upon this analysis, it was determined that utilization of a campus water demand factor (method 2, described above) provided the most accurate yet conservative results, and it is also the method utilized by other University of California campuses for programmatic analyses. The campus water demand factor was determined by dividing the existing annual baseline water demand into the existing developed square footage, which was then applied to the gross square footage at full implementation of the 2002 LRDP to calculate projected solid waste generation. These calculations are shown in Volume 1, Table 4.14-1 (Existing and Projected 2002 LRDP Water Use). Therefore, the campus water demand factor of 0.17577 gpd/gsf is used to estimate future water usage for the NHIP.

The projected water demand for the NHIP is 96,673 gallons per day (gpd), calculated as 550,000 gross square feet (gsf) multiplied by the campus water demand factor of 0.17577 gallons per day (gpd) per gsf. The only component of the NHIP that would not generate a demand for water is the parking structure.

To determine impacts on water supply resulting from implementation of the proposed project, the projected water demand of the NHIP was compared to the total projected water demand for the 2002 LRDP, of which the proposed project is a part, to ensure that the increase in water demand does not exceed the water demand projections of the 2002 LRDP (either individually or in combination with other projects developed under the 2002 LRDP). In addition, projected 2002 LRDP water demands were compared to LADWP water supplies in 2010 to ensure that an adequate and reliable source of water would be available and to determine whether any infrastructure improvements would be necessary.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs related to water supply. However, the following 2002 LRDP EIR PPs shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.14-2(a) *New facilities and renovations (except for patient care facilities in the Medical Center) shall be equipped with low-flow showers, toilets, and urinals.*

2002 LRDP EIR PP 4.14-2(b) *Measures to reduce landscaping irrigation needs shall be used, such as automatic timing systems to apply irrigation water during times of the day when evaporation rates are low, installing drip irrigation systems, using mulch for landscaping, subscribing to the California Irrigation Management Information System Network for current information on weather and evaporation rates, and incorporating drought-resistant plants as appropriate.*

2002 LRDP EIR PP 4.14-2(c) *The campus shall promptly detect and repair leaks in water and irrigation pipes.*

2002 LRDP EIR PP 4.14-2(d) *The campus shall minimize the use of water to clean sidewalks, walkways, driveways and parking areas.*

2002 LRDP EIR PP 4.14-2(e) *The campus shall avoid serving water at UCLA food service facilities except upon request.*

2002 LRDP EIR PP 4.14-2(f) *The campus shall provide ongoing water treatment programs for campus cooling equipment by adding biodegradable chemicals to achieve reductions in water usage.*

2002 LRDP EIR PP 4.14-2(g) *The campus shall educate the campus community on the importance of water conservation measures.*

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on water supply if it would result in any of the following:

- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- 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
- Require new or expanded water entitlements and resources if there are not sufficient water supplies available to serve the project from existing entitlements and resources[12]

Effects Not Found to Be Significant

The Initial Study did not identify any Effects Not Found to Be Significant with respect to water supply; therefore, all potential impacts are discussed in Volume 1 or Volume 2 of this EIR.

Impacts and Mitigation

Threshold	Would the project require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Impact NHIP 4.14-1 **Implementation of the NHIP would not require or result in the construction of new or expanded water treatment facilities, the construction of which could cause significant environmental effects. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.14-1, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would require or result in the construction of new water treatment facilities or expansion of existing facilities, and determined that a less-than-significant impact would occur. As noted in Section 4.14.1 (Environmental Setting), the LADWP is responsible for ensuring the treatment of all water supplies to the City of Los Angeles. As required by the California Department of Health Services, LADWP routinely monitors the water quality of each well that supplies potable water to the City. LADWP also operates the Los Angeles Aqueduct Filtration Plant, and within the next ten years LADWP

[12] This threshold of significance has been slightly modified for ease of comprehension.

plans to invest $724 million in projects that would provide additional safety for City water supplies. In addition to the delivery of adequate water supplies, LADWP has also made the necessary commitments (i.e., planning and financial) to adequately treat all water supplied to the City of Los Angeles through 2020 (Year 2000 Urban Water Management Plan) within existing and/or planned water treatment facilities. Implementation of the 2002 LRDP, including the NHIP, would not require or result in the construction of new water treatment facilities or the expansion of existing facilities. Impacts would be less than significant and no project-specific mitigation is required.

Threshold	Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Impact NHIP 4.14-2 **Implementation of the NHIP would generate an additional demand for water, but would not require water supplies in excess of existing entitlements and resources or result in the need for new or expanded entitlements. This is considered a *less-than-significant* impact.**

As shown in Volume 1, Table 4.14-1 (Existing and Projected 2002 LRDP Water Use), total projected water demand under full implementation of the 2002 LRDP was calculated as 299,945 gallons per day. Utilizing the campus water demand factor discussed above, the water demand associated with operation of the NHIP would be approximately 96,673 gpd (550,00 gsf x 0.17577 gpd/gsf). This would not exceed the projected campus demand anticipated as of 2010–11, which is 3,004,555 gpd, or the water demand attributable to the 2002 LRDP alone.

As described in detail in Impact LRDP 4.14-2, the 2002 LRDP, which includes the NHIP, has been taken into account in the demand projections provided in the 2000 UWMP. As previously mentioned, the LADWP has indicated in its Urban Water Management Plan that it will provide an adequate water supply to meet current and future growth until at least 2020, and the WSA (Los Angeles Department of Water & Power, July 2002) also concluded that an adequate water supply exists to serve full implementation of the 2002 LRDP. As the projected water demand for the NHIP is included in the 2002 LRDP water supply analysis, it is assumed that adequate water is also available to serve the NHIP. This impact would, therefore, be considered less than significant.

Additionally, as part of implementation of the 2002 LRDP, the NHIP would follow all available water conservation practices described in 2002 LRDP EIR PPs 4.14-2(a) through 4.14-2(g), that have been incorporated into the NHIP to further reduce this less-than-significant impact. No project-specific mitigation is required.

4.14.2 Solid Waste

Environmental Setting

All of the solid waste generated in the City of Los Angeles, which is estimated to be about 3,400 tons of refuse per day (Los Angeles County Sanitation Districts 2001), is disposed of in privately owned landfills. The six landfills previously owned and operated by the City of Los Angeles have been permanently closed. Campus solid waste is transported by a private waste hauler to the American Waste Transfer Station in Gardena. Trash ultimately destined for landfill disposal is then transported to the privately-owned Chiquita Canyon Landfill in Santa Clarita. Landfills operated by the Los Angeles County Sanitation Districts do not currently accept solid waste generated by the City of Los Angeles, which includes the solid waste generated at the UCLA campus. Refer to Volume 1, Section 4.14.1 (Utilities and Service Systems, Environmental Setting) for an additional discussion regarding landfills, campus solid waste generation, conservation and recycling programs, and disposal procedures.

Project Impacts and Mitigation

Analytic Method

As described in the 2002 LRDP EIR, to determine whether development under the 2002 LRDP would result in solid waste disposal impacts, the amount of solid waste currently disposed of by UCLA in area landfills was calculated. This annual solid waste generation was divided by the existing developed square footage to determine a solid waste generation factor, which was then applied to the gross square footage at full implementation of the 2002 LRDP to calculate projected solid waste generation. These calculations are shown in Volume 1, Table 4.14-3 (Existing and Projected 2002 LRDP Solid Waste Generation). The existing baseline development includes parking structures, which could indirectly generate solid waste. The amount of projected solid waste generation from the NHIP was calculated utilizing the same solid waste generation factor of 0.0009361 tons/year/square foot.

The projected solid waste generation for the NHIP is 596 tons/year/square foot, which is calculated as 636,250 gross square feet (gsf) multiplied by the campus solid waste generation factor of 0.0009361ton/year/square foot. The total square footage for the Dykstra Parking Structure was included in this analysis since it could indirectly generate solid waste.

To determine impacts on solid waste resulting from implementation of the proposed project, the solid waste generated by the NHIP was compared to the total projected solid waste generated by the 2002 LRDP, of which the proposed project is a part, to ensure that the increase in solid waste does not exceed

the solid waste projections of the 2002 LRDP (either individually or in combination with other projects developed under the 2002 LRDP). In addition, the increase in solid waste resulting from the NHIP was also analyzed and compared to landfill capacity.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Haves Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs related to solid waste. However, the following 2002 LRDP EIR PP shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.14-3 *The campus shall continue to implement a solid waste reduction and recycling program designed to limit the total quantity of campus solid waste that is disposed of in landfills during the LRDP plan horizon.*

Thresholds of Significance

The following thresholds of significance are primarily based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on solid waste if it would result in either of the following:

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs
- Fail to comply with applicable federal, State, and local statutes and regulations related to solid waste

Effects Not Found to Be Significant

The Initial Study did not identify any Effects Not Found to Be Significant with respect to solid waste; therefore, all potential impacts are discussed in Volume 1 or Volume 2 of this EIR.

Impacts and Mitigation

Threshold	Would the project be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?

Impact NHIP 4.14-3 **Implementation of the NHIP would not generate solid waste that exceeds the permitted capacity of landfills serving the campus. This is considered a *less-than-significant* impact.**

Volume 1, Section 4.14.3 (Utilities and Services Systems, Project Impacts and Mitigation) analyzed the impacts on area landfills of full implementation under the 2002 LRDP and determined that a less-than-

significant impact would occur. The analysis employed a solid waste generation factor based on gross square footage under the 2002 LRDP, including the gross square footage for the NHIP.

The City of Los Angeles General Plan Framework EIR indicates that the solid waste disposal demand within the City (which includes UCLA) can be met through 2010 if expansion of the Chiquita Canyon Landfill and Lopez Canyon Landfill is approved. An expansion to the Chiquita Canyon Landfill was approved in 1998, extending the land use permit through 2012 and increasing the landfill capacity to 23 million tons. While the City-owned Lopez Canyon Landfill has been closed, the landfill capacity was expanded to 19.2 million tons prior to its closure. Collectively, these landfills provide 42.2 million tons, which is in excess of the 39.7 million tons determined to be adequate to serve the City's solid waste disposal needs through 2010. As reflected in Volume 1, Table 4.14-2 (Existing Waste Disposal Facilities, 2001), the remaining permitted capacity in the Chiquita Canyon Landfill, the facility serving the UCLA campus, is 23 million tons as of March 2001.[13] The NHIP is projected to generate approximately 595 tons per year of solid waste. This would not exceed the projected campus solid waste generation as of 2010–11, which is 23,326 tons per year, or the solid waste generated under the 2002 LRDP alone, which is approximately 1,766 tons per year.

Because the projected solid waste generation associated with the NHIP is included in the solid waste generated as part of the 2002 LRDP, and the impact associated with solid waste disposal for the 2002 LRDP is less than significant, this impact would also be considered less than significant. No project-specific mitigation is required. In addition, the UCLA campus has achieved a greater than 50 percent reduction of solid waste in conformance with AB 939 (the Integrated Waste Management Act), and the campus remains committed to waste reduction and minimization efforts, as required by PP 4.14-3. No project-specific mitigation is required.

Threshold	Would the project fail to comply with applicable federal, State, and local statutes and regulations related to solid waste?

Impact NHIP 4.14-4 **Implementation of the NHIP would comply with all applicable federal, State, and local statutes and regulations related to solid waste. This would be a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.14-4 determined that the 2002 LRDP would fully comply with all applicable federal, State, and local statutes and regulations related to solid waste, including AB 939 (Integrated Waste Management Act), and a less-than-significant impact would occur. Solid waste recycling and

[13] All data taken from Los Angeles County Integrated Waste Management Plan, 2000 Annual Report; landfill owners survey March 2001.

conservation programs would continue be implemented as part of the NHIP under the 2002 LRDP, and the NHIP would, therefore, result in a less-than-significant impact with regard to applicable statutes and regulations related to solid waste. No project-specific mitigation is required.

4.14.3 Wastewater

Environmental Setting

UCLA's Facilities Management Department is responsible for the maintenance of sanitary sewer lines located on campus. The City of Los Angeles provides transmission facilities from the campus to the City of Los Angeles' Hyperion Treatment Plant (HTP), located in Playa del Rey, directly west of the Los Angeles World Airport. The HTP treats wastewater from most of the City of Los Angeles. The HTP has a design capacity of 480 million gallons per day (mgd) and currently treats an average of 355 mgd to primary and secondary treatment standards. The HTP currently operates at 75 percent of capacity (City of Los Angeles 2002). Refer to Volume 1, Section 4.14.3 (Utilities and Service Systems, Wastewater) for an additional discussion of City wastewater treatment facilities, campus wastewater generation, and conservation efforts.

Project Impacts and Mitigation

Analytic Method

As described in the 2002 LRDP EIR, to determine whether development under the 2002 LRDP would result in wastewater impacts, the amount of wastewater currently generated by UCLA was calculated. This annual wastewater generation was divided by the existing developed square footage to determine a wastewater generation factor, which was then applied to the gross square footage at full implementation of the 2002 LRDP to calculate projected wastewater generation. These calculations are shown in Volume 1, Table 4.14-4 (Existing and Projected 2002 LRDP Wastewater Generation). The existing baseline development excludes parking structures, which do not generate wastewater. The amount of projected wastewater generated from the NHIP was calculated utilizing the same wastewater generation factor of 0.13360 gpd/gsf.

The projected wastewater generation for the NHIP is 73,480 gpd/gsf, which is calculated as 550,000 gsf multiplied by the solid wastewater generation factor of 0.13360 gpd/gsf. The total square footage for the Dykstra Parking Structure was not included in this analysis since it would not generate wastewater.

To determine off-campus impacts on wastewater resulting from implementation of the proposed project, the wastewater generated by the NHIP was compared to the total projected wastewater generated by the

2002 LRDP, of which the proposed project is a part, to ensure that the increase in wastewater does not exceed the wastewater projections of the 2002 LRDP. In addition, to determine on-campus impacts, additional sewer flows associated with the NHIP were compared to the remaining capacity of the on-campus conveyance and treatment systems to determine whether sufficient capacity exists and/or whether there is the need for new or expanded wastewater conveyance systems.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs related to wastewater. However, the following 2002 LRDP EIR PP shall be continued throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.14-6 *As part of the design process for proposed projects, an evaluation of the on-campus sewer conveyance capacity shall be undertaken, and improvements provided if necessary in order to ensure that connections are adequate and capacity is available to accommodate estimated flows.*

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on wastewater if it would result in any of the following:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments

Effects Not Found to Be Significant

The Initial Study did not identify any Effects Not Found to Be Significant with respect to wastewater; therefore, all potential impacts are discussed in Volume 1 or Volume 2 of this EIR.

Impacts and Mitigation

Threshold	Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Impact NHIP 4.14-5 Implementation of the NHIP would not exceed wastewater treatment requirements of the Regional Water Quality Control Board. This would be a *less-than-significant* impact.

Volume 1, Impact LRDP 4.14-5, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB), and determined that a less-than-significant impact would occur with compliance with the City's industrial wastewater permit program, which is administered subject to the requirements and limitations of the NPDES program, as enforced by the Regional Water Quality Control Board, and applicable provisions of Phases I and II of the National Pollutant Discharge Elimination System (NPDES). Because the NHIP would not require an industrial wastewater permit for any of the proposed uses, and the 2002 LRDP, including the NHIP would be required to comply with Phases I and II of NPDES, the NHIP would not exceed wastewater treatment requirements of the RWQCB, and a less-than-significant impact would occur. No project-specific mitigation is required.

Threshold	Would the project require or result in the construction of new or expanded wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Impact NHIP 4.14-6 Implementation of the NHIP could require the construction of new or expanded wastewater conveyance systems, the construction of which would not cause significant environmental effects. This is considered a *less-than-significant* impact.

Volume 1, Impact LRDP 4.14-6, analyzed whether implementation of the 2002 LRDP would require construction of new or expanded wastewater conveyance systems, and concluded that a less-than-significant impact would occur. The Sewer Study performed by RBF in May-July 2002 determined that adequate capacity exists in the on-campus sewer system to accommodate the increased demand from the 2002 LRDP, which includes projected sewer flows from the NHIP. As determined by the analysis provided in Volume 1 of this EIR and the Sewer Availability Report issued by the City of Los Angeles Department of Public Works, there is adequate sewer capacity to accommodate the NHIP development. This impact is, therefore, less than significant, and no project-specific mitigation is required.

As required by 2002 LRDP PP 4.14-6, the campus has evaluated its sewer conveyance capacity as part of the NHIP design process to determine whether modifications are necessary in order to ensure that connections are adequate and capacity is available to accommodate estimated flows. The existing sewer system within the Northwest zone consists of a series of campus-owned sewer lines, which discharge into a City of Los Angeles sewer line on Gayley Avenue. Campus sewer line K is an 8-inch line that services the Saxon Residential Suites in the Northwest zone. Sewer line X, a 12-inch sewer line within Charles E. Young Drive, intercepts the sewage from the Hedrick, Rieber, Sproul, and Sunset Village dormitory facilities. Campus sewer line Y is an 8-inch system that serves the De Neve housing complex. All three of these campus lines discharge into the off-site, City-owned sewer line at Gayley Avenue. The sewer main within Gayley Avenue is initially an 8-inch-diameter line that runs from the upstream terminus manhole near the intersection of Gayley and Landfair Avenues and flows downstream in a southeast direction. At the intersection of Gayley Avenue and Strathmore Drive, the sewer line increases to a 12-inch-diameter main as it accepts sewage discharge from UCLA's sewer lines K, X, and Y.

The NHIP includes provision of a new sewer line to connect the new residence halls to the Gayley Avenue City-owned sewer line. It is anticipated that the new line would extend from the east side of the proposed Hedrick Hall North, southward connecting the proposed Rieber Hall North and Rieber Hall West, and then to campus sewer line X, which ultimately ends at the Gayley Avenue City sewer main. Because the infrastructure planning is in the preliminary design phase, there is a possibility that an additional sewer connection from Rieber Hall West would be provided through De Neve Drive to connect at the sewer manhole at the intersection of De Neve Drive and Charles E. Young Drive West. Finally, the NHIP would include a modification to provide a short pipe connection between on-campus sewer lines H and F in two locations on Westwood Plaza to redirect sewer flows from the campus into sewer line E. This modification would reduce existing campus flows entering the City-owned line in Gayley, thereby transferring capacity to the NHIP. The RBF Sewer Study has determined that there is adequate capacity in the campus line E to accommodate these redirected flows, and this impact would be less than significant.

The NHIP is projected to generate approximately 73,480 gpd of wastewater. This would not exceed the projected campus wastewater generation as of 2010–11, which is 2,283,785 gpd. Of the total campus wastewater generation, approximately 227,984 gpd are attributable to the 2002 LRDP alone, which consists of 1.7 million gsf of development and includes the NHIP. Because the projected wastewater generation associated with the NHIP is included in the wastewater generated as part of the 2002 LRDP, and the impact associated with capacity of conveyance systems for the 2002 LRDP is less than significant, this impact would also be considered less than significant. No project-specific mitigation is required.

The construction impacts anticipated to result from implementation of the NHIP are comprehensively analyzed in Sections 4.2 (Air Quality), 4.9 (Noise and Vibration), and 4.13 (Transportation/Traffic) of this EIR. While significant, unavoidable construction impacts would occur in each of these issue areas as a result of construction of the entire NHIP (even with implementation of all relevant 2002 LRDP MMs and PPs related to construction activities), the modification of sewer lines within the project site is not considered likely to result in significant construction-related impacts by itself.

As described above, existing sewer lines would be extended to the NHIP and would not require substantial demolition—only removal of existing asphalt surfaces—nor would it require significant excavation, as the sewer lines are located relatively near surface given the topography of the project site in relation to the remainder of the campus (e.g., sewer lines are typically located nearer the ground surface at higher elevations). Consequently, following 2002 LRDP EIR PPs 4.2-2(a), which would be followed throughout the planning horizon of the 2002 LRDP, would require implementation of fugitive dust control measures according to SCAQMD Rule 403, would further reduce any air quality impact associated with grading activities to a less-than-significant level.

Construction activities would be limited, and construction traffic would, therefore, also be limited and considered less than significant. This would limit emissions from construction equipment to less-than-significant levels. Implementation of 2002 LRDP EIR PP 4.2-2(b) and 2002 LRDP EIR PP 4.2-2(c) would require maintenance and tuning of construction engines, as well as the use of existing electricity infrastructure on the campus, rather than generators powered by internal combustion engines. Following these programs, practices, and procedures would ensure that construction–related impacts to air quality would be less than significant. This less-than-significant impact would be further reduced with implementation of 2002 LRDP EIR MMs 4.2-2(a) and 4.2-2(b), which have been incorporated into the proposed project and would require that all construction equipment not in use for more than five minutes be turned off and would also require, to the extent feasible, the use of alternative fuel construction equipment.

The limited amount and type of construction activity, the minimal demolition, and the low amount of construction traffic would ensure that construction-related noise effects would also be less than significant with respect to on and off campus uses. In addition, following 2002 LRDP EIR PPs 4.9-8(a) to 4.9-8(d), and 4.9-9 would limit, to the extent feasible, hours of construction to nonsensitive time periods, require muffling of construction equipment, placement of construction staging areas away from sensitive receptors, and coordination with other campus uses and the academic calendar regarding construction activities as well as coordination with off-campus uses. These programs, practices, and

procedures would ensure that construction-related noise generated by modification of the sewer lines would remain less than significant.

Construction of the wastewater infrastructure component of the NHIP alone would be less than significant, and no specific mitigation would be required. However, all relevant 2002 LRDP MMs and PPs related to construction of the entire NHIP shall be applied to reduce overall construction impacts to the maximum extent feasible.

Threshold	Would the project result in a determination by the wastewater treatment provider that serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments[14]

Impact NHIP 4.14-7 **Implementation of the NHIP would not increase wastewater generation such that treatment facilities would be inadequate to serve the project's projected demand in addition to the provider's existing commitments. This is considered a *less-than-significant* impact.**

Volume 1, Impact LRDP 4.14-7 and 4.14-8, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would increase wastewater generation such that treatment facilities would be inadequate to serve the proposed project, and determined that a less-than-significant impact would occur. The Hyperion Wastewater Treatment Plant (HTP) has a design capacity of 480 million gallons per day (mgd) and is currently operating at 75 percent of capacity, which corresponds to approximately 355 mgd (City of Los Angeles 2002). With the improvements currently under construction or proposed for the Hyperion Treatment System, the system is anticipated to have adequate treatment capacity through the year 2010. In fact, according to the City of Los Angeles General Plan Framework (City of Los Angeles 1996), the HTP will treat 408 mgd in 2010, leaving a surplus of approximately 72 mgd. Because the LRDP growth is within the growth projections of tbe City of Los Angeles General Plan Framework EIR, and there is adequate capacity in the HTP, the 2002 LRDP would not increase wastewater generation such that treatment facilities would be inadequate to serve the project's projected demand in addition to the provider's existing commitments. Therefore, the additional 227,984 gpd generated by implementation of the 2002 LRDP, which includes the 73,480 gpd generated by the NHIP, can be adequately treated by the HTP. Continuation of campus water conservation measures as outlined in PP 4.14-2(a) through PP 4.14-2(g) would result in an associated decrease in wastewater generation,

[14] This standard has been slightly modified for ease of comprehension.

which would further minimize this impact. This impact would be less than significant, and no project-specific mitigation is required.

4.14.4 Energy

Electricity

Environmental Setting

Electricity on campus is primarily provided by the Environmental Services Facility (ESF), which simultaneously produces electricity and steam for the entire campus, as well as chilled water for many buildings on the main campus for use in air conditioning and cooling activities. A portion (20 to 25 percent) of the electricity used by the campus is directly provided by LADWP. This includes the residential area of the campus, which relies exclusively upon electricity supplied by LADWP and uses stand-alone chillers for heating, ventilation, and air conditioning (HVAC) systems. Refer to Volume 1, Section 4.14.4 (Utilities and Service Systems, Energy) for further discussion regarding campus electricity use and generation, as well as conservation efforts.

Project Impacts and Mitigation

Analytic Method

As described in the 2002 LRDP EIR, to determine whether development under the 2002 LRDP would result in electricity impacts, the amount of electricity currently generated by UCLA was calculated. This annual electricity generation was divided by the existing developed square footage to determine a electricity generation factor, which was then applied to the gross square footage at full implementation of the 2002 LRDP to calculate projected electricity generation. These calculations are shown in Volume 1, Table 4.14-5 (Existing and Projected 2002 LRDP Electricity Demand). The existing baseline development includes parking structures to account for nighttime lighting. The amount of projected electricity generated as a result of the NHIP was calculated utilizing the same electricity demand factor of 16.6976 kWh/gsf/year.

The projected electricity generation for the NHIP is 10,625,375 kWh/gsf/year, which is calculated as 636,250 gsf multiplied by the electricity demand factor of 16.6976 kWh/gsf/year. The total square footage for the Dykstra Parking Structure was included in this analysis since it would require nighttime lighting.

To determine impacts on electricity demand resulting from implementation of the proposed project, the electricity generated by the NHIP was compared to the total projected electricity generated by the 2002 LRDP, of which the proposed project is a part, to ensure that the increase in electricity demand does not exceed the electricity projections of the 2002 LRDP.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs related to energy. However, the following 2002 LRDP EIR PPs shall be continue throughout the 2002 LRDP planning horizon:

2002 LRDP EIR PP 4.14-10 *The campus shall continue to implement campus energy conservation measures (such as energy-efficient lighting and microprocessor-controlled HVAC equipment) to reduce the demand for electricity and natural gas. The energy conservation measures may be subject to modification as new technologies are developed or if current technologies become obsolete through replacement.* (This is identical to Air Quality PP 4.2-3.)

Thresholds of Significance

The following thresholds of significance are based on Appendix F and Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on energy if it would result in any of the following:

- Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Encourage activities resulting in the wasteful or inefficient use of energy

Effects Not Found to Be Significant

The Initial Study did not identify any Effects Not Found to Be Significant with respect to energy; therefore, all potential impacts are discussed in Volume 1 or Volume 2 of this EIR.

Impacts and Mitigation

Threshold	Would the proposed project require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Impact NHIP 4.14-8 Implementation of the NHIP could increase the demand for electricity, but would not require or result in the construction of new energy production or transmission facilities, the construction of which could cause a significant environmental impact. This is considered a *less-than-significant* impact.

With regard to the electrical system for the proposed project, each new residential building will be provided with a 12 kV, 208V, three-phase silicone transformer substation with downstream distribution equipment, automatic transfer switches, and panel boards to serve loads using copper wiring. The buildings' electrical systems will be connected to the campus 12 kV system loop (comprised of lines along Sunset Boulevard, De Neve Drive, and Charles E. Young Drive West and North).

As noted in Volume 1, Section 4.14-3 (Utilities and Service Systems, Project Impacts and Mitigation), implementation of the 2002 LRDP would increase campus development and correspondingly increase the campus use of electricity and reduce the proportion of campus demand met by campus facilities. Total annual electricity consumption is estimated to increase by up to about 31.5 million kWh/yr to about 416 million kWh/yr, although campus energy conservation measures and the increased campus capacity to store steam and chilled water would offset some of this increase in demand. LADWP would supply this increase in demand, and has stated that it could provide this electricity based on current and estimated future supplies, including planned facilities upgrades (LADWP 2002). Additionally, LADWP has indicated that existing infrastructure to the campus is able to accommodate the increase in electricity anticipated under the 2002 LRDP. Implementation of the 2002 LRDP is not anticipated to result in a demand for electricity that would exceed existing or projected supplies, and would not require the construction or expansion of energy production or transmission facilities.

Utilizing the calculated demand factor of 16.7 kWh/year/square foot, the NHIP would demand approximately 10,625,375 kWh/year of electricity based on project square footage of 636,250 gsf (including the proposed Dykstra Parking Structure). The impact of implementation of the 2002 LRDP on electricity supplies and infrastructure was determined to be less than significant. As there would be adequate electricity to serve development under the 2002 LRDP, which includes the NHIP, the NHIP would also result in a less-than-significant impact, and no project-specific mitigation is required.

Natural Gas

Environmental Setting

Sempra Energy, Inc. and the Southern California Gas Company (SCGC) supply natural gas, and G.S.F. Energy supplies landfill gas to the campus. The major on-campus use of gaseous fuel is to power the campus ESF, which in turn provides electricity and steam to the majority of the campus and chilled water to many buildings on the main campus. Natural gas is also used in campus cafeterias, laboratories, and residence halls. Refer to Volume 1, Section 4.14.1 (Utilities and Service Systems, Environmental Setting) for further discussion regarding natural gas consumption and delivery systems. Gas service to the Northwest zone is provided by a 4-inch-diameter medium-pressure SCGC line that is connected to a 10-inch main in Sunset Boulevard. The 4-inch-diameter gas line operates at a pressure of ±40 psi and delivers gas to separate meters for each building.

Project Impacts and Mitigation

Analytic Method

As described in the 2002 LRDP EIR, to determine whether development under the 2002 LRDP would result in impacts on natural gas supplies, the amount of gas currently used by UCLA was calculated. This annual gas demand was divided by the existing developed square footage to determine a gas generation factor, which was then applied to the gross square footage at full implementation of the 2002 LRDP to calculate projected demand for gas supplies. These calculations are shown in Volume 1, Table 4.14-6 (Existing and Projected 2002 LRDP Natural Gas Demand). The existing baseline development excludes parking structures. The amount of gas required as a result of the NHIP was calculated utilizing the same gas demand generation factor of 0.12246 mmBtu/gsf/year.

The projected gas demand for the NHIP is 67,353 mmBtu/gsf/year, which is calculated as 550,000 gsf multiplied by the natural gas demand factor of 0.12246 mmBtu/gsf/year. The total square footage for the Dykstra Parking Structure was not included in this analysis since it would not result in a demand for natural gas.

To determine impacts on natural gas supplies resulting from implementation of the proposed project, the natural gas required by the NHIP was compared to the total projected natural gas supplies required by the 2002 LRDP, of which the proposed project is a part, to ensure that the increase in natural gas demand does not exceed the natural gas projections of the 2002 LRDP.

2002 LRDP EIR Mitigation Measures and/or Campus Programs, Practices, and Procedures That Have Been Incorporated into the Proposed Project

The 2002 LRDP EIR did not identify any MMs or PPs related to natural gas.

Thresholds of Significance

The following thresholds of significance are based on Appendix F and Appendix G of the 2002 CEQA Guidelines. For purposes of this EIR, implementation of the NHIP may have a significant adverse impact on energy if it would result in any of the following:

- Require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Encourage activities resulting in the wasteful or inefficient use of energy

Impacts and Mitigation

Threshold	Would the proposed project require or result in the construction of new energy production and/or transmission facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Impact NHIP 4.14-9 **Implementation of the NHIP could increase the demand for natural gas, but would not require or result in the construction of new gas production or transmission facilities, the construction of which could cause a significant environmental impact. This is considered a *less-than-significant* impact.**

The 2002 LRDP EIR analyzed the impacts on natural gas of full implementation under the LRDP, including the square footage for the NHIP. The analysis determined that adequate natural gas would be available at full implementation of the 2002 LRDP. The SCGC stated that it would be able to provide the increase in its portion of the volume of natural gas anticipated from implementation of the 2002 LRDP, based on existing and projected supplies (the SCGC [Earl Plummer] 2002), and Sempra Energy would be able to accommodate the increase in use of gas by the campus ESF and the increase in demand resulting from the exhaustion of the Mountaingate Landfill Supply. Additionally, according to the SCGC, which owns the natural gas infrastructure serving the campus, the existing natural gas lines to the campus are able to accommodate this increase in demand.

Development under the 2002 LRDP would increase the campus demand for natural gas by 208,980 mm BTU, for a total demand of 3,871,340 mmBtu per year (see Volume 1, Table 4.14-6 [Existing and Projected 2002 LRDP Natural Gas Demand]). Using the calculated demand factor of 0.12246 mm

BTU/square foot/year, the NHIP would demand approximately 67,353 mmBtu of natural gas based on the project net square footage of 550,000 gsf. This total is less than the increase in demand projected at full implementation of the 2002 LRDP. Because demand projected for the 2002 LRDP, which includes the NHIP, would not exceed available or planned supply, and new infrastructure would not be required to serve the campus, this impact would be less than significant for the NHIP. No project-specific mitigation is required.

Threshold	Would the proposed project encourage activities resulting in the wasteful or inefficient use of energy?

Impact NHIP 4.14-10 Implementation of the NHIP would not result in the wasteful or inefficient use of energy by UCLA. ***A less-than-significant*** **impact would occur.**

Volume 1, Impact LRDP 4.14-10, analyzed whether implementation of the 2002 LRDP, which includes the NHIP, would result in the wasteful, inefficient, or unnecessary use of energy by the campus, and determined that following 2002 LRDP PP 4.14-10 would ensure efficient energy use by requiring the incorporation of energy-efficiency measures (such as efficient lighting and HVAC controls to reduce electricity and natural gas demand) into all construction projects under the 2002 LRDP, including the NHIP. Therefore, although implementation of the 2002 LRDP would increase the campus energy demand, energy efficiency measures would result in lower levels of energy use compared to structures of similar size and use constructed without such measures. To conserve energy, design and control methods such as internal blinds, heat-absorbing glass, and external sun shading will be considered in the design phase; energy-efficient motors will be used for all equipment; variable-speed drives rather than inlet-guide vanes will be used; and control systems will be used to minimize the building systems operation to occupied periods of time. Because the 2002 LRDP would foster energy conservation, it would not, as a consequence, result in the wasteful or inefficient use of energy, and this impact would be less than significant. As the NHIP was considered as part of full implementation of the 2002 LRDP and would incorporate all feasible energy conservation measures, no further analysis of this issue is required, and no project-specific mitigation is required.

4.14.5 Cumulative Impacts

Refer to Volume 1, Section 4.14.4 (Utilities and Service Systems, Cumulative Impacts) for a discussion of cumulative utilities and service systems impacts.

4.14.6 References

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Chapter 5 OTHER CEQA CONSIDERATIONS

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all phases of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. As part of this analysis, the Environmental Impact Report (EIR) must also identify (1) significant environmental effects of the proposed project, (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, (4) mitigation measures proposed to minimize significant effects, and (5) alternatives to the proposed project. Growth-inducing impacts are discussed in Volume 1, Chapter 5 (Other CEQA Considerations).

5.1 SIGNIFICANT ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

Table 2-1 (Summary of Environmental Impacts and Mitigation Measures), which is contained in Chapter 2 of this EIR, and Sections 4.1 through 4.14 of this EIR, provide a comprehensive identification of the proposed project's environmental effects, including the level of significance both before and after mitigation.

5.2 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. Development under the NHIP would result in the following significant and unavoidable project-related impacts:

Air Quality

- Construction-related impacts resulting from peak daily emissions of NOx

Noise

- Construction impacts resulting from on-campus groundborne vibration or groundborne noise levels
- Construction-related impacts resulting from an increase in on-campus ambient noise levels
- Construction-related impacts resulting from an increase in off-campus ambient noise levels

Transportation/Traffic

- Operational impacts resulting from an increase in vehicular trips during the twelve-week summer session at one intersection in the AM peak hour, one intersection in the PM peak hour, and two intersections in both the AM and PM peak hours.
- Construction impacts resulting from truck trips

All other project-related impacts resulting from implementation of the proposed project can be mitigated to a less-than-significant level. Cumulative impacts, including the Northwest Housing Infill Project (as part of the 2002 LRDP) in combination with other projects causing related impacts, are fully analyzed and disclosed in Volume 1 of this EIR, and include

Traffic

- Operational impacts resulting from exceedence of the applicable LOS criteria would make a significant and cumulatively considerable contribution to cumulative impacts on traffic on local streets and intersections during both the regular and summer sessions
- Construction impacts resulting from exceedence of the applicable LOS criteria would make a significant and cumulatively considerable contribution to cumulative impacts on traffic on local streets and intersections during both the regular and summer sessions

Air Quality

- Construction impacts resulting from air emissions would make a significant and cumulatively considerable contribution to cumulative significant impacts on regional air quality from daily emissions of criteria pollutants.

5.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the proposed project. Specifically, Section 15126.2(c) states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Resources that will be permanently and continually consumed by implementation of the Northwest Housing Infill Project (NHIP) include water, electricity, natural gas, and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts, or the unnecessary, inefficient, or wasteful use of resources. In fact, the growth in student enrollment necessitating the need for additional housing and recreational facilities, and the associated growth in the campus population, is responsive to growth that has already occurred in the state as the children of the "baby boom" generation matures to college age. Therefore, natural resources are currently being consumed by this demographic group and would continue to be consumed by this group at some location.

Nonetheless, construction activities related to the proposed project, would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels, natural gas, and gasoline for automobiles and construction equipment, as well as construction materials.

With respect to operational activities, compliance with all applicable building codes, as well as 2002 LRDP EIR mitigation measures and campus programs, practices, and procedures (such as campus conservation features), as well as project-specific mitigation measures, would ensure that all natural resources are conserved to the maximum extent possible. It is also possible that new technologies or systems will emerge, or will become more cost-effective or user-friendly, to further reduce the campus reliance upon nonrenewable natural resources. Overall, the consumption of natural resources would increase at a lesser rate than the projected population increase due to the variety of energy conservation measures that the campus has and will continue to provide.

The campus will incorporate lighting and other energy conservation measures into the proposed NHIP. Lighting conservation efforts include installation of occupancy sensors to automatically turn off lights when not in use, lighting reflectors, electronic ballasts, and high efficiency lamps. The campus is nearing completion of the conversion of all exterior lighting to high-pressure sodium fixtures. Conservation efforts also involve improved HVAC systems with microprocessor-controlled energy management systems. In addition, the campus shall continue to implement all new development in accordance with specifications contained in Title 24 of the CCR.

While development under NHIP will remove some existing landscape and vegetation, the campus will continue its historic policy and practice of incorporating landscaping into all campus projects, including the NHIP, as required by 2002 LRDP PP 4.1-2(d).

The CEQA Guidelines also require a discussion of the potential for environmental damage caused by an accident associated with the project. No unique hazards are found on the project site, and no uniquely hazardous uses are proposed. The project site is located within a seismically active region, and would be exposed to ground shaking in a seismic event. Conformance with the regulatory provisions of the Uniform Building Code pertaining to construction standards would minimize, to the extent feasible, damage and injuries from such occurrence. Further, the campus maintains a Disaster Response Plan, Risk Management Plan, and Business Plan, all aimed at the minimization or elimination of risks associated with the use, transport, disposal, or storage of hazardous materials, including the common hazardous substances (e.g., cleaning products, chlorine, pesticides, and herbicides) that would be used in associated with the NHIP. In addition, the campus complies with all applicable State and federal laws and existing campus programs, practices, and procedures (as required by PP 4.6-1) related to hazardous materials, which reduces the likelihood and severity of accidents that could result in irreversible environmental damage. In fact, over the campus history, there has never been an accident that resulted in irreversible environmental damage, indicating that current practices with respect to hazardous materials handling are adequate. Therefore, no significant risk to human health is expected to occur as a result of implementation of the proposed project.

5.4 GROWTH-INDUCING IMPACTS

Growth-inducing impacts are discussed in Volume 1, Chapter 5 (Other CEQA Considerations) of this EIR.

5.5 MITIGATION MEASURES PROPOSED TO MINIMIZE SIGNIFICANT EFFECTS OF THE PROPOSED PROJECT

Table 2-1 (Summary of Environmental Impacts and Mitigation Measures), which is contained in Chapter 2 (Summary of Environmental Impacts and Mitigation Measures) of this EIR, provides a comprehensive identification of the proposed project's environmental effects and proposed mitigation measures.

5.6 ALTERNATIVES TO THE PROPOSED PROJECT

Alternatives to the proposed project are presented in Chapter 6 (Alternatives) of this EIR.

Chapter 6 ALTERNATIVES

The following discussion evaluates alternatives to the Northwest Housing Infill Project (NHIP) and examines the potential environmental impacts associated with each alternative. Through comparison of these alternatives to the NHIP, the relative environmental advantages of each can be weighed and analyzed. The CEQA Guidelines require that a range of alternatives must be addressed, governed by a rule of reason. Not every conceivable alternative must be addressed, nor do infeasible alternatives need to be considered (CEQA Guidelines Section 15126.6 [a]). When addressing feasibility, Section 15126.6 of the CEQA Guidelines states, "among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, other plans or regulatory limitations, jurisdictional boundaries...." The Guidelines state that the discussion of alternatives must focus on alternatives capable of either avoiding or substantially lessening any significant environmental effects of the project, while also achieving the project objectives, which are identified in Section 3.2 (Project Description, Project Objectives) of this EIR. The alternatives discussion should not consider alternatives whose implementation is remote or speculative, and the analysis need not be presented in the same level of detail as the assessment of the NHIP.

Based on the CEQA Guidelines, several factors must be considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include (1) the nature of the significant impacts of the proposed project, (2) ability of alternatives to avoid or lessen the significant impacts associated with the project, (3) the ability of the alternatives to meet the objectives of the project, and (4) the feasibility of the alternatives. The analysis in this EIR indicates that the project will result in significant unavoidable impacts with respect to construction-related air quality, construction-related noise, construction-related traffic, and operational summer traffic. Thus, the alternatives examined herein represent alternatives that would minimize or avoid the significant air quality, noise, and/or traffic impacts associated with implementation of the project.

6.1 DESCRIPTION OF ALTERNATIVES TO THE PROJECT

A number of alternatives that feasibly attain most of the project objectives were considered as a part of the environmental review for the project. In order to meet the intent of CEQA, a range of alternatives was developed. In considering a range of alternatives to be evaluated in the EIR, the University considered the anticipated significant and unavoidable impacts to occur as a result of the proposed project. The range of alternatives evaluated by the University address whether alternatives related to the

proposed project would have the potential to reduce or avoid significant effects of the project, even if the alternative would impede, to some degree, the attainment of the project objectives, or would be more costly.

This section provides a thorough analysis of the impacts of project alternatives. The analysis of each alternative provides a comparison of the potential impacts of the alternative to the proposed project, as well as the impacts that would result from implementation of the project alternative.

In summary, the alternatives that are evaluated in this section in more detail below include

- *Alternative 1: No Project–No Build*—The No Project alternative would leave the project site in its present condition. There would be no construction of new residence halls and associated recreation and parking facilities, and no ground-floor renovations to the Hedrick, Rieber, and Sproul residential halls. In addition, the relocation and consolidation of Facilities Management structures and uses would not occur. The 2002 LRDP would be fully implemented, and the 550,000 square feet (sf) proposed under the NHIP would be reallocated among the other campus zones.

  Methodology for Selection of Alternative 1: Alternative 1 represents the "No Project" alternative described by Section 15126.6(e)(3)(B) of the CEQA Guidelines, which is the circumstance under which the project would not proceed. The Guidelines indicate that the analysis should identify the practical result of the project's nonapproval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment. Therefore, this No Project alternative compares the environmental impacts of the reallocation of project square footage to other campus land use zones (including the full implementation of the 2002 LRDP) to the environmental impacts that would occur under the proposed project. This alternative would result in reallocation of NHIP gross square footage to other campus zones and would still result in 1.7 million gross square feet (gsf) of (already approved) development under the 2002 LRDP, as well as the enrollment increase of 4,000 full-time-equivalent (FTE) students. This alternative would not, however, accommodate the additional 2,000 beds proposed under the NHIP.

- *Alternative 2: Alternative Site*—This alternative includes a 2,000-bed housing complex provided on Parking Lot 32, with additional dining and student services facilities instead of recreational facilities, as well as 801 spaces of subterranean parking beneath the development. There would be no first-floor renovations of Dykstra, Hedrick, Rieber, and Sproul Halls, and no relocation and consolidation of Facilities Management structures and uses. Also, no demolition of the Housing Administration Building or surface parking lots would occur.

  Methodology for Selection of Alternative 2: This alternative was selected to reduce construction-related noise impacts with respect to the residential community adjacent to the Northwest zone.

6.2 ALTERNATIVES REJECTED AS INFEASIBLE

During the scoping process, three additional alternatives were also considered, but were found to be infeasible, as described in the following sections.

6.2.1 Extended Construction Period Alternative

This alternative proposes to construct the project in the form proposed, but to extend construction in order to reduce construction impacts to air quality. However, this alternative is infeasible because projects are constructed as the program needs become clear and the funding becomes available. Under the Extended Construction alternative, the project would be constructed well after the need is identified, which would not support (even in part) the campus institutional objectives that relate to developing an academic, administrative, and physical environment that supports outstanding research and creative activity; and creating a physical and social environment that fosters the academic and personal development of students. Further, although construction-related emissions could be reduced on a daily basis, emissions would still be significant over the long-term, and no substantial benefit would be gained. In addition, traffic and noise impacts associated with construction would be exacerbated by their extension over a longer period, possibly twice as long as the proposed project, depending upon the emissions associated with specific construction activities. Therefore, this alternative was rejected as infeasible.

6.2.2 Reduced Project Alternative

This alternative consists of development of 1,600 beds, a 20 percent reduction in beds proposed under the NHIP. The reduction in beds would allow a reduction in height of the proposed structures. However, because the proposed project would not result in significant impacts with respect to aesthetics, no substantial benefit would be gained with structures of reduced height. Further, the project would not follow the 2002 LRDP objective of maximizing use of limited land resources and would not meet, to the same degree as the proposed project, the objective of developing on-campus housing to continue the evolution of UCLA from a commuter to a residential campus. The project would also not meet the project objectives of providing additional on-campus housing to address current and anticipated demand, as specified in the SHMP; or using Northwest zone land use resources as efficiently as possible.

In addition to the fact that this alternative would not meet the primary objectives of the proposed project, no substantial environmental benefit would be gained with this alternative. As this project is similar to the proposed project, but determined not to be feasible, a full analysis of the impacts was not provided: for a review of the impacts that could occur under this alternative, refer to the environmental

analysis of the proposed project (Chapter 4 [Environmental Setting, Impacts, and Mitigation]). In summary, a 20 percent reduction in the project would not substantially reduce or shorten construction activities, and only incremental decreases in construction-related traffic would occur. Also, because the types of construction activities—and the types of construction equipment necessary—would not fundamentally change with respect to the proposed project, no substantial reduction in construction noise could be achieved, other than a very slight reduction in the duration of these activities. The amount of reduction necessary in the size of the project to substantially reduce these construction-related effects would render the project infeasible, and would also increase in regular-session operational traffic impacts, which were not significant under the proposed project, as fewer beds would be provided to reduce vehicle trips and vehicle miles traveled by students. Although the proposed project would result in significant operational traffic impacts during the summer session, a slight reduction in the provision of housing would not substantially reduce the number of conference attendees anticipated with the proposed project, and no substantial reduction in the significance of the operational traffic impact of the project during the twelve-week summer session would occur. Further, because this project does not make the most efficient use of land resources in the Northwest zone, the construction of additional residential structure would be necessary to provide the bed count planned under proposed project. The amount of additional construction would increase as the number of beds is decreased in this alternative to achieve substantial reductions in construction impacts. Therefore, for all of the above reasons, this alternative was rejected as infeasible.

Refer to Volume 3, Chapter II (Text Changes)

6.2.3 Increased Housing Alternative

As described in Volume 1, Section 6.2.3 (Alternatives Found to be Infeasible: Increased Housing), this alternative would dedicate a higher proportion of the remaining development allocation under the 2002 LRDP to student housing. The provision of an increase in student housing is intended to eliminate or reduce significant related traffic impacts at affected intersections. One of the primary methods of reducing such intersection impacts is the provision of additional on-campus housing. In fact, the 1990 LRDP and the 2002 LRDP include housing as a component of the campus Transportation Demand Management (TDM) program to limit vehicle trips to and from the campus. However, as discussed in Section 4.13 (Transportation/Traffic), there are no significant intersection impacts during the regular session; therefore, this alternative would not achieve the primary goal of the alternative analysis, which is to avoid or substantially lessen any of the significant effects of the project (in this case, traffic impacts). Significant impacts would occur under the proposed project at four intersections during the summer session; however, housing is currently underutilized by students during the summer. Of the total on-campus housing supply of approximately 9,000 beds, it is estimated that less than 1,000 beds are

Refer to Volume 3, Chapter II (Text Changes)

utilized by students during the summer, despite the University's ability to provide housing for all summer students who request it. Therefore, the provision of additional housing beyond that proposed under the NHIP would not result in any significant reduction in summer traffic impacts and could exacerbate them, as additional conference attendees (which are assumed under the project traffic analysis) could be drawn during the summer. Instead, it would merely result in an increase in a housing supply that is currently under-utilized would not have any effect upon traffic conditions in the vicinity of the campus during the summer.

6.3 ANALYSIS OF ALTERNATIVES TO THE PROPOSED PROJECT

6.3.1 Alternative 1—No Project Alternative

CEQA requires the evaluation of a "No Project" alternative, which means "the existing conditions, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services" (CEQA Guidelines, Section 15126.6[e][2]). Evaluation of this alternative allows The Regents to compare the impact of approving the NHIP with the impacts of not approving the NHIP.

The No Project alternative would leave the project site in its present condition: no new residential buildings would be constructed and no ground-floor renovations to Hedrick, Rieber, or Sproul Halls would occur. No recreational facility would be developed, the Dykstra parking structure would not be provided, no Facilities Management storage would be constructed or relocated, and no demolition on the NHIP project site would occur. However, the remaining approximate 1.7 million gsf already approved under the 2002 LRDP would be constructed, and the approximate 550,000 gsf dedicated to the development of housing in the Northwest zone would be reallocated for academic and support uses among the other campus zones and would result in the development of several smaller projects or a single 550,000 sf project. Development in these zones would occur according to the land use principles articulated in the 2002 LRDP. Not constructing the NHIP would substantially impede the University's ability to address the housing needs of the increase in student enrollment that would occur under the 2002 LRDP; meet the goals of guaranteeing housing goals articulated in the 2002 SHMP, including a reduction in triple-occupancy accommodations; and continue the progress made to date in transforming UCLA to a residential campus, it also would not achieve reductions in vehicle miles traveled, trip generation, or parking demand.

Refer to Volume 3, Chapter II (Text Changes)

Comparison of Environmental Effects

Aesthetics

The No Project alternative would not change the existing structures in the Northwest zone and would not involve any new development on the project site. The aesthetic and visual environment would remain the same, as no landscaping would be removed, and no changes to the visual character of the Northwest zone would occur. The reallocation of the 550,000 gsf among the other campus land use zones would result in the development of academic and support uses, as well as additional parking (which would not exceed the campus parking cap). This development would occur according to the physical planning principles set forth in the 2002 LRDP, and would incorporate all applicable 2002 LRDP EIR mitigation measures (MMs) and programs, practices, and procedures (PPs). Additionally, development would be designed to complement existing architectural styles, massing, and height, and would be required to enhance, where appropriate, the campus interface with Westwood Village. The campus would still provide a landscaped buffer along the western, northern, and eastern edges of campus to complement residential uses of the surrounding community and to provide an attractive perimeter that effectively screens and enhances future campus development. Development of the reallocated square footage would also be required to maintain the open space preserves that have been established on campus. Following 2002 LRDP EIR MMs and PPs would ensure that intensification of land uses on campus would occur in such a manner that ensures significant impacts to the visual character or quality of the campus and the immediately surrounding area would not occur, and would be the same as the less-than-significant impact of the NHIP.

Similarly, although lighting level in the Northwest zone and adjacent would not be significantly affected by implementation of this alternative, reallocation of the proposed square footage among the remaining campus zones could result in development in other locations near the perimeter of the campus that could create new sources of light or glare from exterior building illumination, lighted recreation facilities, parking lots or structures, or vehicular traffic. However, as with the NHIP, development under this alternative would be required to implement 2002 LRDP EIR MMs and PPs related to light and glare reduction, which would ensure that such impacts would remain less than significant, the same as under the proposed project.

Air Quality

Construction activities for the NHIP could contribute substantially to an existing or projected air quality violation. This is considered a significant and unavoidable impact. Under the No Project alternative, the construction activities would simply occur elsewhere within the UCLA campus as the 550,000 gsf

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dedicated to the development of housing in the Northwest zone would be reallocated for academic and support uses among the other campus zones. The same overall construction activities would still occur, and this impact would remain significant and unavoidable.

Alternative 1 would not result in any increase in daily operational campus emissions above the future baseline condition during the regular and summer sessions. Therefore, this alternative would not result in daily operational emissions that contribute substantially to an existing or projected air quality violation. Because the NHIP would increase daily operational campus emissions above the baseline regular and summer session conditions—although by less-than-significant amounts—the potential impact would be reduced with Alternative 1.

Alternative 1 would result in similar traffic generation from staff during the regular session due to similar employment levels to the proposed project. However, because additional housing would not be developed, no reduction in commuter students during the regular session would occur, and regular session commuter student traffic would increase compared to the proposed project. As such, Alternative 1 would be expected to result in greater daily operational emissions during the regular session

During the summer session, Alternative 1 would result in slightly fewer employees during the summer, and no additional conference attendees, compared to the proposed project. However, while vehicular trips during the summer session would be reduced under this alternative, which would result in lower daily operational emissions than the proposed project during the summer session, the operational traffic impact during the summer would remain significant and unavoidable, the same as under the proposed project.

Implementation of Alternative 1 would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard. This is because the campus will continue to implement the existing TDM program, energy conservation efforts, and Best Available Control Technology (BACT) programs that reduce the emissions that would otherwise be generated by the campus by substantially more than one percent on an annual basis. This meets the AQMP performance standard for annual emissions reductions. The UCLA campus would continue to implement these programs under the 2002 LRDP or Alternative 1.

Implementation of the NHIP would not expose sensitive receptors near roadway intersections to substantial pollutant concentrations. The No Project alternative would generate more vehicular traffic to and from the campus during the regular session than under the NHIP, and localized concentrations of

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carbon monoxide (CO) would be incrementally higher under this alternative. However, the No Project alternative would generate less vehicular traffic during the summer session, and localized concentrations of CO would be incrementally lower. The resulting impact would remain less than significant under either development scenario, but slightly greater under the No Project alternative.

Although a the same overall amount of development would occur under Alternative 1, more educational space would be constructed. This educational and laboratory space has the potential to generate slightly greater amounts of toxic air contaminants than the residential uses proposed under the NHIP. Although this impact is expected to remain less than significant under Alternative 1, the potential impact is potentially greater than under the NHIP, which was also less than significant.

Volume 1, Impact LRDP 4.1-8 (Air Quality) concluded that implementation of the 2002 LRDP, which includes the NHIP, would not create objectionable odors affecting a substantial number of people, as potential sources of odors would be construction activities and food service facilities, as well as trash receptacles. Potential odors from sources such as construction or food service would be localized and would be similar to the existing uses and activities on campus. Potential odors from trash receptacles would not occur, as receptacles have lids, and the trash would be emptied on a regular basis, before substantial odors develop. Impacts would, therefore, be less than significant under the NHIP, and because implementation of Alternative 1 would develop uses that are similar to existing campus uses, odors that could be created under this alternative would be less than significant, the same as under the proposed project.

Biological Resources

The No Project alternative would not involve development of additional student housing in the Northwest zone, and would avoid all potential impacts to active nests in the Northwest zone of avian species protected by the MBTA that would potentially occur under the NHIP. Development of the reallocated square footage under this alternative could remove trees or vegetation in other campus zones; however, development in other areas of the campus would be require to follow all applicable 2002 LRDP EIR PPs and incorporate all applicable 2002 LRDP EIR MMs related to the removal of mature trees and the potential disturbance of occupied nests, as well as the protection of trees to be maintained or relocated. Because other campus zones generally contain fewer mature trees than the Northwest zone, fewer mature trees would likely be removed as a result of development of the reallocated square footage under this alternative, and the potential for disturbing active nests of raptors or other avian species would be slightly reduced. As with the proposed project, the impact of this alternative upon nesting opportunities for raptors and other avian species would be less than significant. However, the

less-than-significant impact of this alternative would be slightly less than the proposed project, as fewer trees would likely be disturbed, and potential impacts related to the disturbance of trees (such as disturbance of active nests) would be slightly reduced.

Cultural Resources

Because the Northwest zone contains no historical structures, no impacts to historical structures could occur under the NHIP. Under the No Project alternative, reallocation of the proposed square footage to other campus zones could result in the modification of historic structures. However, as required by 2002 LRDP EIR PPs, any modification to a historic structure shall occur in compliance with the Secretary of the Interior's standards and guidelines, and the campus shall continue to maintain the integrity of the historic campus core. No historic structures would be demolished under this alternative, and impacts under this alternative to historic structures would be less than significant, but slightly greater than the less-than-significant impacts of the NHIP, which could not affect any historic structures, as none are present in the Northwest zone.

As with the proposed project, development of 550,000 sf on other areas of the campus would require excavation, which could result in the disturbance of archaeological or paleontological resources, or human burials. However, as discussed in Section 4.4 (Cultural Resources), no archaeological resources or human burials have been or are expected to be encountered on campus. Development under this alternative, as with all projects implemented under the 2002 LRDP, would be required to follow all applicable 2002 LRDP EIR MMs and PPs related to the avoidance and care of these resources, which would ensure that such impacts remain less than significant, the same as under the NHIP. Although paleontological resources could be found during grading or excavation activities, implementation of 2002 LRDP EIR MM 4.4-4(a) and 4.4-4(b), as with the NHIP, would ensure that impacts to these resources remain less than significant, the same as under the NHIP.

Geology and Soils

Because no construction of residential uses would occur under the No Project alternative, 1,675 net new additional students and 249 new staff (of which 35 are students) would not be housed on campus and would not be exposed to adverse effects from or associated with seismic groundshaking. However, development of 550,000 sf of academic or academic support uses would still occur under this alternative in campus zones other than the Northwest zone. As no portion of the campus has been designated as a seismic hazard zone under the Alquist-Priolo Earthquake Fault Zoning Act of 1994, and no known active or potentially active faults are known on campus, development under this alternative would not be subject to a substantial risk of fault (ground surface) ruptures. However, while the proposed project site

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has not been designated as a potential liquefaction or landsliding hazard area by the CDMG, portions of the Southwest zone have been designated as potential liquefaction hazard areas, and risks of developing on these sites may be slightly greater than under the proposed project. However, any development on campus (including this alternative) would be required to follow applicable 2002 LRDP EIR PPs related to geology, which require a project-specific geotechnical assessment and development of design recommendations by a Certified Engineering Geologist or a Licensed Geotechnical Engineer. Further, all development on campus would be required to comply with Chapter 23 of the CBC or with requirements for Zone 4 of the UBC, whichever is more stringent, as well as the Seismic Hazards Mapping Act, University Policy on Seismic Safety, and structural peer review. As with the proposed project, following these 2002 LRDP EIR PPs would ensure that development and operation of the No Project alternative would not result in a significant impact related to the exposure of people or structures to potentially substantial adverse effects involving fault rupture, groundshaking, seismic-related ground failure, including liquefaction, or landslides. However, this alternative would have a slightly greater less-than-significant impact that the proposed project, as development under this alternative could occur within a potential hazard zone.

As with the proposed project, following applicable 2002 LRDP EIR PPs related to dust control and soil stabilization, and compliance with NPDES, would ensure that development under this alternative would not result in substantial soil erosion or the loss of topsoil. Therefore, as with the proposed project, this alternative would have a less-than-significant impact with respect to erosion or the loss of topsoil. Even though this impact would be less than significant under both the proposed project and this alternative, less grading could be required under this alternative than under the proposed project, as the development could occur on an area that is already overlain by hardscape or located on flat topography. Therefore, impacts related to erosion or the loss of topsoil from development under this alternative could be slightly less than the less-than-significant impact anticipated under the proposed project.

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As described in Section 4.5 (Geology and Soils) of this Volume, the proposed project is located on stable soils that are not subject to significant differential settlement or expansion and are not considered to be subject to liquefaction or landsliding, and impacts related to development on unstable soils are considered to be less than significant. Although development under this alternative could occur in areas that have been mapped by the CDMG as potentially subject to liquefaction (the Southwest zone), or on areas that may potentially contain expansive unstable soils, any development under the No Project alternative would be subject to the same 2002 LRDP EIR PPs and statutory and regulatory requirements related to geotechnical site investigation and building design as the proposed project (or any project

under the 2002 LRDP, as discussed above) and would also, therefore, be less than significant, but still slightly greater than under the proposed project.

Hazards and Hazardous Materials

Under the No Project alternative, housing would not be developed, and the 550,000 sf that would be used under the proposed project would instead be developed with academic and/or support uses. These uses could include instruction facilities such as laboratories, which—unlike the NHIP—are among the primary uses that handle hazardous materials. However, as with any development under the 2002 LRDP, this alternative would be required to comply with all applicable federal, State, and local regulations, as well as campus programs, practices, and procedures, which would ensure that the potential for worker or public exposure to hazardous materials from improper or unsafe activities, or from accidents, is less than significant. Also, Volume 1, Section 4.6 (Hazards and Hazardous Materials) concluded that continuation of existing or equivalent campus PPs, as well as safety procedures mandated by federal and State laws and regulations, would ensure that the use, transport, or disposal of hazardous materials would not expose campus occupants or the nearby public to significant health or safety risks. Therefore, as with the proposed project, this impact would be considered less than significant under the No Project alternative. The chemicals that would be used under the NHIP are limited to chlorine for the proposed pool, household cleaning products, and herbicides and pesticides used in association with standard campus landscaping and maintenance practice: the NHIP does not include any laboratory or medical uses, which are the primary facilities that handle hazardous materials, and as described in Volume 2, Section 4.6, would not require the disposal of such materials (chlorine would evaporate, cleaning products are disposed in the wastewater system or by evaporation, and pesticides and herbicides are directly applied to affected areas, following applicable guidelines), and these materials would be used in very small amounts, which substantially reduces risks associated with transport. The potential requirement for the use, transport, or disposal of hazardous waste could, therefore, be slightly greater under this alternative depending upon the uses developed, than under the proposed project and could represent a greater, though still less-than-significant risk, compared to the proposed project.

Under the NHIP, renovation or demolition of existing structures was not considered to present significant health or safety risks to construction workers, as all applicable State and federal regulations, as well as the campus Asbestos Management Program and Lead Compliance Program, must be followed with respect to asbestos-containing materials and lead-based paint. Biohazardous materials could also be present in buildings or portions of buildings that could be demolished to allow development of the 550,000 sf of the NHIP on other portions of the campus. However, as with any project implemented under the 2002 LRDP, the risks associated with the presence of such materials would be reduced to a

less-than-significant level by following pertinent EH&S programs, practices, and procedures, as well as current State regulations regarding testing, monitoring, and disposal. Additionally, existing campus licenses require decontamination prior to decommissioning any facility that used radioactive materials. As under the proposed project, all of these regulations, license requirements, and PPs would apply to development under this alternative, and this impact would also be considered less than significant, the same as under the proposed project.

As with the NHIP, the No Project alternative would not be located on a site that is included on a list of hazardous materials and no impact would occur with respect to the location of the project on a contaminated site. Although some listed sites are located on campus, as described in Volume 1, Section 4.6, these sites consist of registered USTs and hazardous materials storage locations, rather than contaminated sites (e.g., soil or groundwater), and the campus has not had a documented instance of contaminated soil and/or groundwater caused by construction or operation activities. While a possibility exists that localized contamination would occur as a result of pesticide or herbicide use, or in association with the disturbance or removal of older underground utilities or unidentified buried debris, the use of pesticides and herbicides is, as described above, subject to applicable guidelines and 2002 LRDP EIR PPs, and other 2002 LRDP EIR PPs require specific procedures that the campus must follow in the unlikely event that contaminated groundwater or soil is discovered as a result of site preparation or construction activities for any project under the 2002 LRDP. Further, all remaining USTs conform to federal, State, and local regulations. Therefore, as with the NHIP, development in other campus zones under this alternative would not result in development on a contaminated site. While removal of a UST to allow development could pose a health or safety risk, any potential risk would be eliminated or reduced to a less-than-significant level by managing the tank and removal process according to the UST Program of the Los Angeles RWQCB.

As discussed in Volumes 1 and 2, Section 4.6 implementation of applicable campus safety procedures, hazardous materials transportation regulations, and federal and State law would ensure that no significant risk associated with upset or the release of hazardous materials into the environment would occur as a result of implementation of projects as part of the 2002 LRDP, including the NHIP. As with the NHIP, implementation of this alternative would comply with all applicable programs, practices, and policies, as well as applicable federal and State laws and regulations, which would ensure that this alternative would not result in a significant impact with respect to creating a substantial risk to people or the environment through accident or upset conditions. However, while the amount of hazardous materials used, transported, and disposed of by the proposed project is small as a result of the proposed uses (residential), development of other uses under this alternative could include uses, such as laboratories,

that routinely use or require the transport or disposal of larger quantities of hazardous materials than the NHIP. Therefore, although this impact under this alternative would be less than significant, it could potentially represent a greater risk than the NHIP, and this impact would, therefore, be slightly greater in relation to the less-than-significant impact anticipated under the NHIP.

As described in Volume 2, Section 4.6, the theoretical incremental cancer risk as a result of lifetime exposure to emissions from routine campuswide operation of all sources under the 2002 LRDP was estimated in the HRA to be below the thresholds determined by CAPCOA and SCAQMD. Because development under this alternative would result in the construction of uses that are substantially similar to uses that currently exist on campus, the risk associated with development of this alternative would be the same as under the NHIP and would not exceed the established thresholds. This impact would also be less than significant, the same as under the proposed project.

Implementation of this alternative could result in the development of several smaller projects or as a single, 550,000 sf project; therefore, construction under this alternative could result in campus road detours or closures that are the same as under the proposed project, or more severe, if several smaller projects are implemented and construction periods significantly overlap, or if the projects were concentrated in such a manner as to potentially impede access to a substantial portion of the campus. However, as with the NHIP, development under this alternative would be required to follow 2002 LRDP EIR PPs that require multiple emergency access or evacuation routes, coordination with UCPD and LAFD, and to the extent feasible, maintenance of one unobstructed lane at all times on all campus roadways. Therefore, as with the NHIP, the impact of this alternative upon implementation of campus emergency response or evacuation plans would be considered less than significant.

Development under this alternative could develop uses beneath one of the helicopter ingress and egress flight paths for the replacement hospital. However, the extremely low potential risk associated with helicopter overflights would be no greater than under the proposed project, and could be slightly less if no development under this alternative occurred beneath a helicopter flight path. The less-than-significant impact anticipated under this alternative with respect to helicopter overflights would, therefore, be the same as or slightly less than the less-than-significant impact under the NHIP.

Hydrology and Water Quality

As described above in Section 4.7 (Hydrology and Water Quality), development of the NHIP would convert approximately 65,000 sf of pervious (landscaped) surface area in the Northwest zone to impervious surfaces. The No Project alternative would not result in the conversion of permeable to impermeable surfaces in the Northwest campus, but could result in such a conversion (at one or several

sites) in other campus zones. As described above, in Section 4.3 (Biological Resources), the Northwest zone is one of three areas on campus (the others are Stone Canyon Creek and Mildred E. Mathias Botanical Garden) that are characterized by more dense vegetation than the rest of the campus. Because areas available for development in other campus zones do not have the same level of landscaping or density of vegetation, the development in these zones—particularly if accomplished as several smaller projects rather than one large project—would be more likely to occur on already impervious surfaces and would likely result in a smaller conversion than the proposed project of landscaped or pervious surfaces to impervious surfaces, resulting in reduced runoff compared to the proposed project, which was determined to have a less-than-significant impact on storm drainage systems, and no new infrastructure would be required. Additionally, because development in other campus zones would likely occur on existing impervious surfaces, site drainage patterns would change to even smaller degree as a result of implementation of this alternative, even though the analysis in Section 4.7 (Hydrology and Water Quality) determined that implementation of the NHIP would not result in the substantial alteration of drainage patterns, and would result in a less-than-significant impact with respect to altered drainage patterns on campus, as broad campus drainage patterns are established and are dictated by topography. Also, the impacts of this alternative with respect to erosion and sedimentation would be the same as under the proposed project and would remain less than significant after following applicable 2002 LRDP EIR PPs and complying with all applicable NPDES requirements. Because this alternative would be subject to the same requirements and 2002 LRDP EIR PPs and MMs, this alternative would not substantially increase surface runoff volume or velocity, or substantially alter site drainage patterns in a manner that would cause erosion or sedimentation, and this impact would also be less than significant, the same as under the proposed project.

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As with the NHIP, the risk of mudflows would not be considered to constitute a significant impact under the proposed project, as development is more likely to occur on existing impervious surfaces, and the analysis in Volumes 1 and 2, Section 4.7 (Hydrology and Water Quality) concluded that no exposed slopes exist that would be subject to mudflows.

The NHIP site is not located within a 100-year flood zone, and as stated in Volume 1, Section 4.7 (Hydrology and Water Quality), although 100-year flood zones are present on portions of the campus, development would not occur in these zones under the 2002 LRDP. Therefore, implementation of the No Project alternative would not result in the placement of structures (or housing) within a 100-year floodplain. As with the proposed project, this alternative would result in a less-than-significant impact with respect to development in floodplains.

Implementation of this alternative could result in development within the hypothetical inundation path of the Stone Canyon Reservoir; however, as discussed in Volume 1 Section 4.7 (Hydrology and Water Quality), complete and instantaneous failure of the Stone Canyon Dam structure is considered by LADWP to be extremely remote, and the impact with respect to such an event is considered to be less than significant. Therefore, as with the NHIP, development under this alternative would result in a less-than-significant impact with respect to flooding due to a failure of the Stone Canyon Reservoir. However, the impact under this alternative could be slightly greater than under the NHIP because the NHIP would not be developed within the hypothetical inundation path of the reservoir.

Volume 1, Section 4.7 (Hydrology and Water Quality) determined that implementation of the 2002 LRDP, including the NHIP, would not substantially interfere with groundwater recharge because water supplies that would be used to meet the demand of the campus would not exceed available supply and would not result in excess groundwater extraction. Further, the small amount of conversion of permeable to impermeable surfaces was not considered to substantially affect groundwater recharge, and the campus is not considered a major source of groundwater recharge in the area. Because, as described above, development under this alternative would likely result in the conversion of less permeable surface area to impermeable surface area, the amount of conversion assumed to occur under the 2002 LRDP would not increase as a result of development under this alternative. Therefore, as with the NHIP, this alternative would have a less-than-significant impact on groundwater recharge.

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Land Use and Planning

As described in Volume 1, Section 4.8 (Land Use), the 2002 LRDP EIR concluded that implementation of the 2002 LRDP, which included the NHIP, would not conflict with applicable regional plans or with neighboring residential uses. Under the No Project alternative, the proposed 550,000 sf would not be developed in the Northwest zone. No conflict with the Benign Use Agreement would occur under the proposed project, and no conflict could occur for any development outside of the Benign Use Zone. All development under the 2002 LRDP, including this alternative, would be required to implement all applicable 2002 LRDP EIR MMs and PPs, as well as the physical planning principles of the 2002 LRDP. Therefore, this alternative would also have a less-than-significant impact with respect to land use conflicts, the same as under the proposed project.

Noise and Vibration

The No Project alternative would not involve new development on the project site, but would involve an equal or greater number of projects than the NHIP, as the same gross square footage could be constructed in more locations on campus. The proposed project's construction noise and groundborne

vibration impacts to surrounding residence halls on campus would be avoided; however, these impacts could affect other surrounding campus uses and could affect sensitive electronic equipment, depending upon the location of proposed development. The other less-than-significant noise and vibration impacts anticipated under the NHIP with respect to on-campus residential uses would be avoided with this alternative unless another housing development is proposed, but the same impacts could occur to other neighboring campus uses. This impact would, therefore, be the same as the significant and unavoidable construction-related impacts anticipated under the NHIP.

Population and Housing

Volume 1, Section 4.10 (Population and Housing) concluded that implementation of the 2002 LRDP, which includes an enrollment increase of 4,000 FTE students, would not induce substantial population growth within the context of approved local and regional plans, and would result in a less-than-significant impact. Under the No Project alternative, 1,675 net new bed spaces would not be available on campus; however, the enrollment increase of 4,000 FTE students would still be accommodated, and development of the same amount of gross square footage would likely require similar staffing levels to the proposed project. Consequently, population impacts would be the same as under the NHIP, and would be less than significant. However, there would continue to be an unmet demand for proximate and affordable student housing unless or until another housing development is proposed. Therefore, the No Project alternative would have a greater—and potentially significant—housing impact on and off campus, compared to the less-than-significant housing impact that is anticipated under the NHIP.

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Public Services

The No Project alternative would have less impact on public services compared to the proposed project. Demand for police services would be reduced in comparison to the NHIP, due to the decrease in the number of resident students, and would be less than significant because the analysis in Volume 1, Section 4.11 (Public Services) determined that with the provision of between 44 and 80 sworn officers, the campus could, at full implementation of the 2002 LRDP, continue to provide an adequate level of service for police protection. The analysis also determined that the continued provision of standard and required life safety systems in new structures would ensure that the increase in demand for fire protection services would not result in a significant impact. Because any development under the No Project alternative would be required to follow all applicable 2002 LRDP PPs, the impact of this alternative would be less than significant, the same as under the proposed project. Also, as stated above, this alternative would not necessarily require more faculty or staff than the NHIP, and the impact of this alternative on schools would be the same as the less-than-significant impact anticipated under the NHIP.

Recreation

The No Project alternative would result in the same average weekday campus population as the NHIP, which would create a similar demand for campus recreational facilities compared to the proposed project. Development under this alternative would likely consist of academic uses, and would not likely result in the provision of additional recreational facilities, while the proposed project would have provided 15,000 gsf of recreational facilities. The 2002 LRDP EIR (Volume 1, Section 4.12, Recreation) concluded that adequate recreational facilities (0.85 acres of parkland per 1,000 residents) are present to serve an average weekday population of 61,542 at full implementation of the 2002 LRDP. However, more recreational facilities would be provided under the NHIP than under the No Project alternative; therefore, although this impact would be less-than-significant under this alternative, the impact would be greater than the less-than-significant impact anticipated under the NHIP.

Transportation

Alternative 1 would result in similar traffic generation from staff during the regular session due to similar employment levels to the proposed project. However, because additional housing would not be developed, no reduction in commuter students during the regular session would occur, and regular session commuter student traffic would increase compared to the proposed project. Further, additional parking (not to exceed the campus parking cap) would be allocated under this alternative to accommodate new academic or support uses, which would generate additional traffic, compared to the proposed project. As such, significant regular session impacts could occur under Alternative 1, compared to no significant regular session impact under the proposed project.

During the summer session, Alternative 1 would result in slightly fewer employees during the summer no additional conference attendees, compared to the proposed project. Consequently, vehicular trips during the summer session would be reduced under this alternative. Consequently, the four significantly impacted intersections during the summer with project development would be less severely impacted under this alternative than the under the NHIP, but could still be significant.

Construction of the same gross square footage as under the NHIP would result in a similar amount of construction, which would generate a similar amount of construction traffic. As discussed in Section 4.13 (Transportation/Traffic), construction traffic impacts would be significant and unavoidable for the NHIP and would be significant for the No Project alternative as well as the proposed project.

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As with the NHIP, the No Project alternative would not result in hazards due to design features or incompatible uses, as development would occur according to physical planning principles of the 2002 LRDP, and as with the NHIP, this alternative would be less than significant.

Implementation of both the NHIP and the No Project alternative could also require temporary lane closures on campus roadways, as well as closures of paths or sidewalks. However, following 2002 LRDP PPs 4.13-6 and 4.13-7 would ensure that short-term vehicular and pedestrian hazards remain less than significant in both cases, and the impacts of this alternative would be the same as under the proposed project.

Neither the NHIP nor the No Project alternative would impair emergency access on an operational basis, and short-term emergency access impacts resulting from construction under either scenario would remain less than significant after following PP 4.13-3.

Under both the NHIP and the No Project alternative, construction activities could result in the temporary loss of parking spaces and could require construction parking. However, this impact was determined to be less than significant for the NHIP. Because the No Project alternative would require a similar amount of construction, this impact would also be considered less than significant, the same as under the NHIP.

Utilities and Service Systems

The development of additional academic or support uses that are identical in square footage to the proposed project would likely require similar levels of electricity and natural gas to the proposed project, and similar levels of water and sewer capacity, which would not significantly affect service providers, as discussed in Volumes 1 and 2, Section 4.14 (Utilities and Service Systems). As with the proposed project, this alternative would have a less-than-significant impact on utilities and service systems.

Relationship to Project Objectives

The No Project alternative would not meet any of the project objectives. The project would not provide additional on-campus housing to address current and anticipated demand, as specified in the 2002 SHMP, or to enhance the educational experience for students and continue the evolution of UCLA from a commuter to a residential campus. The No Project alternative would also not meet the objective of reducing the proportion of students who commute to campus, because it would not provide any on-campus housing. The No Project alternative would also not provide additional recreational and parking facilities to support the student resident population, would not provide recreational facilities for

students, faculty, and staff on campus, and would not utilize the land resources in the Northwest zone as efficiently as possible, pursuant to the planning principles in the 2002 LRDP.

6.3.2 Alternative 2—Alternative Site

Under this alternative, the proposed project would be built on surface Parking Lot 32. The site is seven acres in size and is bordered by Parking Structure 32 to the north, Veteran to the west, Wilshire Boulevard to the south, and the Kinross Building to the east. Lot 32 is currently used for campus parking and contains approximately 735 surface parking spaces.

Project development on this site would consist of the construction and operation of 567,000 gsf of residential and support uses on the Lot 32 site. As with the proposed project, development would include three high-rise (up to nine-story) residence halls accommodating up to 2,000 beds, totaling 552,000 sf. An estimated 15,000 gsf for dining and support facilities would be provided. The additional dining and support facilities would be necessary because the original location of the proposed project assumed the use of existing dining facilities in Covel Commons, De Neve Housing, Hedrick Hall, and Rieber Hall by the students housed in the NHIP, as well as use of the existing and expanded student services provided in the existing residence halls and the proposed first-floor renovations. This alternative, however, would not allow convenient access to the existing dining and student services facilities in the Northwest zone and would require the provision of these services on the Lot 32 site. Due to the area constraints of the Lot 32 site, no recreational facility would be provided; however, some landscaping and open space would be provided.

Development of this alternative would require the removal of approximately 735 existing surface parking spaces on Lot 32. However, these parking spaces would be replaced, on a one-for-one basis, in a subterranean parking structure located beneath the development. The subterranean parking structure would include an additional estimated 66 parking spaces to accommodate future growth needs, for a total of 801 parking spaces.

The current development allocation for the Southwest campus zone under the 2002 LRDP is 210,000 gsf. The 2002 LRDP also permits a shift of up to 30,000 sf to each campus land use zone over the horizon period of the LRDP, which raises the development potential of the Southwest zone to 240,000 gsf. Consequently, this alternative would still require an amendment to the 2002 LRDP, subject to the approval of The Regents, to transfer an additional 327,000 gsf to the Southwest zone to increase the development allocation to 567,000 gsf. This alternative would not involve first-floor

renovation of Hedrick, Rieber, and Sproul Halls, and the Housing Administration building would remain in its location, as would the Facilities Management storage and waste yard.

Comparison of Environmental Effects

Aesthetics

The project site consists of a surface parking lot. Implementation of this alternative would introduce an undergraduate residential community into an established urbanized area. Surrounding land uses are commercial properties along Wilshire Boulevard, the Los Angeles National Cemetery to the west, and Westwood Village to the east. While the proposed project would consist of three new residential buildings on three sites, built as infill between existing residence halls, Alternative 2 would construct three similar residence halls to accommodate the same number of beds along a commercial corridor. To accommodate the same amount of housing as the proposed project, building massing and heights would be similar to the proposed project. The proposed residential buildings would be designed with architectural detail, height, bulk, building proportion, and placement to enhance compatibility with adjacent uses, in accordance with key planning objectives in the 2002 LRDP. As such, implementation of this alternative would result in less-than-significant impacts relative to visual height and massing of the buildings that are the same as those anticipated to occur under the proposed project.

Alternative 2 would introduce new sources of light and glare into the area. Although the residential buildings would be constructed with nighttime security, parking, and pedestrian pathway lighting, the existing surface parking lot is also currently illuminated. Additionally, the surrounding land uses consist of commercial buildings, which are not sensitive uses, and are illuminated within the interior and on the exterior by streetlights. As a result, the new sources of lighting for the new residential halls would not be substantially different from the existing lighting of the parking lot and would be similar to the lighting in the existing area. Therefore, this impact would be considered less than significant, the same as under the proposed project, as residential components of the NHIP would be constructed on existing parking lots RH and HH, as well as the existing housing administration building, and light levels would be similar to the existing light levels on Lot 32. Daytime glare could be created under this alternative, as this alternative would construct residential buildings with a substantial number of windows on the site that is bordered by one campus building, the Kinross Building. This impact would be reduced to a less-than-significant level with implementation of mitigation measures in the 2002 LRDP EIR, which set forth lighting requirements to minimize spillover onto adjacent uses and require minimization of the use of reflective exterior finishes to reduce impacts from glare. With implementation of these mitigation

measures, the light and glare impacts would be less than significant, the same as under the proposed project.

There are no scenic views to or from the project site, as the surrounding area is developed with high- and mid-rise commercial structures that effectively block mid-range and long-range views to and from the project site. In addition, the buildings in this alternative would not be greater in height than the high-rise structures across Wilshire Boulevard, and would not block views of the Santa Monica Mountains from higher levels of these commercial structures. Furthermore, Wilshire Boulevard at this location is not designated as a scenic corridor. Therefore, this alternative would not result in any impacts to scenic views, the same as under the proposed project.

Air Quality

Construction activities for the NHIP could contribute substantially to an existing or projected air quality violation. This is considered a significant unavoidable impact. Construction activities for Alternative 2 would involve slightly more development than the NHIP—particularly an increase in excavation for the subterranean parking structure—and, therefore, generate greater daily peak construction emissions than the NHIP.

Implementation of the NHIP would not result in daily operational emissions that contribute substantially to an existing or projected air quality violation during the regular or summer sessions. This is a less-than-significant impact. Alternative 2 would result in the same type and amount of development, and, therefore, generate the same daily operational emissions. The resulting impact of Alternative 2 would be less than significant, the same as under the proposed project.

Implementation of the NHIP, or equivalent development at other locations within the campus, would not expose sensitive receptors near roadway intersections to substantial pollutant concentrations under the proposed project or Alternative 2 since the number of motor vehicle trips would be substantially the same under either development scenario.

Implementation of the NHIP would not expose sensitive receptors on or off campus to substantial pollutant concentrations due to campus-generated toxic air emissions. The alternative site is not exposed to concentrations of toxic air pollutants generated by the campus that exceed adopted standards. This impact would continue to be less than significant under Alternative 2.

Biological Resources

Alternative 2 would involve new development on an existing surface parking lot that contains trees along the Veteran Avenue and Wilshire Boulevard edges. However, the interior of the parking lot does not contain any trees or dense landscaping, or other known biological resources. Because the Lot 32 site is not a natural area and does not provide a connection between natural areas, implementation of this alternative would not interfere with a wildlife movement corridor or with the movement of native animal species, and would have a reduced impact when compared to the proposed project. Additionally, as a parking lot, the project would not constitute a wildlife nursery site, and the use of a wildlife nursery site, as with the proposed project, would not be impeded by this alternative. Construction activities may require the removal of some trees along the periphery of the site. However, development under this alternative would be required to follow all applicable 2002 LRDP EIR PPs and incorporate all applicable 2002 LRDP EIR MMs related to the removal of mature trees and the potential disturbance of occupied nests, as well as the protection of trees to be maintained or relocated. The number of these trees that would potentially be removed would be significantly fewer than those removed under the proposed project. Therefore, although both projects would have less-than-significant impacts after implementation of applicable 2002 LRDP MMs and following 2002 LRDP PPs, the direct and indirect impacts of this alternative on migratory and avian species of special concern would be slightly less than under the proposed project.

Cultural Resources

As with the proposed project, the Lot 32 site does not contain and therefore would not affect any historical structures. Development on Lot 32 would require excavation, which could result in the disturbance of archaeological or paleontological resources, or human burials. However, as discussed in Volume 1, Section 4.4 (Cultural Resources), no archaeological resources or human burials have been or are expected to be encountered on campus, and as with the NHIP, all site development must comply with 2002 LRDP EIR MMs 4.4-3(a) and (b), 4.4-4(a) and (b), and 2002 LRDP EIR PP 4.4-5, which have been incorporated into the proposed project and provide for procedures in the event of discovery of potential archaeological or paleontological resources during construction activities, as well as notification of a coroner and of Native American representatives in the event human remains are unearthed. As with the NHIP, implementation of these measures would ensure that development under Alternative 2 would have a less-than-significant impact on cultural resources, the same as under the proposed project.

Geology and Soils

Under Alternative 2, residential development would occur at a different location within the campus (Lot 32). Alternative 2 would result in the same impacts to the proposed project related to seismic groundshaking and earthquake fault rupture, as seismicity across the campus is anticipated to be similar, and as with the proposed project, no known earthquake fault traverses the alternative site. Alternative 2 would expose the same numbers of persons to seismic events such as rupture of a fault and groundshaking, and the site would be subject to the same level of geotechnical investigation and review as the proposed project, pursuant to the University Policy of Seismic Safety, Chapter 23 of the CBC, and 2002 LRDP EIR PP 4.5-1(a), (c), and (d), which would ensure that impacts related to fault rupture and seismic groundshaking would be less than significant, the same as under the proposed project. As with the proposed project, Alternative 2 would be developed on a site that has not been designated by the CDMG as a potential landslide hazard area and would result in a less-than-significant impact related to landslide risk. Following applicable 2002 LRDP EIR PPs would also ensure that impacts related to risks associated with expansive or unstable soils would be less than significant under this alternative, the same as the less-than-significant impacts identified with the proposed project.

The potential liquefaction risk under this alternative is greater than under the proposed project: the proposed project site in the Northwest zone is not located in a zone designated by the CDMG as potentially subject to liquefaction; Lot 32 is located in such an area. However, preparation of a geotechnical study for this alternative site would also be required, as with the proposed project, and the recommendations of the geotechnical study would be required to be incorporated into the project. Further, the project would be required to comply with applicable provisions of the statutes, regulations, and University policies, programs, practices, and procedures listed above. This impact would, therefore, be less than significant under this alternative, though still slightly greater than under the proposed project.

Because subterranean parking would be provided under this alternative, more grading would be required under this alternative compared to the proposed project. However, as with the proposed project, this alternative would be required to comply with all applicable provisions of NPDES Phases I and II, as well as 2002 LRDP PP 4.2-2(a), which requires implementation of fugitive dust control measures, and the loss of soil to erosion would be minimal, as with the proposed project. Therefore, as with the proposed project, substantial erosion would not occur with this alternative, and this impact would be less than significant.

Refer to Volume 3, Chapter II (Text Changes)

Hazards and Hazardous Materials

Under Alternative 2, uses identical to the proposed project would be developed, with the exception of the proposed recreational facility and pool, which would not be developed. As with the proposed project, this alternative would not result in the routine use, transport, disposal, or storage of hazardous materials, with the limited exception of standard cleaning products and pesticides or herbicides used in association with standard campus landscaping and maintenance practices. Unlike the proposed project, this alternative would not require the use, transport, disposal, or storage of chlorine. As with the proposed project, this alternative would be subject to all applicable federal, State, and local laws and regulations pertaining to hazardous materials. Consequently, the proposed project would have the same less-than-significant impact anticipated under the proposed project. Additionally, because the quantities of such materials would be less than under the proposed project (with the exception of chlorine, which would not be used under this alternative), and because under this alternative the campus would be required to comply with 2002 LRDP MM 4.6-1, as well as with applicable federal, State, and local laws and regulations, the risk of upset or accidental release of such substances would be less than significant—but slightly less than—the proposed project.

Demolition activities under the proposed project would be conducted in accordance with applicable provisions of the California Health and Safety Code, as well as other applicable State and federal regulations and the campus Asbestos Management Program, which would ensure that a less-than-significant impact would occur with respect to exposure of occupants or construction workers to hazardous materials. Lot 32 is occupied by an existing surface parking lot, with no buildings that contain asbestos, lead-based paint, or other hazardous substances, and demolition activities on this alternative would not expose workers to such hazardous substances. This impact under this alternative would, therefore, be slightly less than the less-than-significant impact anticipated under the proposed project.

Although the site has been paved, there has likely been some use of pesticides or herbicides as part of routine maintenance activities, as discussed in Volume 1, Section 4.6. However, as described in Volume 1, Section 4.7 (Hydrology and Water Quality), no evidence exists of current soils or groundwater contamination on campus. Although previously undetected underground storage tanks or other undetected soil or groundwater contamination could be exposed as a result of construction activities, 2002 LRDP MM 4.6-2 requires the assessment and remediation of any contamination encountered during site preparation and construction activities for any project implemented under the 2002 LRDP. Further, this alternative would be required to comply with all applicable federal, State, and local laws and regulations, which would ensure that a less-than-significant impact occurs, the same as under the proposed project.

This alternative site is not located within one-quarter mile of an existing or proposed school, as there are no schools within one-quarter mile of Lot 32. However, although the NHIP site is located within one-quarter mile of a school (the Child Care Center at Bellagio Avenue), neither project is anticipated to handle acutely hazardous materials. The impact of the proposed project and this alternative would be less than significant; however, the impact of Alternative 2 would be slightly less, because no school is located within one-quarter mile of Lot 32.

Alternative 2 would have a slightly higher—though still minimal—risk with regard to helipad operations from the Medical Center, as a larger percentage of flights would occur to the southwest, over the site of Alternative 2, according to Volume 1, Impact LRDP 4.6-7 (Hazards and Hazardous Materials). Impacts under either proposal would be less than significant; however, Alternative 2 would result in a slightly more severe impact than the proposed project.

Hydrology and Water Quality

As described in Section 4.7 (Hydrology and Water Quality) implementation of the NHIP would convert approximately 65,000 sf of pervious (landscaped) surface area to impervious area. This conversion would increase the total amount of campus runoff by 0.34 percent. This increase is negligible with respect to the capacity of campus, City, and County storm drainage systems, and the impact of the proposed project upon these drainage systems was determined to be less than significant. Alternative 2 would develop a residential project on Lot 32, which is currently paved and impermeable. Because development under this alternative would include the provision of landscaping, post-construction permeability of the site would actually be greater than under the existing condition. Therefore, stormwater runoff would incrementally decrease with implementation of this alternative, which would result in a less-than-significant impact on storm drain capacity. Although the project and this alternative would each result in a less-than-significant impact on storm drainage facilities, the impact of this alternative would be slightly less than under the proposed project, as runoff would incrementally decrease under this alternative compared to the slight increase under the proposed project.

Both the proposed project and Alternative 2 would be subject to all applicable provisions of NPDES Phases I and II, which would ensure that runoff would meet all applicable water quality standards, and that neither the proposed project nor the alternative would constitute a substantial new source of polluted runoff. Neither project would result in a significant impact with respect to polluted runoff.

Neither site is located in a potential flood hazard zone mapped by the CDMG. Consequently, neither Alternative 2 nor the proposed project would construct housing (or any structure) within a 100-year flood zone. As discussed in Section 4.7 (Hydrology and Water Quality), the NHIP site is not located

within the hypothetical inundation path of the Stone Canyon Reservoir, which is illustrated in Volume 1, Figure 4.7-2 (Areas of Flood Hazard and Hypothetical Inundation). Implementation of this alternative would, however, result in development within the hypothetical inundation path of the Stone Canyon Reservoir, but as discussed in Volumes 1 Section 4.7 (Hydrology and Water Quality), complete and instantaneous failure of the Stone Canyon Dam structure is considered by LADWP to be extremely remote, and the impact with respect to such an event is considered to be less than significant. Therefore, as with the NHIP, development under this alternative would result in a less-than-significant impact with respect to flooding due to a failure of the Stone Canyon Reservoir. Although less than significant, the impact of this alternative would be slightly greater than under the proposed project.

Volume 1, Section 4.7 (Hydrology and Water Quality) determined that implementation of the 2002 LRDP, including the NHIP, would not substantially interfere with groundwater recharge because water supplies that would be used to meet the demand of the campus would not exceed available supply and would not result in excess groundwater extraction. Further, the small amount of conversion of permeable to impermeable surfaces was not considered to substantially affect groundwater recharge, and the campus is not considered a major source of groundwater recharge in the area. Because, as described above, development under this alternative would likely result in the conversion of less permeable surface area to impermeable surface area, the amount of conversion assumed under the 2002 LRDP would not increase as a result of development under this alternative. Therefore, as with the NHIP, this alternative would have a less-than-significant impact on groundwater recharge, though the impact of this alternative would be slightly less than under the proposed project.

Alternative 2 is relatively flat and is not located on a site susceptible to landslides and, therefore, mudflows. As with the proposed project, Alternative 2 would not result in a significant impact associated with the risk of mudflows.

Land Use and Planning

The 2002 LRDP would provide additional housing within walking distance of campus, ultimately transforming the campus from a predominantly commuter orientation to a more residential one. Thus, the provision of housing under this alternative would be consistent with the goals of the 2002 LRDP. The site of Alternative 2 is located within the Southwest zone and the 2002 LRDP anticipates this zone to provide for a portion of future facility requirements of the primary academic, research and administrative needs, as well as being able to accommodate implementation of the Southwest Housing and Parking project. As such, this alternative would not be consistent with the plan of the 2002 LRDP for the site of Alternative 2. Additionally, under this alternative, an amendment to the 2002 LRDP would be

necessary to transfer gsf to increase the development allocation from the Northwest zone to the Southwest zone. Impacts associated with the consistency of this alternative with the 2002 LRDP would, therefore, be greater than under the proposed project.

The site of Alternative 2 is immediately adjacent to high-density commercial uses. Uses specifically surrounding this site are primarily offices, parking, and public service uses along Wilshire Boulevard. In addition, residential uses are located within the project vicinity. The provision of four residential structures consisting of 2,000 beds under this alternative would not be functionally compatible with the adjacent commercial corridor, and this impact would be greater than the proposed project's less-than-significant impact.

The height, scale, and massing of the three high-rise (up to nine-story) residential buildings would be generally consistent with the adjacent high-density commercial uses and offices, parking, and public service uses along Wilshire Boulevard. As such, development of this alternative would have the same less-than-significant impact as the proposed project.

Noise and Vibration

Implementation of the NHIP would not expose new on-campus student residential units to noise levels in excess of the State's 45 dBA CNEL interior noise standard. Ambient noise levels at the alternative site are, however, higher than the Northwest zone of the campus. This is because the alternative site is acoustically "hard," with a predominance of concrete and asphalt. It is also because it is located close to two very busy roadways (Wilshire Boulevard and Veteran Avenue) and a busy commercial area. However, noise levels within any residential structures constructed within Parking Lot 32 would still meet the State's 45 dBA CNEL noise standard without any special exterior to interior noise attenuation features.

The NHIP construction could generate and expose persons on campus to excessive groundborne vibration or groundborne noise levels. This is considered a significant impact. Development of the project at Lot 32 would reduce this impact to a less-than-significant level because there are no structures that are sensitive to groundborne vibration or groundborne noise levels in close proximity to the site: the closest sensitive receptors are located south of Wilshire Boulevard, behind high-rise commercial structures. While the NHIP would generate and expose persons off campus to excessive groundborne vibration or groundborne noise levels, construction of this alternative would reduce this impact to a less-than-significant level, which would be less than the proposed project.

Refer to Volume 3, Chapter II (Text Changes)

Implementation of the NHIP could generate increased local traffic volumes, but would not cause a substantial permanent on or off campus increase in ambient roadway noise levels in the project vicinity during the regular and summer sessions. Because Alternative 2 would generate the same number of trips as the proposed NHIP in both the regular and summer sessions, roadway noise levels would also not increase substantially under this development alternative.

A similar amount of new stationary sources of noise would be added to the campus under both the NHIP and Alternative 2. This equipment would be shielded and appropriate noise muffling devices installed to reduce noise levels that affect nearby on- and/or off-campus noise-sensitive uses. As such, the noise levels generated by this new equipment would not cause a substantial permanent on- or off-campus increase in ambient noise levels under either development scenario.

Refer to Volume 3, Chapter II (Text Changes)

Implementation of the NHIP would not cause a substantial permanent on- or off-campus increase in ambient noise levels in the project vicinity due to activity at the proposed recreation facility. The alternative would not include the recreation facility. Therefore, this impact would be less than significant under either development scenario, but the impact of the alternative would be less than the proposed project.

Implementation of the NHIP would not cause a substantial permanent off-campus increase in ambient noise levels in the project vicinity due to motor vehicle activity at the proposed Dykstra Parking Structure. Development of the project at Parking Lot 32 would also not cause a significant impact because the site is currently a parking lot, and the increase in noise would be slightly less than under the proposed project.

Refer to Volume 3, Chapter II (Text Changes)

The NHIP construction could result in substantial temporary or periodic increases in ambient noise levels at on-campus locations. This is considered a significant impact. Implementation of Alternative 2 would eliminate this impact by relocating construction activities to an area that is not located adjacent to residential uses. The alternative project site, and the existing uses in the immediate vicinity are less sensitive to construction noise than the proposed project site. It is expected that construction activities at this location would not significantly impact any of the existing commercial and office uses in the vicinity.

Students, faculty, and visitors to UCLA are currently exposed to short-term noise levels generated by helicopter operations to and from the Academic Health Center. These helicopter operations occur an average of five to six times per week and people are exposed to helicopter noise for less than 30 seconds of each flight. Although the helicopter flight path does not cross the alternative site, the students that

live in the new residential buildings could still be exposed to short-term helicopter noise for less than 30 seconds. Therefore, residents of the NHIP would not be exposed to excessive noise levels generated by helicopter operations under either development scenario.

Population and Housing

As with the proposed project, development under Alternative 2 would incrementally increase the housing stock available on campus. Implementation of either the proposed project or this alternative would be within the 2002 LRDP growth projections, which projects the on-campus population to increase by 1,865 students, faculty, staff, and visitors, including construction workers, during the 2002 LRDP horizon period. Although the proposed project and this alternative would result in construction of the same number of beds, slightly more excavation is required, which could extend the construction period, though additional construction workers would probably not be required. The population effects during operation would be the same as under the proposed project because staffing needs would be the same. Overall, population and housing impacts would be the same as those anticipated to occur under the proposed project, and would be less than significant.

Public Services

The population increase as a result of development of Alternative 2 would be similar to the proposed project and would result in the same requirements for fire and police protection, as well as schools, to maintain adequate service levels or response times. As with all projects under the 2002 LRDP, following 2002 LRDP PP 4.11-1 would ensure that fire alarm connections are provided in all new and renovated buildings. Also, following 2002 LRDP PP 4.11-2(a) and 4.11-2(b) would ensure the continued assessment of police staffing and equipment levels, the provision of adequate staff and facilities, and the adequacy of police protection for University housing.

Implementation of 2002 LRDP mitigation measures related to construction mitigation would ensure adequate emergency vehicle access during construction periods under Alternative 2, the same as the less-than-significant impact identified for the proposed project. Ongoing construction is considered part of the baseline conditions on campus, and temporary road closures are routinely addressed to ensure maintenance of adequate emergency access at all times. With this alternative, as with the proposed project, no foreseeable conditions that would impair implementation of, or physically interfere with, the adopted UCLA Disaster Response Plan would occur during construction of the proposed project. As with the proposed project, this alternative's population increases have been included in the projected population increases analyzed in the 2002 LRDP EIR, and would also have a less-than-significant impact on schools.

Therefore, the impacts from Alternative 2 to public services would be the same as the less-than-significant impacts of the proposed project.

Recreation

Alternative 2 would have a similar population increase as the proposed project, resulting in similar demand for campus recreational facilities. Unlike the proposed project, development of this alternative would not result in recreational facilities. However, the on-campus recreational areas would total approximately 52 improved acres under this alternative, and projected average weekday population during the regular session (the period of highest campus population) for 2010–11 is 61,541 persons. This yields a parkland-to-population ratio of 0.85 acre per 1,000 campus population. This ratio falls within the range of parkland provided by the City of Los Angeles of approximately 1 acre per 1,000 persons and the 0.8 acre per 1,000 persons contained within the Westwood Community Plan Area. Therefore, this alternative would result in slightly less parkland for every student on campus, but the parkland-to-population ratios would be consistent with existing ratios within the project area. As such, recreation impacts under this alternative would be less than significant, but slightly greater than the proposed project.

Transportation

Alternative 2 would result in similar traffic generation from residential students and staff during the regular session, although the location of those trips would be shifted to the streets in proximity to the Southwest campus zone. During the summer session, Alternative 2 would result in generally the same increase in trip generation as the proposed project, although these trips would occur along Wilshire Boulevard, Veteran Avenue and Gayley Avenue, and therefore the location of potentially significant impacts would shift to those intersections in proximity to the Southwest campus zone. Because the streets in this area accommodate larger volumes of traffic, the increase in vehicle trips associated with Alternative 2 may not result in significant impacts at one or more intersections. Thus, although trip generation would remain the same, the traffic impacts during summer session could be significant at fewer intersections than the proposed project.

Alternative 2 would result in greater construction traffic impacts because the Lot 32 site is in close proximity to Wilshire Boulevard and Veteran and Gayley Avenues. Thus, construction deliveries and potential lane closures would result in greater impacts than the proposed project's significant impacts because traffic flow on Wilshire, Veteran or Gayley could be affected.

Refer to Volume 3, Chapter II (Text Changes)

Because overall trip generation would be generally the same for Alternative 2 as the proposed project, impacts to regional highways designated by the Congestion Management Program would also be less than significant, the same as the proposed project.

Alternative 2 would not result in the need for any new roadway segments, and it is assumed that access to the site would continue to be provided via the existing driveways on Veteran and Gayley Avenues. Thus, no hazards would result from features such as sharp curves or dangerous intersections. However, development of the student housing in an area currently occupied by parking and in close proximity to major streets could result in potential traffic hazards due to conflicts between pedestrians, bicycles and vehicular traffic. Therefore, impacts associated with traffic hazards from land use incompatibilities would be potentially significant, greater than the proposed project. Potential hazards from construction activities could also result in potentially significant impacts, greater than the proposed project, due to the substantially higher traffic volumes on the adjacent streets which could be affected by construction activities.

Implementation of Alternative 2 could also require temporary closures of sidewalks adjacent to the site. However, following 2002 LRDP PP 4.13-7 would ensure that short-term pedestrian hazards remain less than significant, and the impacts of this alternative would be the same as under the proposed project.

Neither the NHIP nor the Alternative 2 would impair emergency access on an operational basis, and short-term emergency access impacts resulting from construction under either scenario would remain less than significant after following PP 4.13-3.

Operationally, Alternative 2 would result in the same minor increase in parking inventory, and therefore this alternative would not result in inadequate parking capacity, and the impact would be less than significant, same as the proposed project. Because the proposed site of this alternative is a parking lot, construction would result in greater short-term parking impacts than the proposed project. Implementation of LRDP MM 4.13-12 would reduce this impact to a less-than-significant level, although impacts would be greater than the proposed project.

Development of Alternative 2 would not conflict with adopted programs, policies or practices supporting alternative transportation and impacts would be less than significant, as with the proposed project.

Because this alternative would result in the same increase in on-campus resident students and staff employment as the proposed project, Alternative 2 would not increase demand for public transit during the regular session, and this impact would be less than significant, as with the proposed project.

Alternative 2 would result in a minor increase in demand for public transit during the summer, although this impact would be less than significant, the same as the proposed project.

Utilities and Service Systems

As previously described, this alternative would consist of the construction and operation of approximately 567,000 gsf of space, which is about three percent greater than the proposed project. As with the proposed project, Alternative 2 would not require the construction of new or expanded water and wastewater treatment facilities, and this impact is less than significant. This alternative proposes the same number of beds and accommodates the same population increase as under the proposed project. As with the proposed project, the projected demand for this alternative would not exceed the total projected demand for the 2002 LRDP, and adequate water has been determined available to serve the campus at full implementation of the 2002 LRDP. Therefore, this impact is less than significant, though slightly greater than the impact anticipated under the proposed project. As with the proposed project, development of this alternative would be in compliance with all applicable federal, State, and local statutes and regulations related to solid waste, and no impact would occur. Projected solid waste generation would be slightly greater than the proposed project, and as discussed in Section 4.14 (Utilities and Service Systems), the landfills that currently serve the campus have adequate capacity to serve the campus as full implementation of the 2002 LRDP. Consequently, development of this alternative would result in the same though slightly greater impacts than the proposed project, and a less-than-significant impact to solid waste would occur. Projected wastewater generation would be slightly greater than under the proposed project, but still within the quantity anticipated under full implementation of the 2002 LRDP, and the same as under the proposed project, implementation of improvements currently under construction or proposed for the Hyperion treatment system would ensure that the additional wastewater generated would be accommodated. As such, a less-than-significant impact would occur under this alternative. Because only a slight increase in wastewater generation, compared to the proposed project, would occur under this alternative, sewer capacity impacts would be the same.

Electricity and natural gas demands would be slightly greater than the proposed project, because the additional square footage of the development and the larger parking structure (801 spaces under this alternative, compared to 299 spaces under the proposed project) would require a greater amount of electricity, but would still be within the projections of the 2002 LRDP EIR and, therefore, less than significant. Consequently, no new conveyance infrastructure would be required. Standard energy-conservation measures would be implemented under this alternative, as with the proposed project. Because demand for utilities under this alternative would be slightly greater than under the proposed project, the impacts on utilities and service systems from Alternative 2 would be slightly greater than the

less-than-significant impacts from the proposed project, but would still be considered less than significant.

Relationship to Project Objectives

Alternative 2 would meet some of the objectives of the proposed project by (1) providing additional on-campus housing to address current and anticipated demand, as specified in the 2002 SHMP; (2) reducing the proportion of students who commute by increasing the proportion of students who reside on campus; (3) planning, designing, and implementing the alternative within the practical constraints of available funding sources; and (4) providing proximate, convenient parking adjacent to student housing. However, Alternative 2 does not use Northwest zone land resources as efficiently as possible, and is not consistent with the intent of the 2002 LRDP, which anticipates utilizing the site for academic uses. Therefore, project development at this alternative site would not meet several project objectives and would not be consistent with the intent of the 2002 LRDP. Also, Alternative 2 would result in increased impacts in several areas, notably construction-related air quality, land use and planning, recreation, construction-related traffic, operational traffic, and utilities and service systems.

6.3.3 Environmentally Superior Alternative

Based on the information in this section, and as summarized in Table 6-1 (Comparison of Alternatives to the Proposed Project), neither the No Project alternative nor the Alternative Site would be environmentally superior to the proposed project, and neither project is fully consistent with the policies and goals of the 2002 LRDP, nor does either alternative meet the project objectives to the same degree as the propose project.

As specified in the CEQA Guidelines, the EIR shall identify an environmentally superior alternative among the other alternatives. While the impacts of both Alternative 1 (No Project) and Alternative 2 (Alternative Site) would be greater than the project, Alternative 2 would result in an increase in severity of fewer of the project-identified impacts in comparison to Alternative 1. Therefore, Alternative 2 could be considered the environmentally superior alternative. However, although not fully analyzed, the Reduced Project alternative described previously in Section 6.2.2 (Reduced Project Alternative), while not meeting the project objectives to the same degree as Alternative 2, would be considered more environmentally superior than Alternative 2. However, while the Reduced Project alternative could result in a marginal reduction of the project's significant environmental effects, they would still remain significant and unavoidable.

Refer to Volume 3, Chapter II (Text Changes)

6.3.4 Comparison of Alternatives

Table 6-1 (Comparison of Alternatives to the Proposed Project) presents a summary comparison of post-mitigation project impacts with those of each alternative, assuming that feasible mitigation measures are also implemented for each alternative. This table presents the level of significance for impacts resulting from each project alternative, by issue area, as compared to the impacts of the 2002 LRDP (e.g., "LS (greater)" indicates that although the level of significance of the project alternative is "less than significant," the impacts are greater than the proposed project).

Table 6-1 Comparison of Alternatives to the Proposed Project

Impact Area	*Alternative 1: No Project*	*Alternative 2: Alternative Site*
Aesthetics	LS (Same)	LS (Same)
Air Quality—Construction	SU (Same)	SU (Greater)
Air Quality—Operation	LS (Greater)	LS (Same)
Biological Resources	LS (Less)	LS (Less)
Cultural Resources	LS (Greater)	LS (Same)
Geology and Soils	LS (Greater)	LS (Same)
Hazards and Hazardous Materials	LS (Greater)	LS (Same)
Hydrology and Water Quality	LS (Same)	LS (Less)
Land Use and Planning	LS (Same)	LS (Greater)
Noise—Construction	SU (Same)	SU (Less)
Noise—Operation	LS (Same)	LS (Less)
Population/Housing	LS (Greater)	LS (Same)
Public Service	LS (Same)	LS (Same)
Recreation	LS (Greater)	LS (Greater)
Transportation—Construction	SU (Same)	SU (Greater)
Transportation—Operation	SU (Greater)	SU (Greater)
Utilities and Service Systems	LS (Same)	LS (Greater)
Relationship to Project Objectives	Less	Less

LS = Less Than Significant
PS = Potentially Significant
S = Significant
SU = Significant and Unavoidable

Refer to Volume 3, Chapter II (Text Changes)

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Los Angeles, CA 90045-6424

Toxic Air Contaminant Consultants

URS Corporation
2020 East First Street, Suite 400
Santa Ana, CA 92705-4032

Geotechnical Consultants

Geotechnologies, Inc.
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Glendale, CA 91201-2837

Public Meeting Transcription (Scoping Meeting)

Newlander & Newlander
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Los Angeles, CA 90017-1938

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Irvine, CA 92618-2027

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APPENDICES

Appendix I Air Quality Model Output

TOTAL OPERATIONAL EMISSIONS

Project Number: 10328-08
Project Name: UCLA Northwest Housing Infill Project

Existing Daily Campus Emissions

	Regular Session Emissions in Pounds per Day					Summer Session Emissions in Pounds per Day				
Emissions Source	CO	ROC	NOx	SOx	PM_{10}	CO	ROC	NOx	SOx	PM_{10}
Construction Activities	209.6	37.5	298.2	10.8	24.9	209.6	37.5	298.2	10.8	24.9
Stationary Sources	631.2	44.4	163.3	69.6	73.4	631.2	44.4	163.3	69.6	73.4
Landscape Maintenance	31.9	4.9	0.2	0.0	0.1	31.9	4.9	0.2	0.0	0.1
Consumer Products		114.2					12.2			
Motor Vehicles	15,379.3	1,251.4	1,632.9	7.4	785.3	14,681.5	1,180.6	1,563.3	6.6	696.6
Totals	16,252.0	1,452.4	2,094.6	87.8	883.7	15,554.2	1,279.6	2,025.0	87.0	795.0

Future Without Project Daily Campus Emissions

	Regular Session Emissions in Pounds per Day					Summer Session Emissions in Pounds per Day				
Emissions Source	CO	ROC	NOx	SOx	PM_{10}	CO	ROC	NOx	SOx	PM_{10}
Construction Activities	163.9	31.0	265.3	10.8	45.0	163.9	31.0	265.3	10.8	45.0
Stationary Sources	699.7	49.2	181.0	77.1	81.4	699.7	49.2	181.0	77.1	81.4
Landscape Maintenance	35.4	5.4	0.2	0.0	0.1	35.4	5.4	0.2	0.0	0.1
Consumer Products		148.4					46.4			
Motor Vehicles	12,196.1	1,055.8	1,205.4	6.1	841.6	10,644.1	921.4	1,052.0	5.4	734.5
Totals	13,095.1	1,289.8	1,651.9	94.0	968.1	11,543.1	1,053.4	1,498.5	93.3	861.0

Future With NHIP Daily Campus Emissions

	Regular Session Emissions in Pounds per Day					Summer Session Emissions in Pounds per Day				
Emissions Source	CO	ROC	NOx	SOx	PM_{10}	CO	ROC	NOx	SOx	PM_{10}
Construction Activities	163.9	31.0	265.3	10.8	45.0	163.9	31.0	265.3	10.8	45.0
Stationary Sources	702.4	49.9	197.2	77.1	81.4	702.4	49.9	197.2	77.1	81.4
Landscape Maintenance	36.6	5.6	0.2	0.0	0.1	36.6	5.6	0.2	0.0	0.1
Consumer Products		177.0					49.5			
Motor Vehicles	12,236.8	1,059.3	1,209.4	6.2	844.4	10,975.9	950.1	1,084.8	5.5	757.4
Totals	13,139.7	1,322.8	1,672.1	94.1	970.9	11,878.8	1,086.1	1,547.5	93.4	883.9

Net Increase in Daily Campus Emissions

	Regular Session Emissions in Pounds per Day					Summer Session Emissions in Pounds per Day				
Analysis Condition	CO	ROC	NOx	SOx	PM_{10}	CO	ROC	NOx	SOx	PM_{10}
Total Future Baseline	13,095.1	1,289.8	1,651.9	94.0	968.1	11,543.1	1,053.4	1,498.5	93.3	861.0
Total Future With Project	13,139.7	1,322.8	1,672.1	94.1	970.9	11,878.8	1,086.1	1,547.5	93.4	883.9
Net Increase	44.6	33.0	20.2	0.1	2.8	335.7	32.7	49.0	0.1	22.9

CONSTRUCTION EMISSIONS ESTIMATES
SITE EXCAVATION AND GRADING PHASE

Project Number: 10328-08
Project Name: UCLA NW Housing
Construction Scenario: Scenario 1: Construction of Hedrick North, Excavation for Dykstra Parking, and Sproul 1st Floor Renovation

---

Construction Equipment Emissions
Emissions = F x G x H

	F	G	H									
		Hours/	Emission Factors in Pounds per Hour[1]					Emissions in Pounds per Day				
Equipment Type	Quantity	Day	CO	ROC	NO_x	SO_x	PM_{10}	CO	ROC	NO_x	SO_x	PM_{10}
Generator Sets <50 HP	6	2	1.479	0.054	0.002	0.0006	0.00025	17.7	0.6	0.0	0.0	0.0
Fork Lift - 50 Hp	2	5	0.18	0.053	0.441	0	0.031	1.8	0.5	4.4	0.0	0.3
Fork Lift - 175 Hp	4	5	0.52	0.17	1.54	0	0.93	10.4	3.4	30.8	0.0	18.6
Water Truck	1	2	1.8	0.19	4.17	0.45	0.26	3.6	0.4	8.3	0.9	0.5
Tracked Loader	0	6	0.201	0.095	0.83	0.076	0.059	-	-	-	-	-
Tracked Tractor	0	6	0.35	0.12	1.26	0.14	0.112	-	-	-	-	-
Scraper	1	7	1.25	0.27	3.84	0.46	0.41	8.8	1.9	26.9	3.2	2.9
Wheeled Dozer	1	5	0.572	0.12	0.713	0.35	0.165	2.9	0.6	3.6	1.8	0.8
Wheeled Loader	2	5	0.572	0.23	1.9	0.182	0.17	5.7	2.3	19.0	1.8	1.7
Wheeled Tractor	0	6	3.58	0.18	1.27	0.09	0.14	-	-	-	-	-
Roller	0	6	0.3	0.065	0.87	0.067	0.05	-	-	-	-	-
Motor Grader	0	6	0.151	0.039	0.713	0.086	0.061	-	-	-	-	-
Crane	2	4	0.75078	0.25026	1.91866	0.16684	0.12513	6.0	2.0	15.3	1.3	1.0
Backhoe	3	3.5	0.572	0.23	1.9	0.17	0.182	6.0	2.4	20.0	1.8	1.9
Miscellaneous	0	6	0.675	0.15	1.7	0.143	0.14	-	-	-	-	-
Subtotal								62.9	14.2	128.3	10.8	27.7

[1] Emission Factors from SCAQMD CEQA Air Quality Handbook (1993), Tables A9-8-A, A9-8-B, A9-8-C, and A9-8-D.

On-Road Vehicle Source Emissions
Emissions = F x G x H x I

	F	G	H	I									
		Trips/	Miles/	Emission Factors in Pounds per 100 Trips per Mile					Emissions in Pounds per Day				
Vehicle Type	Quantity	Vehicle	Trip	CO	ROC	NO_x	SO_x	PM_{10}	CO	ROC	NO_x	SO_x	PM_{10}
Haul Trucks[2]	68	2	50	1.42511	0.22467	1.982379	0	0.012118	96.9	15.3	134.8	0.0	0.8
Construction Employees[3]	50	3.7	10.6	2.2	0.82	1.16	0	0.22	4.1	1.5	2.1	0.0	0.4
Subtotal									101.0	16.8	136.9	0.0	1.2

[2] Emission factors from EMFAC7G (Year 2001, 100% heavy-duty diesel, 90F)
[3] Emission factors from URBEMIS7G (Year 2001, construction worker trips)

Site Grading
PM_{10} Emissions = (10.0 lbs per day x A) - B[4]

	A	O		PM_{10}
	Acres/	Rule 403 Reduction		Emissions
Emissions Source	Day	%	lbs	(lbs/day)
Site Grading	5	68%	34.0	16.0

[4] Emission Factors from URBEMIS7G (2000).

Total Site Grading Phase Emissions

	Emissions in Pounds per Day				
Emissions Source	CO	ROC	NO_x	SO_x	PM_{10}
Construction Equipment	62.9	14.2	128.3	10.8	27.7
On-Road Vehicles	101.0	16.8	136.9	0.0	1.2
Site Grading	-	-	-	-	16.0
Total	163.9	31.0	265.3	10.8	45.0
SCAQMD Threshold	550.0	75.0	100.0	150.0	150.0
Exceeds Threshold?	No	No	Yes	No	No

CONSTRUCTION EMISSIONS ESTIMATES
SITE EXCAVATION AND GRADING PHASE

Project Number: 10328-08
Project Name: UCLA NW Housing
Construction Scenario: Scenario 2: Construction of Hedrick North, Dykstra Parking, Rieber North, and Rieber West, and Renovation of Hedrick 1st Floor

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Construction Equipment Emissions
Emissions = F x G x H

	F	G	H									
		Hours/	Emission Factors in Pounds per Hour[1]					Emissions in Pounds per Day				
Equipment Type	Quantity	Day	CO	ROC	NO_x	SO_x	PM_{10}	CO	ROC	NO_x	SO_x	PM_{10}
Generator Sets <50 HP	12	2	1.479	0.054	0.002	0.0006	0.00025	35.5	1.3	0.0	0.0	0.0
Fork Lift - 50 Hp	4	5	0.18	0.053	0.441	0	0.031	3.6	1.1	8.8	0.0	0.6
Fork Lift - 175 Hp	8	5	0.52	0.17	1.54	0	0.93	20.8	6.8	61.6	0.0	37.2
Water Truck	0	2	1.8	0.19	4.17	0.45	0.26	-	-	-	-	-
Tracked Loader	0	6	0.201	0.095	0.83	0.076	0.059	-	-	-	-	-
Tracked Tractor	0	6	0.35	0.12	1.26	0.14	0.112	-	-	-	-	-
Scraper	0	7	1.25	0.27	3.84	0.46	0.41	-	-	-	-	-
Wheeled Dozer	0	5	0.572	0.12	0.713	0.35	0.165	-	-	-	-	-
Wheeled Loader	3	5	0.572	0.23	1.9	0.182	0.17	8.6	3.5	28.5	2.7	2.6
Wheeled Tractor	0	6	3.58	0.18	1.27	0.09	0.14	-	-	-	-	-
Roller	0	6	0.3	0.065	0.87	0.067	0.05	-	-	-	-	-
Motor Grader	0	6	0.151	0.039	0.713	0.086	0.061	-	-	-	-	-
Crane	5	4	0.75078	0.25026	1.91866	0.16684	0.12513	15.0	5.0	38.4	3.3	2.5
Backhoe	5	3.5	0.572	0.23	1.9	0.17	0.182	10.0	4.0	33.3	3.0	3.2
Miscellaneous	0	6	0.675	0.15	1.7	0.143	0.14	-	-	-	-	-
Subtotal								93.5	21.6	170.6	9.1	46.1

[1] Emission Factors from SCAQMD CEQA Air Quality Handbook (1993), Tables A9-8-A, A9-8-B, A9-8-C, and A9-8-D.

On-Road Vehicle Source Emissions
Emissions = F x G x H x I

	F	G	H	I									
		Trips/	Miles/	Emission Factors in Pounds per 100 Trips per Mile					Emissions in Pounds per Day				
Vehicle Type	Quantity	Vehicle	Trip	CO	ROC	NO_x	SO_x	PM_{10}	CO	ROC	NO_x	SO_x	PM_{10}
Haul Trucks[2]	8	2	50	1.42511	0.22467	1.982379	0	0.012118	11.4	1.8	15.9	0.0	0.1
Construction Employees[3]	70	3.7	10.6	2.2	0.82	1.16	0	0.22	5.7	2.1	3.0	0.0	0.6
Subtotal									17.1	3.9	18.9	0.0	0.7

[2] Emission factors from EMFAC7G (Year 2001, 100% heavy-duty diesel, 90F)
[3] Emission factors from URBEMIS7G (Year 2001, construction worker trips)

Site Grading
PM_{10} Emissions = (10.0 lbs per day x A) - B[4]

	A	O		PM_{10}
	Acres/	Rule 403 Reduction		Emissions
Emissions Source	Day	%	lbs	(lbs/day)
Site Grading	0	68%	0.0	0.0

[4] Emission Factors from URBEMIS7G (2000).

Total Site Grading Phase Emissions

	Emissions in Pounds per Day				
Emissions Source	CO	ROC	NO_x	SO_x	PM_{10}
Construction Equipment	93.5	21.6	170.6	9.1	46.1
On-Road Vehicles	17.1	3.9	18.9	0.0	0.7
Site Grading	-	-	-	-	0.0
Total	110.6	25.6	189.5	9.1	46.7
SCAQMD Threshold	550.0	75.0	100.0	150.0	150.0
Exceeds Threshold?	No	No	Yes	No	No

BUILDING NUMBERS AND SQUARE FOOTAGE

	Existing		Under Const./Approved		LRDP Baseline Total		Proposed NHIP		Total With NHIP	
ZONE	Square Feet	Buildings	Square Feet	Buildings	Square Feet	Buildings	Square Feet	Buildings	Square Feet	Buildings
Botanical Garden	0	0	19,100	1	19,100	1			19,100	1
Bridge	330,568	4	0	0	330,568	4			330,568	4
Campus Services	411,072	8	0	0	411,072	8			411,072	8
Central	1,007,125	15	69,950	3	1,077,075	18			1,077,075	18
Core - North	2,609,439	35	138,600	3	2,748,039	38			2,748,039	38
Core South	3,662,968	33	514,280	3	4,177,248	36			4,177,248	36
Health Sciences	3,287,991	24	-183,595	-2	3,104,396	22			3,104,396	22
Northwest	2,100,079	40	65,100	1	2,165,179	41			2,165,179	41
Southwest	472,453	13	882,000	1	1,354,453	14			1,354,453	14
Other	0	0	0	0	0	0	550,000	7	550,000	7
Totals	13,881,695	172	1,505,435	10	15,387,130	182	550,000	7	15,937,130	189
	100.0%		10.8%		110.8%		4.0%		114.8%	

STATIONARY SOURCE EMISSIONS

Campus-Wide Sources Based on SCAQMD Reports

Analysis Scenario	Percent of	Emissions in Tons Per Year				
Existing Uses and Operations	Existing	CO	VOC	NOx	SOx	PM10
		115.2	8.1	29.8	12.7	13.4

This Equates to:

		Emissions in Pounds Per Day				
		CO	VOC	NOx	SOx	PM10
Existing Uses and Operations	100.0%	631.2	44.4	163.3	69.6	73.4
LRDP Baseline Uses and Oper.	110.8%	699.7	49.2	181.0	77.1	81.4

NHIP Sources Based on Natural Gas Demand

Assumed number of "Residential Units"	1000.0
	2.7

Assumed # of "Res Units"	Cubic Feet per Unit per Month	Total Cubic Feet per Day	Emission Factors in Pounds Per 1,000,000 Cubic Feet Per Day CO	VOC	NOx	SOx	PM10
1000	4105	135033	20.0	5.3	120.0	0.0	0.2

	Emissions in Pounds Per Day				
	CO	VOC	NOx	SOx	PM10
NHIP Uses and Operations	2.7	0.7	16.2	0.0	0.0
Total Campus Emissions with NHIP	702.4	49.9	197.2	77.1	81.4

LANDSCAPE MAINTENANCE EMISSIONS

Analysis Scenario	Number of "Business Units'	Emission Factors in Pounds Per Day CO	VOC	NOx	SOx	PM10
		1.149	0.175	0.007	0	0.0041

		Emissions in Pounds Per Day				
		CO	VOC	NOx	SOx	PM10
Existing Uses and Operations	28	31.9	4.9	0.2	0.0	0.1
LRDP Baseline Uses and Oper.	31	35.4	5.4	0.2	0.0	0.1
Total with NHIP	32	36.6	5.8	0.2	0.0	0.1

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\UCLA NHIP Fut
Project Name: UCLA NHIP - Future Baseline Use Traffic Volumes in 2006 - Regular
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Summer)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SO2
TOTALS (ppd, unmitigated)	1,055.76	1,205.39	12,196.14	841.58	6.13

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\UCLA NHIP Fut
Project Name: UCLA NHIP - Future Baseline Use Traffic Volumes in 2006 - Regular
Project Location: South Coast Air Basin (Los Angeles area)

DETAIL REPORT
(Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10	SO2
University/college (4 yrs	1,055.76	1,205.39	12,196.14	841.58	6.13
TOTAL EMISSIONS (lbs/day)	1,055.76	1,205.39	12,196.14	841.58	6.13

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2006 Temperature (F): 70 Season: Summer

EMFAC Version: EMFAC2001 (10/2001)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
University/college (4 yrs	128,056.00 trips / UCLA campus	1.00	128,056.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	68.23	4.70	94.50	0.80
Light Truck < 3,750 lbs	10.33	11.00	88.90	0.10
Light Truck 3,751- 5,750	18.56	1.80	97.60	0.60
Med Truck 5,751- 8,500	0.30	12.50	79.20	8.30
Lite-Heavy 8,501-10,000	0.05	18.20	72.70	9.10
Lite-Heavy 10,001-14,000	0.01	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.05	9.10	27.30	63.60
Heavy-Heavy 33,001-60,000	0.03	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.00	0.00	0.00	100.00
Motorcycle	1.56	90.90	9.10	0.00
School Bus	0.11	0.00	0.00	100.00
Motor Home	0.77	0.00	100.00	0.00

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)			
University/college (4 yrs)	5.0	2.5	92.5

Changes made to the default values for Operations

The mitigation option switch changed from on to off.
The light auto percentage changed from 61.4 to 68.23.
The light truck < 3750 lbs percentage changed from 9.3 to 10.33.
The light truck 3751-5750 percentage changed from 16.7 to 18.56.
The med truck 5751-8500 percentage changed from 7.2 to 0.30.
The lite-heavy truck 8501-10000 percentage changed from 1.1 to 0.05.
The lite-heavy truck 10001-14000 percentage changed from 0.3 to 0.01.
The med-heavy truck 14001-33000 percentage changed from 1.1 to 0.05.
The heavy-heavy truck 33001-60000 percentage changed from 0.7 to 0.03.
The motorcycle percentage changed from 1.4 to 1.56.
The school bus percentage changed from 0.1 to 0.11.
The motorhome percentage changed from 0.7 to 0.77.
The operational emission year changed from 2002 to 2006.
The operational winter selection item changed from 3 to 2.
The operational summer temperature changed from 90 to 70.
The operational summer selection item changed from 8 to 4.
The travel mode environment settings changed from both to: none
The default/nodefault travel setting changed from nodefault to: nodefault
Side Walks/Paths: No Sidewalks
changed to: Side Walks/Paths: Complete Coverage
Street Trees Provide Shade: No Coverage
changed to:Street Trees Provide Shade: Moderate Coverage
Pedestrian Circulation Access: No Destinations
changed to:Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses Within Walking Distance
changed to:Visually Interesting Uses: Large Number and Variety
Street System Enhances Safety: No Streets
changed to: Street System Enhances Safety: Most Streets
Pedestrian Safety from Crime: No Degree of Safety
changed to:Pedestrian Safety from Crime: High Degree of Safety
Visually Interesting Walking Routes: No Visual Interest
changed to:Visually Interesting Walking Routes: Moderate Level
Transit Service: Dial-A-Ride or No Transit Service
changed to: Transit Service: 15-30 Minute Bus within 1/4 Mile
Interconnected Bikeways: No Bikeway Coverage
changed to: Interconnected Bikeways: Moderate Coverage
Bike Routes Provide Paved Shoulders: No Routes
changed to:Bike Routes Provide Paved Shoulders: Few Routes
Safe Vehicle Speed Limits: No Routes Provided
changed to:Safe Vehicle Speed Limits: Few Destinations
Safe School Routes: No Schools
changed to: Safe School Routes: University/College Within Cycling Distance
Uses w/in Cycling Distance: No Uses w/in Cycling Distance
changed to:Uses w/in Cycling Distance: Large Number and Variety
Mitigation measure Project Density Meets Transit Level of Service Requirements:6
has been changed from off to on.
Mitigation measure Provide Transit Shelters Benches:2
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Provide Route Signs and Displays:0.5
has been changed from off to on.
Mitigation measure Provide Bus Turnouts:1
has been changed from off to on.

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\UCLA NHIP Fut
Project Name: UCLA NHIP - Future Baseline Use Traffic Volumes in 2006- Summer Se
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Summer)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SO2
TOTALS (ppd, unmitigated)	921.41	1,051.99	10,644.10	734.49	5.35

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\UCLA NHIP Fut
Project Name: UCLA NHIP - Future Baseline Use Traffic Volumes in 2006- Summer Se
Project Location: South Coast Air Basin (Los Angeles area)

DETAIL REPORT
(Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10	SO2
University/college (4 yrs	921.41	1,051.99	10,644.10	734.49	5.35
TOTAL EMISSIONS (lbs/day)	921.41	1,051.99	10,644.10	734.49	5.35

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2006 Temperature (F): 70 Season: Summer

EMFAC Version: EMFAC2001 (10/2001)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
University/college (4 yrs	111,760.00 trips / UCLA campus	1.00	111,760.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	68.23	4.70	94.50	0.80
Light Truck < 3,750 lbs	10.33	11.00	88.90	0.10
Light Truck 3,751- 5,750	18.56	1.80	97.60	0.60
Med Truck 5,751- 8,500	0.30	12.50	79.20	8.30
Lite-Heavy 8,501-10,000	0.05	18.20	72.70	9.10
Lite-Heavy 10,001-14,000	0.01	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.05	9.10	27.30	63.60
Heavy-Heavy 33,001-60,000	0.03	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.00	0.00	0.00	100.00
Motorcycle	1.56	90.90	9.10	0.00
School Bus	0.11	0.00	0.00	100.00
Motor Home	0.77	0.00	100.00	0.00

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

ł of Trips - Commercial (by land use)			
Jniversity/college (4 yrs)	5.0	2.5	92.5

Changes made to the default values for Operations

The mitigation option switch changed from on to off.
The light auto percentage changed from 61.4 to 68.23.
The light truck < 3750 lbs percentage changed from 9.3 to 10.33.
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The heavy-heavy truck 33001-60000 percentage changed from 0.7 to 0.03.
The motorcycle percentage changed from 1.4 to 1.56.
The school bus percentage changed from 0.1 to 0.11.
The motorhome percentage changed from 0.7 to 0.77.
The operational emission year changed from 2002 to 2006.
The operational winter selection item changed from 3 to 2.
The operational summer temperature changed from 90 to 70.
The operational summer selection item changed from 8 to 4.
The travel mode environment settings changed from both to: none
The default/nodefault travel setting changed from nodefault to: nodefault
Side Walks/Paths: No Sidewalks
changed to: Side Walks/Paths: Complete Coverage
Street Trees Provide Shade: No Coverage
changed to:Street Trees Provide Shade: Moderate Coverage
Pedestrian Circulation Access: No Destinations
changed to:Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses Within Walking Distance
changed to:Visually Interesting Uses: Large Number and Variety
Street System Enhances Safety: No Streets
changed to: Street System Enhances Safety: Most Streets
Pedestrian Safety from Crime: No Degree of Safety
changed to:Pedestrian Safety from Crime: High Degree of Safety
Visually Interesting Walking Routes: No Visual Interest
changed to:Visually Interesting Walking Routes: Moderate Level
Transit Service: Dial-A-Ride or No Transit Service
changed to: Transit Service: 15-30 Minute Bus within 1/4 Mile
Interconnected Bikeways: No Bikeway Coverage
changed to: Interconnected Bikeways: Moderate Coverage
Bike Routes Provide Paved Shoulders: No Routes
changed to:Bike Routes Provide Paved Shoulders: Few Routes
Safe Vehicle Speed Limits: No Routes Provided
changed to:Safe Vehicle Speed Limits: Few Destinations
Safe School Routes: No Schools
changed to: Safe School Routes: University/College Within Cycling Distance
Uses w/in Cycling Distance: No Uses w/in Cycling Distance
changed to:Uses w/in Cycling Distance: Large Number and Variety
Mitigation measure Project Density Meets Transit Level of Service Requirements:6
has been changed from off to on.
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Mitigation measure Provide Bus Turnouts:1
has been changed from off to on.

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\UCLA NHIP Pro
Project Name: UCLA NHIP - Future With Project Traffic Volumes - Regular Session
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Summer)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SO2
TOTALS (ppd, unmitigated)	1,059.28	1,209.41	12,236.81	844.39	6.15

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\UCLA NHIP Pro
Project Name: UCLA NHIP - Future With Project Traffic Volumes - Regular Session
Project Location: South Coast Air Basin (Los Angeles area)

DETAIL REPORT
(Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10	SO2
University/college (4 yrs	1,059.28	1,209.41	12,236.81	844.39	6.15
TOTAL EMISSIONS (lbs/day)	1,059.28	1,209.41	12,236.81	844.39	6.15

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2006 Temperature (F): 70 Season: Summer

EMFAC Version: EMFAC2001 (10/2001)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
University/college (4 yrs	128,483.00 trips / UCLA campus	1.00	128,483.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	68.23	4.70	94.50	0.80
Light Truck < 3,750 lbs	10.33	11.00	88.90	0.10
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Med Truck 5,751- 8,500	0.30	12.50	79.20	8.30
Lite-Heavy 8,501-10,000	0.05	18.20	72.70	9.10
Lite-Heavy 10,001-14,000	0.01	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.05	9.10	27.30	63.60
Heavy-Heavy 33,001-60,000	0.03	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.00	0.00	0.00	100.00
Motorcycle	1.56	90.90	9.10	0.00
School Bus	0.11	0.00	0.00	100.00
Motor Home	0.77	0.00	100.00	0.00

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)			
University/college (4 yrs)	5.0	2.5	92.5

Changes made to the default values for Operations

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changed to:Street Trees Provide Shade: Moderate Coverage
Pedestrian Circulation Access: No Destinations
changed to:Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses Within Walking Distance
changed to:Visually Interesting Uses: Large Number and Variety
Street System Enhances Safety: No Streets
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Pedestrian Safety from Crime: No Degree of Safety
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Transit Service: Dial-A-Ride or No Transit Service
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Interconnected Bikeways: No Bikeway Coverage
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changed to:Bike Routes Provide Paved Shoulders: Few Routes
Safe Vehicle Speed Limits: No Routes Provided
changed to:Safe Vehicle Speed Limits: Few Destinations
Safe School Routes: No Schools
changed to: Safe School Routes: University/College Within Cycling Distance
Uses w/in Cycling Distance: No Uses w/in Cycling Distance
changed to:Uses w/in Cycling Distance: Large Number and Variety
Mitigation measure Project Density Meets Transit Level of Service Requirements:6
has been changed from off to on.
Mitigation measure Provide Transit Shelters Benches:2
has been changed from off to on.
Mitigation measure Provide Street Lighting:0.5
has been changed from off to on.
Mitigation measure Provide Route Signs and Displays:0.5
has been changed from off to on.
Mitigation measure Provide Bus Turnouts:1
has been changed from off to on.

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\UCLA NHIP Pro
Project Name: UCLA NHIP - Future With Project Traffic Volumes - Summer Session
Project Location: South Coast Air Basin (Los Angeles area)

SUMMARY REPORT
(Pounds/Day - Summer)

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	PM10	SO2
TOTALS (ppd, unmitigated)	950.14	1,084.79	10,975.92	757.38	5.52

URBEMIS 2001 For Windows 6.2.2

File Name: C:\Program Files\URBEMIS 2001 For Windows\Projects2k\UCLA NHIP Pro
Project Name: UCLA NHIP - Future With Project Traffic Volumes - Summer Session
Project Location: South Coast Air Basin (Los Angeles area)

DETAIL REPORT
(Pounds/Day - Summer)

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	PM10	SO2
University/college (4 yrs	950.14	1,084.79	10,975.92	757.38	5.52
TOTAL EMISSIONS (lbs/day)	950.14	1,084.79	10,975.92	757.38	5.52

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2006 Temperature (F): 70 Season: Summer

EMFAC Version: EMFAC2001 (10/2001)

Summary of Land Uses:

Unit Type	Trip Rate	Size	Total Trips
University/college (4 yrs	115,244.00 trips / UCLA campus	1.00	115,244.00

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	68.23	4.70	94.50	0.80
Light Truck < 3,750 lbs	10.33	11.00	88.90	0.10
Light Truck 3,751- 5,750	18.56	1.80	97.60	0.60
Med Truck 5,751- 8,500	0.30	12.50	79.20	8.30
Lite-Heavy 8,501-10,000	0.05	18.20	72.70	9.10
Lite-Heavy 10,001-14,000	0.01	0.00	66.70	33.30
Med-Heavy 14,001-33,000	0.05	9.10	27.30	63.60
Heavy-Heavy 33,001-60,000	0.03	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.00	0.00	0.00	100.00
Motorcycle	1.56	90.90	9.10	0.00
School Bus	0.11	0.00	0.00	100.00
Motor Home	0.77	0.00	100.00	0.00

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

University/college (4 yrs)	5.0	2.5	92.5

Changes made to the default values for Operations

The mitigation option switch changed from on to off.
The light auto percentage changed from 61.4 to 68.23.
The light truck < 3750 lbs percentage changed from 9.3 to 10.33.
The light truck 3751-5750 percentage changed from 16.7 to 18.56.
The med truck 5751-8500 percentage changed from 7.2 to 0.30.
The lite-heavy truck 8501-10000 percentage changed from 1.1 to 0.05.
The lite-heavy truck 10001-14000 percentage changed from 0.3 to 0.01.
The med-heavy truck 14001-33000 percentage changed from 1.1 to 0.05.
The heavy-heavy truck 33001-60000 percentage changed from 0.7 to 0.03.
The motorcycle percentage changed from 1.4 to 1.56.
The school bus percentage changed from 0.1 to 0.11.
The motorhome percentage changed from 0.7 to 0.77.
The operational emission year changed from 2002 to 2006.
The operational winter selection item changed from 3 to 2.
The operational summer temperature changed from 90 to 70.
The operational summer selection item changed from 8 to 4.
The travel mode environment settings changed from both to: none
The default/nodefault travel setting changed from nodefault to: nodefault
Side Walks/Paths: No Sidewalks
changed to: Side Walks/Paths: Complete Coverage
Street Trees Provide Shade: No Coverage
changed to:Street Trees Provide Shade: Moderate Coverage
Pedestrian Circulation Access: No Destinations
changed to:Pedestrian Circulation Access: Most Destinations
Visually Interesting Uses: No Uses Within Walking Distance
changed to:Visually Interesting Uses: Large Number and Variety
Street System Enhances Safety: No Streets
changed to: Street System Enhances Safety: Most Streets
Pedestrian Safety from Crime: No Degree of Safety
changed to:Pedestrian Safety from Crime: High Degree of Safety
Visually Interesting Walking Routes: No Visual Interest
changed to:Visually Interesting Walking Routes: Moderate Level
Transit Service: Dial-A-Ride or No Transit Service
changed to: Transit Service: 15-30 Minute Bus within 1/4 Mile
Interconnected Bikeways: No Bikeway Coverage
changed to: Interconnected Bikeways: Moderate Coverage
Bike Routes Provide Paved Shoulders: No Routes
changed to:Bike Routes Provide Paved Shoulders: Few Routes
Safe Vehicle Speed Limits: No Routes Provided
changed to:Safe Vehicle Speed Limits: Few Destinations
Safe School Routes: No Schools
changed to: Safe School Routes: University/College Within Cycling Distance
Uses w/in Cycling Distance: No Uses w/in Cycling Distance
changed to:Uses w/in Cycling Distance: Large Number and Variety
Mitigation measure Project Density Meets Transit Level of Service Requirements:6
has been changed from off to on.
Mitigation measure Provide Transit Shelters Benches:2
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has been changed from off to on.
Mitigation measure Provide Route Signs and Displays:0.5
has been changed from off to on.
Mitigation measure Provide Bus Turnouts:1
has been changed from off to on.

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

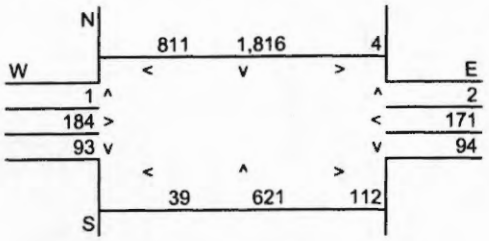
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

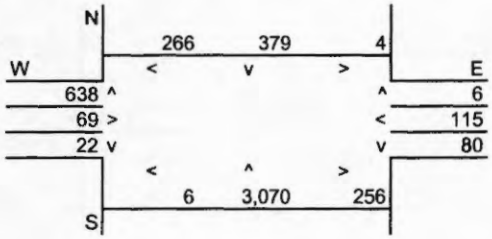
Intersection: Church Ln.-Ovada Ln./Sepulveda Blvd.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Sepulveda Blvd.	At Grade	4	10	15
East-West Roadway:	Church Ln.-Ovada Ln.	At Grade	4	10	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	3,255	N-S Road:	4,363
E-W Road:	1,299	E-W Road:	1,116

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	3,255	14.08	3.21	2.47	1.74
East-West Road	2.6	2.2	1.7	1,299	14.08	0.48	0.40	0.31
P.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	4,363	9.51	2.90	2.24	1.58
East-West Road	2.6	2.2	1.7	1,116	9.51	0.28	0.23	0.18

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	8.9	8.4	5.7
50 Feet from Roadway Edge	8.1	7.7	5.1
100 Feet from Roadway Edge	7.3	7.0	4.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

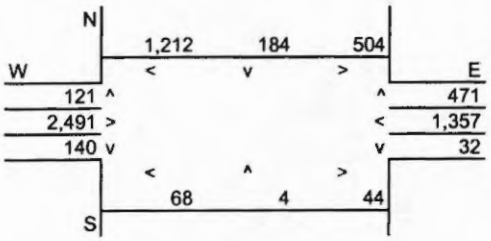
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

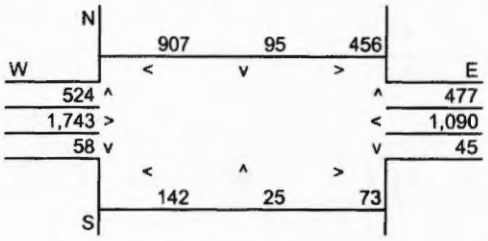
Intersection: Sunset Blvd./Church Ln.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Church Ln.	At Grade	4	15	15
East-West Roadway:	Sunset Blvd.	At Grade	4	15	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,496	N-S Road:	2,484
E-W Road:	5,389	E-W Road:	4,464

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	2,496	9.51	0.62	0.52	0.40
East-West Road	7.0	5.4	3.8	5,389	9.51	3.59	2.77	1.95
P.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	2,484	9.51	0.61	0.52	0.40
East-West Road	7.0	5.4	3.8	4,464	9.51	2.97	2.29	1.61

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	9.4	8.8	6.0
50 Feet from Roadway Edge	8.5	8.0	5.4
100 Feet from Roadway Edge	7.6	7.2	4.7

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

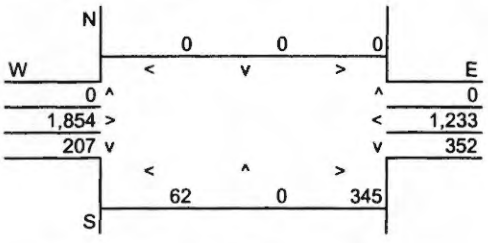
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

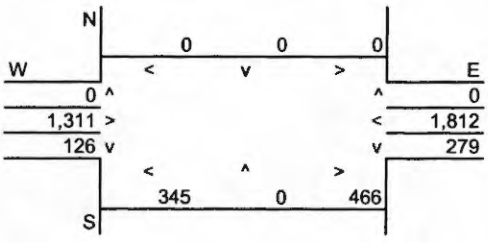
Intersection: Sunset Blvd./Veteran Ave.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Veteran Ave.	At Grade	2	15	15
East-West Roadway:	Sunset Blvd.	At Grade	4	15	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	966	N-S Road:	1,216
E-W Road:	3,784	E-W Road:	3,868

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	966	9.51	0.25	0.20	0.16
East-West Road	7.0	5.4	3.8	3,784	9.51	2.52	1.94	1.37
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	1,216	9.51	0.31	0.25	0.20
East-West Road	7.0	5.4	3.8	3,868	9.51	2.57	1.99	1.40

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	8.0	8.1	5.1
50 Feet from Roadway Edge	7.3	7.4	4.7
100 Feet from Roadway Edge	6.7	6.8	4.2

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

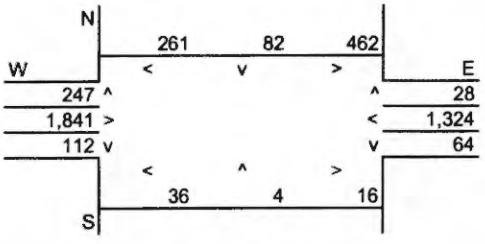
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

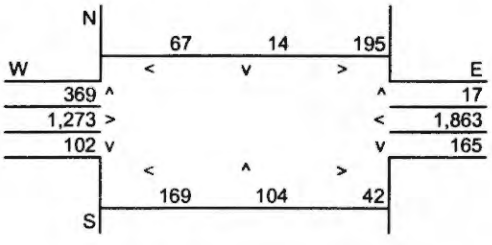
Intersection: Sunset Blvd./Bellagio Way
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Bellagio Way	At Grade	2	15	10
East-West Roadway:	Sunset Blvd.	At Grade	4	15	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,084	N-S Road:	766
E-W Road:	3,821	E-W Road:	3,843

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 50 Feet	A_3 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	1,084	9.51	0.28	0.23	0.18
East-West Road	7.0	5.4	3.8	3,821	9.51	2.54	1.96	1.38
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	766	14.08	0.29	0.24	0.18
East-West Road	7.0	5.4	3.8	3,843	14.08	3.79	2.92	2.06

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	8.0	9.3	6.0
50 Feet from Roadway Edge	7.4	8.4	5.3
100 Feet from Roadway Edge	6.8	7.4	4.7

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

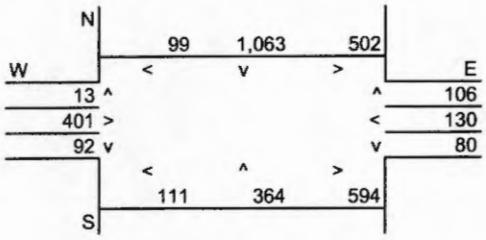
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

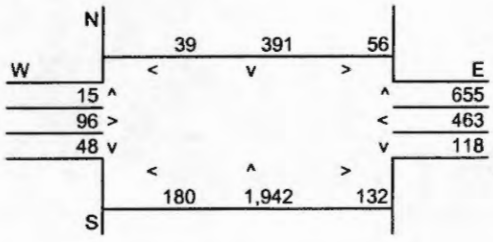
Intersection: Montana Ave./Sepulveda Blvd.
Analysis Condition: Exisiting Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Sepulveda Blvd.	At Grade	4	10	15
East-West Roadway:	Montana Ave.	At Grade	2	10	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,304	N-S Road:	3,098
E-W Road:	1,813	E-W Road:	1,520

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	2,304	14.08	2.27	1.75	1.23
East-West Road	2.7	2.2	1.7	1,813	14.08	0.69	0.56	0.43
P.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	3,098	9.51	2.06	1.59	1.12
East-West Road	2.7	2.2	1.7	1,520	9.51	0.39	0.32	0.25

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	8.2	7.7	5.2
50 Feet from Roadway Edge	7.5	7.1	4.7
100 Feet from Roadway Edge	6.9	6.6	4.3

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

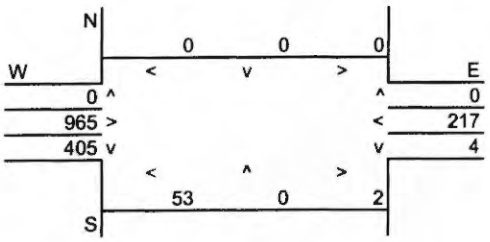
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

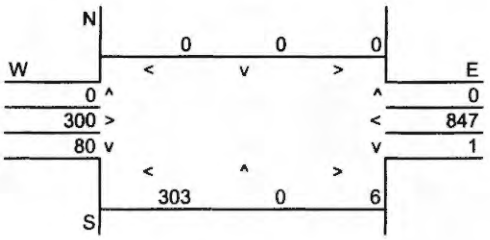
Intersection: Montana Ave./Levering Ave.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Levering Ave.	At Grade	2	10	15
East-West Roadway:	Montana Ave.	At Grade	2	10	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	464	N-S Road:	390
E-W Road:	1,640	E-W Road:	1,530

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	464	14.08	0.18	0.14	0.11
East-West Road	7.6	5.7	4.0	1,640	14.08	1.75	1.32	0.92
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	390	9.51	0.10	0.08	0.06
East-West Road	7.6	5.7	4.0	1,530	9.51	1.11	0.83	0.58

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	7.1	6.4	4.5
50 Feet from Roadway Edge	6.7	6.1	4.1
100 Feet from Roadway Edge	6.2	5.8	3.8

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

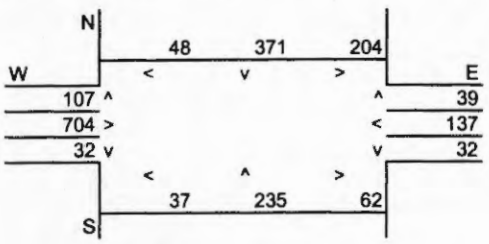
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

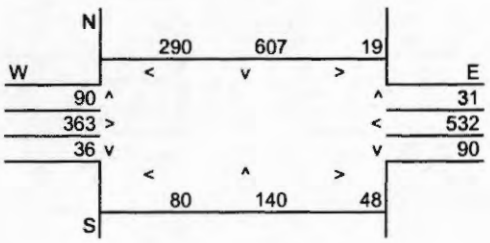
Intersection: Montana Ave./ Gayley Ave. - Veteran Ave.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Gayley Ave. - Veteran Ave.	At Grade	4	15	10
East-West Roadway:	Montana Ave.	At Grade	2	15	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,004	N-S Road:	1,177
E-W Road:	1,178	E-W Road:	1,391

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	1,004	9.51	0.25	0.21	0.16
East-West Road	7.6	5.7	4.0	1,178	9.51	0.85	0.64	0.45
P.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	1,177	14.08	0.43	0.36	0.28
East-West Road	7.6	5.7	4.0	1,391	14.08	1.49	1.12	0.78

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	6.3	7.1	4.4
50 Feet from Roadway Edge	6.0	6.7	4.1
100 Feet from Roadway Edge	5.8	6.3	3.8

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

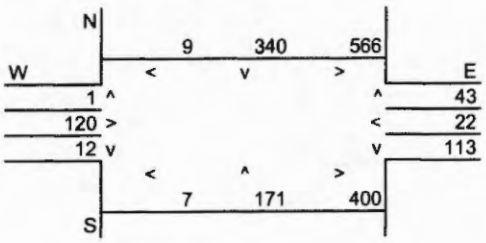
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

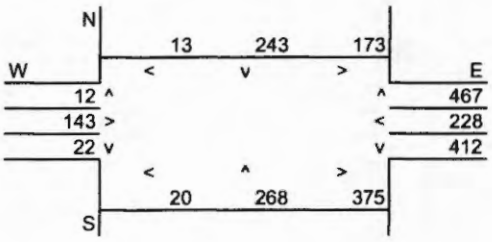
Intersection: Strathmore Pl./Gayley Ave.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Gayley Ave.	At Grade	4	20	20
East-West Roadway:	Strathmore Pl.	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,130	N-S Road:	1,340
E-W Road:	1,264	E-W Road:	1,798

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	1,130	7.21	0.21	0.18	0.14
East-West Road	7.6	5.7	4.0	1,264	7.21	0.69	0.52	0.36
P.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	1,340	7.21	0.25	0.21	0.16
East-West Road	7.6	5.7	4.0	1,798	7.21	0.99	0.74	0.52

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	6.1	6.4	4.0
50 Feet from Roadway Edge	5.9	6.2	3.8
100 Feet from Roadway Edge	5.7	5.9	3.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

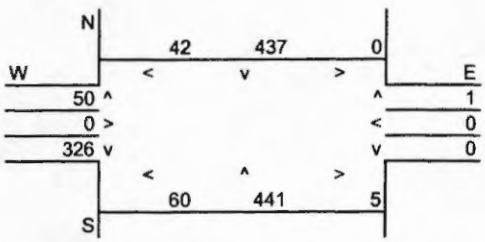
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

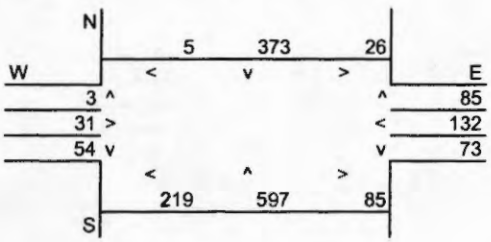
Intersection: Levering Ave./Veteran Ave.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Veteran Ave.	At Grade	2	20	20
East-West Roadway:	Levering Ave.	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,269	N-S Road:	1,401
E-W Road:	478	E-W Road:	444

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	7.6	5.7	4.0	1,269	7.21	0.70	0.52	0.37
East-West Road	2.7	2.2	1.7	478	7.21	0.09	0.08	0.06
P.M. Peak Traffic Hour								
North-South Road	7.6	5.7	4.0	1,401	7.21	0.77	0.58	0.40
East-West Road	2.7	2.2	1.7	444	7.21	0.09	0.07	0.05

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	6.0	6.1	3.7
50 Feet from Roadway Edge	5.8	5.8	3.6
100 Feet from Roadway Edge	5.6	5.7	3.4

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

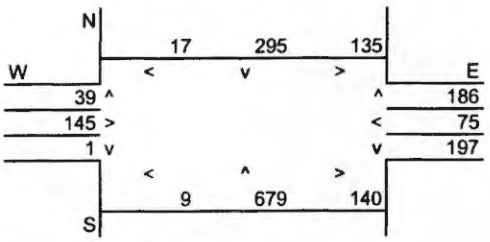
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

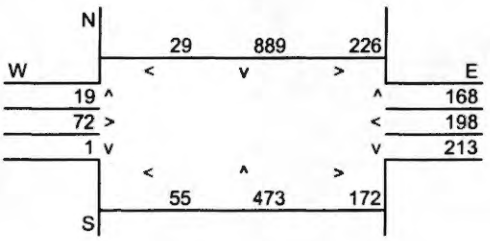
Intersection: Le Conte Ave./Gayley Ave
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Gayley Ave.	At Grade	4	20	20
East-West Roadway:	Le Conte Ave.	At Grade	4	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,351	N-S Road:	1,804
E-W Road:	878	E-W Road:	1,049

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	1,351	7.21	0.68	0.53	0.37
East-West Road	2.6	2.2	1.7	878	7.21	0.16	0.14	0.11
P.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	1,804	7.21	0.91	0.70	0.49
East-West Road	2.6	2.2	1.7	1,049	7.21	0.20	0.17	0.13

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	6.0	6.3	3.9
50 Feet from Roadway Edge	5.9	6.1	3.7
100 Feet from Roadway Edge	5.7	5.8	3.5

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

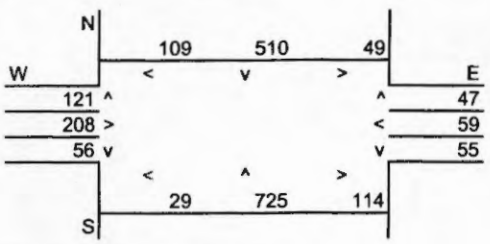
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

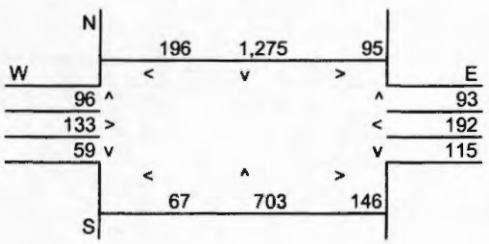
Intersection: Weyburn Ave./Gayley Ave.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Gayley Ave.	At Grade	4	20	20
East-West Roadway:	Weyburn Ave.	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,561	N-S Road:	2,458
E-W Road:	582	E-W Road:	774

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	1,561	7.21	0.79	0.61	0.43
East-West Road	2.7	2.2	1.7	582	7.21	0.11	0.09	0.07
P.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	2,458	7.21	1.24	0.96	0.67
East-West Road	2.7	2.2	1.7	774	7.21	0.15	0.12	0.09

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	6.1	6.6	4.1
50 Feet from Roadway Edge	5.9	6.3	3.9
100 Feet from Roadway Edge	5.7	6.0	3.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

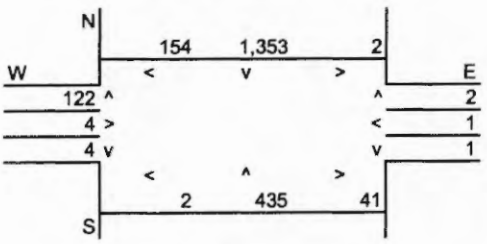
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

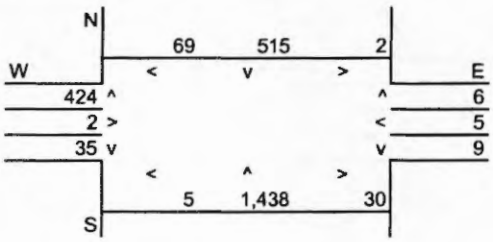
Intersection: Constitution Ave./Sepulveda Blvd.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Sepulveda Blvd.	At Grade	4	20	20
East-West Roadway:	Constitution Ave.	At Grade	2	20	20

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,068	N-S Road:	2,454
E-W Road:	287	E-W Road:	540

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	2,068	7.21	1.04	0.81	0.57
East-West Road	2.7	2.2	1.7	287	7.21	0.06	0.05	0.04
P.M. Peak Traffic Hour								
North-South Road	7.0	5.4	3.8	2,454	7.21	1.24	0.96	0.67
East-West Road	2.7	2.2	1.7	540	7.21	0.11	0.09	0.07

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	6.3	6.5	4.0
50 Feet from Roadway Edge	6.1	6.2	3.8
100 Feet from Roadway Edge	5.8	5.9	3.6

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

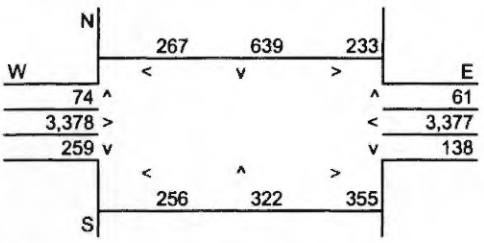
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

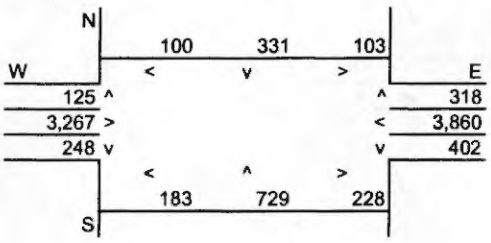
Intersection: Wilshire Blvd./Sepulveda Blvd.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Sepulveda Blvd.	At Grade	4	10	10
East-West Roadway:	Wilshire Blvd.	At Grade	8	10	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,969	N-S Road:	2,121
E-W Road:	7,611	E-W Road:	8,178

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	1,969	14.08	0.72	0.61	0.47
East-West Road	5.7	4.6	3.4	7,611	14.08	6.11	4.93	3.64
P.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	2,121	14.08	0.78	0.66	0.51
East-West Road	5.7	4.6	3.4	8,178	14.08	6.56	5.30	3.91

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	12.0	12.5	8.2
50 Feet from Roadway Edge	10.7	11.2	7.3
100 Feet from Roadway Edge	9.3	9.6	6.2

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

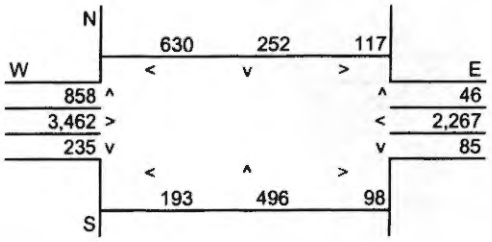
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

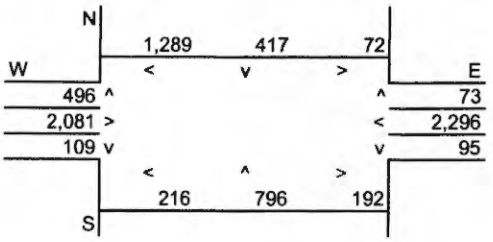
Intersection: Wilshire Blvd./Veteran Ave.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Veteran Ave.	At Grade	2	15	10
East-West Roadway:	Wilshire Blvd.	At Grade	8	15	10

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	2,399	N-S Road:	3,143
E-W Road:	7,645	E-W Road:	6,487

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 50 Feet	A_3 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	50 Feet	100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	2,399	9.51	0.62	0.50	0.39
East-West Road	5.7	4.6	3.4	7,645	9.51	4.14	3.34	2.47
P.M. Peak Traffic Hour								
North-South Road	2.7	2.2	1.7	3,143	14.08	1.19	0.97	0.75
East-West Road	5.7	4.6	3.4	6,487	14.08	5.21	4.20	3.11

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	10.0	11.6	7.6
50 Feet from Roadway Edge	9.0	10.4	6.7
100 Feet from Roadway Edge	8.1	9.1	5.8

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

SIMPLIFIED CALINE4 CARBON MONOXIDE ANALYSIS

Project Number: 10328-08
Project Title: UCLA Northwest Housing Infill Project

Background Information

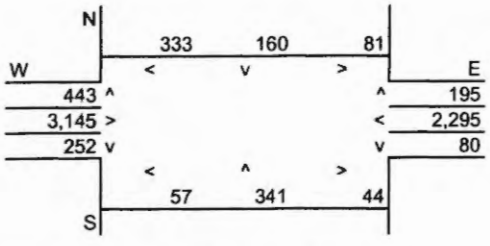
Nearest Air Monitoring Station measuring CO:	Northwest Coastal LA County
Background 1-hour CO Concentration (ppm):	5.2
Background 8-hour CO Concentration (ppm):	3.1
Persistence Factor:	0.7
Analysis Year:	2005

Roadway Data

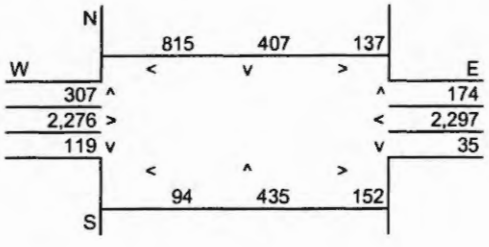
Intersection: Wilshire Blvd./Gayley Ave.
Analysis Condition: Future Plus Project Traffic Volume (Regular Session)

		Roadway Type	No. of Lanes	Average Speed A.M.	Average Speed P.M.
North-South Roadway:	Gayley Ave.	At Grade	4	20	15
East-West Roadway:	Wilshire Blvd.	At Grade	8	20	15

A.M. Peak Hour Traffic Volumes



P.M. Peak Hour Traffic Volumes



Highest Traffic Volumes (Vehicles per Hour)

N-S Road:	1,553	N-S Road:	2,275
E-W Road:	6,525	E-W Road:	5,908

Roadway CO Contributions and Concentrations

Emissions = (A x B x C) / 100,000[1]

Roadway	A_1 Reference CO Concentrations 25 Feet	A_2 Reference CO Concentrations 50 Feet	A_3 Reference CO Concentrations 100 Feet	B Traffic Volume	C Emission Factors[1]	Estimated CO Concentrations 25 Feet	Estimated CO Concentrations 50 Feet	Estimated CO Concentrations 100 Feet
A.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	1,553	7.21	0.29	0.25	0.19
East-West Road	5.7	4.6	3.4	6,525	7.21	2.68	2.16	1.60
P.M. Peak Traffic Hour								
North-South Road	2.6	2.2	1.7	2,275	9.51	0.56	0.48	0.37
East-West Road	5.7	4.6	3.4	5,908	9.51	3.20	2.58	1.91

[1] Methodology and emission factors from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Total Roadway CO Concentrations

Peak Hour Emissions = North-South Concentration + East-West Concentration + Background 1-hour Concentration[2]
8-Hour Emissions = ((Highest Peak Hour Concentration - Background 1-hour Concentration) x Persistence Factor) + Background 8-hour Concentration[2]

	A.M. Peak Hour	P.M. Peak Hour	8-Hour
25 Feet from Roadway Edge	8.2	9.0	5.7
50 Feet from Roadway Edge	7.6	8.3	5.2
100 Feet from Roadway Edge	7.0	7.5	4.7

[2] Methodology from Bay Area Air Quality Management District *BAAQMD CEQA Guidelines* (1996).

Appendix 2 Floral and Faunal Lists

Table A2-1 Plant Species Observed within the NHIP Sites	
Scientific Name	*Common Name*
Hedrick Hall North	
CUPRESSACEAE	
Juniperus sp.	Juniper
PINACEAE	
Pinus canariensis	Canary Island pine
Pinus halepensis	Aleppo pine
POACEAE	
Avena sp.	Wild oats
Bromus sp.	Brome grass
Festuca sp.	Fescue
Poa sp.	Bluegrass
APOCYNACEAE	
Nerium oleander	Oleander
ARALIACEAE	
Hedera canariensis	Algerian ivy
Hedera helix	English ivy
ASTERACEAE	
Osteospermum fruticosum	Trailing African daisy
FAGACEAE	
Quercus sp.	Live oak
MYRTACEAE	
Callistemon sp.	Bottlebrush
Eucalyptus spp.	Eucalyptus
PLATANACEAE	
Platanus racemosa	California sycamore
ROSACEAE	
Cotoneaster lacteus	Cotoneaster
Heteromeles arbutifolia	Toyon
ULMACEAE	
Ulmus parviflora	Chinese elm
VERBENACEAE	
Lantana camara	Lantana
Rieber Hall North and West	
AMARYLLIDACEAE	
Agapanthus orientalis	Lily-of-the-Nile
ARACEAE	
Philodendron bipinnatifidum	Philodendron
CUPRESSACEAE	
Juniperus sp.	Juniper
DICKSONIACEAE	
Dicksonia antarctica	Tasmanian tree fern
LILIACEAE	
Hemerocallis sp.	Day lily
PINACEAE	
Pinus canariensis	Canary Island pine
Pinus halepensis	Aleppo pine

Table A2-1 Plant Species Observed within the NHIP Sites	
Scientific Name	**Common Name**
POACEAE	
Festuca sp.	Fescue
Poa sp.	Bluegrass
PODOCARPACEAE	
Podocarpus sp.	Podocarpus
APOCYNACEAE	
Trachelospermum jasminoides	Star jasmine
Vinca major	Periwinkle
ARALIACEAE	
Hedera canariensis	Algerian ivy
Hedera helix	English ivy
ASTERACEAE	
Taraxacum officinale	Dandelion
BEGONIACEAE	
Begonia sp.	Begonia
BERBERIDACEAE	
Nandina domestica	Heavenly bamboo
FABACEAE	
Albizia julibrissin	Silk tree
Trifolium sp.	Clover
MAGNOLIACEAE	
Magnolia soulangiana	Saucer magnolia
MENISPERMACEAE	
Cocculus laurifolius	Cocculus
MORACEAE	
Ficus rubiginosa	Rusty-leaf fig
Ficus sp.	Ficus
MYRTACEAE	
Callistemon sp.	Bottlebrush
Eucalyptus spp.	Eucalyptus
PITTOSPORACEAE	
Pittosporum tobira	Tobira
PLATANACEAE	
Platanus racemosa	California sycamore
ROSACEAE	
Cotoneaster lacteus	Cotoneaster
Prunus caroliniana	Carolina laurel cherry
Rhaphiolepis indica	India hawthorn
ULMACEAE	
Ulmus parviflora	Chinese elm
VERBENACEAE	
Lantana camara	Lantana

Table A2-1 Plant Species Observed within the NHIP Sites	
Scientific Name	*Common Name*
Dykstra Parking Structure	
ARECAEAE	
Washingtonia filifera	California fan palm
PINACEAE	
Cedrus deodara	Deodar cedar
Pinus canariensis	Canary Island pine
Pinus halepensis	Aleppo pine
POACEAE	
Avena sp.	Wild oats
Bromus sp.	Brome grass
Festuca sp.	Fescue
Melica imperfecta	Melic
Poa sp.	Bluegrass
AIZOACEAE	
Carpobrotus edulis	Hottentot fig (Iceplant)
APOCYNACEAE	
Vinca major	Periwinkle
ASTERACEAE	
Sonchus oleraceus	Common sow thistle
Taraxacum officinale	Dandelion
BIGNONIACEAE	
Tecomaria capensis	Cape honeysuckle
BRASSICACEAE	
Brassica niger	Black mustard
CAPRIFOLIACEAE	
Lonicera sp.	Honeysuckle
FABACEAE	
Acacia melanoxylon	Acacia
Acacia sp.	Black acacia
Albizia julibrissin	Silk tree
Medicago sp.	Burclover
Trifolium sp.	Clover
FLACOURTIACEAE	
Xylosma congestum	Xylosma
MYRTACEAE	
Eucalyptus spp.	Eucalyptus
Melaleuca sp.	Melaleuca
OLEACEAE	
Ligustrum japonicum var. *texanum*	Wax leaf privet
PITTOSPORACEAE	
Pittosporum tobira	Tobira
ROSACEAE	
Cotoneaster lacteus	Cotoneaster
Heteromeles arbutifolia	Toyon
ULMACEAE	
Ulmus parviflora	Chinese elm
VERBENACEAE	
Lantana camara	Lantana

Table A2-1 Plant Species Observed within the NHIP Sites

Scientific Name	Common Name
Recreation	
PINACEAE	
Pinus canariensis	Canary Island pine
Pinus halepensis	Aleppo pine
POACEAE	
Avena sp.	Wild oats
Bromus sp.	Brome grass
Festuca sp.	Fescue
Poa sp.	Bluegrass
AIZOACEAE	
Carpobrotus edulis	Hottentot fig (Iceplant)
ANACARDIACEAE	
Rhus sp.	Rhus
ASTERACEAE	
Artemesia californica	California sagebrush
Centaurea solstitialis	Yellow star-thistle
Conyza canadensis	Horseweed
BRASSICACEAE	
Brassica niger	Black mustard
FABACEAE	
Astragalus sp.	Milkvetch
GERANIACEAE	
Erodium sp.	Storksbill
MYRTACEAE	
Eucalyptus spp.	Eucalyptus
PLATANACEAE	
Platanus racemosa	California sycamore
SCROPHULARIACEAE	
Verbascum thapsus	Wooly mullein
VERBENACEAE	
Lantana camara	Lantana

Source: EIP field surveys performed 5 March, 2002
The Northwest Campus Development Phase II Supplemental Environmental Impact Report did not address plant species.

Table A2-2 Avian Species Observed at the Proposed Project Sites[1,2]

Scientific Name	Common Name
Hedrick Hall North	
COLUMBIDAE	
Zenaida macroura	Mourning Dove
TROCHILIDAE	
Calypte anna	Anna's Hummingbird
Selasphorus sasin	Allen's Hummingbird
PICIDAE	
Picoides nuttallii	Nuttall's Woodpecker
PARIDAE	
Parus inornatus	Oak Titmouse
TYRANNIDAE	
Sayornis nigricans	Black Phoebe
CORVIDAE	
Aphelocoma coerulescens	Western Scrub Jay
Corvus brachyrhynchos	American Crow
AEGITHALIDAE	
Psaltriparus minimus	Bushtit
MUSCICAPIDAE	
Regulus calendula	Ruby-crowned Kinglet
Catharus guttatus	Hermit Thrush
TURDIDAE	
Turdus migratorius	American Robin
Pipilo crissalis	California Towhee
Pipilo erythropthalmus	Spotted Towhee
MIMIDAE	
Mimus polyglottos	Northern Mockingbird
BOMBYCILLIDAE	
Bombycilla cedrorum	Cedar Waxwing
PARULADAE	
Dendroica townsendi	Townsend's Warbler
Rieber Hall North	
COLUMBIDAE	
Columba livia *	Rock Dove (Common Pigeon)
Zenaida macroura	Mourning Dove
TROCHILIDAE	
Calypte anna	Anna's Hummingbird
AEGITHALIDAE	
Psaltriparus minimus	Bushtit
MUSCICAPIDAE	
Regulus calendula	Ruby-crowned Kinglet
TURDIDAE	
Turdus migratorius	American Robin

Table A2-2 Avian Species Observed at the Proposed Project Sites [1, 2]	
Scientific Name	*Common Name*
PARULADAE	
Dendroica coronata	Yellow-rumped Warbler
Rieber Hall West	
COLUMBIDAE	
Columba livia *	Rock Dove (Common Pigeon)
Zenaida macroura	Mourning Dove
TROCHILIDAE	
Calypte anna	Anna's Hummingbird
AEGITHALIDAE	
Psaltriparus minimus	Bushtit
TURDIDAE	
Pipilo crissalis	California Towhee
PARULADAE	
Dendroica coronata	Yellow-rumped Warbler
FRINGILLIDAE	
Carpodacus mexicanus	House Finch
Carduelis psaltria	Lesser Goldfinch
Dykstra Parking Structure	
COLUMBIDAE	
Zenaida macroura	Mourning Dove
TROCHILIDAE	
Calypte anna	Anna's Hummingbird
TYRANNIDAE	
Sayornis nigricans	Black Phoebe
CORVIDAE	
Corvus brachyrhynchos	American Crow
AEGITHALIDAE	
Psaltriparus minimus	Bushtit
MIMIDAE	
Mimus polyglottos	Northern Mockingbird
PARULADAE	
Dendroica coronata	Yellow-rumped Warbler
FRINGILLIDAE	
Carpodacus mexicanus	House Finch
Recreation	
COLUMBIDAE	
Zenaida macroura	Mourning Dove
TROCHILIDAE	
Calypte anna	Anna's Hummingbird

Table A2-2 Avian Species Observed at the Proposed Project Sites[1, 2]

Scientific Name	Common Name
CORVIDAE	
Aphelocoma coerulescens	Western Scrub Jay
Corvus brachyrhynchos	American Crow
AEGITHALIDAE	
Psaltriparus minimus	Bushtit
TURDIDAE	
Pipilo crissalis	California Towhee
MIMIDAE	
Mimus polyglottos	Northern Mockingbird
BOMBYCILLIDAE	
Bombycilla cedrorum	Cedar Waxwing
PARULADAE	
Dendroica coronata	Yellow-rumped Warbler
FRINGILLIDAE	
Carpodacus mexicanus	House Finch
Carduelis psaltria	Lesser Goldfinch
Junco hyemalis	Dark-eyed Junco

1. Taxonomy and nomenclature follows American Ornithologists' Union (1983) and supplements for birds, and Laundenslayer *et al.* (1991) for amphibians, reptiles and mammals.
2. This is not intended to be an exhaustive list of all bird species that may occur at one time or another on the project sites during their migration; rather, it includes only those species that are most commonly observed in residential areas of coastal Los Angeles County.

* Non-native species

Source: EIP field surveys performed 5 March, 2002

Appendix 3 Noise Model Output

ON-SITE TRAFFIC NOISE LEVELS AND NOISE CONTOURS

Project Number: 10328-08
Project Name: UCLA Northwest Housing Infill Project

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Source of Traffic Volumes: Crain & Associates
Community Noise Descriptor: L_{dn}: _____ CNEL: X

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition Roadway Name Roadway Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Alpha Factor	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Distance from Centerline of Roadway: CNEL at 75 Feet	Distance to Contour: 70 CNEL	65 CNEL	60 CNEL
Future Plus Project Traffic Volumes (Regular Session)											
Sunset Blvd.											
Veteran Ave. to Bellagio Rd.	4	14	38,680	35	0.5	2.0%	2.0%	68.2	57	123	265
Gayley Ave.											
Strathmore Pl. to Veteran Av	2	0	11,760	30	0.5	2.0%	2.0%	62.3	23	49	106
Veteran Ave.											
Sunset Blvd. to Gayley Ave.	2	0	12,160	35	0.5	2.0%	2.0%	62.8	25	54	116
Strathmore Pl.											
east of Gayley Ave.	4	0	17,980	25	0.5	2.0%	2.0%	63.0	26	56	120
Bellagio Rd.											
south of Sunset Blvd.	2	0	5,960	25	0.5	2.0%	2.0%	58.1	12	26	56
Future Plus Project Traffic Volumes (Summer Session)											
Sunset Blvd.											
Veteran Ave. to Bellagio Rd.	4	14	39,290	35	0.5	2.0%	2.0%	68.3	58	124	268
Gayley Ave.											
Strathmore Pl. to Veteran Av	2	0	13,430	30	0.5	2.0%	2.0%	62.8	25	54	116
Veteran Ave.											
Sunset Blvd. to Gayley Ave.	2	0	13,470	35	0.5	2.0%	2.0%	63.3	27	58	124
Strathmore Pl.											
east of Gayley Ave.	4	0	13,920	25	0.5	2.0%	2.0%	61.9	-	47	101
Bellagio Rd.											
south of Sunset Blvd.	2	0	5,490	25	0.5	2.0%	2.0%	57.7	-	25	53

[1] Distance is from the centerline of the roadway segment to the receptor location.
"-" = contour is located within the roadway lanes.

OFF-SITE TRAFFIC NOISE LEVELS

Project Number: 10328-08
Project Name: UCLA Northwest Housing Infill Project

Background Information

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Analysis Scenario(s): Existing and Future Traffic Volumes
Source of Traffic Volumes: Crain & Associates
Community Noise Descriptor: L_{eq}: _____ CNEL: X

Assumed 24-Hour Traffic Distribution:	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium-Duty Trucks	87.43%	5.05%	7.52%
Heavy-Duty Trucks	89.10%	2.84%	8.06%

Analysis Condition / Roadway Name / Roadway Segment	Land Use	Lanes	Median Width	Peak Hour Volume	ADT Volume	Design Speed (mph)	Dist. from Center to Receptor[1]	Alpha Factor	Barrier Attn. dB(A)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	Peak Hour dB(A) L_{eq}	24-Hour dB(A) CNEL
Future Plus Project Traffic Volumes (Regular Session)													
Sunset Boulevard													
west of Church St.	Single Family	4	14	4,464	44,640	35	100	0.5	0	2.0%	2.0%	68.7	66.8
Church St. to Sepulveda Blvd.	Single Family	4	14	3,884	38,840	35	100	0.5	0	2.0%	2.0%	68.1	66.2
Sepulveda Blvd. to Veteran Ave.	Single Family	4	14	3,594	35,940	35	100	0.5	0	2.0%	2.0%	67.8	65.9
Veteran Ave. to Bellagio Rd.	Single Family	4	14	3,868	38,680	35	100	0.5	0	2.0%	2.0%	68.1	66.2
Gayley Avenue													
Weyburn Ave. to Le Conte Ave.	Multi-Family	2	14	1,809	18,090	35	75	0	0	2.0%	2.0%	67.4	65.5
Le Conte Ave. to Strathmore Pl.	Multi-Family	2	0	1,804	18,040	30	50	0	0	2.0%	2.0%	68.4	66.8
Strathmore Pl. to Veteran Ave.	Multi-Family	2	0	1,176	11,760	30	50	0	0	2.0%	2.0%	66.6	64.9
Strathmore Pl.													
west of Gayley Ave.	Multi-Family	2	0	438	4,380	30	45	0	0	2.0%	2.0%	62.8	61.1
Levering Avenue													
Montana Ave. to Veteran Ave.	Multi-Family	2	0	444	4,440	30	75	0	0	2.0%	2.0%	60.6	58.9
Veteran Ave. to Le Conte Ave.	Multi-Family	2	0	432	4,320	30	75	0	0	2.0%	2.0%	60.5	58.8
Le Conte Ave. to Weyburn Ave.	Multi-Family	2	0	2,458	24,580	30	75	0	0	2.0%	2.0%	68.0	66.4
Veteran Avenue													
Sunset Blvd. to Gayley Ave.	Single and Multi-Family	2	0	1,216	12,160	35	75	0.5	0	2.0%	2.0%	64.8	62.8
Gayley Ave. to Levering Ave.	Multi-Family	2	0	1,089	10,890	35	75	0.5	0	2.0%	2.0%	64.3	62.4
Levering Ave. to Wilshire Blvd.	Multi-Family	4	0	3,143	31,430	35	200	0.5	0	2.0%	2.0%	62.5	60.6
Montana Avenue													
Veteran Ave. to Levering Ave.	Multi-Family	2	0	1,391	13,910	35	75	0.5	0	2.0%	2.0%	65.3	63.4
Levering Ave. to Sepulveda Ave.	Single Family	2	0	1,570	15,700	30	50	0.5	0	2.0%	2.0%	67.8	66.2
west of Sepulveda Blvd	Single Family	2	0	841	8,410	35	75	0	0	2.0%	2.0%	64.1	62.1
Sepulveda Boulevard													
Ovada Pl. to Sunset Blvd	Single Family	6	0	3,815	38,150	40	50	0.5	0	2.0%	2.0%	75.0	73.0
Sunset Blvd. to Montana Ave.	Mulit-Family	4	0	3,098	30,980	40	200	0.5	0	2.0%	2.0%	63.7	61.6
Bellagio Road													
Chalon Rd. to Sunset Blvd.	Single Family	2	0	766	7,660	25	50	0.5	0	2.0%	2.0%	63.3	61.8
Future Plus Project Traffic Volumes (Summer Session)													
Sunset Boulevard													
west of Church St.	Single Family	4	14	5,143	51,430	35	100	0.5	0	2.0%	2.0%	69.3	67.4
Church St. to Sepulveda Blvd.	Single Family	4	14	4,120	41,200	35	100	0.5	0	2.0%	2.0%	68.4	66.4
Sepulveda Blvd. to Veteran Ave.	Single Family	4	14	3,698	36,980	35	100	0.5	0	2.0%	2.0%	67.9	66.0
Veteran Ave. to Bellagio Rd.	Single Family	4	14	3,929	39,290	35	100	0.5	0	2.0%	2.0%	68.2	66.2
Gayley Avenue													
Weyburn Ave. to Le Conte Ave.	Multi-Family	2	14	1,831	18,310	35	75	0	0	2.0%	2.0%	67.5	65.6
Le Conte Ave. to Strathmore Pl.	Multi-Family	2	0	1,807	18,070	30	50	0	0	2.0%	2.0%	68.4	66.8
Strathmore Pl. to Veteran Ave.	Multi-Family	2	0	1,343	13,430	30	50	0	0	2.0%	2.0%	67.2	65.5
Strathmore Pl.													
west of Gayley Ave.	Multi-Family	2	0	290	2,900	30	45	0	0	2.0%	2.0%	61.0	59.3
Levering Avenue													
Montana Ave. to Veteran Ave.	Multi-Family	2	0	434	4,340	30	75	0	0	2.0%	2.0%	60.5	58.8
Veteran Ave. to Le Conte Ave.	Multi-Family	2	0	403	4,030	30	75	0	0	2.0%	2.0%	60.2	58.5
Le Conte Ave. to Weyburn Ave.	Multi-Family	2	0	2,846	28,460	30	75	0	0	2.0%	2.0%	68.6	67.0
Veteran Avenue													
Sunset Blvd. to Gayley Ave.	Single and Multi-Family	2	0	1,347	13,470	35	75	0.5	0	2.0%	2.0%	65.2	63.3
Gayley Ave. to Levering Ave.	Multi-Family	2	0	1,219	12,190	35	75	0.5	0	2.0%	2.0%	64.8	62.8
Levering Ave. to Wilshire Blvd.	Multi-Family	4	0	5,022	50,220	35	200	0.5	0	2.0%	2.0%	64.5	62.6
Montana Avenue													
Veteran Ave. to Levering Ave.	Multi-Family	2	0	1,169	11,690	30	50	0.5	0	2.0%	2.0%	66.5	64.9
Levering Ave. to Sepulveda Ave.	Single Family	2	0	1,539	15,390	35	75	0.5	0	2.0%	2.0%	65.8	63.9
west of Sepulveda Blvd.	Single Family	2	0	820	8,200	35	75	0	0	2.0%	2.0%	63.9	62.0
Sepulveda Boulevard													
Ovada Pl. to Sunset Blvd	Single Family	6	0	4,087	40,870	40	50	0.5	0	2.0%	2.0%	75.3	73.3
Sunset Blvd. to Montana Ave.	Mulit-Family	4	0	3,288	32,880	40	200	0.5	0	2.0%	2.0%	63.9	61.9
Bellagio Road													
Chalon Rd. to Sunset Blvd.	Single Family	2	0	907	9,070	25	50	0.5	0	2.0%	2.0%	64.0	62.6

[1] Distance is from the centerline of the roadway segment to the receptor location.

Appendix 4 Traffic Technical Report

UCLA NORTHWEST CAMPUS

HOUSING INFILL PROJECT TRAFFIC ANALYSIS

Prepared for:

UNIVERSITY OF CALIFORNIA, LOS ANGELES

Prepared by:

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October, 2002

EXECUTIVE SUMMARY

The University of California, Los Angeles (UCLA) proposes to update the campus Long Range Development Plan (LRDP) to address the program and space implications of a proposed increase in student enrollment in both regular session and summer enrollment (through the academic year 2010/2011). The proposed 2002 LRDP would reallocate the development capacity remaining in the current LRDP (of approximately 1.7 million gross square feet) among the eight campus land use zones to accommodate space needs (associated with current programs and anticipated enrollment growth), The UCLA 2002 LRDP includes the construction of additional on-campus student housing as part of the Northwest Campus Housing Infill Project. This report is a project-level analysis for the proposed Northwest Campus Housing Infill Project element of the 2002 LRDP.

To assess the potential traffic impacts of the Northwest Campus Housing Infill Project, this study provides an evaluation of existing and future traffic conditions at 18 study intersections and seven freeway segments on the San Diego (I-405) and Santa Monica (I-10) Freeways. Future traffic conditions were modeled to account for projected regional growth, anticipated highway and street improvements, traffic associated with previously-approved projects, implementation of previously-adopted mitigation measures, and continued implementation of the campus Transportation Demand Management programs.

The net effect of the Northwest Campus Housing Infill Project would be an increase of approximately 211* faculty/staff during the regular and summer session, the conversion of approximately 1,675 undergraduate commuter students to resident students during

* Approximately 35 students would also be employed at the project.

the regular session and the addition of approximately 318 conference attendees during the summer session.

The increase in trip generation associated with implementation of the Northwest Campus Housing Infill Project would increase traffic volumes on the local street network and the adjacent freeways. As this analysis indicates, the project would have significant impacts at four study intersections during the summer session. Two of these intersections can be mitigated to less than significant traffic impacts during the summer. Traffic impacts on study intersections during the regular session would be less than significant. In addition, impacts from the project on the seven study segments of the San Diego and Santa Monica Freeways would be less than significant, during both regular and summer session.

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INTRODUCTION

In response to State projections, University of California, Los Angeles (UCLA) is considering the program and space implications of an enrollment increase of approximately 4,000 (full time equivalent) students by the year 2010/2011. Because this increase would exceed the enrollment projections in the 1990 Long Range Development Plan (1990 LRDP), UCLA proposes to update the existing LRDP and prepare an Environmental Impact Report (EIR), as required by Section 21080.09 of the California Environmental Quality Act (CEQA).

The UCLA 2002 LRDP proposes to accommodate anticipated program growth associated with increased enrollment within the remaining development capacity in the 1990 LRDP (of approximately 1.7 million gross square feet) and to maintain the current limits on parking spaces and vehicle trips established in the 1990 LRDP. It is anticipated that the enrollment increase would be accommodated in both the regular session (or academic year) and summer session. As part of the 2002 LRDP, UCLA proposes to construct additional on-campus student housing in the Northwest zone of the campus. This report is a project-level analysis of the potential environmental effects of the proposed Northwest Campus Housing Infill Project.

Crain & Associates was retained to conduct a transportation systems analysis to assess the potential traffic impacts of the Northwest Campus Housing Infill Project. This report details existing conditions, projects future traffic conditions (without implementation of the Northwest Campus Housing Infill Project) and analyzes the potential impacts of implementation of the Northwest Campus Housing Infill Project. This report relies upon information and analysis presented in the UCLA Long Range Development Plan

Transportation Systems Analysis (October, 2002) prepared by Crain & Associates, which is incorporated by reference in entirety.

In addition, this study utilizes impact assessment methodologies that are consistent with previous UCLA studies and City of Los Angeles policies with respect to traffic analyses to provide an accurate assessment of the potential traffic and parking impacts of the Northwest Campus Housing Infill Project.

PROJECT DESCRIPTION

UCLA proposes to update the Long Range Development Plan to meet existing program needs, address the academic, administrative and support space requirements associated with an increase in enrollment and extension of the time horizon, or "build-out" year, of the LRDP from 2005/06 to the 2010/11 academic year. The 2002 LRDP proposes to accommodate future program growth within the remaining development capacity in the 1990 LRDP while maintaining the current limits on parking spaces and vehicle trips established in the 1990 LRDP.

The 1990 LRDP proposed the development of 3.71 million square feet of new development between 1990 and 2005, of which approximately 1.7 million gross square feet of development capacity remains. The 2002 LRDP would reallocate this remaining development capacity among the eight campus land use zones to accommodate anticipated future program needs (associated with current programs and anticipated enrollment growth), in support of the campus mission of instruction, research and public service. Estimated changes in campus population are shown in Table 1.

Table 1(a)

Estimated Changes in Campus Population with 2002 LRDP

Regular Session

Population Group	Current (2001-02)	Future (2010-11) With 2002 LRDP	Change
Headcount *(Three-Quarter Average)*			
Students	34,310	36,445	2,135
Faculty/Staff	20,045	21,940	1,895
Average Weekday Population			
Students	28,306	30,067	1,761
Faculty/Staff	17,774	19,439	1,665
Other Individuals	10,558	12,035	1,446
Total	56,668	61,541	4,873

Source: UCLA Capital Programs, April 2002

Table 1(b)

Estimated Changes in Campus Population with 2002 LRDP

Summer Session

Population Group	Current (2000)[1]	Future (2010–11) With 2002 LRDP	Change
Headcount *(Summer session Total)*			
Students	10,010	16,560	6,550
Faculty/Staff	17,705	19,746	2,041
Average Weekday Population			
Students	8,979	12,750	3,772
Faculty/Staff	14,706	16,333	1,626
Other Individuals	10,441	12,035	1,594
Total	34,127	41,119	6,992

1. The baseline year for the summer session is the academic year 2000-2001 in order to account for an increase in summer session enrollment that occurred in the summer of 2001 in response to a state-subsidized program designed to increase summer enrollment.

Source: UCLA Capital Programs, April 2002

As part of the LRDP, the campus proposes to develop a new Northwest Campus Housing project. This project would provide housing for approximately 2,000

undergraduate students to accommodate anticipated enrollment growth, respond to the housing commitment goals of the Student Housing Master Plan 2000-2010, and reduce the number of triple-room occupancies. In terms of regular session enrollment, the net effect of the LRDP, in combination with the Northwest Campus Housing Infill Project, would be an increase of 2,135 regular session students, of which approximately 1,675 could reside on campus (as a result of the Northwest Campus Housing Infill Project), and 460 could be new commuter students to campus. The net effect of the Northwest Campus Housing Infill Project would be an increase of approximately 211* faculty/staff during the regular and summer session, the conversion of approximately 1,675 undergraduate commuter students to resident students during the regular session and the addition of approximately 318 conference attendees during the summer session.

In addition, the Northwest Campus Housing Infill Project would include the following: a parking facility south of Dykstra Hall to provide approximately 299 parking spaces (approximately 233 replacement and 66 new spaces); a recreation facility with a 25-meter pool and low-intensity outdoor recreation space on a site between the Hitch and Saxon Residential Suites; and the reconfiguration of the ground floors of three existing nearby residential halls.

* Approximately 35 students would also be employed at the project.

ENVIRONMENTAL SETTING

DESCRIPTION OF HIGHWAY & STREET NETWORK

The site of this study is the northwest portion of the UCLA Campus, which is located within the community of Westwood, in the City of Los Angeles, as shown in Figure 1, Site Vicinity Map. The land uses in the Westwood area are a mixture of retail, residential, restaurant, educational, cultural and commercial office uses. Access to and from the area is provided by a well-developed surface street network and by the nearby San Diego (Interstate 405) Freeway and the Santa Monica (Interstate 10) Freeway. A substantial portion of the surface street traffic in the area is "through" traffic, with origins or destinations in the areas of Westwood, Century City, Beverly Hills and/or Santa Monica. The surface streets and freeways in the project area are described below.

Freeways

One of the most important traffic-carrying facilities in the project area is the San Diego Freeway (I-405). This freeway provides regional access throughout and beyond the western portion of Los Angeles County. In the vicinity of the campus, I-405 is a north/south freeway that provides five mixed-flow lanes in each direction. A southbound high-occupancy vehicle (HOV) lane was recently installed (in the Sepulveda pass) north of the campus and a northbound HOV lane has been approved for construction. To the north, the San Diego Freeway merges with the Golden State Freeway (I-5) at Mission Hills. To the south, I-405 passes through Orange County to the City of Irvine where it merges with I-5; the I-5 then extends to San Diego County. The San Diego Freeway also provides direct access to other freeways, including an interchange with the Santa Monica Freeway (I-10) approximately 2.5 miles south of the Campus and

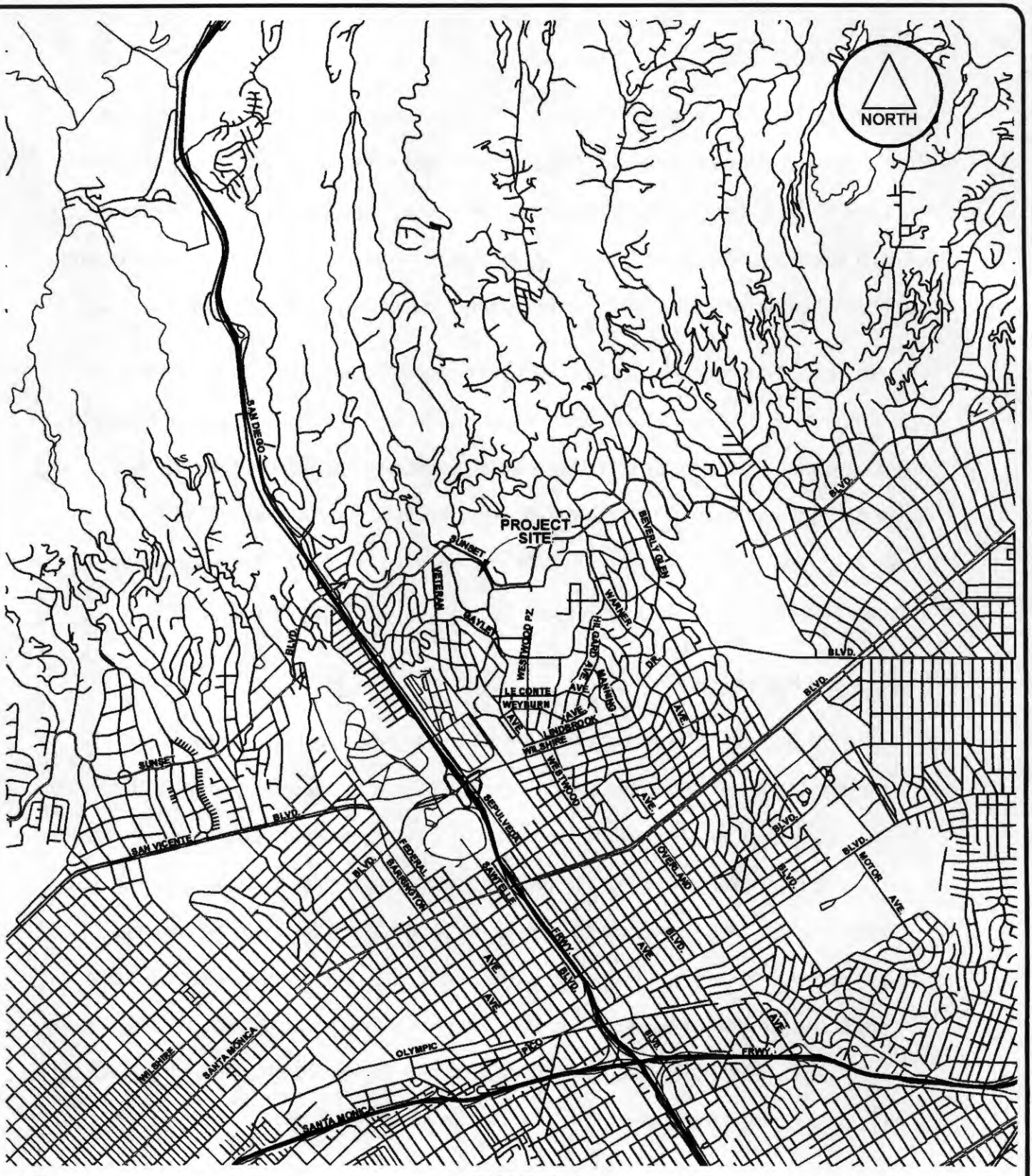

FIGURE 1

FN: UCLA NMH INFILL\SITEVIC

SITE VICINITY MAP

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with the Ventura Freeway (US Highway 101) approximately seven miles northwest of the Campus. Access to and from the surface street network immediately surrounding the project site is provided by northbound and southbound freeway on- and off-ramps located at Wilshire Boulevard, Santa Monica Boulevard and at Sunset Boulevard, and a northbound off-ramp and southbound on-ramp located near Montana Avenue.

The Santa Monica Freeway (I-10) is another important transportation facility located approximately 2.5 miles south of the Campus. This freeway is an east/west facility that provides regional access for Los Angeles County, extending east to San Bernardino and beyond. To the west, I-10 transitions into the Pacific Coast Highway (PCH) in the City of Santa Monica; PCH then extends to the northwest. The Santa Monica Freeway typically provides four through lanes per direction in the vicinity of the Campus.

Streets and Highways

- Wilshire Boulevard begins in Downtown Los Angeles and traverses westerly through the cities of Los Angeles, Beverly Hills and Santa Monica, terminating near the Pacific Ocean. This arterial is among the most prominent streets in the West Los Angeles area, providing direct access to the commercial establishments along this route, as well as serving as a major thoroughfare between Westside and Downtown Los Angeles. Wilshire Boulevard is also one of the highest capacity surface street routes between the San Diego Freeway and the Century City/Beverly Hills areas. At the San Diego Freeway, Wilshire Boulevard provides full access to both the northbound and southbound freeway facilities.

  Wilshire Boulevard is designated as a Major Highway throughout its length. West of Glendon Avenue and east of the San Diego Freeway, Wilshire Boulevard provides four westbound and four eastbound through lanes, with left-turn channelization also

provided (including double left-turn lanes eastbound at many locations). Within this section, Wilshire Boulevard is generally 105 feet wide.

- Sunset Boulevard is an east/west oriented Major Highway throughout the Westside providing a continuous facility from Downtown Los Angeles, through West Hollywood and Beverly Hills, and continuing through Pacific Palisades where it terminates at the Pacific Coast Highway. Sunset Boulevard also provides the northernmost east/west thoroughfare south of the Santa Monica Mountains through the campus vicinity, and is therefore heavily used by both local and commuter traffic. In the study area, Sunset Boulevard is approximately 50 feet wide, and is striped for two lanes in each direction, plus left-turn channelization at major intersections. Parking is prohibited along Sunset Boulevard within the study area.

- Le Conte Avenue is designated as a Secondary Highway through the commercial portions of Westwood Village (between Gayley Avenue and Hilgard Avenue), but is downgraded to a local (residential) street east of Hilgard Avenue. Le Conte Avenue provides a single travel lane in each direction plus left-turn channelization and on-street parking on both sides of the street.

- Gayley Avenue is primarily a north/south-oriented Secondary Highway extending from Veteran Avenue on the north (where it becomes Montana Avenue) to Wilshire Boulevard on the south (where it becomes Midvale Avenue). Gayley Avenue is a primary access route for the UCLA Campus, and is striped to provide one to two travel lanes in each direction. On-street parking is allowed along some portions of Gayley Avenue.

- Strathmore Drive is a local street that serves the residential neighborhood west of the Campus. This roadway also serves through traffic from Veteran Avenue to the

Campus. East of Gayley Avenue, Strathmore Drive enters Campus and changes names to Strathmore Place, which is a two-lane per direction internal Campus roadway.

- Levering Avenue is a short, northwest-to-southeast oriented local street to the west of the project site, beginning at Montana Avenue west of Veteran Avenue, and terminating at Glenrock Avenue west of Gayley Avenue. Although this facility is only approximately one-half mile long, its location and orientation make it enticing as an alternate route to Montana/Gayley Avenue both into and out of Westwood Village. At its intersection with Veteran Avenue, Levering Avenue is 40 feet wide and is striped to provide a single lane in each direction plus on-street parking.

- Veteran Avenue is a north/south oriented Secondary Highway located west of the project site. Between Sunset Boulevard and Wilshire Boulevard, Veteran Avenue generally varies in width from approximately 40 to 60 feet, and is striped to provide a single travel lane in each direction, along with on-street parking on both sides of the street. At Wilshire Boulevard, the roadway flares to approximately 70 feet in width, to provide additional through lanes as well as left and right-turn channelization in both the northbound and southbound directions. Veteran Avenue provides a primary connection between Sunset and Wilshire Boulevards, as well as access to the UCLA campus.

- Montana Avenue is an east/west oriented collector street. In the project vicinity one lane is provided in each direction. A northbound off-ramp from the Interstate 405 is provided to Montana Avenue. On street parking is restricted to permitted vehicles.

- Sepulveda Boulevard is designated as a Major Highway which extends northerly to the vicinity of the I-405 and I-5 interchange and southerly to Manhattan Beach

where it terminates into Pacific Coast Highway. Sepulveda Boulevard provides two through lanes in each direction in the vicinity of UCLA.

- Church Lane is a frontage road located west of the San Diego Freeway. This roadway extends in a southeast-to-northwest direction from Waterford Street to Sunset Boulevard where it continues and crosses the San Diego Freeway and becomes Ovada Place at Sepulveda Boulevard. Church Lane provides two through lanes in the northbound approach and one through lane in the southbound approach at Sunset Boulevard with left-turn and right-turn channelization in both directions. Church Lane also provides access to the I-405 southbound ramps located north of Sunset Boulevard.

- Weyburn Avenue is a short local street that traverses the southern end of the UCLA Southwest campus zone, beginning at Veteran Avenue on the west and continuing east of Hilgard Avenue to Le Conte Avenue. Weyburn Avenue generally provides a single travel lane in each direction along with on-street parking on both sides of the street, although two lanes in each direction with no parking are currently provided across the UCLA Southwest campus zone.

- Bellagio Way is a secondary highway which serves the residential neighborhood northwest of the Campus. This two lane roadway extends to Sunset Boulevard where it crosses into campus and becomes Bellagio Drive. To the north, this road connects via Bellagio Road and Chalon Road to Roscomare Road and Mulholland Drive.

Study Intersections and Freeways

To provide a conservative assessment of the potential traffic and parking impacts of the Northwest Campus Housing Infill Project, this document utilizes traffic impact

assessment methodologies that are consistent with University and City of Los Angeles policies. This analysis incorporates a detailed evaluation of existing and future traffic conditions at 18 study intersections. These study intersections are listed below:

1. Church Lane/Ovada Place and Sepulveda Boulevard
2. San Diego Freeway Southbound On/Off Ramps and Church Lane
3. Sunset Boulevard and Church Lane
4. Sunset Boulevard and San Diego Freeway Northbound On/Off Ramps
5. Sunset Boulevard and Veteran Avenue
6. Sunset Boulevard and Bellagio Way
7. San Diego Freeway Northbound Off Ramp and Sepulveda Boulevard
8. Montana Avenue and Sepulveda Boulevard
9. Montana Avenue and Levering Avenue
10. Montana Avenue/Gayley Avenue and Veteran Avenue
11. Strathmore Place and Gayley Avenue
12. Levering Avenue and Veteran Avenue
13. Le Conte Avenue and Gayley Avenue
14. Weyburn Avenue and Gayley Avenue
15. Constitution Avenue and Sepulveda Boulevard
16. Wilshire Boulevard and Sepulveda Boulevard
17. Wilshire Boulevard and Veteran Avenue
18. Wilshire Boulevard and Gayley Avenue

To be consistent with the UCLA 2002 LRDP Traffic Study, the 18 study intersections are a subset of the study intersections from the 2002 LRDP document. All 18 study intersections are within the area surrounding the project site and are the intersections expected to be most directly affected by the vehicle trips generated by the Northwest Campus Housing Infill Project. Figure 2 shows the location of these intersections.

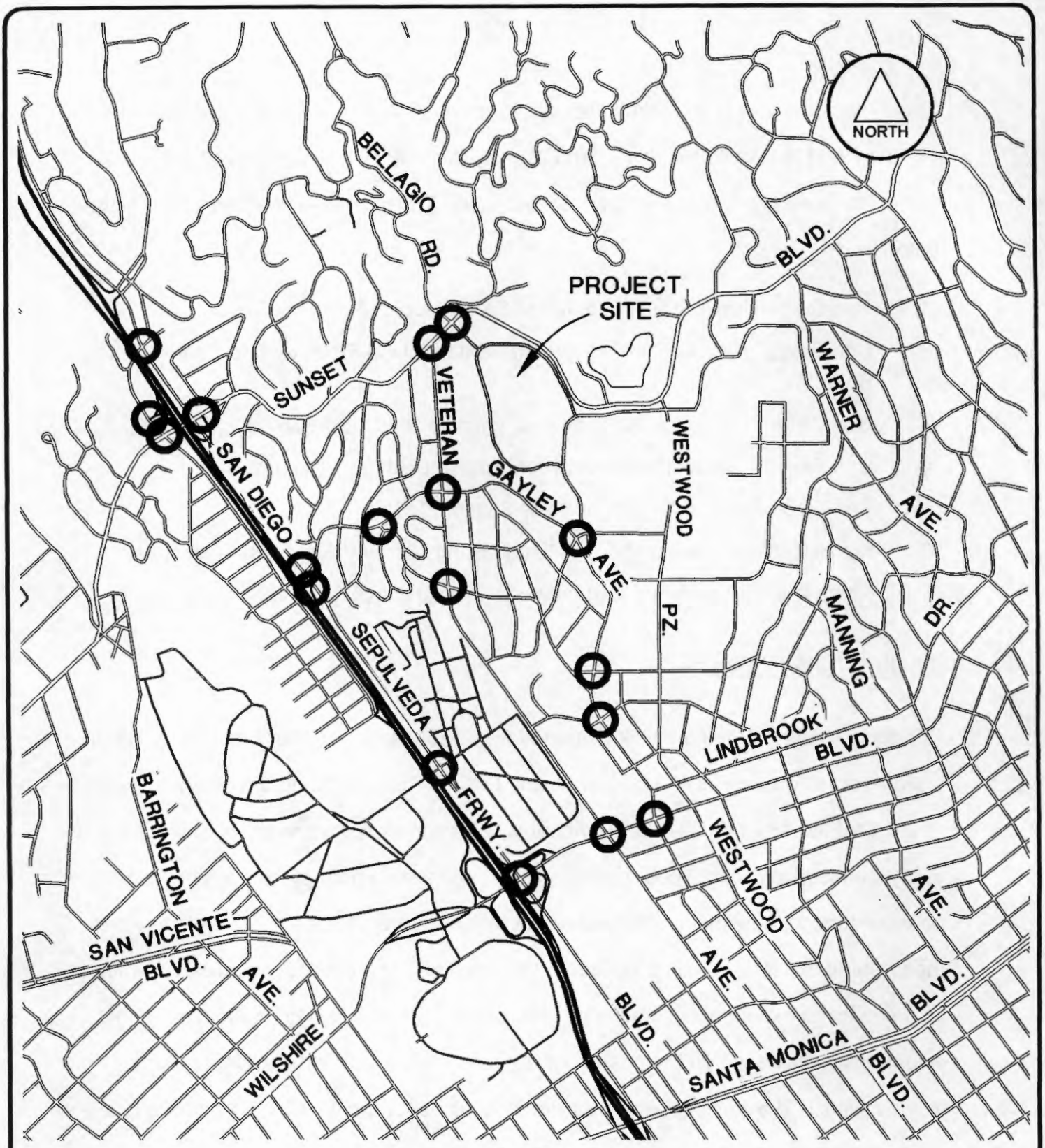

FIGURE 2

FN: UCLA NWH INFILL\STUDY-INTS

STUDY INTERSECTION LOCATIONS

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The impact analysis in this study also incorporates two freeways, the San Diego (I-405) Freeway and the Santa Monica (I-10) Freeway, for which seven freeway segments within the general project vicinity were examined. These freeway segments are listed below:

1. San Diego Freeway (I-405) south of Santa Monica Freeway
2. San Diego Freeway (I-405) between Santa Monica Freeway and Santa Monica Blvd.
3. San Diego Freeway (I-405) between Wilshire Blvd. and Santa Monica Blvd.
4. San Diego Freeway (I-405) between Sunset Blvd. and Wilshire Blvd.
5. San Diego Freeway (I-405) north of Sunset Blvd.
6. Santa Monica Freeway (I-10) between Bundy Dr. and San Diego Freeway
7. Santa Monica Freeway (I-10) between Overland Ave. and National Blvd.

Existing Traffic Volumes

Counts of existing AM and PM peak period traffic conditions were conducted by Wiltec, a professional data collection company, and Crain & Associates during May and August of 2001 for the 18 intersections. The counts were conducted manually at each of the 18 study intersections, where count personnel tracked the number of vehicles making each possible turning movement. The peak-hour traffic volumes for each intersection were then determined for analysis purposes by finding the four highest consecutive 15-minute volumes for all movements combined. This procedure provides the highest existing volumes, as it is based on the peak hour for each intersection independent of other intersections. The existing peak hour traffic volumes for the 18 study intersections are shown in Figure 3 for the regular session and in Figure 4 for summer session.

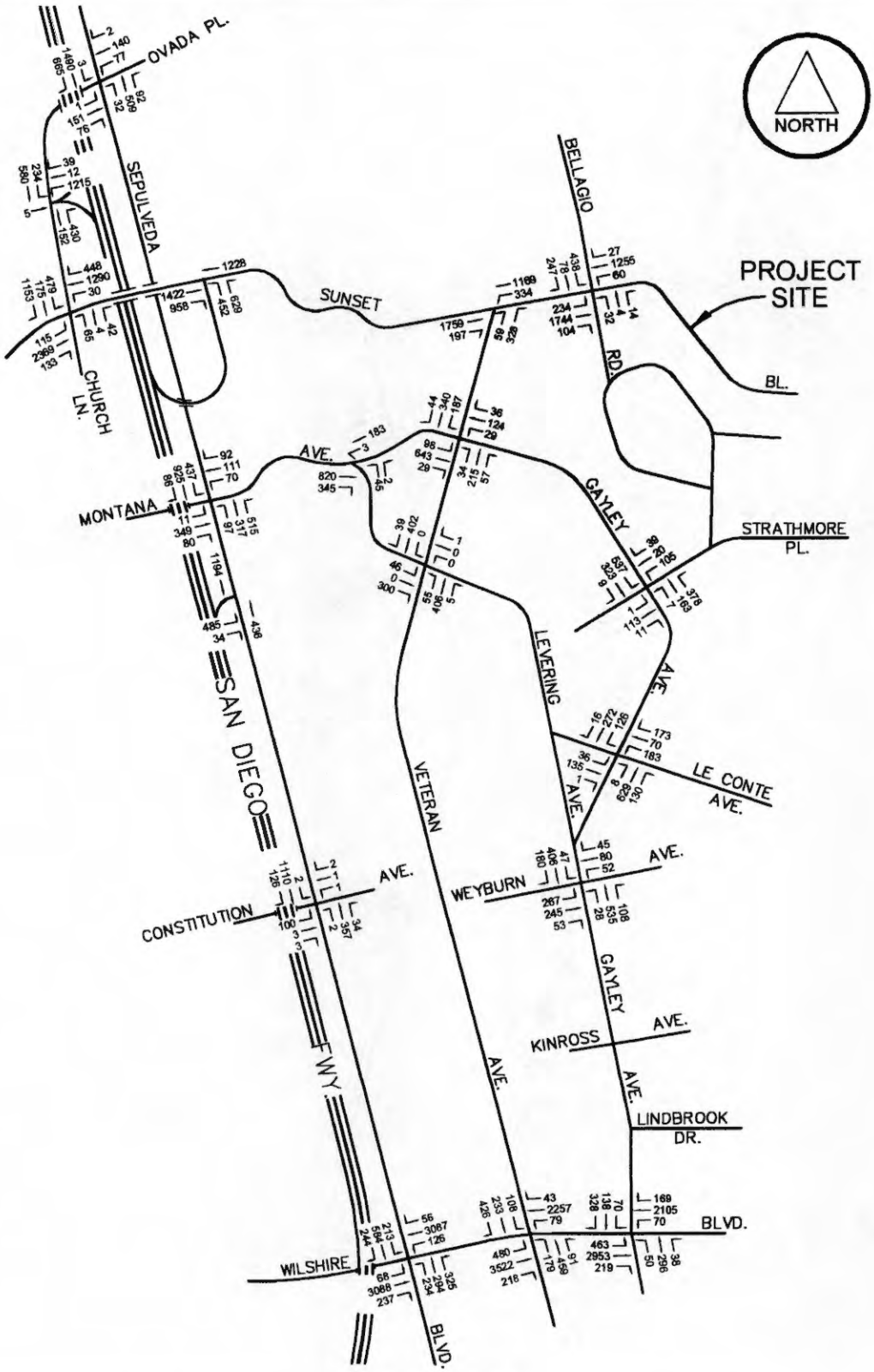

FIGURE 3(a)

FN: UCLA NWH INFILL\AM2001

EXISTING (2001) TRAFFIC VOLUMES
REGULAR SESSION
AM PEAK HOUR

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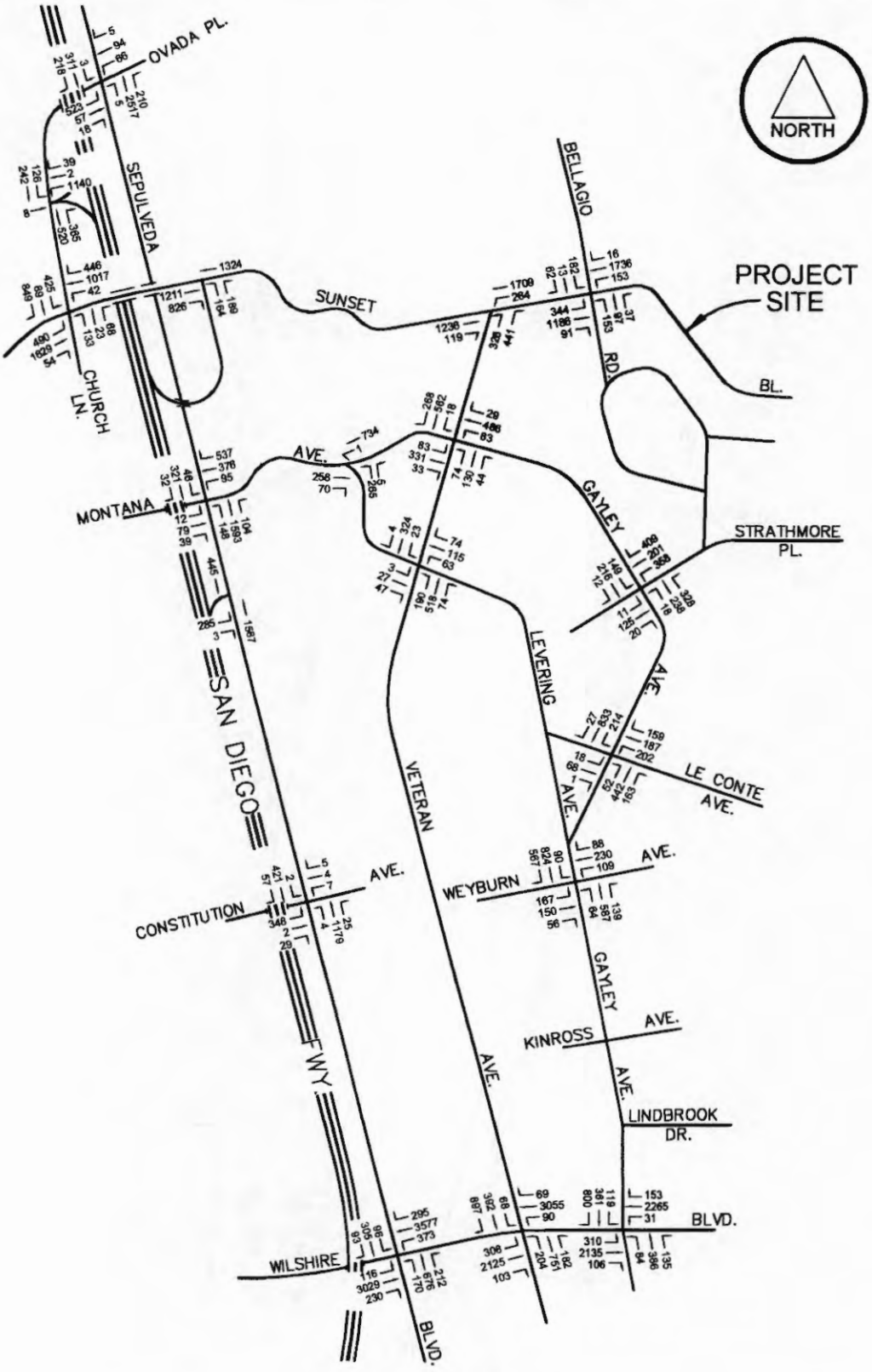

FIGURE 3(b)

FN: UCLA NWH INFILL\PM2001

EXISTING (2001) TRAFFIC VOLUMES
REGULAR SESSION
PM PEAK HOUR

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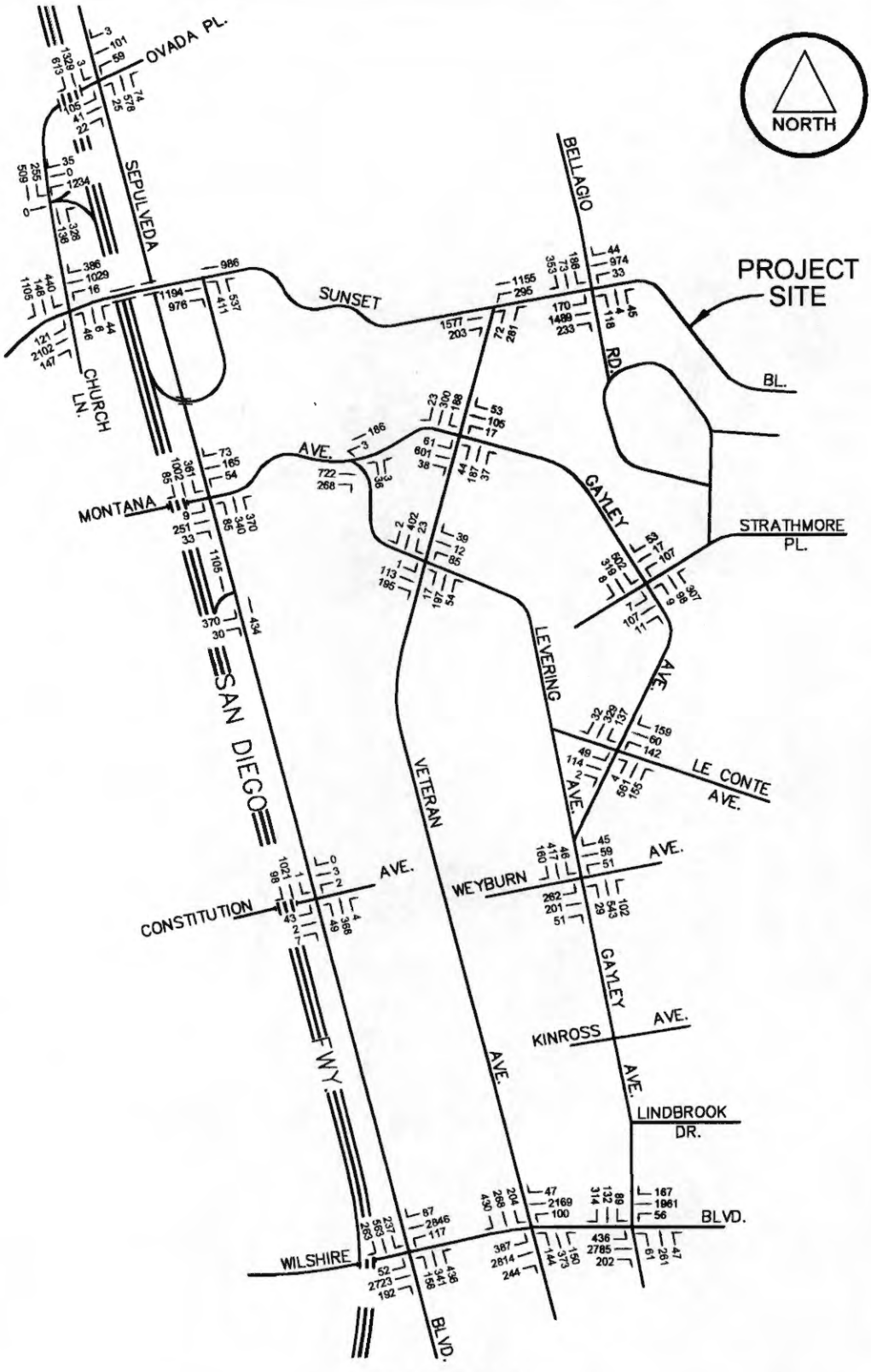

FIGURE 4(a)

FN: UCLA NMH INFILL\AM2001-SUMMER

EXISTING (2001) TRAFFIC VOLUMES
SUMMER SESSION
AM PEAK HOUR

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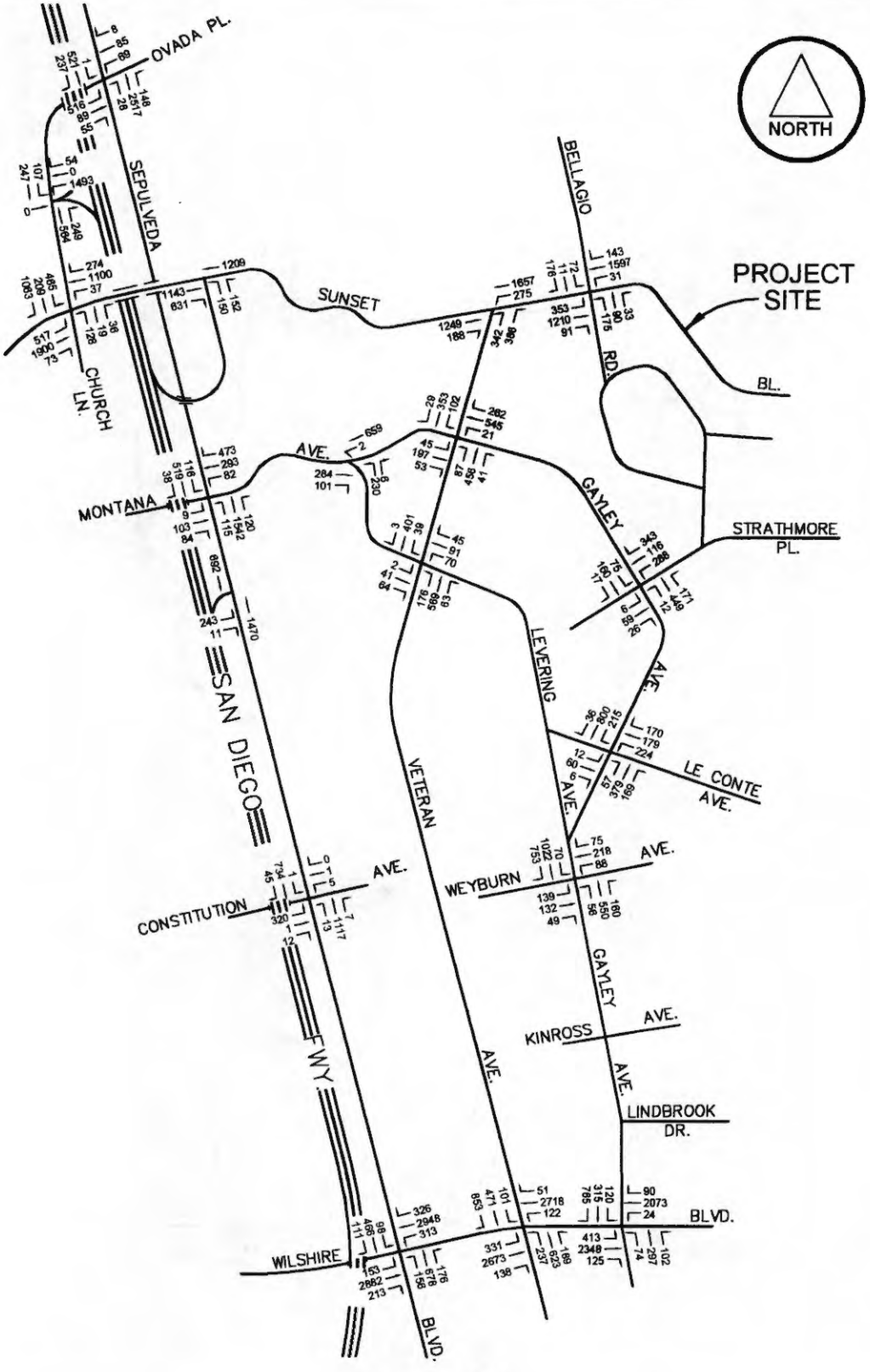

FIGURE 4(b)

FN: UCLA NMH INFILL\PM2001-SUMMER

EXISTING (2001) TRAFFIC VOLUMES
SUMMER SESSION
PM PEAK HOUR

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ALTERNATIVE TRANSPORTATION

The UCLA Campus is generally well served by alternative modes of transportation. Viable transit opportunities include public bus services provided by six outside operators, and Campus-operated shuttle bus services. These services not only offer an alternative means by which to commute to the Campus, but also help to reduce the need for a car once at UCLA through the ability to utilize shuttles to get around the Campus, travel into Westwood Village or to other off-campus locations. UCLA has also implemented a Transportation Demand Management (TDM) Program which facilitates and promotes the use of transit, carpools, vanpools and bicycling. The transportation alternatives made available to the Campus population through the various transit services and the Campus trip-reduction program are discussed in greater detail below.

Public Transit

The UCLA Campus area is served by six public transit operators: Santa Monica Municipal Bus Lines (SMMBL), Culver City Bus (CCB), the Los Angeles County Metropolitan Transportation Authority (LACMTA), the Los Angeles Department of Transportation (LADOT), the Antelope Valley Transit Authority (AVTA), and Santa Clarita Transit (SCT). Together, these operators run a total of 19 bus routes through the Westwood area by way of Le Conte Avenue, Hilgard Avenue, Gayley Avenue, Wilshire Boulevard or Westwood Boulevard. All 19 routes stop within short walking distance of Campus or a UCLA-operated Express Shuttle stop. These 19 bus lines, which are described in greater detail in Appendix A, provide convenient access between the Campus and areas as far west as Pacific Palisades and the City of Santa Monica, as far east as Montebello, as far south as the Los Angeles International Airport (LAX) and as far north as Santa Clarita. When transfer opportunities are also considered,

these bus routes provide good transit service to much of the Los Angeles region. Figure 5 shows the public transit routes serving the UCLA Campus.

As shown in Table 2(a), both Line 12 operated by Santa Monica Municipal Bus Lines and Culver City Bus Line 6 are above their seating capacity during the AM and PM peak periods. However, all routes have standing room available. No data was available for the Los Angeles Department of Transportation bus lines, the Antelope Valley Transit Authority bus line and the Santa Clarita Transit bus lines as these are commuter buses.

Table 2(a)
Current Estimated Bus Capacity
SMMBL & Culver City Lines Serving UCLA

AM PEAK (to UCLA)

Route	Total Load	No. of Buses	Seats Available* (40 per Bus)	% of Seats Occupied	Total Capacity* (60 per Bus)	% of Total Capacity Occupied
SMMBL 1	540	18	720	75.0	1,080	50.0
SMMBL 2	253	8	320	79.1	480	52.7
SMMBL 3	144	9	360	40.0	540	26.7
SMMBL 8	379	10	400	94.8	600	63.2
SMMBL 12	531	13	520	102.1	780	68.1
CCB 6	416	10	400	104.0	600	69.3

PM PEAK (from UCLA)

Route	Total Load	No. of Buses	Seats Available (40 per Bus)	% of Seats Occupied	Total Capacity (60 per Bus)	% of Total Capacity Occupied
SMMBL 1	308	12	480	64.2	720	42.8
SMMBL 2	127	8	320	39.7	480	26.5
SMMBL 3	114	5	200	57.0	300	38.0
SMMBL 8	276	8	320	86.3	480	57.5
SMMBL 12	454	11	440	103.2	660	68.8
CCB 6	402	10	400	100.5	600	67.0

* It is assumed that the capacity of existing and future buses is 40 seats per bus and 20 standees per bus. Actual capacity may vary by bus.

Source: Santa Monica Municipal Bus Lines, December 2001 and January 2002, Culver City Bus, November 2000.

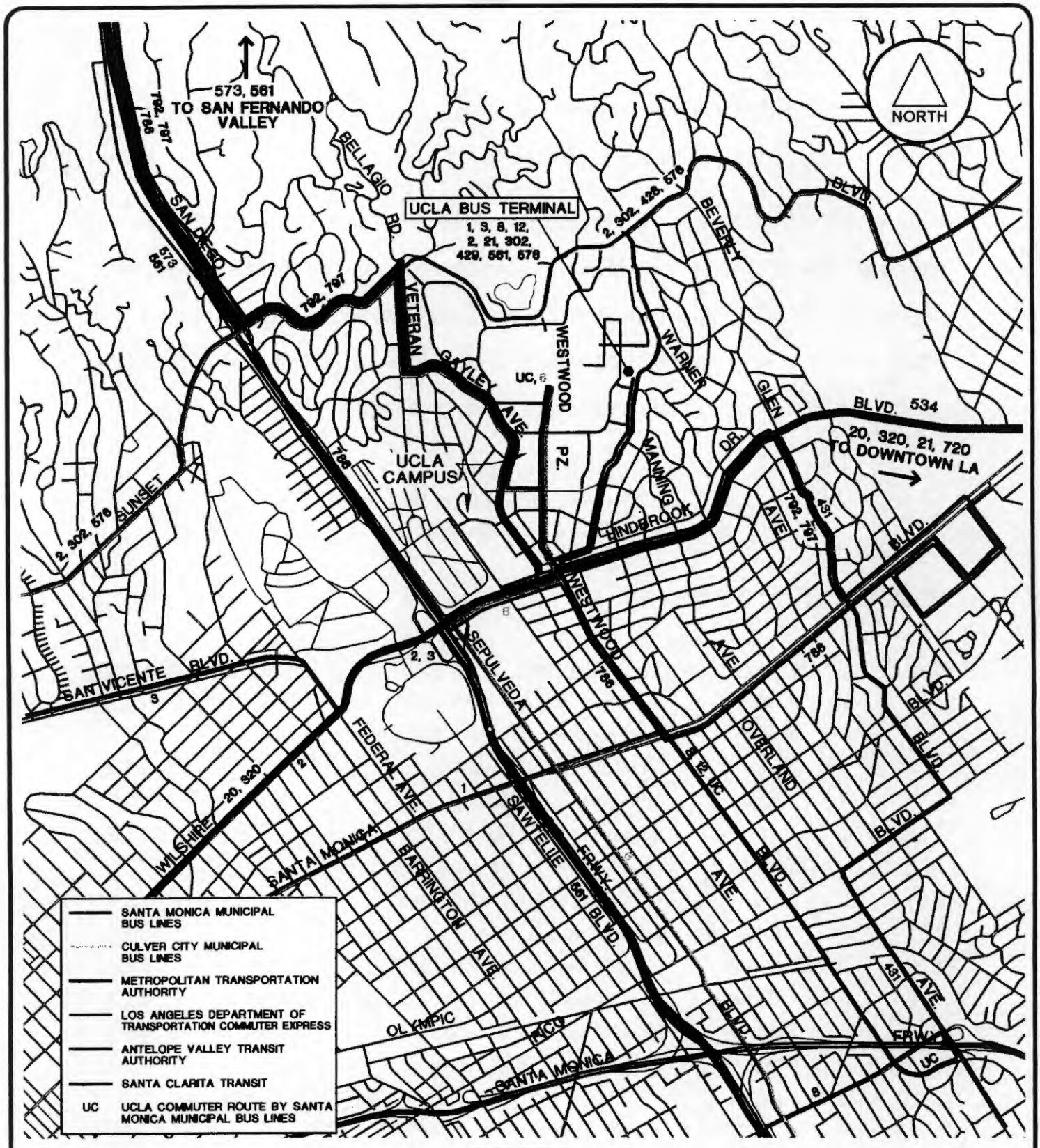

FIGURE 5

FN: UCLA NMH INFILL\BUS ROUTES

PUBLIC TRANSIT ROUTES

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Although additional service on these routes would reduce standees, it appears that current total capacity is sufficient to meet demand.

In general, the MTA services to Westwood have substantial available capacity, as shown in Table 2(b). Based on MTA-provided data (which does not include separate data for the AM or PM peak), the most crowded line is the Metro Rapid Line (Line 720), which on a daily basis has 40 to 50 percent of its capacity used. Most other MTA lines serving the UCLA vicinity have much more capacity available.

Table 2(b)
Current Estimated Bus Capacity
MTA Lines Serving Westwood

WEEKDAY (to/from Westwood)

Route	Direction	Peak Bus Stop	Avg. No. of Seats Occupied	% of Total Occupied
2	East	Sunset and S. Beverly Glen	14.5	24.2
2	West	Gayley and Landfair (east jog)	14.9	24.8
20	East	Wilshire and Glendon	14.9	24.9
20	West	Wilshire and Glendon	9.5	15.9
305	East	Sunset and S. Beverly Glen	6.7	11.2
305	West	Sunset and N. Beverly Glen	6.5	10.9
561	North	Hilgard and Charing Cross	15.1	25.1
561	South	Hilgard and Sunset	18.2	30.4
576	East/North	Gayley and Landfair (west jog)*	19.0	31.7
576	West/South	Gayley and Landfair (west jog)**	24.5	40.8
720	East	Westwood and Wilshire	28.5	47.5
720	West	Westwood and Wilshire	24.6	40.9

* Also has the same average of 19.0 seats occupied at LeConte and Gayley.

** Also has the same average of 24.5 seats occupied at Gayley and Landfair (east jog), Gayley and Strathmore, Gayley and Veteran, LeConte and Gayley, and LeConte and Westwood.

Source: Metropolitan Transit Authority, Winter, 2002

Campus Transportation Demand Management (TDM) Program

The UCLA TDM Program began in 1984 with a mission of using parking fees and other UCLA resources to achieve cost-effective reductions in campus trip generation and parking demand, while increasing mobility options for faculty, staff, and students. LRDP Mitigation Measure C-1.1, included in the Final EIR for the 1990 LRDP required that the TDM program be continued and expanded. As a result, the UCLA TDM program has grown into a comprehensive program that offers a broad range of services to encourage and assist UCLA commuters in utilizing alternatives to the single-occupancy vehicle. As part of its on-going TDM Program, UCLA actively provides and promotes vanpools; carpool matching and parking incentive programs; financial incentives for carpool and vanpool participants; accommodation of the use of other modes of transit, including bicycles, motorcycles, and scooters; alternative work schedules and telecommuting; annual distribution of the UCLA Commuter's Guide; parking control management; and restricting access to main campus parking facilities for on-campus housing residents. UCLA has one of the most comprehensive TDM programs in the country with the largest vanpool program of any public or private university. During the more than 18 years of operation, UCLA's TDM program has remained at the leading edge of such programs, and has received numerous awards from regional and local agencies, including the State of California Governor's award, the City of Los Angeles Mayoral award, and Rideshare Program awards from the South Coast Air Quality Management District (SCAQMD) and Southern California Association of Governments (SCAG).

By 2000, the TDM program had exceeded the goal of a 12-percent reduction (below 1990 LRDP levels) five years earlier than projected in the 1990 LRDP. In addition, since 1990, when the SCAQMD first required a survey of all employees to determine

Average Vehicle Ridership[1] (AVR), the TDM program increased the campus-wide AVR from 1.26 to 1.51 by the Spring of 2000, exceeding the goal of 1.5 set by the SCAQMD. Even in large metropolitan areas, such as Los Angeles, an AVR of 1.5 is considered a high goal to achieve.

The specific components of the TDM Program may change over time as the campus strives for the most cost-effective manner by which to maintain achievement of its required goals, so long as the overall effectiveness of the Program is not compromised. A description of the components of the current TDM program is provided below:

Carpool Matching

Carpool matching is performed by Southern California Rideshare, the region's ridesharing agency. In addition, the Commuter Guide gives a full explanation of carpooling to UCLA, including an explanation of the convenience and money-saving options of carpool parking permits, (which are currently reduced from $48 to $42 for two-person carpools and $30 for three-person carpools). Information on how to receive a customized 'RideGuide', which aids commuters in finding other people to ride with, is located at the end of the Commuter Guide, including a RideGuide request form. A custom RideGuide not only provides a list of potential car-poolers, it contains a comprehensive, personalized outline of the major transportation options from the individual's community. There are currently over 1,000 active carpools with over 2,300 participants at UCLA.

Commuter Assistance-Ridesharing

Commuter Assistance-Ridesharing (CAR) currently operates a fleet of over 130 vans,

[1] The AVR is the ratio of employees arriving between 6 AM and 10 AM to the motor vehicles they drive to campus.

covering more than 85 southern California communities. Approximately 1,425 monthly full-time riders participate in the program, for which fares are partially subsidized by the campus. Part-time riders can also use the van service at any time on a space available basis. The customized RideGuide provides potential riders with full information on current routes to their community.

Campus Transit

In addition to the public transit routes described above, the campus also provides shuttle bus service around the campus and from several remote housing facilities. The SCAQMD gave UCLA an Honorable Mention Award in 2000 for its fleet of clean-operating CNG transit buses. The routes covered are described below.

• *UCLA Campus Express*

UCLA currently operates two Campus Express routes which serve the main and Southwest campus which are in service Monday through Friday from 7:00 AM to 6:00 PM and provide approximately 10-minute headways throughout the day.

• *Northwest Campus Shuttle*

The Northwest Campus Shuttle operates on school days between 11:30 AM and 2:00 PM on approximately 30-minute headways. This shuttle travels between Macgowan Hall (the terminus of the Campus Express routes), the Child Care Center, the dormitories and the Southern Regional Library Facility.

• *Medical Center Shuttle*

The Medical Center Shuttle is a courtesy service provided to patients at the UCLA Medical Center. This shuttle operates between 7:30 AM and 6:30 PM, and serves campus Medical Center facilities on 15 to 20-minute headways.

• *University Apartments Shuttle*

This shuttle provides weekday service between Campus and the University Apartments that are located on Venice Boulevard at Barry Avenue, and between Mentone and Keystone Avenues. Only tenants of the University Apartments are eligible to ride this service. The shuttle generally provides hourly headways between 7:00 AM and 10:30 PM during the regular session. Once on Campus, the shuttle serves Ackerman Union, the Life Sciences Building and Murphy Hall.

Emergency Ride Home

To further support the campus carpooling and vanpooling efforts, Transportation Services has an 'Emergency Ride Home' program that offers full-time vanpool and carpool participants who must get home during the day for a family emergency or who have to work late free or subsidized rental cars, nightrider vanpools, or special arrangements with existing van and carpools.

Bicycles

To support and encourage bicycling to campus safely and comfortably, UCLA provides more than 2,000 bicycle spaces throughout the campus, as well as access to on-campus shower facilities, such as those located in the Men's Gym and Kaufman Hall. The campus continues to work with agencies, such as Los Angeles County Metropolitan Transportation Authority (MTA) and SCAG, as well as UCLA student groups, to promote a comprehensive system of bicycle routes in the vicinity of the campus. Design of the Westwood Replacement Hospital includes provision of a setback that will allow for the future extension of a marked bicycle lane (by the City of Los Angeles) along the east side of Gayley Avenue.

Motorcycles and Scooters

There are nearly 1,200 specially designated motorcycle/scooter parking spaces located throughout parking lots and structures around campus. Location information and maps are available at the Parking Services office on the main campus and on the Transportation Services Website.

Telecommuting and Alternative Work Schedules

Transportation Services continues to encourage all campus groups to consider telecommuting and alternative work schedules, including a compressed workweek and flextime schedules. Information about these programs is available through Campus Human Resources and Transportation Services.

Electric Vehicles

UCLA continues to participate in the SCAQMD electric vehicle (EV) infrastructure program called 'Quick Charge LA'. This program consists of a network of over 200 EV charging stations at transit centers, shopping malls, and other locations throughout the region. Currently, there are ten public electric vehicle-charging stations on the UCLA campus. Location information and maps are available at the Parking Services office on the main campus and on the Transportation Services Website.

TDM Outreach

The UCLA Commuter Guide, which is published by UCLA Transportation Services Communications & Marketing Group, is a comprehensive information source describing parking and transportation options at UCLA. The Commuter Guide is distributed to all incoming students, faculty, and staff. In addition, all of UCLA's departmental parking coordinators receive copies of the updated Commuter Guide for distribution each spring, when faculty and staff make decisions regarding annual parking permit renewal.

UCLA also publicizes the availability and convenience of alternative transportation modes to campus through Ridesharing brochures, the Transportation Services Website (www.transportation.ucla.edu), information within the General Catalog and admissions packets sent to students, advertisements in the Daily Bruin, annual commuter fairs, and presentation and distribution of information at new student and employee orientation session. Public transit is also actively promoted through MTA, Culver City, and Santa Monica route information and schedule brochures available at the Parking Services office on campus, as well as on the Transportation Services Website. The website provides extensive information regarding commuting regularly to campus using public transit, including links to local public transit providers' published schedules and maps, and inexpensive ways to travel to off-campus locations, such as the airport or Metrolink commuter rail stations.

On-Campus Housing

Another campus-wide development objective articulated in the 1990 LRDP relates to the provision of on-campus housing, in part, as a component of transportation management. The 1990 LRDP incorporated the Student Housing Master Plan goal aimed at providing housing for 50 percent of the student population in University-owned or private sector housing within one-mile of campus. In support of this goal, the 1990 LRDP adopted a mitigation measure to provide additional housing in the southwest zone of the campus. The Southwest Campus Housing project, which was recently approved by The Regents, will begin construction this year. Upon completion of the (recently approved) Southwest Campus Housing project, UCLA will have reached the goal of providing housing for 50 percent of the total student enrollment in University-owned or private sector housing within walking distance from campus. Including this project as part of the 2002 LRDP will help maintain the achievement of this goal.

Bus Fare Subsidy Pilot Program

As part of the campus commitment to review potential methods of enhancing the effectiveness of its TDM program, including revisions to existing strategies and programs and the exploration and development of new programs, the campus currently operates a transit fare subsidy pilot program known as BruinGo.

To explore the effectiveness of a transit fare subsidy in reducing the parking demand, the campus prepared and transmitted a Request for Information (RFI) in 1998 to the local public transit providers (the Santa Monica Municipal Bus Lines, the Metropolitan Transportation Authority, Culver City Municipal Bus Lines, and the Los Angeles Department of Transportation) to gauge interest in conducting a pilot transit fare subsidy program. Although some of the service providers expressed interest, the MTA indicated that it would not participate in a pilot transit pass program because it already offers a college/vocational student pass. The Culver City Municipal Bus Lines and the Los Angeles Department of Transportation indicated that they were not prepared to provide a complete response to the RFI pending resolution of various issues, including the need to acquire the necessary technology (e.g., "card readers") and the financial implications associated with a fare discount based on the promise of volume ridership.

BruinGo was collaboratively launched by UCLA and the Santa Monica Municipal Bus Lines at the beginning of academic year 2000-2001 to provide fare-free bus travel to UCLA students, faculty, and staff on the "Big Blue Bus" upon presentation of a Bruin ID card. The program was intended as a pilot to determine whether subsidized transit fare service would reduce on-campus parking demand. While the campus continues to analyze the effectiveness of BruinGo within the context of the overall campus TDM program, the BruinGo pilot program has been extended for the 2002-03 academic year, through the Spring Quarter of 2003.

CAMPUS PARKING AND TRIP GENERATION

A commuter's decision on whether or not to drive a personal motor vehicle is usually predicated upon their being able to reliably find an affordable parking space upon reaching their destination. This includes UCLA commuters traveling to Campus. In order to control trips to UCLA, two direct parking measures are used. First, parking fees are set to fully recover the cost of constructing and operating parking at UCLA. Second, permits to commuter students are issued on a space available basis. Students able to demonstrate the highest need (e.g. an off-campus job) are given the first opportunity to purchase a parking permit. Thus, at UCLA, trip generation is based not only on the population, but also on the parking supply that serves the Campus. The following section analyzes the parking availability under the 2002 LRDP and the resulting trip generation.

Parking Supply

As shown in Table 3, the UCLA Campus currently has approximately 21,020 marked parking spaces and 1,310 stack parking spaces. More than 19,400, or 87 percent, of these spaces are provided in structures. UCLA records also show that about 324 spaces (1.5 percent) have meters, 224 spaces (1.0 percent) are loading zones, and the remainder of the 21,782 spaces require daily or monthly permits. Thus, although UCLA has reservoir of about 22,330 parking spaces, these spaces are tightly controlled with over 97 percent requiring daily or longer permits, and these permits are only issued on a space available basis.

Figure 6 shows the location of the parking area. As is shown by this figure, the major parking structures are located mainly immediate north and south of the Core, Central

and Health Sciences zones of the main campus. Limited structure parking is also provided in the Northwest (residential) and Southwest zones of the campus.

Table 3
Current (Fall Quarter, 2001) UCLA Parking Inventory

Structures	Marked Spaces	Stacked Parking	Total Parking
1	1,697	110	1,807
2	2,257	-	2,257
3	2,040	-	2,040
4	1,672	300	1,972
5	746	-	746
6	753	-	753
8	2,776	900	3,676
9	1,929	-	1,929
32	924	-	924
CHS/G/MC	1,075	-	1,075
E/ER	155	-	155
MB/MP	1,144	-	1,144
RC	147	-	147
Sproul Hall	64	-	64
SV	722	-	722
Structure Subtotal	18,101	1,310	19,411
Surface Lots			
Northwest (10, 11, 13, 15, 17, Dystra/Bradley, Hedrick, Rieber & Sproul)	872	-	872
Central (A, Dickson Court, Fowler Dock & J)	306	-	306
North (AGSM meters & UES/R)	89	-	89
Southwest -- North End (30 & 31)	311	-	311
Southwest -- Other (32, MR, V-32, V-33 & V-34)	849	-	849
South Medical (Doris/Jules Stein)	131	-	131
Miscellaneous (D, S, PVUB & W. UnEx)	40	-	40
Surface Lots Subtotal	2,598	-	2,598
Streets	321	-	321
Parking Inventory Total	21,020	1,310	22,330

UCLA Parking Areas

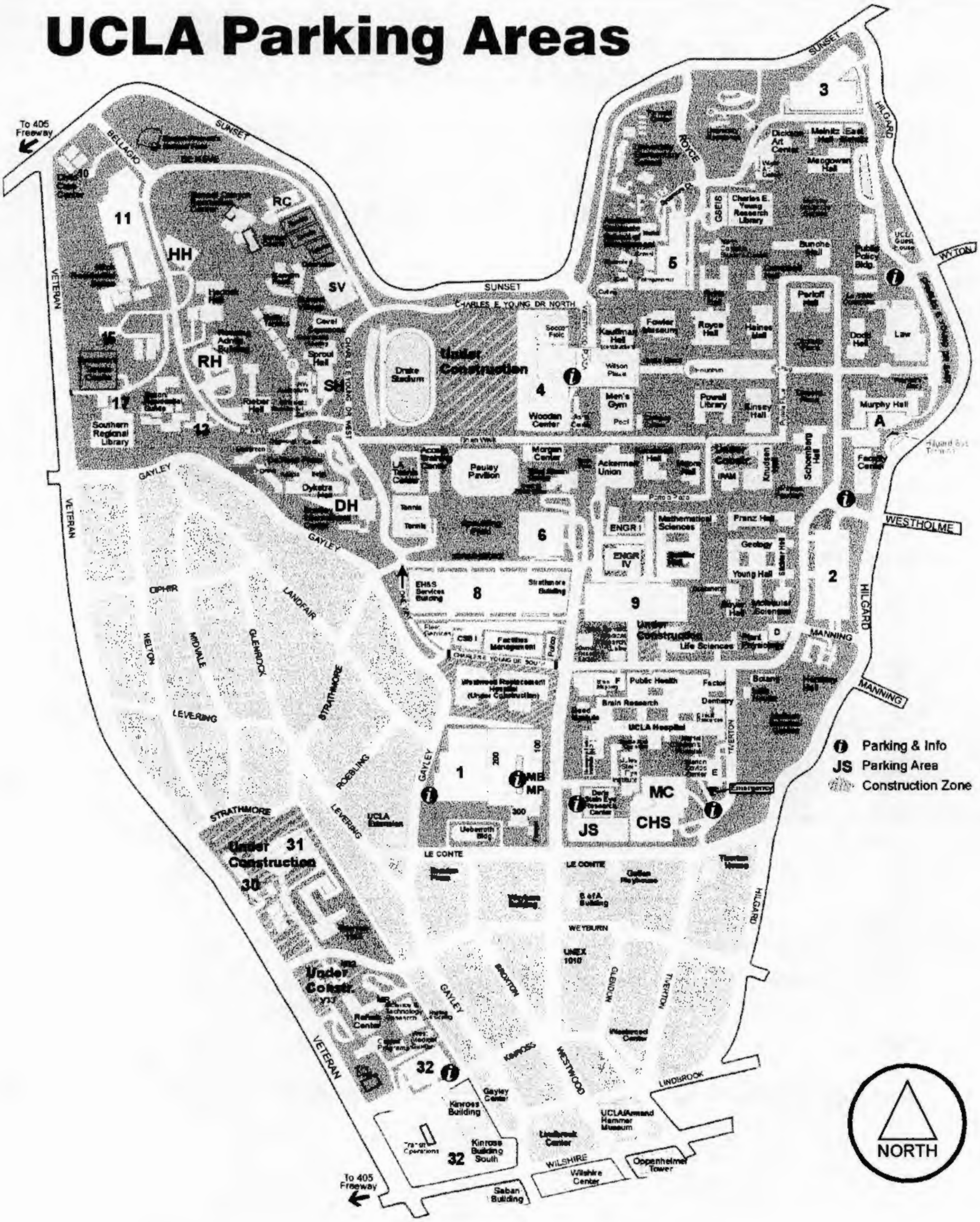

FIGURE 6

FN: UCLA NWH INFILL\CAMPUS PARKING LOC

CAMPUS PARKING FACILITY LOCATIONS

CRAIN & ASSOCIATES
2007 Sawtelle Boulevard
Los Angeles, California 90025
(310) 473-6508
Transportation Planning • Traffic Engineering

The Wilshire Center located at 10920 Wilshire Boulevard, was acquired by UCLA in 1992 and currently accommodates various administrative units that were previously located in other leased space in Westwood Village. As the building was constructed in 1981, the traffic impacts of the building had been included in the Westwood Village traffic long before it was acquired by UCLA. Furthermore, the traffic impacts of the building were included in the cumulative baseline for the 1990 LRDP EIR traffic analysis. The Wilshire Center is not within the LRDP boundary and therefore the Wilshire Center parking is not included in the on-campus parking inventory. However, in accordance with the Trip Mitigation Monitoring Agreement between UCLA and the City of Los Angeles, the additional trips generated by the UCLA occupants of the Wilshire Center not generated in 1990 are included in the campus vehicle trip generation cordon count conducted on an annual basis. For analytical purposes, the UCLA employees that occupy the Wilshire Center and other off-campus leased space are conservatively included in the population assumptions for the 2002 LRDP and the Northwest Campus Housing Infill Project traffic studies.

Parking Allocation

Use of the parking spaces on the UCLA Campus is controlled through a permit system. Employees (who work more than 49 percent of the time) are eligible to purchase a parking permit, and approximately 80 percent currently exercise this option. A number of spaces are allocated to university guests, emeritus faculty, vendors, medical center patients, and other visitors (through both quarterly and daily permit sales.) A number of student permits are allocated based on institutional priorities, to students with disabilities, certain highly recruited scholars, scholarship athletes, and teaching and research assistants. Additional spaces are allocated to resident students.

The remainder of on-campus parking spaces are allocated to commuter students, which currently results in permits being awarded to approximately 28.3 percent of commuter students (during regular session). Student permits are issued on a need-based point system. Students with off-campus jobs or other special circumstances are given higher priority to purchase permits. Those students most able to use other modes of transportation (e.g., live close to campus) are given the lowest priority.

The availability of student permits varies from year to year, based on the total parking inventory, participation in carpools, vanpools and other alternative transportation modes and the allocation of spaces to faculty/staff, and university guests and visitors. Because student demand typically exceeds the available supply, a waiting list for student parking occurs each year during the regular session. The waiting list for parking has varied substantially from year-to-year, and throughout the academic year. Typically the waiting list is greatest in the fall, and generally declines through the winter and into the spring. Historically, there has been no waiting list for student parking in the summer. As of Fall 2001, the student waiting list for parking was approximately 3,300 students.

Table 4(a) summarizes the current allocation of parking spaces to the various campus user groups (in the Fall, when parking demand is greatest). Table 4(b) provides parking space allocations for summer. As shown in Table 4(a), the total number of permits issued is greater than the number of spaces because at any given time a portion of faculty, staff and students (with parking permits) are not on-campus (e.g. because of variable student class schedules, staff vacation, or faculty sabbaticals) or may have traveled to campus using an alternative mode.

Table 4(a)
Current (Fall 2001) Regular Session Parking Allocation

Permit Group	Number	Parking Permits	Total Parking Spaces
Faculty & Staff-Medical Center	5,617	4,655	3,329
Faculty & Staff-Other University	12,986	10,186	7,341
Resident Students			
Undergraduate	7,334	839	559
Commuter Students			
Student Academic Employee	4,005	2,578	1,853
Other Commuter Students	22,971	6,498	3,952
Quarterly Guest/Emeritus Permits	5,671	5,671	2,552
University Extension Permits	4,875	4,875	0
Daily Permit Sales	6,155	6,155	2,196
Other Spaces (Meters/Loading Zones)	--	--	548
Total		41,457*	22,330*

Table 4(b)
Current (2000) Summer Session Parking Allocation

Permit Group	Number	Parking Permits	Total Parking Spaces
Faculty & Staff-Medical Center	5,617	4,655	3,329
Faculty & Staff-Other University	12,986	10,186	7,341
Resident Students			
Undergraduate	715	223	149
Daily Conference Attendees	1,395	697	433
Commuter Students			
Student Academic Employee	2,562	1,649	1,185
Other Commuter Students	7,796	2,934	1,784
Quarterly Guest/Emeritus Permits	5,671	5,671	2,552
University Extension Permits	4,875	4,875	0
Daily Permit Sales	6,155	6,155	2,196
Other Spaces (Meters/Loading Zones)	--	--	548
Unsold Spaces	--	--	2,813
Total		37,045*	22,330*

* Does not include Wilshire Center parking permits or supply.

Using the parking allocation ratios for each group, and the population for that group, per person permit and parking space ratios can be developed, as shown in Table 4(c)

Table 4(c)
Current (Fall 2001 and Summer 2001) UCLA Parking Allocation Ratios

Permit Group	Permits per Person	Spaces per Person
Faculty & Staff-Medical Center	0.829	0.593
Faculty & Staff-Other University	0.784	0.565
Resident Students		
Undergraduate*	0.114	0.076
Commuter Students		
Student Academic Employee	0.644	0.463
Other Commuter Students*	0.283	0.172
Quarterly Guest/Emeritus Permits	1.000	0.450
University Extension Permits	1.000	0.000
Daily Permit Sales	1.000	0.357

* Because more parking spaces are available during the summer, these ratios are higher for commuter students. Permits per person during the summer are 0.312 for undergraduate resident students and 0.376 for other commuter students and spaces per person are 0.208 and 0.229, respectively.

Campus Vehicle Trips

In conjunction with the adoption of the 1990 LRDP, the University entered into a Transportation Mitigation Monitoring Agreement (TMMA) with the City of Los Angeles, which limits the total number of vehicle trips that can be generated over the 15-year planning horizon of the 1990 LRDP to 139,500 average daily vehicle trips (and this limit is codified as LRDP Mitigation Measure C-1.5). To determine the annual status of UCLA Campus trip generation, UCLA conducts a weeklong count of vehicles entering and exiting the UCLA Campus during the third week of October. This "Cordon Count" is conducted via a mixture of electronic, mechanical, and manual means (e.g., magnetic road loops, rubber hose counting systems, and persons recording trips at individual intersections and driveways). As a result, all trips entering and exiting the campus are

recorded, including those trips associated with pass-through traffic (e.g., non-UCLA vehicles traversing the campus to travel from one location to another).

As shown in Table 5 below, total average daily trip generation for the UCLA Campus has varied since the 1990 LRDP, but has remained well below the LRDP trip cap. (This information, along with data on AM and PM peak periods, is presented graphically in Appendix B of this study.) For the year 2001, the Campus generated approximately 121,799 daily vehicle trips during the regular session [as detailed in Table 8(a)] and approximately 108,325 trips during the summer [as detailed in Table 8(b)].

Table 5
Historical Campus Vehicle Trip Generation
(Average Daily Trips)

1990	123,135
1991	124,011
1992	119,792
1993	122,073
1994	108,133
1995	110,796
1996	113,406
1997	117,820
1998	115,067
1999	114,233
2000	113,436
2001	121,799

Source: Annual UCLA Cordon Counts

Campus Trip Generation Rates

In order to estimate future vehicle trips, and provide an estimate of the relative contribution of parking groups (e.g., faculty/staff, students, resident students and commuter students) to the overall trip generation for the campus, current trip generation

rates were developed. These rates are based upon traffic counts from the Fall 2001 Cordon Count study conducted for UCLA and counts conducted during the 1999/2000 and 2000/01 academic years of trips in and out of individual UCLA parking structures.

Counts at individual parking lots and structures were conducted and linear regressions were utilized to disaggregate parking spaces among the various population (or user) groups within each parking lot or structure. The linear regressions compared the total inbound and outbound trips at each time of day to the permits that were issued for that parking structure. In that way a number of trips per permit could be determined for each student and employee user group. The number of cars parked in each area was also determined from this data. Daily permit sales and parking meter revenue data were analyzed to determine the trip generation characteristics of other population segments, such as medical center patients and campus visitors. The result of this analysis is shown in Table 6. As shown in this table, differences in trip generation characteristics were identified for general campus and health sciences faculty and staff. Therefore, for the purposes of this study, separate groups were established and are utilized in the analysis of current and future parking and trip rates.

Table 6
Current Vehicle Trip Rates Per Space

Permit Group	Daily	AM Peak Hour[1]	PM Peak Hour[2]
Faculty & Staff-Medical Center	2.538	0.320	0.329
Faculty & Staff-Other University	3.293	0.289	0.383
Resident Students			
Undergraduate	2.444	0.034	0.202
Commuter Students			
Student Academic Employee	2.913	0.304	0.356
Other Commuter Students	3.716	0.247	0.334
Quarterly Guest/Emeritus Permits	3.789	0.400	0.198
University Extension Permits	--	--	--
Daily Permit Sales	8.546[3]	0.493	0.432

1. The AM Peak Hour is the highest 1 hour period between 7:00 and 9:00 AM.
2. The PM Peak Hour is the highest 1 hour period between 4:00 and 6:00 PM.
3. Because of the high turnover associated with visitor parking, those spaces allocated to visitor parking generate approximately 8.5 vehicle trips per day.

Utilizing current campus population numbers (for each user group), vehicle trip rates (per space) were converted into a per-person trip rate, which is shown on Table 7. It should be noted that the per person trip rate for commuter students will vary with the supply of student parking. If more parking spaces become available to meet student demand, the per-person rate would increase. Similarly, if the number of available spaces goes down, the per person commuter student trip rate would decline. Because parking allocations for the other population groups is anticipated to be generally stable (over the planning horizon of the 2002 LRDP including the Northwest Campus Housing Infill Project), and because the total supply of parking is limited by the parking cap of 25,169 spaces, the per person trip rates for other groups are not anticipated to vary substantially.

Table 7
Current Vehicle Trip Rates Per Person

	Regular Session			Summer Session		
Permit Group	Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour
Faculty & Staff-Medical Center	1.504	0.190	0.195	1.354	0.171	0.175
Faculty & Staff-Other University	1.861	0.163	0.216	1.675	0.147	0.195
Resident Students						
Undergraduate	0.186	0.003	0.015	0.508	0.007	0.042
Daily Conference Attendees*	--	--	--	0.814	0.011	0.067
Commuter Students						
Student Academic Employee	1.348	0.141	0.165	1.213	0.126	0.148
Other Commuter Students	0.639	0.042	0.057	0.850	0.056	0.076
Quarterly Guest/Emeritus Permits	1.705	0.180	0.089	1.705	0.180	0.089
University Extension Permits	1.705	0.000	0.000	1.705	0.000	0.000
Daily Permit Sales	3.049	0.176	0.154	3.049	0.176	0.154

* On-campus bed spaces and parking permits are available for conference attendees only during the summer. Daily permit sales include other conference attendees.

Using the above trip rates and current parking allocations, an estimate of how each population group contributes to overall campus trip generation was developed, which is provided in Table 8(a). This breakdown also includes estimates for certain campus uses (e.g., the Child Care Center, Campus shuttle buses) and a single line entry that covers both two-wheeled vehicles, through traffic and drop-off trips.

For an estimate of summer trips [shown in Table 8(b)], 90 percent of the generation rates for the regular session were used for the faculty and staff population groups. The reduction accounts for faculty with nine-month appointments who don't conduct research on campus during the summer, and similarly lower employment levels for certain staff (e.g., food service employees). The lower number of student trips

(compared to regular session) reflect the fewer number of students that are on-campus during the summer.

Table 8(a)
Estimated Current Vehicle Trip Generation
(Regular Session)

Permit Group	Daily	AM Peak Hour	PM Peak Hour
Faculty & Staff			
General Campus	24,172	2,119	2,811
Health Sciences	8,449	1,066	1,094
Resident Students			
Undergraduate	1,366	19	113
Commuter Students			
Student Academic Employees	5,398	563	659
Other Commuter Students	14,684	975	1,319
Other Permits			
Quarterly Guest/Emeritus	9,670	1,021	505
University Extension Permits	8,313	-	-
Daily Permit Sales	18,768	1,083	948
Other Parking (e.g. meters)	3,931	85	328
2-Wheel Vehicles/Thru Vehicles/Drop-offs	22,042	1,345	1,169
Campus Shuttles	2,948	229	245
Main/Southwest Campus Total	119,741	8,505	9,191
Wilshire Center	2,058	155	206
Cordon Total	121,799	8,660	9,397

Table 8(b)
Estimated Current Vehicle Trip Generation
(Summer Session)

Permit Group	Daily	AM Peak Hour	PM Peak Hour
Faculty & Staff			
General Campus	21,755	1,907	2,530
Health Sciences	7,604	959	985
Resident Students			
Undergraduate	363	5	30
Day's Conference Attendees	1,135	16	94
Commuter Students			
Student Academic Employee	3,108	324	379
Other Commuter Students	6,630	440	596
Other Permits			
Quarterly Guest/Emeritus	9,670	1,021	505
University Extension Permits	8,313	-	-
Daily Permit Sales	18,768	1,083	948
Other Parking (e.g. meters)	3,931	85	328
2-Wheel Vehicles/Thru Vehicles/Drop-offs	22,042	1,345	1,169
Campus Shuttles	2,948	229	245
Main/Southwest Campus	106,267	7,414	7,809
Wilshire Center	2,058	155	206
Cordon Total	108,325	7,569	8,015

EXISTING TRAFFIC CONDITIONS

Analysis of Existing Traffic Conditions

A detailed analysis of current traffic conditions was performed at the 18 study intersections in the vicinity of the Campus. An analysis of current traffic conditions was also conducted for seven freeway segments along the San Diego Freeway (I-405) and the Santa Monica Freeway (I-10).

The methodology used in this study for the analysis and evaluation of traffic operations at each study intersection is based on procedures outlined in Circular Number 212 of the Transportation Research Board.[2] In the discussion of Critical Movement Analyses for signalized intersections, procedures are outlined for determining operating characteristics of an intersection in terms of the Level of Service provided for different levels of traffic volume and other variables, such as the number of traffic signal phases. The term "Level of Service" describes the quality of traffic flow. Levels of Service A to C operate quite well. Level D typically is the level for which a metropolitan area street system is designed. Level E represents volumes at or near the capacity of the highway, which will result in possible stoppages of momentary duration and fairly unstable flow. Level F occurs when a facility is overloaded, and is characterized by stop-and-go traffic with stoppages of long duration.

A determination of the Level of Service ("LOS") at an intersection, where traffic volumes are known or have been projected, can be obtained through a summation of the critical movement volumes at that intersection. Once the sum of critical movement volumes has been obtained, the values indicated in Table 9 can be used to determine the applicable Level of Service.

---

[2] Interim Materials on Highway Capacity, Circular Number 212, Transportation Research Board, Washington, D.C., 1980.

Table 9
Critical Movement Volume Ranges
For Determining Levels of Service*

Level of Service	Maximum Sum of Critical Volumes (VPH) Two Phase	Three Phase	Four or More Phases
A	900	855	825
B	1,050	1,000	965
C	1,200	1,140	1,100
D	1,350	1,275	1,225
E	1,500	1,425	1,375
F	----------Not Applicable----------		

* For planning applications only, i.e., not appropriate for operations and design applications.

Capacity is defined herein to represent the maximum total hourly movement volume which has a reasonable expectation of passing through an intersection under prevailing roadway and traffic conditions. For planning purposes, capacity equates to the maximum value of LOS E, as indicated in Table 9. The Critical Movement Analysis ("CMA") indices used in this study were calculated by dividing the sum of critical movement volumes by the appropriate capacity value for the type of signal control present or proposed at the study intersections. Thus, the LOS corresponding to a range of CMA values is shown in Table 10.

Table 10
Level of Service
As a Function of CMA Values

Level of Service	Range of CMA Values
A	<= 0.60
B	0.601 - 0.700
C	0.701 - 0.800
D	0.801 - 0.900
E	0.901 - 1.000
F	>1.000

By applying this analysis procedure to the study intersections, the CMA values and the corresponding LOS values for the existing summer session traffic conditions were determined. Those values, for existing, AM and PM peak hour conditions (year 2001), are shown in Table 11(a) for the regular session and in Table 11(b) for the summer session.

As the values in Table 11 indicate, 10 of the 18 study intersections during the regular session and 11 of the 18 study intersections during the summer session are presently operating at Levels of Service A to D during both peak hour periods. Those study intersections that are operating at LOS E or F at one or both of the peak hours are located along Church Lane, Sunset Boulevard, Montana Avenue and Wilshire Boulevard.

Table 11(a)
Critical Movement Analysis Summary
Existing (2001) Traffic Conditions During Regular Session

Intersection		AM Peak Hour CMA	AM Peak Hour LOS	PM Peak Hour CMA	PM Peak Hour LOS
1.	Church Ln. / Ovada Pl. and Sepulveda Blvd.	0.925	E	0.960	E
2.	San Diego Fwy S/B On/Off Ramps and Church Ln.	0.950	E	0.953	E
3.	Sunset Blvd. and Church Ln.	0.884	D	0.814	D
4.	Sunset Blvd. and San Diego Fwy N/B On/Off Ramps	0.823	D	0.544	A
5.	Sunset Blvd. and Veteran Ave.	0.892	D	0.820	D
6.	Sunset Blvd. and Bellagio Way	0.941	E	1.008	F
7.	San Diego Fwy N/B off-ramp and Sepulveda Blvd.	0.506	A	0.564	A
8.	Montana Ave. and Sepulveda Blvd.	0.931	E	0.890	D
9.	Montana Ave. and Levering Ave.	1.012	F	0.837	D
10.	Montana Ave. / Gayley Ave. and Veteran Ave.	0.866	D	0.999	E
11.	Strathmore Pl. and Gayley Ave.	0.697	B	0.619	B
12.	Levering Ave. and Veteran Ave	0.491	A	0.637	B
13.	Le Conte Ave. and Gayley Ave.	0.646	B	0.548	A
14.	Weyburn Ave. and Gayley Ave.	0.421	A	0.691	B
15.	Constitution Ave. and Sepulveda Blvd.	0.415	A	0.590	A
16.	Wilshire Blvd. and Sepulveda Blvd.	1.056	F	1.065	F
17.	Wilshire Blvd. and Veteran Ave.	0.934	E	1.361	F
18.	Wilshire Blvd. And Gayley Ave.	0.689	B	0.785	C

Table 11(b)
Critical Movement Analysis Summary
Existing (2001) Traffic Conditions During Summer Session

Intersection		AM Peak Hour CMA	AM Peak Hour LOS	PM Peak Hour CMA	PM Peak Hour LOS
1.	Church Ln. / Ovada Pl. and Sepulveda Blvd.	0.779	C	0.971	E
2.	San Diego Fwy S/B On/Off Ramps and Church Ln.	0.973	E	1.193	F
3.	Sunset Blvd. and Church Ln.	0.767	C	0.927	E
4.	Sunset Blvd. and San Diego Fwy N/B On/Off Ramps	0.760	C	0.413	A
5.	Sunset Blvd. and Veteran Ave.	0.812	D	0.867	D
6.	Sunset Blvd. and Bellagio Way	0.939	E	1.042	F
7.	San Diego Fwy N/B off-ramp and Sepulveda Blvd.	0.434	A	0.509	A
8.	Montana Ave. and Sepulveda Blvd.	0.668	B	0.850	D
9.	Montana Ave. and Levering Ave.	0.859	D	0.748	C
10.	Montana Ave. / Gayley Ave. and Veteran Ave.	0.778	C	0.969	E
11.	Strathmore Pl. and Gayley Ave.	0.623	B	0.466	A
12.	Levering Ave. and Veteran Ave	0.489	A	0.633	B
13.	Le Conte Ave. and Gayley Ave.	0.567	A	0.519	A
14.	Weyburn Ave. and Gayley Ave.	0.406	A	0.779	C
15.	Constitution Ave. and Sepulveda Blvd.	0.376	A	0.531	A
16.	Wilshire Blvd. and Sepulveda Blvd.	0.973	E	1.000	E
17.	Wilshire Blvd. and Veteran Ave.	0.847	D	1.292	F
18.	Wilshire Blvd. And Gayley Ave.	0.647	B	0.742	C

Analysis of Existing Freeway Conditions

An examination was also made of freeway conditions on the two regional facilities within the project study area. The seven freeway segments listed below were selected for this analysis.

1. San Diego Freeway (I-405) south of Santa Monica Freeway
2. San Diego Freeway (I-405) between Santa Monica Freeway and Santa Monica Blvd.
3. San Diego Freeway (I-405) between Wilshire Blvd. and Santa Monica Blvd.
4. San Diego Freeway (I-405) between Sunset Blvd. and Wilshire Blvd.
5. San Diego Freeway (I-405) north of Sunset Blvd.
6. Santa Monica Freeway (I-10) between Bundy Dr. and San Diego Freeway
7. Santa Monica Freeway (I-10) between Overland Ave. and National Blvd.

Current traffic volumes on these freeway segments were obtained from several sources. Daily, AM and PM peak hour traffic volumes on the segments analyzed were obtained from the most current Caltrans data.[3] In addition, AM and PM peak hour directional splits were taken from the Los Angeles County 1999 Congestion Management Program ("CMP"). All of the freeway traffic volumes from 2000 were growth-factored by one percent to reflect year 2001 traffic conditions, per CMP traffic forecasting procedures. Existing freeway geometrics (e.g., number of mainline travel lanes) for each of the segments analyzed were determined from CMP data, aerial photographs and field surveys. Segment peak hour traffic capacities were computed for each direction using established Highway Capacity Manual ("HCM") methodology. As detailed in procedures discussed in the HCM Chapter 3, each mainline travel lane was assumed to have a capacity of 2,000 vehicle per hour (VPH). The total directional capacities were then computed, and used in conjunction with the previously determined peak hour directional freeway segment volumes to calculate the existing 2001 freeway levels of services in the

[3] 2000 Traffic volumes on California State Highways, Caltrans Website.

project vicinity. These values are shown in Table 12.

As shown in Table 12, many study segments on the San Diego Freeway (I-405) and the Santa Monica Freeway (I-10) currently operate at or above its design capacities during at least one of the peak hours, resulting in severe congestion and travel speeds of less than 25 miles per hour.

Table 12
Existing (2001) Freeway Volumes and Levels of Service

No.	Location	Peak Hour	Dir.	No. Lanes	Freeway Capacity	Daily Volume	Peak Hr Volume	D/C	LOS
1.	San Diego Fwy.	AM	N/B	5	10,000	307,000	12,430	1.243	F(0)
	(I-405) South of	PM		5	10,000		11,190	1.119	F(0)
	Santa Monica Fwy.	AM	S/B	5	10,000		7,450	0.745	C
		PM		5	10,000		10,420	1.042	F(0)
2.	San Diego Fwy.	AM	N/B	5	10,000	313,100	8,250	0.825	D
	(I-405) Btwn. Santa	PM		5	10,000		11,350	1.135	F(0)
	Monica Fwy. &	AM	S/B	5	10,000		11,910	1.191	F(0)
	Santa Monica Blvd.	PM		5	10,000		10,570	1.057	F(0)
3.	San Diego Fwy.	AM	N/B	6	12,000	291,900	7,720	0.643	C
	(I-405) Btwn.	PM		6	12,000		11,280	0.940	E
	Wilshire Blvd. &	AM	S/B	6	12,000		11,140	0.928	D
	Santa Monica Blvd.	PM		6	12,000		9,230	0.769	C
4.	San Diego Fwy.	AM	N/B	5	10,000	264,600	6,906	0.696	C
	(I-405) Btwn.	PM		5	10,000		11,940	1.194	F(0)
	Sunset Blvd. &	AM	S/B	5	10,000		10,040	1.004	F(0)
	Wilshire Blvd.	PM		5	10,000		6,540	0.654	C
5.	San Diego Fwy.	AM	N/B	5	10,000	262,600	6,850	0.685	C
	(I-405) North of	PM		5	10,000		11,740	1.174	F(0)
	Sunset Blvd.	AM	S/B	4	8,000		9,880	1.235	F(0)
		PM		4	8,000		6,440	0.805	D
6.	Santa Monica Fwy.	AM	W/B	5	10,000	255,500	7,580	0.758	C
	(I-10) Btwn.	PM		5	10,000		9,840	0.984	E
	Bundy Dr. &	AM	E/B	5	10,000		10,070	1.007	F(0)
	San Diego Fwy.	PM		5	10,000		9,350	0.935	E
7.	Santa Monica Fwy.	AM	W/B	4	10,000	267,700	7,410	0.741	C
	(I-10) Btwn.	PM		4	10,000		7,540	0.754	C
	Overland Ave. &	AM	E/B	5	8,000		8,380	1.048	F(0)
	National Blvd.	PM		5	8,000		9,630	1.204	F(0)

Note: LOS designations based on criteria detailed in Appendix D, Exhibit D6, page D-40, 1997, Los Angeles County CMP.

STUDY METHODOLOGY

COMPUTER MODEL OVERVIEW

Future traffic volumes for the project study area were projected using a micro-computer version of the Southern California Association of Government's ("SCAG") Transportation Model. This model projects future traffic conditions (for academic year 2010/11[4]) assuming current trends in regional growth. For this study, various changes were incorporated into the model to account for future highway improvements, projections of local and on-campus growth (from previously-approved projects), and implementation of mitigation measures (including those transportation demand control measures adopted for the 1990 LRDP and capacity enhancements for recently-approved UCLA projects). In addition, key assumptions about campus transportation programs (such as continued implementation of TDM programs) were factored into future projections of campus parking demand and trip generation. The following sections describe the regional computer model, the ways in which the regional model was modified for this study, and other relevant assumptions used in this analysis.

Model Refinements

The transportation model used for this study is based on a regional model developed by SCAG which incorporates a regional land use database developed in consultation with local jurisdictions and a highway network developed with input from transportation agencies throughout the region. The parameters of the model (trip generation rates, roadway capacity, etc.) have been calibrated to closely replicate the transportation patterns unique to the Southern California region. The model and modeling procedures

[4] To provide a conservative analysis, although the LRDP is based on academic years, the future year modeled for this study was 2011. Throughout this document, future traffic conditions, or future year 2011 conditions is intended to reflect traffic conditions during the academic year 2010/11.

used in this study are described more fully in Appendix C of this report. Because the SCAG model covers a five-county region (including Los Angeles, Ventura, Orange, San Bernardino and Riverside Counties), it must be adapted to more accurately reflect local conditions within the study area. For this study, the roadway network contained within the SCAG model was refined to reflect the highway network in the study area. Additional roadway "links" were added to represent the streets and highways in and around the project vicinity, including the UCLA Campus and Westwood area. Field surveys were used to document roadway geometrics, turning restrictions, traffic signal phasing, on-street parking and other factors which may affect vehicle travel speeds and routes.

Future Highway Improvements

After the model has been refined to reflect current conditions within the study area, the model was further refined to account for future highway improvements, so that future traffic conditions reflect those improvements. This includes only those improvements now under construction or for which implementation is reasonably assured (e.g., already funded, or included in an adopted transportation program). These improvements include provision of High-Occupancy Vehicle (HOV) or "carpool" lanes on the San Diego Freeway, as well as those programmed for the Golden State, Hollywood and Antelope Valley Freeways. Other potential improvements which may not be implemented by year 2011 were not included, such as trip-reduction measures required by the South Coast Air Quality Management District (SCAQMD) and the Los Angeles County Congestion Management Program (CMP).

Cumulative Traffic Growth/Related Projects

To develop projections of future traffic conditions in the study area, the SCAG transportation model uses current land use data and socioeconomic projections to estimate future traffic volumes on regional highways and major streets. The socioeconomic data is developed for the SCAG Regional Plan and Comprehensive Guide (RCPG) and is updated on a periodic basis in consultation with relevant jurisdictions charged with regulating development in the five county area.

Because the SCAG model covers a five-county region, it must be adapted to more accurately reflect local conditions within the study area. Both current land use data and future socio-economic projections were disaggregated to smaller zones in the study area to better replicate traffic access patterns and provide a finer level of detail.

In addition to regional projections of future growth, the traffic study also accounted for the impact of previously-approved or other "reasonably foreseeable" projects on the UCLA campus and the study area. Using information gathered from the City of Los Angeles and UCLA, a variety of "related projects" were identified, including those projects which are completed but not fully occupied, are currently under construction or beginning construction, or are presently only proposed but which could become operational by 2011. A list of the non-UCLA related projects for this study is provided in Table 13(a). Figure 7 depicts the location of all non-UCLA related projects. This list represents all projects within a 2 ½ mile radius of the Campus center. This includes all related projects anticipated to have a potential significant impact at study intersections.

A list of all UCLA projects that are approved, under construction or analyzed in a certified EIR and are reasonably foreseeable is provided in Table 13(b).

Table 13(a)
Non-UCLA Related Projects

No.	Description	Location	MDU	Retail Employees	Non-Retail Employees	Total Employees
1.	19,000 sf Whole Foods Supermarket	1050 Gayley Ave.	0	235	0	235
	937 seat Movie Theater(Previous Use)		0	(28)	0	(28)
	10,500 sf Restaurant(Previous Use)		0	(23)	0	(23)
			0	184	0	184
2.	115,000 sf Shopping Center	1001 Tiverton Ave.	0	253	0	253
	350 DU Apartment		350	0	0	0
			350	253	0	253
3.	19 DU Apartment	10852 Lindbrook Ave.	19	0	0	0
	6,100 sf Specialty Retail		0	13	0	13
	16,100 sf Specialty Retail(Previous Use)		0	(35)	0	(35)
			19	(22)	0	(22)
4.	107 DU Condominium	10804 Wilshire Blvd.	107	0	0	0
5.	6 Pump Gas Station w/ Convenience Market	10991 Santa Monica Blvd.	0	22	0	22
6.	71,000 sf Century City Shopping Center	10250 Santa Monica Blvd.	0	156	0	156
7.	791,000 sf General Office	10270 Constellation Blvd.	0	0	3,164	3,164
8.	ABC Entertainment Center	2000 Avenue of the Stars	0	(487)	1,724	1,238
9.	360,000 sf Fox Studio Expansion (remainder est.)	10201 W. Pico Blvd.	0	0	1,440	1,440
10.	2,300 sf Fast-Food Restaurant w/ Drive-thru	11021 W. Pico Blvd.	0	5	0	5
11.	74,653 sf Office Building	11110 W. Pico Blvd.	0	0	299	299
12.	330,000 sf Office	12233 W. Olympic Blvd.	0	0	1,320	1,320
	41,000 sf Office(Previous Use)		0	0	(164)	(164)
	6,000 sf Specialty Retail(Previous Use)		0	(13)	0	(13)
	16 Pump Gas Station(Previous Use)		0	(66)	0	(66)
			0	(79)	1,156	1,077
13.	1,140 sf Retail (Alcohol Permit)	11305 Santa Monica Blvd.	0	(3)	0	(3)

Table 13(a) cont.
Non-UCLA Related Projects

No.	Description	Location	MDU	Retail Employees	Non-Retail Employees	Total Employees
14.	Harvard-Westlake Middle School-	700 N. Faring Rd.				
	24 students (net), 15 employees (net)		0	0	15	15
15.	95,000 sf Office	Wilshire Bl and	0	0	380	380
	9,633 sf Retail (Previous Use)	Santa Monica Bl.	0	(21)	0	(21)
			0	(21)	380	359
16.	20 du Condominium	137-147 Spalding Dr.	20	0	0	0
17.	15,000 sf Shopping Center	421-427 N. Beverly Dr.	0	33	0	33
	15,000 sf Office		0	0	60	60
			0	33	60	93
18.	15,000 sf Shopping Center	339 N. Rodeo Dr.	0	33	0	33
19.	5,000 sf Shopping Center	360 N. Rodeo Dr.	0	11	0	11
20.	41,500 sf Office	233-269 N. Beverly Dr.	0	0	166	166
21.	54,313 sf Shopping Center	11711 San Vicente Bl.	0	119	0	119
22.	1,900 sf Fast-Food Restaurant w/ Drive-thru	11712 San Vicente Bl.	0	4	0	4
23.	146,708 sf Office	11677 Wilshire Bl.	0	0	587	587

Table 13(b)
UCLA Projects*

Project	Net New GSF	Population Change
Men's Gym Staging Bldg (Wooden West)	33,025	0
Intramural Field Parking (Storage Space)	3,000	0
Physics and Astronomy	101,900	6
Luck Research Center	95,000	45
Southwest Campus Staging Building	75,000	0
Acosta Training Center	33,325	0
Gloria Kaufman Hall (Garden Dance Theater)	3,600	0
Nanosystems Engineering Facilities Plan	166,000	174
Southwest Campus Housing	882,000	37
Childcare	10,000	TBD
Total Net New GSF	1,402,850	262

Seismic Renovation	Renovation or Replacement GSF
Academic Health Center Replacement (Hospital, SRB1 & 2)	1,710,000
Dickson Art Center	146,000
Kinsey Hall	142,000
Men's Gym	103,300
Gloria Kaufman Hall (Dance)	81,000

Note: GSF = gross square feet; TBD = to be determined

*Includes projects that were not completed at the time of LRDP traffic counts, or that are reasonably foreseeable.

Source: UCLA, May 2002

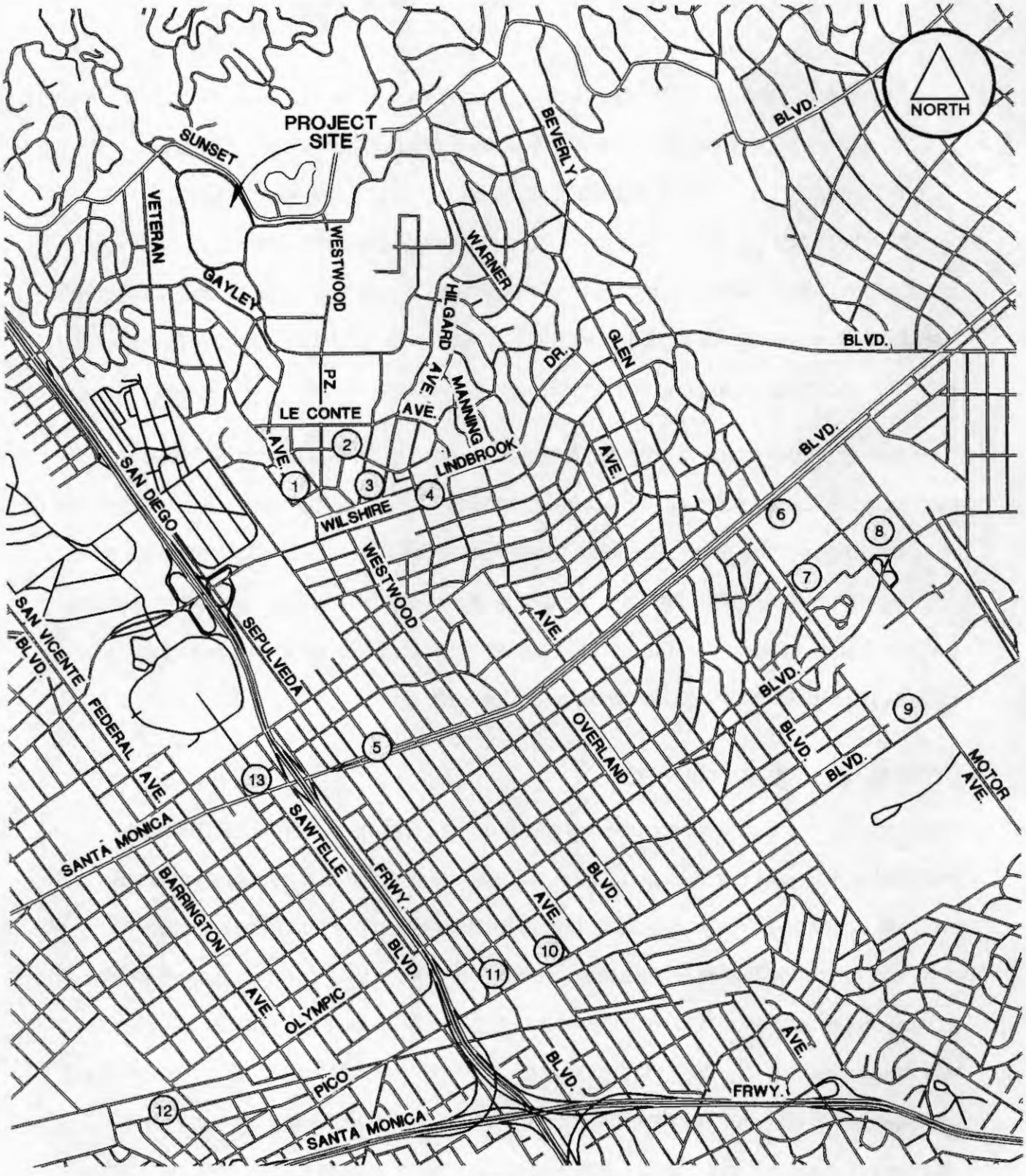

FIGURE 7

FN: UCLA NWH INFILLVRELPROJS

RELATED PROJECTS LOCATION MAP

CRAIN & ASSOCIATES
2007 Sawtelle Boulevard
Los Angeles, California 90025
(310) 473-6508
Transportation Planning · Traffic Engineering

The net effect of the UCLA related projects would include an increase of approximately 262 faculty and staff (associated with the Luck Research Center, the Southwest Campus project, the Physics and Astronomy Building, and the Nanosystems Engineering Facilities Plan), and provide on-campus housing for approximately 2,000 graduate resident students. In addition, net growth of approximately 3,552 additional parking spaces would be provided by the Replacement Hospital, Southwest Campus Housing and Intramural Field Parking Structure projects.

To estimate future traffic conditions, for each zone in the study area, the traffic volume that would result from the SCAG socioeconomic data was compared to the volumes that would result from the related projects (identified for that zone). The larger of the traffic volumes (from the SCAG data or the list of related projects) was added to the existing traffic volumes to estimate future traffic conditions. This was conservative in that the highest potential traffic volumes were used for each zone.

Campus Population Estimates

The population projections provided in this study as well as the 2002 LRDP study include two types of campus population counts: headcount and average weekday population. Although average weekday population is a more accurate estimate of the number of persons that are physically present on the campus during a typical weekday (based on reductions due to less than full time work and class schedules, vacations, sick days, sabbaticals, etc.), for the purposes of this analysis, headcount is generally used since the variation between headcount and average weekday attendance is reflected in the campus parking permit overissue factor, where the number of parking permits exceeds the physical number of spaces.

The distribution and assignment of trips was performed by the transportation computer model. The computer model produced and utilized the assignment of travel shown in Table 14. It should be noted that in order to better account for local trips, a relatively close model cordon (Sunset Boulevard, Beverly Glen Boulevard, Santa Monica Boulevard and the San Diego Freeway) was used as shown in Table 14 below. Thus, all trips are counted in the direction they leave campus. For instance, trips which travel southbound on the San Diego Freeway are counted as south directed trips even though some of these trips may then travel to the east on the Santa Monica Freeway.

Table 14 lists the direction for the portions of trips near the campus.

Table 14
Direction of Campus Trips

North	21%
South	38%
East	12%
West	18%
Local	11%

Campus Programs and Practices

Consistent with mitigation measures adopted for the 1990 LRDP, the campus has developed a range of programs and practices designed to reduce parking demand, minimize trip generation, encourage alternative transportation and increase on-campus housing. For the purposes of this study, it is assumed that those programs and practices will remain in effect. Although the specific elements of the Transportation Demand Management program may change over the planning horizon of the 2002 LRDP including the Northwest Campus Housing Infill Project, the overall commitments established in the 1990 LRDP and the average vehicle ridership goal established by the South Coast Air Quality Management District will remain in effect.

Under the 1990 LRDP, the campus adopted goals to expand on-campus housing and established limits for on-campus parking (at 25,169 spaces) and the number of vehicle trips that could be generated by the Campus (at 139,500 average daily trips). These limits form the backbone of UCLA's commitment to limiting the campus traffic impact on the local street and regional highway network.

Several other measures demonstrate this commitment as well. In 1985, the Commuter Assistance-Rideshare ("CAR") office was formed to administer UCLA's outreach to students and faculty/staff commuters. This office administers UCLA's vanpool program, which operates over 130 vanpools, in addition to a carpool program and other rideshare or trip-reduction support. In 1987, UCLA adopted a Transportation Systems Demand Management ("TSDM") Plan to further increase ridesharing among UCLA commuters. Continued expansion of this plan was included as a mitigation measure in the 1990 LRDP along with a goal of reducing faculty and staff parking demand 12 percent below pre-(1990) LRDP levels.

In addition to the daily trip cap of 139,500 average daily vehicle trips, the TMMA also established an AM peak period (7:00 to 9:30 AM) limit of 24,320 average daily trips and a PM peak period (3:00 to 6:30 PM) cap of 37,122 average daily trips. To monitor compliance with the trip caps included in the TMMA, UCLA conducts an annual "cordon count," which is a count of all vehicles entering and exiting campus during the third week in October (since the Fall Quarter has the greatest parking demand).

The trip impacts of individual projects are evaluated in conjunction with the CEQA review of those projects. If a project proposed during the LRDP planning horizon is estimated to cause the trip cap to be exceeded per LRDP Mitigation Measure C-1.5,

such project will not be occupied until appropriate trip reductions have been achieved, and the net effect of occupying the project will not cause the trip cap to be exceeded.

In order to facilitate this reduction in trips, UCLA is continuing and expanding its ridesharing program. The campus has achieved an Average Vehicle Ridership ("AVR") of 1.5, a goal established by the Southern California Air Quality Management District ("SCAQMD") to reduce air pollution and traffic congestion. As part of the 2002 LRDP, which includes the Northwest Campus Housing Infill Project, the campus would continue to meet or exceed this 1.5 AVR goal. The ridesharing measures necessary to maintain this AVR goal will assist the campus to maintain the trip caps established in the 1990 LRDP (and TMMA), and achieve trip reductions through alternative mode usage.

In addition, the campus has continued to pursue an aggressive housing program, including the construction of on-campus housing, and the development and acquisition of off-campus housing, primarily for students. These housing programs, such as the proposed Northwest Campus Housing Infill Project, further reduce the generation of campus regional vehicle trips.

In summary, the Campus has: 1) adopted trip generation caps and a parking inventory cap; 2) adopted and surpassed a parking-demand reduction target for faculty and staff; and 3) achieved an AVR goal of 1.5 riders per vehicle. The Campus proposes to retain the parking and trip caps, maintain the parking reduction target, and maintain the AVR goal during the planning horizon for the 2002 LRDP. These policies will continue to minimize the potential traffic and parking impacts of the 2002 LDRP including the Northwest Campus Housing Infill Project. The specific components of the TDM Program may change over time as the campus strives for the most cost-effective manner by which to maintain achievement of its required goals, so long as the overall

effectiveness of the program is not compromised (as embodied in the parking cap, the trip cap, and the average vehicle ridership goal).

PROJECT IMPACTS

SIGNIFICANCE THRESHOLDS

Under CEQA, each local jurisdiction must determine which traffic (and other environmental) impacts it considers "significant". For this study, significant project-related traffic impacts at study intersections are defined by the University of California, which is the lead agency for the project. For the UCLA campus, the University uses the City of Los Angeles significance criteria.

The City of Los Angeles defines a significant traffic impact based on a "stepped scale," with intersections at high volume-to-capacity ratios being more sensitive to additional traffic than those operating with available surplus capacity. A significant impact is identified as an increase in the CMA value of 0.010 or more, when the final ("With Project") LOS is E or F; a CMA increase of 0.020 or more when the final LOS is D, or an increase of 0.040 or more at LOS C. No significant impacts are deemed to occur at LOS A or B, as these operating conditions exhibit sufficient surplus capacities to accommodate large traffic increases with little effect on traffic delays.

The Los Angeles County Congestion Management Plan ("CMP") identifies an impact of less than two percent or a final ("With Project") Level of Service of E or better as less than significant. The University has adopted this significance criteria for freeway traffic impacts.

Criteria have not been set for public transit. However, to exceed the total capacity of a route would be considered adverse. A project contributing more than two percent to this excess would be considered significant by the Congestion Management Plan.

FUTURE "WITHOUT PROJECT" CONDITIONS

To estimate the future traffic volumes (for the year 2011) that would result from implementation of any approved new specific projects but without the Northwest Campus Housing Infill Project, the UCLA related projects listed in Table 13(b) were analyzed to determine how those projects would impact the parking inventory and vehicle trip generation for the Campus. Based on traffic studies performed for the related projects (including the Southwest Campus Housing and the Intramural Field Parking Structure projects), UCLA trip generation rates (used since the 1990 LRDP) were modified by the 2002 LRDP study and used in this study, in order to estimate future UCLA trip rates for 2010/11, as shown in Table 15.

Table 15
UCLA On-Campus Trip Generation Rates
Future "Without Project" Conditions

	Regular Session			Summer Session		
	Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour
Faculty & Staff-Medical Center	1.504	0.190	0.195	1.354	0.171	0.175
Faculty & Staff-Other University	1.861	0.163	0.216	1.675	0.147	0.195
Resident Students						
Undergraduate	0.186	0.003	0.015	0.508	0.007	0.042
Graduate	0.959	0.091	0.101	0.958	0.092	0.100
Not Enrolled/Employed Off-Campus	N/A	N/A	N/A	3.350	0.280	0.400
Day's Conference Attendees	N/A	N/A	N/A	0.814	0.011	0.067
Commuter Students						
Student Academic Employee	1.348	0.141	0.164	1.213	0.126	0.148
Other Commuter Students	0.974	0.065	0.088	0.851	0.056	0.076
Quarterly Guest/Emeritus Permits	1.705	0.180	0.089	1.705	0.180	0.089
University Extension Permits	1.705	0.000	0.000	1.705	0.000	0.000
Daily Permit Sales	3.049	0.176	0.154	3.049	0.176	0.154

The trip rates in Table 15 indicate that development of the Southwest Campus Housing and Parking project would result in a new population "user group," of graduate student residents. In addition, due to an increase in the supply of on-campus parking

(associated with the related projects, including the Intramural Field Parking Structure), the per person trip rate for students would increase in the future (compared to current conditions, because more student permits would be available, and therefore more student trips would be generated).

Using the trip generation rates above, an estimate of the total number of vehicle trips that would be generated by the Campus in 2010/11 (without implementation of the 2002 LRDP and without the Northwest Campus Housing Infill Project) was developed, as shown in Table 16(a) and (b).

Table 16(a)
Future "Without Project" Trip Generation
(Regular Session)

Permit Group	Number	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
Faculty & Staff-Medical Center	5,617	8,449	1,066	1,094
Faculty & Staff-Other University	13,074	24,336	2,133	2,830
Resident Students				
Undergraduate	7,334	1,366	19	113
Graduate	2,000	1,917	182	201
Not Enrolled/Employed Off-Campus	0	0	0	0
Commuter Students				
Student Academic Employee	3,219	4,339	453	529
Other Commuter Students	21,757	21,190	1,407	1,904
Quarterly Guest/Emeritus Permits	5,671	9,670	1,021	505
University Extension Permits	5,336	9,099	0	0
Daily Permit Sales	6,155	18,768	1,083	948
Other Parking		3,931	85	328
Two-Wheeled/Through/Drop-Off Vehicles		22,042	1,345	1,169
Shuttles		2,948	229	245
Main/Southwest Campus		128,055	9,023	9,866
Wilshire Center	950	1,768	155	206
Cordon Total		129,823	9,178	10,072

As shown in Table 16(a), in the future, the UCLA Campus would generate approximately 129,823 average daily trips, 9,178 trips during the morning peak hour, and 10,072 trips during the afternoon peak during the regular session, without implementation of the 2002 LRDP including the Northwest Campus Housing Infill project. This would represent an increase of approximately 8,024 average daily trips, 518 trips during the AM peak hour, and 675 trips during the PM peak hour, compared to current conditions (for 2000/01).

During the summer, the UCLA Campus would generate approximately 113,543 daily trips, 7,959 AM peak hour trips and 8,569 PM peak hour trips, as shown in Table 16(b).

Table 16(b)
Future "Without Project" Trip Generation
(Summer Session)

Permit Group	Number	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
Faculty & Staff-Medical Center	5,617	7,604	959	985
Faculty & Staff-Other University	13,074	21,903	1,920	2,547
Resident Students				
Undergraduate	715	363	5	30
Graduate	599	574	55	60
Not Enrolled/Employed Off-Campus	1,401	4,694	392	560
Day's Conference Attendees	1,395	1,135	16	94
Commuter Students				
Student Academic Employee	2,049	2,486	259	303
Other Commuter Students	7,710	6,558	435	589
Quarterly Guest/Emeritus Permits	5,671	9,670	1,021	505
University Extension Permits	5,336	9,099	0	0
Daily Permit Sales	6,155	18,768	1,083	948
Other Parking		3,931	85	328
Two-Wheeled/Through/Drop-Off Vehicles		22,042	1,345	1,169
Shuttles		2,948	229	245
Main/Southwest Campus		111,775	7,804	8,363
Wilshire Center	950	1,768	155	206
Cordon Total		113,543	7,959	8,569

To estimate future traffic volumes for the year 2011 (without implementation of the 2002 LRDP including the Northwest Campus Housing Infill Project), a future traffic scenario was then developed that added forecast traffic growth (from the SCAG socioeconomic data) and traffic from the related projects (that were assumed to be developed by year 2011) to existing traffic volumes. The resulting traffic volumes (for the year 2011) reflect the expected future "Without Project" conditions, which are shown in Figures 8 and 9. These volumes represent ambient traffic growth and cumulative development in the study area and provide a future "baseline" against which the effects of project-related traffic (from the Northwest Campus Housing Infill Project) can be determined.

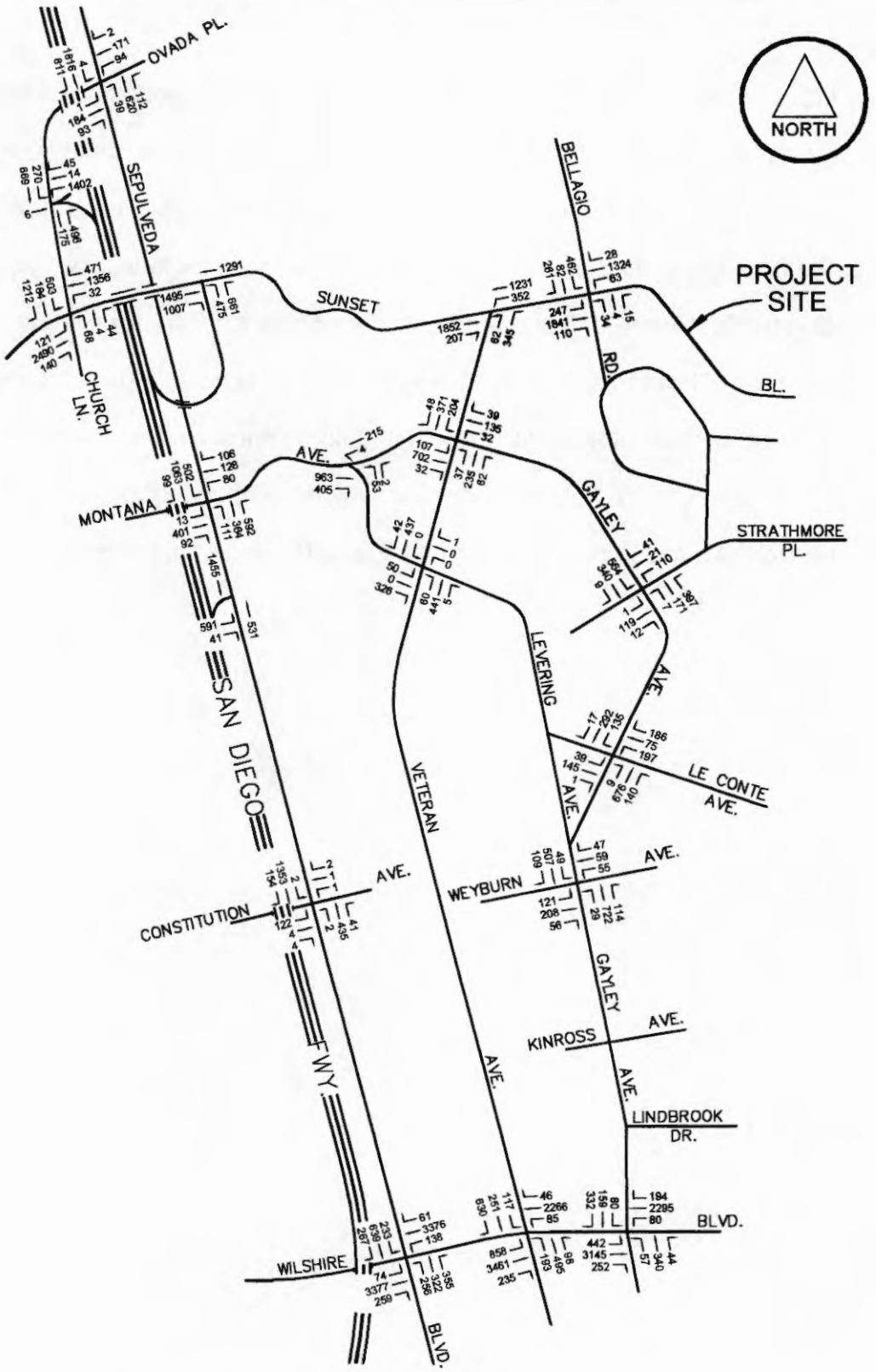

FIGURE 8(a)

FN: UCLA NWH INFILL\AM2011WO

FUTURE (2011) TRAFFIC VOLUMES
WITHOUT PROJECT (REGULAR SESSION)
AM PEAK HOUR

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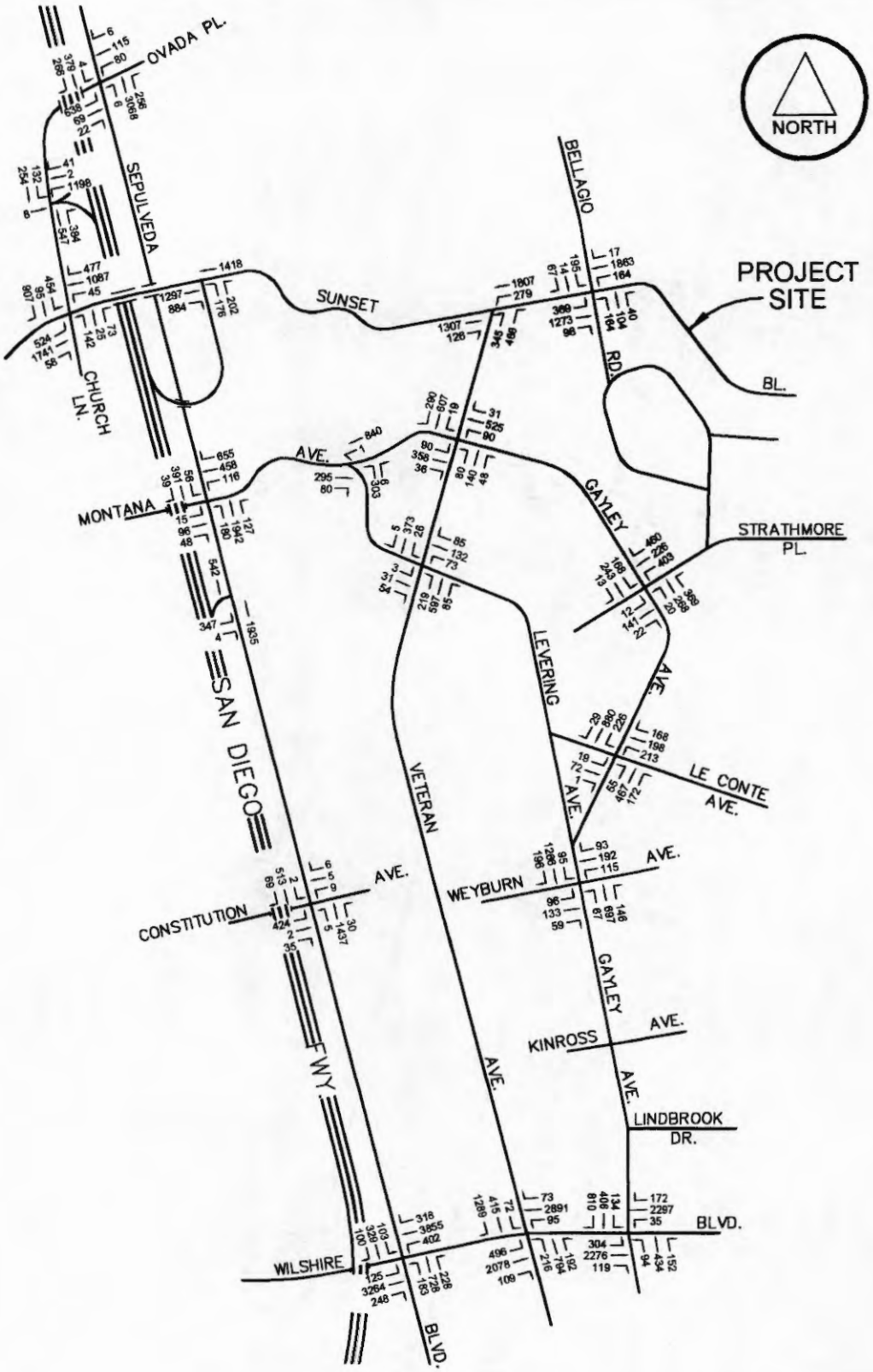

FIGURE 8(b)

FN: UCLA NWH INFILL\PM2011WO

FUTURE (2011) TRAFFIC VOLUMES
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PM PEAK HOUR

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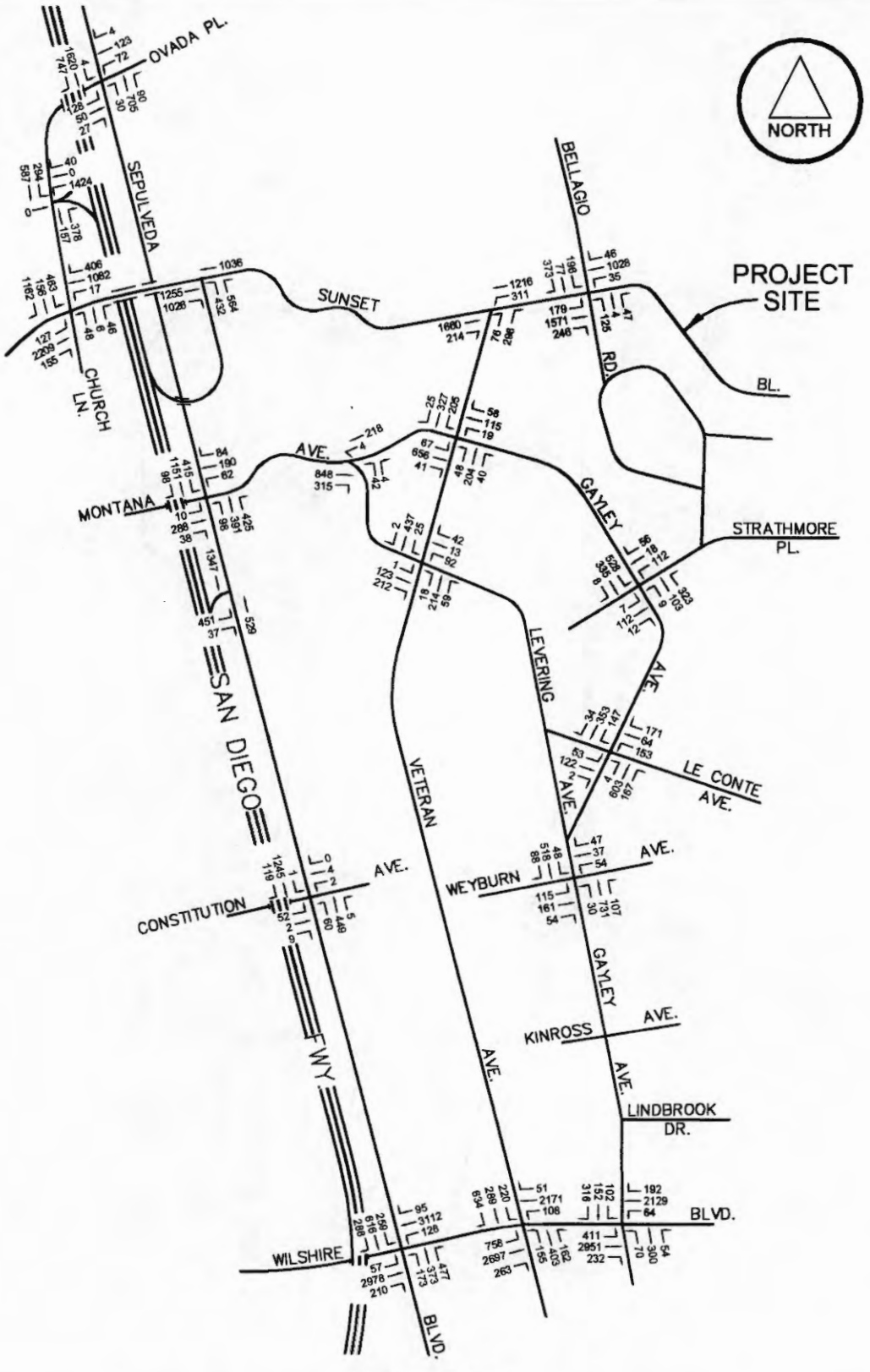

FIGURE 9(a)

FN: UCLA NMH INFILL\AM2011WO-SUMMER

FUTURE (2011) TRAFFIC VOLUMES
WITHOUT PROJECT (SUMMER SESSION)
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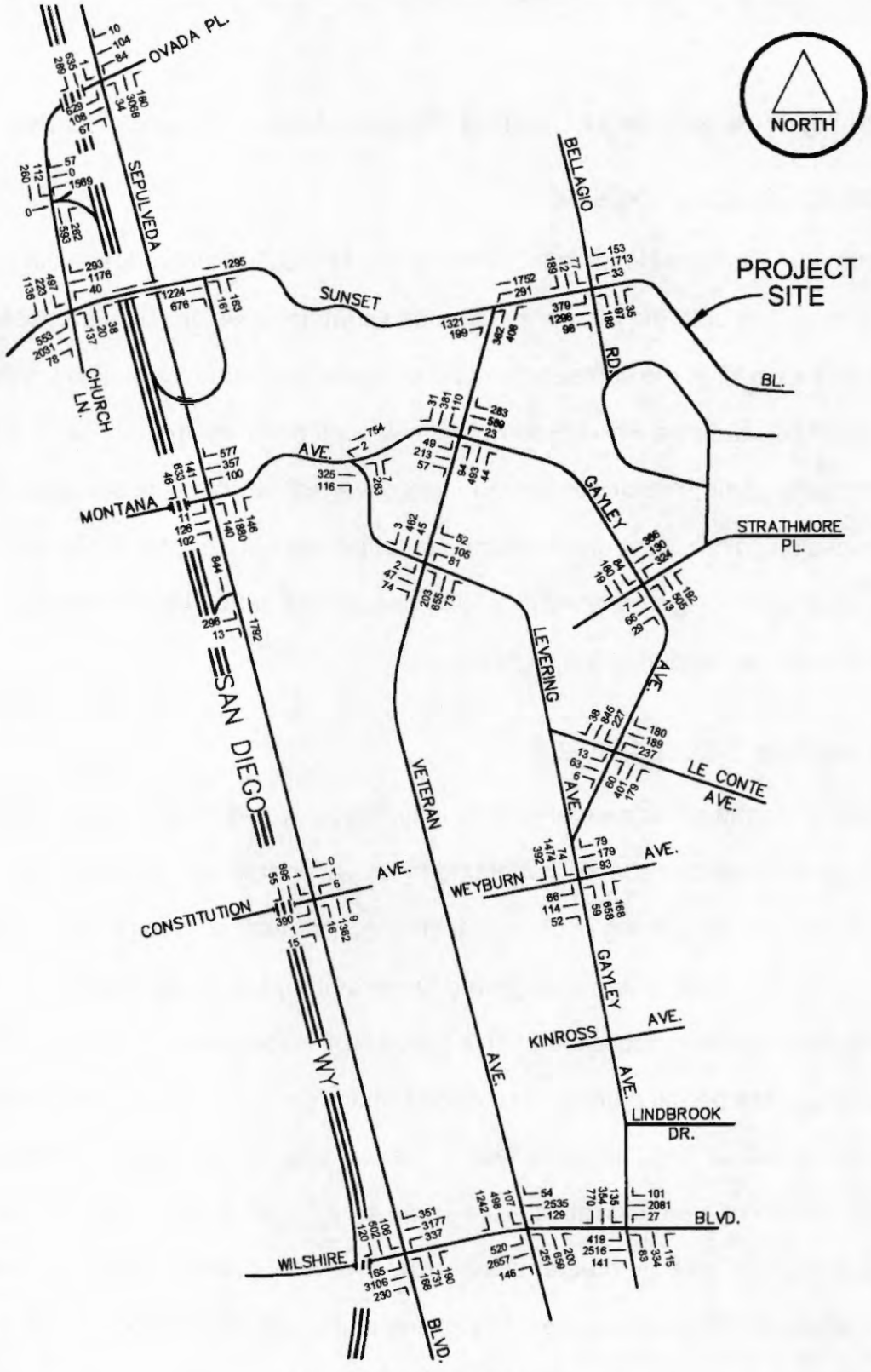

FIGURE 9(b)

FN: UCLA HWH INFILL\PM2011WO-SUMMER

FUTURE (2011) TRAFFIC VOLUMES
WITHOUT PROJECT (SUMMER SESSION)
PM PEAK HOUR

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FUTURE "WITH NORTHWEST CAMPUS HOUSING INFILL PROJECT" CONDITIONS

Changes in Campus Population

The Northwest Campus Housing Infill Project would result in increases in the campus population, during both the regular session and summer session. The proposed project would add 246 staff to the campus during the regular and summer session. About 35 of these would be students, who would not receive staff parking. In addition, 1,675 undergraduate commuter students would be converted into resident students during the regular session. There was also assumed to be an increase of 318 conference attendees on an average summer day. (No bed spaces would be available for conference attendees during the regular session.)

Future Campus Parking Demand

Because the Northwest Campus Housing Infill Project would result in an increase in staff and visitors and the conversion of undergraduate commuter students into resident students, demand for parking could also increase. An analysis of potential demand was conducted to determine whether projected future demand could be accommodated within the parking cap established by the 1990 LRDP. This analysis included an assessment of the permit demand associated with projected increases in faculty/staff and other individuals (e.g., emeritus faculty, visitors and medical patients) using current (Year 2001) parking demand ratios [from Table 4(c)]. Then it was assumed that the campus would increase the on-campus parking inventory (during the planning horizon of the Northwest Campus Housing Infill project) to 25,169 spaces (the current inventory plus the increase due to approved projects plus the proposed project changes) as shown in Table 17. Given parking demand for faculty, staff, on-campus residents, and other permits (e.g., guest, emeritus faculty and visitors), the future number of on-

campus parking spaces that would be available for commuter students was estimated. The results of this analysis are shown in Table 17(a), which indicates that approximately 5,463 on-campus parking spaces would be available to meet commuter student demand, which would correspond to approximately 9,254 student parking permits. The resulting ratio of permits issued to commuter students to total commuter students of 0.46 would be higher than the existing ratio of 0.28, as shown in Table 4(c). Therefore, future parking demand associated with the implementation of the Northwest Campus Housing Infill Project can be accommodated within the number of proposed spaces, which is at the 1990 LRDP parking cap of 25,169 on-campus spaces.

Table 17(a)
Future On-Campus Regular Session Parking Allocation
With Northwest Campus Housing Infill Project

Permit Group	Number	Parking Permits	Spaces
Faculty & Staff-Medical Center	5,617	4,655	3,231
Faculty & Staff-Other University	13,285	10,421	7,289
Resident Students			
Undergraduate	9,009	1,031	667
Graduate	2,000	1,917	1,917
Not Enrolled/Employed Off-Campus	0	0	0
Commuter Students			
Student Academic Employee	3,219	2,072	1,446
Other Commuter Students	20,082	9,254	5,463
Other Permits			
Quarterly Guest/Emeritus Permits	5,671	5,671	2,477
University Extension Permits	5,336	5,336	0
Daily Permit Sales	6,155	6,155	2,131
Other Parking	--	--	548
Total Spaces			25,169

Table 17(b)
Future On-Campus Summer Session Parking Allocation
With Northwest Campus Housing Infill Project

Permit Group	Number	Parking Permits	Spaces
Faculty & Staff-Medical Center	5,617	4,655	3,231
Faculty & Staff-Other University	13,285	10,421	7,289
Resident Students			
Undergraduate	878	274	177
Graduate	599	574	574
Not Enrolled/Employed Off-Campus	1,401	1,343	1,343
Day Conference Attendees	1,713	857	532
Commuter Students			
Student Academic Employee	2,049	1,319	920
Other Commuter Students	7,547	4,183	2,469
Other Permits			
Quarterly Guest/Emeritus Permits	5,671	5,671	2,477
University Extension Permits	5,336	5,336	0
Daily Permit Sales	6,155	6,155	2,131
Other Parking	--	--	548
Unsold Spaces			3,478
Total Spaces			25,169

Using the space and permit allocations and the population for each user group, future parking ratios can be developed, as shown in Table 18.

Table 18
Future Parking Ratios
With the Northwest Campus Housing Infill Project

Permit Group	Permits Per Person	Spaces Per Person (Regular Session)	Spaces Per Person Summer Session
Faculty & Staff-Medical Center	0.829	0.575	0.575
Faculty & Staff-Other University	0.784	0.549	0.549
Resident Students			
Undergraduate*	0.114	0.074	0.202
Graduate	0.959	0.959	0.959
Not Enrolled/Employed Off-Campus	0.959	0.959	0.959
Commuter Students			
Student Academic Employee	0.644	0.449	0.449
Other Commuter Students*	0.461	0.272	0.327
Other Permits			
Quarterly Guest/Emeritus Permits	1.000	0.437	0.437
University Extension Permits	1.000	0.000	0.000
Daily Permit Sales	1.000	0.346	0.346

* Permits per person during the summer for undergraduate resident students is 0.312 and for other commuter students is 0.554.

Table 18 indicates that future parking ratios would remain the same as current conditions (or the future "without project" conditions, which includes the effect of the related projects), except for commuter students, which would increase from the current 0.28 permits per students to a future ratio of 0.46 permits per students (due to the increased supply of parking). Because the student parking ratio would increase, the student waiting list for parking would decrease. The increase in the ratio of permits issued to commuter students to about 0.45 is the approximate 0.42 current ratio for commuter student applications to total students. The increase may eliminate the student waiting list. Therefore, the assumption that all spaces would be filled is a worst case scenario.

Future Campus Trip Generation

Future trip generation for the campus was estimated by adjusting the future "without project" trip rates (shown in Table 15) to account for the effects of the Northwest Campus Housing Infill Project, including an increase of 246 faculty and staff, the conversion of 1,675 undergraduate commuter students to on-campus resident students during the regular session and the net increase of 318 more conference attendees during the summer session.

The Future "Without Project" trip generation rates for year 2011, shown in Table 15, were updated to include the Northwest Campus Housing Infill Project and form the "With Project" scenario. The trip generation rates only needed to be modified for the commuter students. (Because the number of parking spaces available to commuter students would be increased compared to current conditions, the permit per person ratio, and therefore the trip per person ratio, would increase. All other parking allocation

ratios are assumed to remain the same.) The result of this modification is shown in Table 19, Future On-Campus Trip Generation Rates.

Table 19
Future (With Northwest Campus Housing Infill Project) On-Campus Trip Generation Rates

	Regular Session			Summer Session		
Permit Group	Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour
Faculty & Staff-Medical Center	1.504	0.190	0.195	1.354	0.171	0.175
Faculty & Staff-Other University	1.861	0.163	0.216	1.675	0.147	0.195
Resident Students						
Undergraduate	0.186	0.003	0.015	0.508	0.007	0.042
Graduate	0.959	0.091	0.101	0.958	0.092	0.100
Not Enrolled/Employed Off-Campus	N/A	N/A	N/A	3.350	0.280	0.400
Conference Attendees	N/A	N/A	N/A	0.814	0.011	0.067
Commuter Students						
Student Academic Employee	1.348	0.141	0.164	1.213	0.126	0.148
Other Commuter Students	1.041	0.069	0.094	1.253	0.083	0.112
Quarterly Guest/Emeritus Permits	1.705	0.180	0.089	1.705	0.180	0.089
University Extension Permits	1.705	0.000	0.000	1.705	0.000	0.000
Daily Permit Sales	3.049	0.176	0.154	3.049	0.176	0.154

Using the future generation rates, and the proposed future allocation of parking (shown in Table 19), an estimate of how each population group would contribute to overall campus trip generation (with the Northwest Campus Housing Infill Project) was developed, which is provided in Table 20(a) for the regular session. This breakdown also includes estimates for certain campus uses, such as Campus shuttle buses (which are assumed to be the same as for current conditions) and a single line entry that covers two-wheeled vehicles, through traffic and drop-off trips.

Table 20(a)
Future (With Northwest Campus Housing Infill Project) Campus Trip Generation (Regular Session)

Permit Group	Number	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
Faculty & Staff-Medical Center	5,617	8,449	1,066	1,094
Faculty & Staff-Other University	13,285	24,730	2,168	2,876
Resident Students				
Undergraduate	9,009	1,678	24	139
Graduate	2,000	1,917	182	201
Not Enrolled/Employed Off-Campus	0	0	0	0
Commuter Students				
Student Academic Employee	3,219	4,339	453	529
Other Commuter Students	20,082	20,912	1,388	1,879
Quarterly Guest/Emeritus Permits	5,671	9,670	1,021	505
University Extension Permits	5,336	9,099	0	0
Daily Permit Sales	6,155	18,768	1,083	948
Other Parking		3,931	85	328
Two-Wheeled/Through/Drop-off Vehicles		22,042	1,345	1,169
Shuttles		2,948	229	245
Main/Southwest Campus		128,483	9,044	9,913
Wilshire Center		1,768	155	206
Cordon Total		130,251	9,199	10,119

For an estimate of future summer trips [shown in Table 20(b)], 90 percent of the generation rates for regular session were used for all population groups and uses (except for students). The reduction accounts for faculty with nine-month appointments who don't conduct research on campus during the summer, and similarly lower employment levels for certain staff (e.g., food service employees). The lower number of student trips (compared to regular session) reflects the fewer number of students that are on campus during the summer.

Table 20(b)
Future (With Northwest Campus Housing Infill Project) Campus Trip Generation (Summer Session)

Permit Group	Number	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
Faculty & Staff-Medical Center	5,617	7,604	959	985
Faculty & Staff-Other University	13,285	22,257	1,951	2,589
Resident Students				
Undergraduate	878	446	6	37
Graduate	599	574	55	60
Not Enrolled/Employed Off-Campus*	1,401	4,694	392	560
Conference Attendees	1,713	1,395	20	116
Commuter Students				
Student Academic Employee	2,049	2,486	259	303
Other Commuter Students	7,547	9,453	627	849
Quarterly Guest/Emeritus Permits	5,671	9,670	1,021	505
University Extension Permits	5,336	9,099	0	0
Daily Permit Sales	6,155	18,768	1,083	948
Other Parking		3,931	85	328
Two-Wheeled/Through Vehicles		22,042	1,345	1,169
Shuttles		2,948	229	245
Main/Southwest Campus		115,367	8,032	8,694
Wilshire Center		1,768	155	206
Cordon Total		117,135	8,187	8,900

* This includes graduate students who are not enrolled in summer session and are assumed to be employed off-campus.

As shown in Table 20, future trip generation with the Northwest Campus Housing Infill Project for both the regular and summer session would remain below the cap of 139,500 average daily trips established by the 1990 LRDP. The table also shows that the project would have only 21 more AM peak hour trips and 47 more PM peak hour trips during the regular session, and 228 more AM peak hour and 331 more PM peak hour trips during the summer session.

By comparing the increase in trip generation between the "Without Project" and "With Project" scenarios, the net increase in traffic volumes associated with the Northwest Campus Housing Infill Project was identified, and are shown in Figure 10 for the regular

session and Figure 11 for the summer session. By adding the peak hour traffic volumes (associated with the Northwest Campus Housing Infill Project, shown in Figures 10 and 11) to the projected future traffic "Without Project" volumes for the year 2011 (shown in Figures 8 and 9), future total traffic volumes (that would occur with the Northwest Campus Housing Infill Project) can be estimated, as shown in Figure 12 for the regular session and Figure 13 for the summer session.

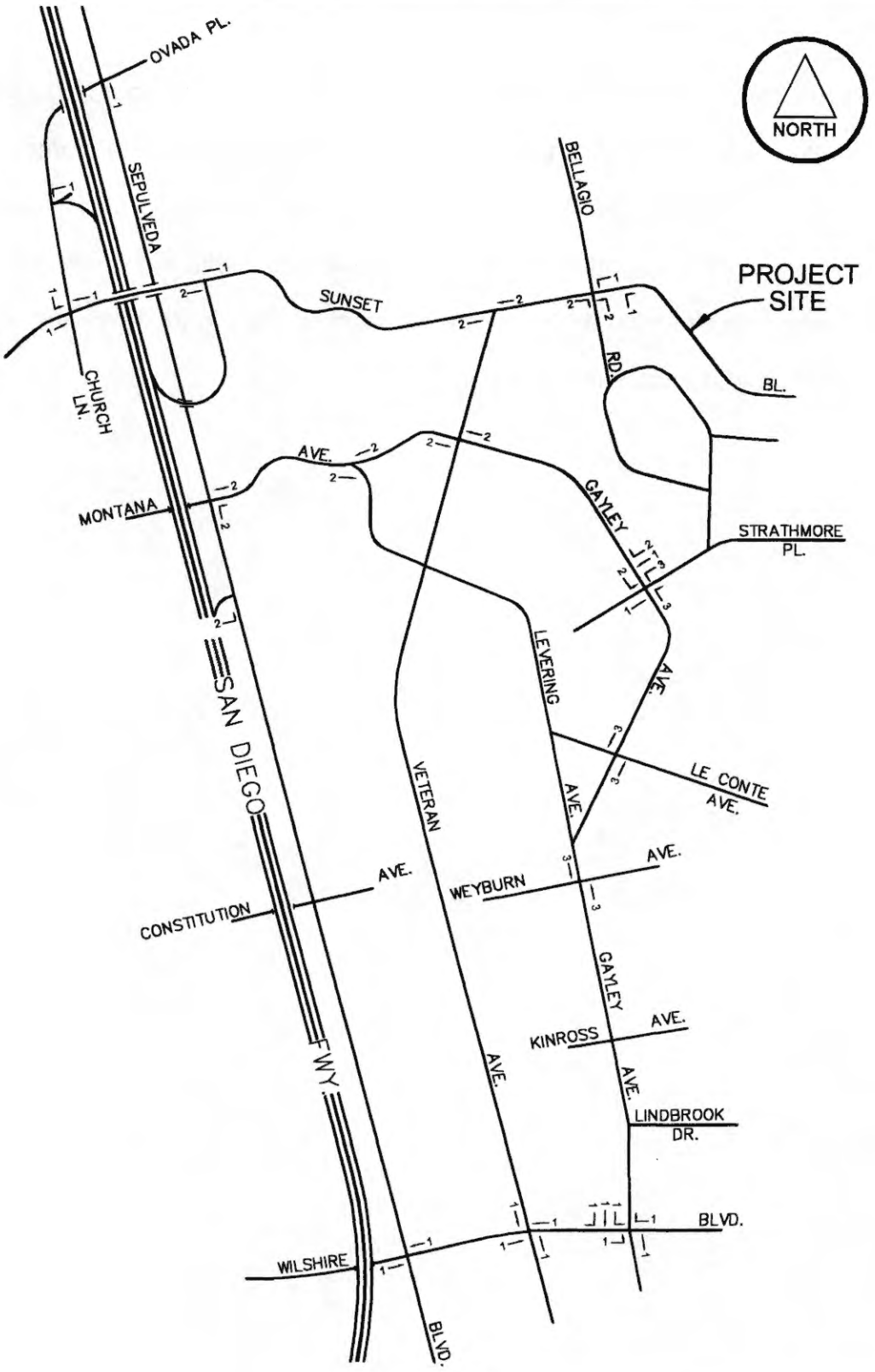

FIGURE 10(a)

FN: UCLA NWH INFILL\AM\NETPRJ-REGULAR

NET PROJECT TRAFFIC VOLUMES
REGULAR SESSION
AM PEAK HOUR

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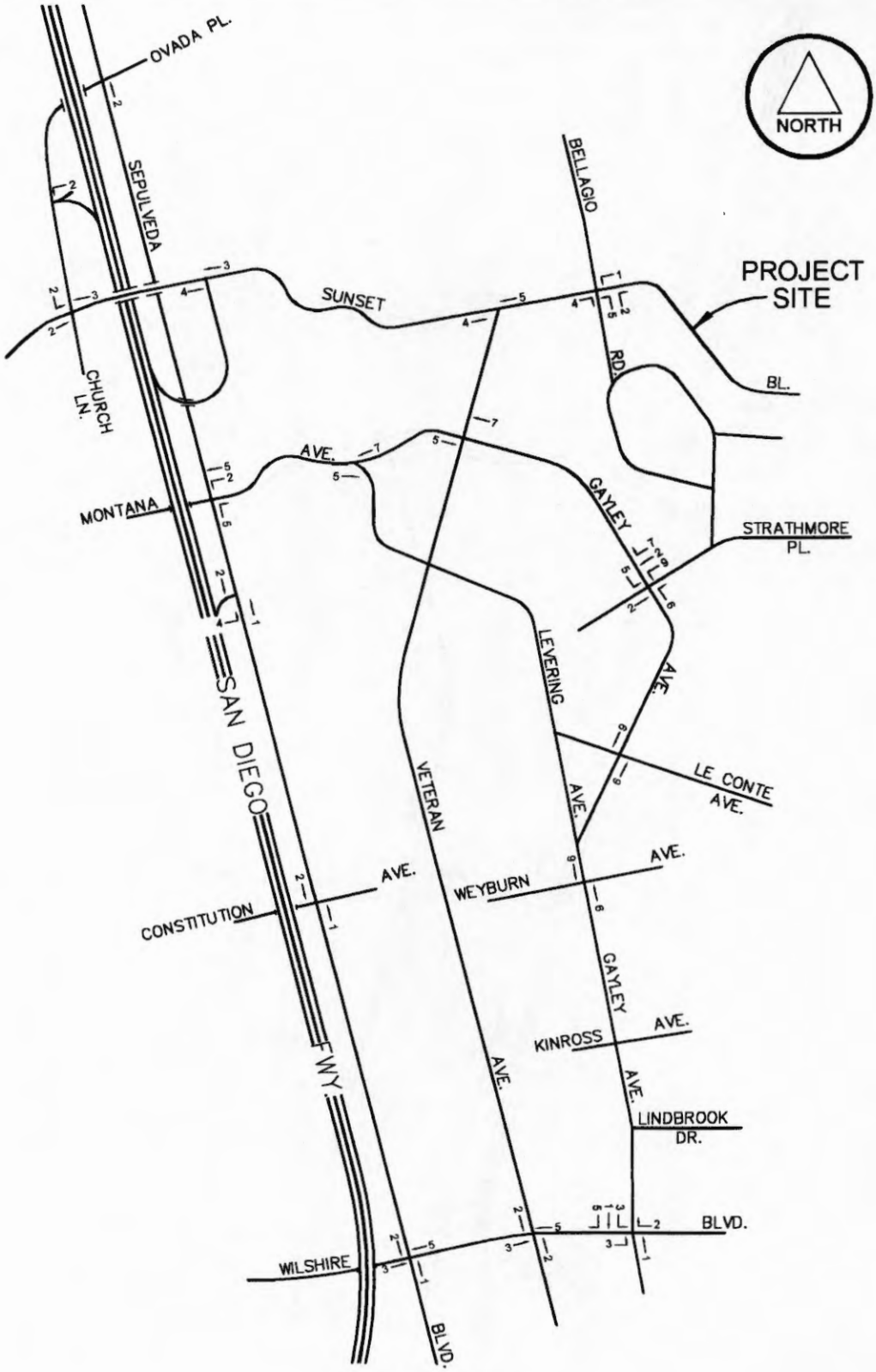

FIGURE 10(b)

FN: UCLA NWH INFILL\PM\NETPRJ-REGULAR

NET PROJECT TRAFFIC VOLUMES
REGULAR SESSION
PM PEAK HOUR

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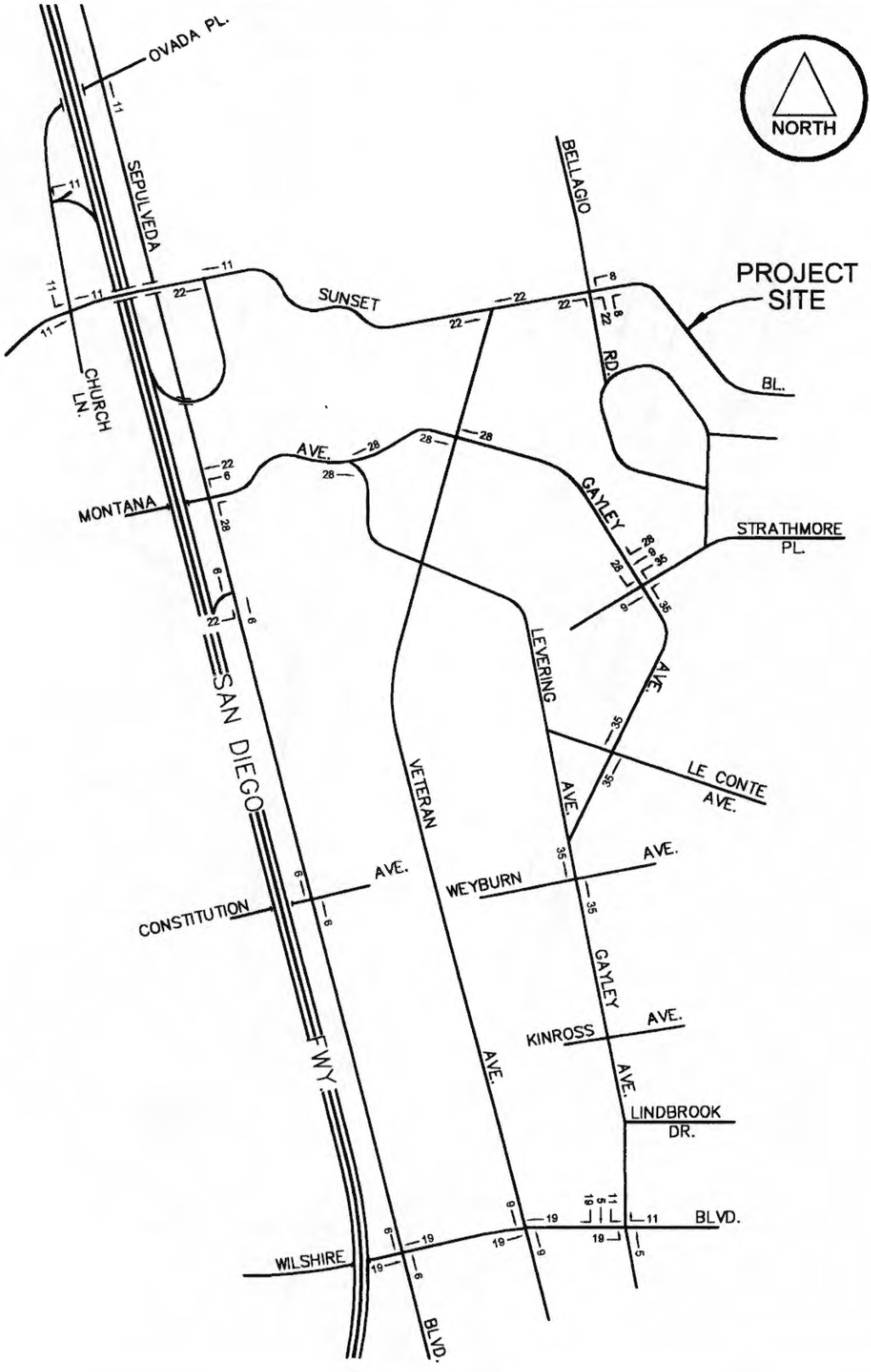

FIGURE 11(a)

FN: UCLA NWH INFILLVAMNETPRJ-SUMMER

NET PROJECT TRAFFIC VOLUMES
SUMMER SESSION
AM PEAK HOUR

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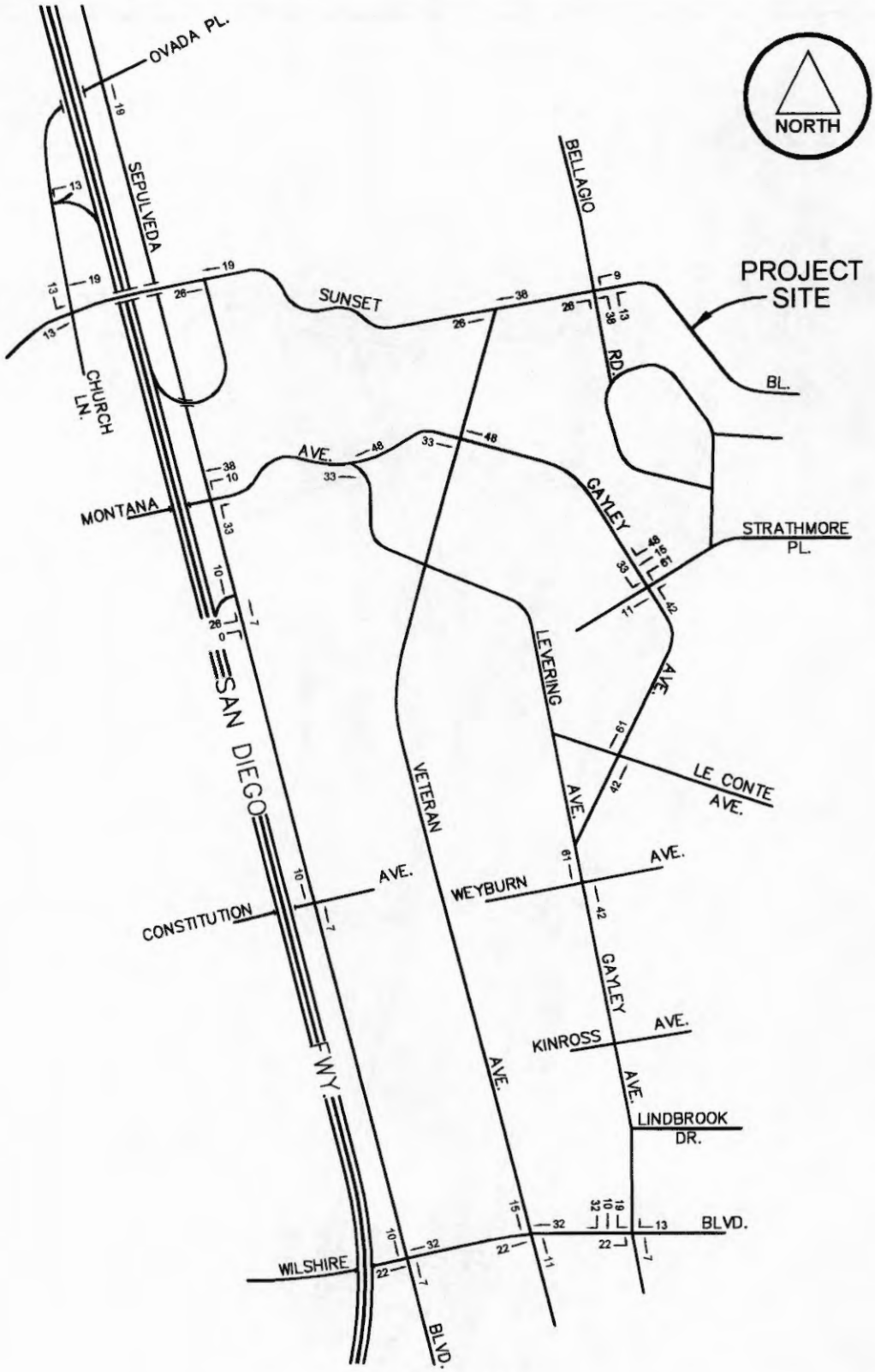

FIGURE 11(b)

FN: UCLA NWH INFILL\PM\NETPRJ-SUMMER

NET PROJECT TRAFFIC VOLUMES
SUMMER SESSION
PM PEAK HOUR

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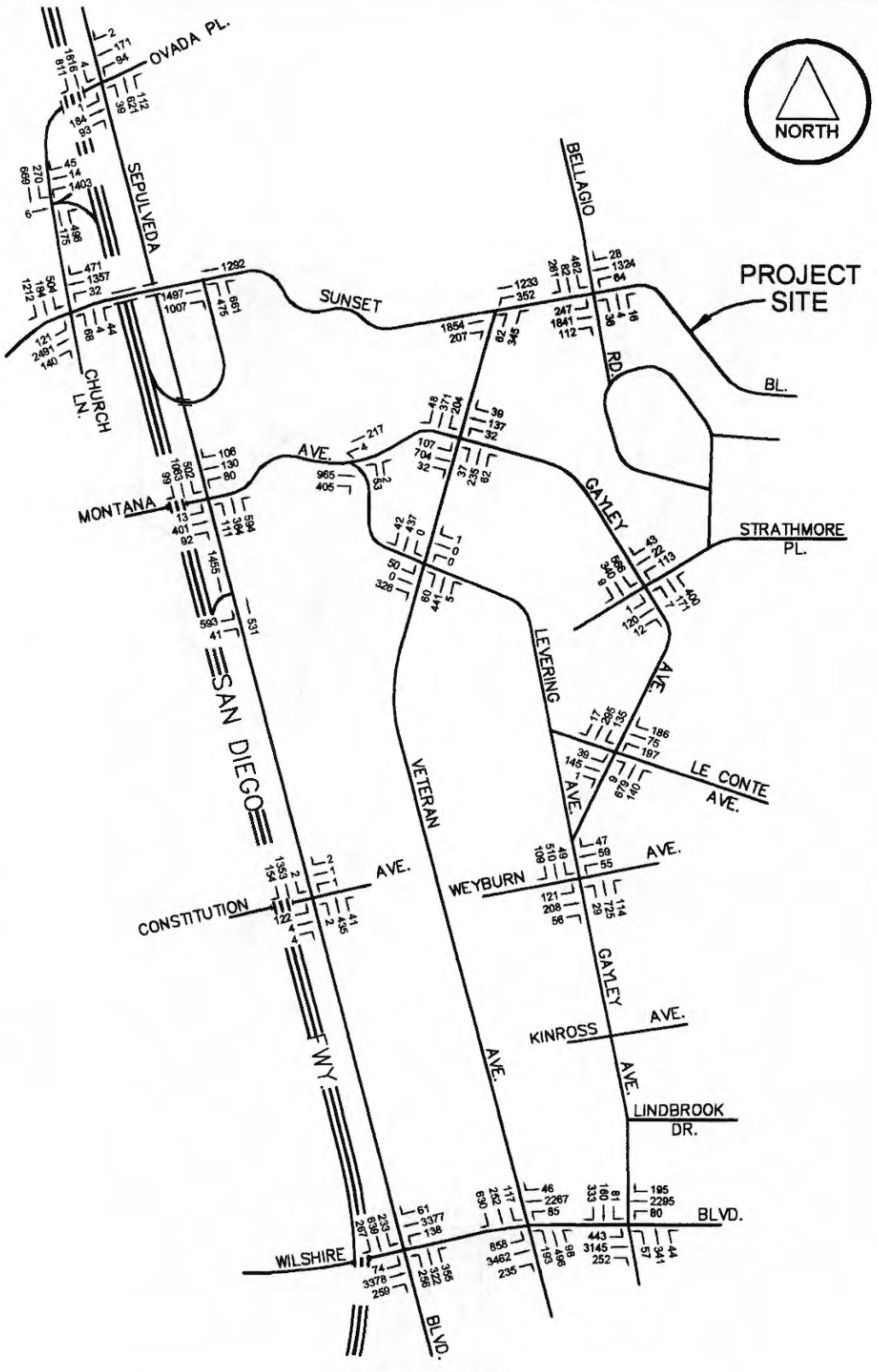

FIGURE 12(a)

FN: UCLA NMH INFILL\AM2011WP

FUTURE (2011) TRAFFIC VOLUMES WITH PROJECT (REGULAR SESSION) AM PEAK HOUR

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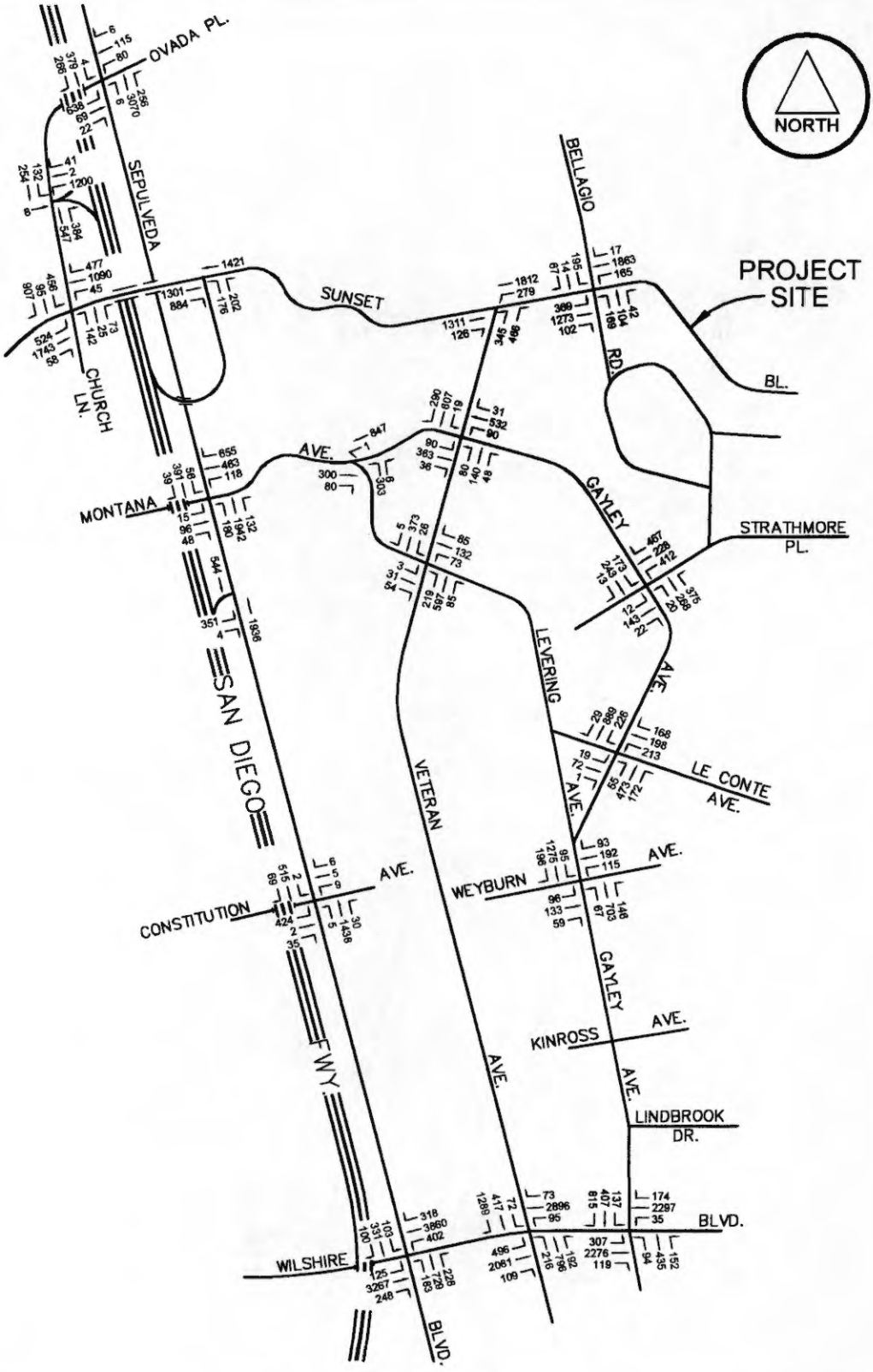

FIGURE 12(b)

FN: UCLA NWH INFILLPM2011WP

FUTURE (2011) TRAFFIC VOLUMES WITH PROJECT (REGULAR SESSION) PM PEAK HOUR

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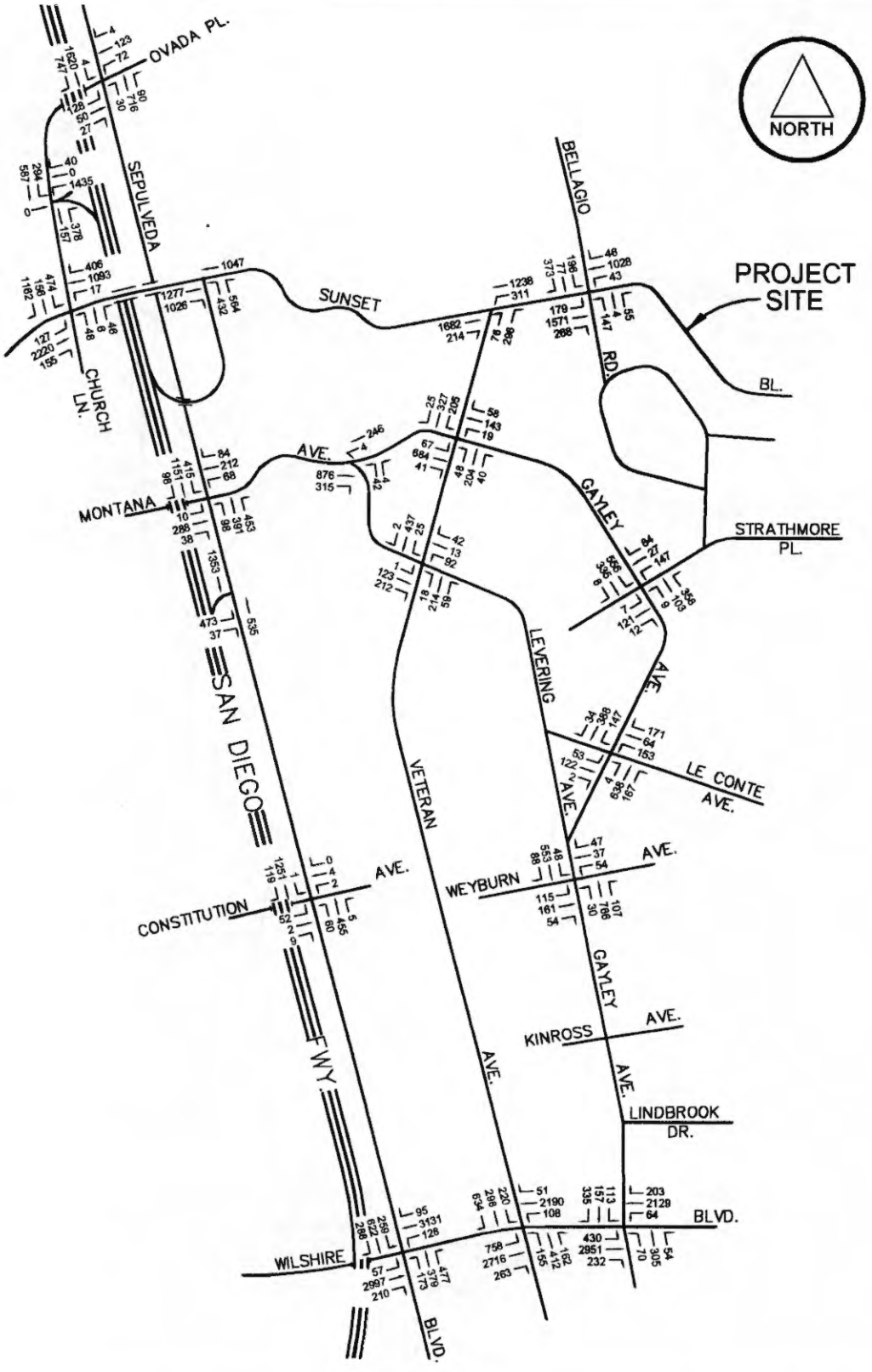

FIGURE 13(a)

FN: UCLA NWH INFILL\AM2011WP-SUMMER

FUTURE (2011) TRAFFIC VOLUMES
WITH PROJECT (SUMMER SESSION)
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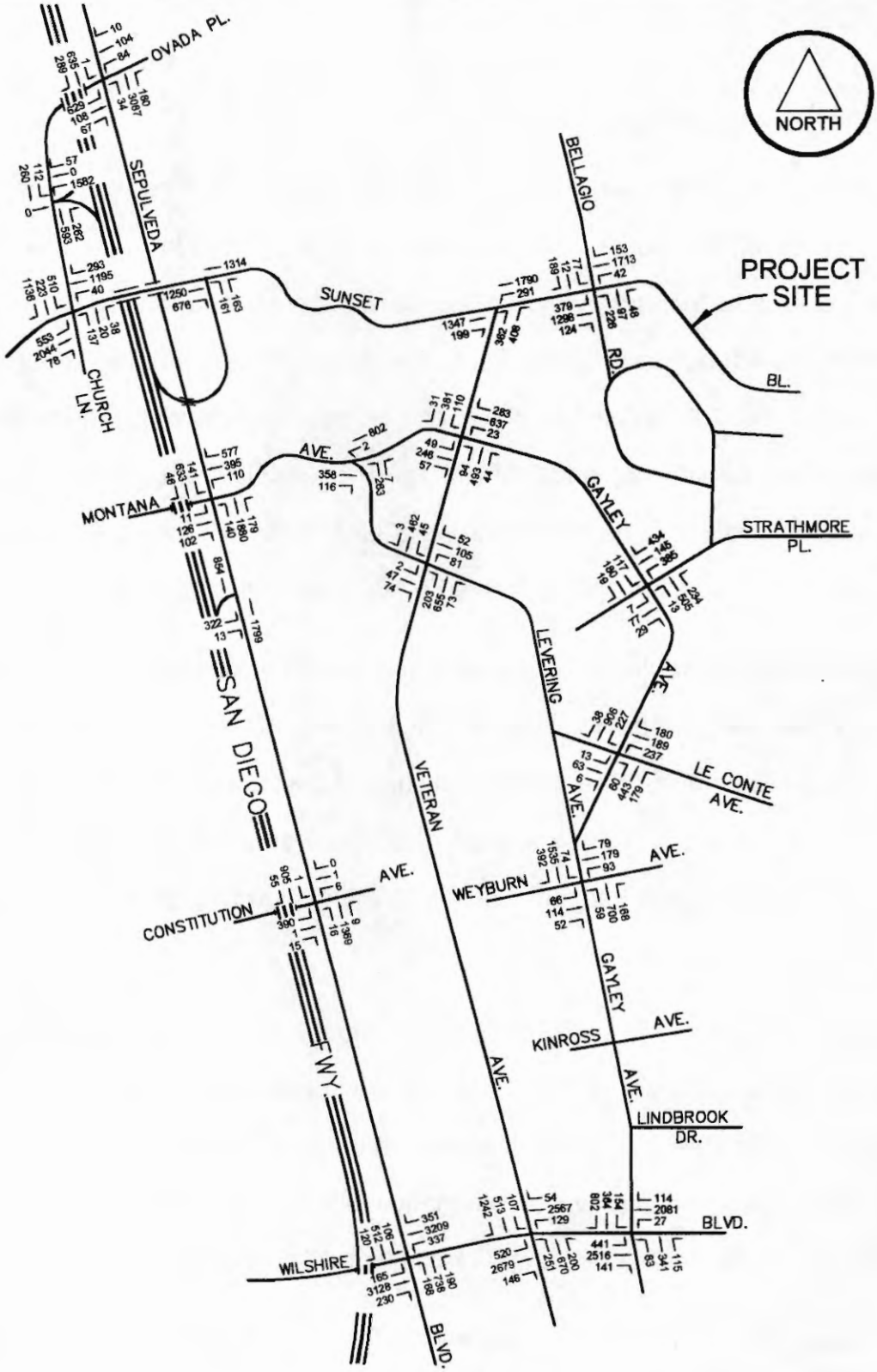

FIGURE 13(b)

FN: UCLA NWH INFILL\PM2011WP-SUMMER

FUTURE (2011) TRAFFIC VOLUMES
WITH PROJECT (SUMMER SESSION)
PM PEAK HOUR

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Alternative Transportation Impacts

As discussed above in the Environmental Setting section, UCLA currently operates a range of Transportation Demand Management programs, including vanpools, carpools, shuttle buses and support for other modes. Services are provided to all commuters, especially those without parking permits, by the Commuter Assistance-Rideshare ("CAR") office. The CAR office has achieved a ridesharing rate which meets the existing trip caps, parking cap and SCAQMD AVR goals. This study assumes that these goals will continue to be met under the 2002 LRDP. In addition, the UCLA Campus is served by 19 bus lines operated by six public transit operators.

As shown in Table 21(a), there are currently about 45,579 commuters who are employed or are non-resident students at UCLA. There are 23,917 parking permits issued to these commuters, or approximately half of the total commuters. The remainder (approximately 21,662 persons) must utilize an alternative mode to travel to and from campus, including vanpools, buses, walking, bicycling, or other alternative means.

Similarly, Table 21(b) shows that in the future Without Project condition there would be about 43,667 commuters who are employed or are non-resident students at UCLA. Approximately 26,359 parking permits are issued to these commuters. Hence, about 17,308 persons would need to use an alternative mode to travel to and from campus in the future without the Northwest Campus Housing Infill project.

With implementation of the proposed Northwest Campus Housing Infill Project, the number of commuters without parking permits would reduce by approximately 1,507 commuters, compared to the future Without Project conditions. Therefore, implementation of the Northwest Campus Housing Infill Project would have a less than

significant impact on alternative transportation modes as there would not be a net increase in ridership causing the capacity of any route to be exceeded.

Table 21(a)
Current Commuters

Permit Group	Number	Parking Permits	Other Commuters
Faculty & Staff	18,603	14,841	3,762
Commuter Students	26,976	9,076	17,900
Total	45,579	23,917	21,662

Table 21(b)
Future (2011) Commuters -- Without Project

Group	Number	Parking Permits	Other Commuters
Faculty & Staff	18,691	14,910	3,781
Commuter Students	24,976	11,449	13,527
Total	43,667	26,359	17,308

Table 21(c)
Future (2011) Commuters -- With Northwest Campus Housing Infill Project

Permit Group	Number	Parking Permits	Other Commuters
Faculty & Staff	18,902	15,076	3,826
Commuter Students	23,301	11,326	11,975
Total	42,203	26,402	15,801

Intersection Impacts

By adding the estimated traffic volumes (that would result from the Northwest Campus Housing Infill Project) to the future (Without Project) traffic volumes (shown in Figures 8 and 9), future traffic volumes that would occur with the project were estimated (and are shown in Figures 12 and 13). For these traffic volumes, a Critical Movement Analyses

was conducted to identify future Levels of Service for the year 2011 and thereby identify the impacts associated with the project. Summaries of the CMA and LOS "Without Project" and "With Proposed Project" conditions at the 18 study intersections are shown in Table 22. This table also includes the existing (2001) CMA conditions (from Table 11) to permit comparison of current and future conditions, and thereby shows the effects of cumulative traffic growth on the study area roadway network (which will occur even without implementation of the project).

As summarized in Table 22, with projected future traffic conditions, implementation of the project would not have any significant impacts at the 18 study intersections during the regular session, but would significantly impact four intersections during the summer session. These are:

- Sunset Boulevard and Bellagio Way
- Montana Avenue and Levering Avenue
- Montana Avenue/Gayley Avenue and Veteran Avenue
- Strathmore Place and Gayley Avenue

It was assumed that the increase in the number of bed spaces would result in an increase in number of conference attendees. As a result, it was assumed that the greater number of vehicle trips would be generated by the conference attendees. This in turn resulted in some of the reported project traffic impacts.

Table 22(a)
Critical Movement Analysis Summary
Existing and Future (2011) Conditions (Regular Session)

No.	Intersection	Peak Hour	Existing CMA	Existing LOS	Future Without Project CMA	Future Without Project LOS	Future With Project CMA	Future With Project LOS	Impact
1.	Church Lane/Ovada Place and Sepulveda Boulevard	AM	0.925	E	0.805	D	0.805	D	0.000
		PM	0.960	E	1.158	F	1.158	F	0.000
2.	San Diego Fwy S/B On/Off Ramps and Church Lane	AM	0.950	E	0.629	B	0.630	B	0.001
		PM	0.953	E	0.589	A	0.591	A	0.002
3.	Sunset Boulevard and Church Lane	AM	0.884	D	0.902	E	0.902	E	0.000
		PM	0.814	D	0.843	D	0.843	D	0.000
4.	Sunset Boulevard and San Diego Fwy N/B On/Off-Ramps	AM	0.823	D	0.777	C	0.777	C	0.000
		PM	0.544	A	0.553	A	0.553	A	0.000
5.	Sunset Boulevard and Veteran Avenue	AM	0.892	D	0.913	E	0.913	E	0.000
		PM	0.820	D	0.840	D	0.842	D	0.002
6.	Sunset Boulevard and Bellagio Way	AM	0.941	E	0.971	E	0.974	E	0.003
		PM	1.008	F	1.063	F	1.066	F	0.003
9.	Montana Avenue and Levering Avenue	AM	1.012	F	1.188	F	1.190	F	0.002
		PM	0.837	D	0.957	E	0.963	E	0.006
10.	Montana Avenue/Gayley Avenue and Veteran Avenue	AM	0.866	D	0.952	E	0.953	E	0.001
		PM	0.999	E	1.085	F	1.089	F	0.004
11.	Strathmore Place and Gayley Avenue	AM	0.697	B	0.736	C	0.741	C	0.005
		PM	0.619	B	0.705	C	0.721	C	0.016
12.	Levering Avenue and Veteran Avenue	AM	0.491	A	0.540	A	0.540	A	0.000
		PM	0.637	B	0.743	C	0.743	C	0.000
13.	Le Conte Avenue and Gayley Avenue	AM	0.646	B	0.699	B	0.701	C	0.002
		PM	0.548	A	0.583	A	0.587	A	0.004
14.	Weyburn Avenue and Gayley Avenue	AM	0.421	A	0.406	A	0.407	A	0.001
		PM	0.691	B	0.659	B	0.663	B	0.004
15.	Constitution Avenue and Sepulveda Boulevard	AM	0.415	A	0.360	A	0.360	A	0.000
		PM	0.590	A	0.571	A	0.571	A	0.000
16.	Wilshire Boulevard and Sepulveda Boulevard	AM	1.056	F	1.162	F	1.162	F	0.000
		PM	1.065	F	1.152	F	1.153	F	0.001
17.	Wilshire Boulevard and Veteran Avenue	AM	0.934	E	0.977	E	0.977	E	0.000
		PM	1.361	F	1.243	F	1.244	F	0.001
18.	Wilshire Boulevard and Gayley Avenue	AM	0.689	B	0.757	C	0.758	C	0.001
		PM	0.785	C	0.831	D	0.834	D	0.003

Table 22(b)
Critical Movement Analysis Summary
Existing and Future (2011) Conditions (Summer Session)

No.	Intersection	Peak Hour	Existing CMA	Existing LOS	Future Without Project CMA	Future Without Project LOS	Future With Project CMA	Future With Project LOS	Impact	
1.	Church Lane/Ovada Place and Sepulveda Boulevard	AM	0.779	C	0.935	E	0.935	E	0.000	
		PM	0.971	E	1.176	F	1.181	F	0.005	
2.	San Diego Fwy S/B On/Off Ramps and Church Lane	AM	0.973	E	0.642	B	0.646	B	0.004	
		PM	1.193	F	0.723	C	0.727	C	0.004	
3.	Sunset Boulevard and Church Lane	AM	0.767	C	0.780	C	0.784	C	0.004	
		PM	0.927	E	0.965	E	0.973	E	0.008	
4.	Sunset Boulevard and San Diego Fwy N/B On/Off-Ramps	AM	0.760	C	0.750	C	0.750	C	0.000	
		PM	0.413	A	0.416	A	0.425	A	0.009	
5.	Sunset Boulevard and Veteran Avenue	AM	0.812	D	0.829	D	0.837	D	0.008	
		PM	0.867	D	0.892	D	0.901	E	0.009	
6.	Sunset Boulevard and Bellagio Way	AM	0.939	E	0.885	D	0.909	E	0.024	*
		PM	1.042	F	1.066	F	1.084	F	0.018	*
7.	San Diego Fwy N/B Off-Ramp And Sepulveda Boulevard	AM	0.434	A	0.545	A	0.554	A	0.009	
		PM	0.509	A	0.636	B	0.648	B	0.012	
8.	Montana Avenue And Sepulveda Boulevard	AM	0.668	B	0.777	C	0.799	C	0.022	
		PM	0.850	D	1.052	F	1.057	F	0.005	
9.	Montana Avenue and Levering Avenue	AM	0.859	D	1.011	F	1.034	F	0.023	*
		PM	0.748	C	0.855	D	0.895	D	0.040	*
10.	Montana Avenue/Gayley Avenue and Veteran Avenue	AM	0.778	C	0.855	D	0.874	D	0.019	
		PM	0.969	E	1.053	F	1.085	F	0.032	*
11.	Strathmore Place and Gayley Avenue	AM	0.623	B	0.658	B	0.721	C	0.063	*
		PM	0.466	A	0.532	A	0.621	B	0.089	
12.	Levering Avenue and Veteran Avenue	AM	0.489	A	0.537	A	0.537	A	0.000	
		PM	0.633	B	0.741	C	0.741	C	0.000	
13.	Le Conte Avenue and Gayley Avenue	AM	0.567	A	0.615	B	0.638	B	0.023	
		PM	0.519	A	0.553	A	0.581	A	0.028	
14.	Weyburn Avenue and Gayley Avenue	AM	0.406	A	0.389	A	0.399	A	0.010	
		PM	0.779	C	0.753	C	0.773	C	0.020	
15.	Constitution Avenue and Sepulveda Boulevard	AM	0.376	A	0.468	A	0.470	A	0.002	
		PM	0.531	A	0.663	B	0.665	B	0.002	
16.	Wilshire Boulevard and Sepulveda Boulevard	AM	0.973	E	1.040	F	1.044	F	0.004	
		PM	1.000	E	1.053	F	1.060	F	0.007	
17.	Wilshire Boulevard and Veteran Avenue	AM	0.847	D	0.915	E	0.920	E	0.005	
		PM	1.292	F	1.161	F	1.167	F	0.006	
18.	Wilshire Boulevard and Gayley Avenue	AM	0.647	B	0.710	C	0.719	C	0.009	
		PM	0.742	C	0.781	C	0.799	C	0.018	

* Denotes a project significant impact, prior to mitigation.

Regional Transportation System Impacts

To address the increasing public concern that traffic congestion was impacting the quality of life and economic vitality of the State of California, the Congestion Management Program ("CMP") was enacted by Proposition 111. The intent of the CMP is to provide the analytical basis for transportation decisions through the State Transportation Improvement Program ("STIP") process. A Countywide approach has been established by the Metropolitan Transportation Authority and the local agency to implement the statutory requirements of the CMP. The Countywide approach includes designating a highway network that includes all state highways and principal arterials with the County and monitoring the network's level of service standards. This monitoring of the CMP network is one of the responsibilities of local jurisdictions. If level of service standards deteriorate, then local jurisdictions must prepare a deficiency plan to be in conformance with the Countywide plan.

All development projects which are required to prepare an EIR are subject to the Land Use Analysis program of the CMP. This requirement is to provide decision-makers with the project-specific traffic impacts created by large projects on the CMP highway network.

In order to analyze the impact of the project on the regional transportation system (e.g., the freeway network), the results of the computerized transportation model were again examined. Year 2011 freeway volumes, including the full buildout of the without projects scenario, were forecast in the same manner as for the surface street study intersections.

It is assumed that traffic volumes are as high in the summer as at other times. The future year 2011 freeway volumes are shown in Tables 23. Traffic volumes attributable

to the proposed project at the maximum net penetration time in summer, as determined earlier, were then analyzed as an incremental increase to the future "Without Project" traffic volumes, resulting in the "With Proposed Campus Northwest Housing Infill Project" traffic volumes, also provided in Table 23. This methodology allowed for both an assessment of overall future freeway conditions and a determination of project impacts (at their maximum during the summer) to these regional transportation facilities, as indicated in these tables.

The CMP defines regional project impacts as significant if the D/C ratio increases by 0.020 or more and the final (With Project) LOS is F. According to Table 23, all of the analyzed freeway segments would be operating at LOS E or F in one or both peak hours. However, the San Diego Freeway and the Santa Monica Freeway would not experience a significant impact as a result of the Northwest Campus Housing Infill Project.

Table 23(a)
Future (2011) Freeway Traffic Volumes and Levels of Service
Regular Session

No.	Location	Peak Hour	Dir	No. Lanes	Freeway Capacity	Without Project Traffic Conditions				With Project Traffic Conditions				
						Daily Volume	Peak Hour Volume	D/C Ratio	LOS	Daily Volume	Peak Hour Volume	D/C Ratio	LOS	Impact
1.	San Diego Fwy. (I-405)	AM	N/B	5	10,000	322,700	13,070	1.307	F(1)	322,800	13,071	1.307	F(1)	0.000
	South of Santa Monica Fwy.	PM		5	10,000		11,760	1.176	F(0)		11,762	1.176	F(0)	0.000
		AM	S/B	5	10,000		7,830	0.783	D		7,831	0.783	D	0.000
		PM		5	10,000		10,950	1.095	F(0)		10,953	1.095	F(0)	0.000
2.	San Diego Fwy. (I-405)	AM	N/B	5	10,000	329,100	8,670	0.867	D	329,200	8,673	0.867	D	0.000
	Btwn. Santa Monica Fwy. &	PM		5	10,000		11,930	1.193	F(0)		11,935	1.194	F(0)	0.001
	Santa Monica Bl.	AM	S/B	5	10,000		12,520	1.252	F(1)		12,523	1.252	F(1)	0.000
		PM		5	10,000		11,110	1.111	F(0)		11,117	1.112	F(0)	0.001
3.	San Diego Fwy. (I-405)	AM	N/B	6	12,000	306,800	8,110	0.676	C	306,900	8,113	0.676	C	0.000
	Btwn. Wilshire Bl. &	PM		6	12,000		11,860	0.988	E		11,865	0.989	E	0.001
	Santa Monica Bl.	AM	S/B	6	12,000		11,710	0.976	E		11,713	0.976	E	0.000
		PM		6	12,000		9,700	0.808	D		9,707	0.809	D	0.001
4.	San Diego Fwy. (I-405)	AM	N/B	5	10,000	278,100	7,320	0.732	C	278,200	7,322	0.732	C	0.000
	Btwn. Sunset Bl. &	PM		5	10,000		12,550	1.255	F(1)		12,554	1.255	F(1)	0.000
	Wilshire Bl.	AM	S/B	5	10,000		10,550	1.055	F(0)		10,552	1.055	F(0)	0.000
		PM		5	10,000		6,870	0.687	C		6,875	0.688	C	0.001
5.	San Diego Fwy. (I-405)	AM	N/B	5	10,000	276,000	7,200	0.720	C	276,100	7,201	0.720	C	0.000
	North of Sunset Bl.	PM		5	10,000		12,340	1.234	F(0)		12,343	1.234	F(0)	0.000
		AM	S/B	5*	9,600		10,390	1.082	F(0)		10,391	1.082	F(0)	0.000
		PM		5*	9,600		6,770	0.705	C		6,772	0.705	C	0.000
6.	Santa Monica Fwy. (I-10)	AM	W/B	5	10,000	268,600	7,970	0.797	D	268,600	7,971	0.797	D	0.000
	Btwn. Bundy Dr. &	PM		5	10,000		10,340	1.034	F(0)		10,341	1.034	F(0)	0.000
	San Diego Fwy.	AM	E/B	5	10,000		10,580	1.058	F(0)		10,581	1.058	F(0)	0.000
		PM		5	10,000		9,830	0.983	E		9,831	0.983	E	0.000
7.	Santa Monica Fwy. (I-10)	AM	W/B	4	10,000	281,400	7,790	0.779	D	281,500	7,791	0.779	D	0.000
	Btwn. Overland Ave. &	PM		4	10,000		7,930	0.793	D		7,932	0.793	D	0.000
	National Bl.	AM	E/B	5	8,000		8,810	1.101	F(0)		8,811	1.101	F(0)	0.000
		PM		5	8,000		10,120	1.265	F(1)		10,123	1.265	F(1)	0.000

Note: LOS designations based on criteria detailed in Appendix D, Exhibit D6, page D-40, 1997, Los Angeles County CMP.

Table 23(b)
Future (2011) Freeway Traffic Volumes and Levels of Service
Summer Session

No.	Location	Peak Hour	Dir	No. Lanes	Freeway Capacity	Without Project Traffic Conditions				With Project Traffic Conditions				
						Daily Volume	Peak Hour Volume	D/C Ratio	LOS	Daily Volume	Peak Hour Volume	D/C Ratio	LOS	Impact
1.	San Diego Fwy. (I-405) South of Santa Monica Fwy.	AM	N/B	5	10,000	322,700	13,070	1.307	F(1)	323,100	13,081	1.308	F(1)	0.001
		PM		5	10,000		11,760	1.176	F(0)		11,773	1.177	F(0)	0.001
		AM	S/B	5	10,000		7,830	0.783	D		7,841	0.784	D	0.001
		PM		5	10,000		10,950	1.095	F(0)		10,969	1.097	F(0)	0.002
2.	San Diego Fwy. (I-405) Btwn. Santa Monica Fwy. & Santa Monica Bl.	AM	N/B	5	10,000	329,100	8,670	0.867	D	330,100	8,698	0.870	D	0.003
		PM		5	10,000		11,930	1.193	F(0)		11,963	1.196	F(0)	0.003
		AM	S/B	5	10,000		12,520	1.252	F(1)		12,547	1.255	F(1)	0.003
		PM		5	10,000		11,110	1.111	F(0)		11,158	1.116	F(0)	0.005
3.	San Diego Fwy. (I-405) Btwn. Wilshire Bl. & Santa Monica Bl.	AM	N/B	6	12,000	306,800	8,110	0.676	C	307,800	8,138	0.678	C	0.002
		PM		6	12,000		11,860	0.988	E		11,893	0.991	E	0.003
		AM	S/B	6	12,000		11,710	0.976	E		11,737	0.978	E	0.002
		PM		6	12,000		9,700	0.808	D		9,748	0.812	D	0.004
4.	San Diego Fwy. (I-405) Btwn. Sunset Bl. & Wilshire Bl.	AM	N/B	5	10,000	278,100	7,320	0.732	C	278,900	7,342	0.734	C	0.002
		PM		5	10,000		12,550	1.255	F(1)		12,576	1.258	F(1)	0.003
		AM	S/B	5	10,000		10,550	1.055	F(0)		10,572	1.057	F(0)	0.002
		PM		5	10,000		6,870	0.687	C		6,908	0.691	C	0.004
5.	San Diego Fwy. (I-405) North of Sunset Bl.	AM	N/B	5	10,000	276,000	7,200	0.720	C	276,400	7,211	0.721	C	0.001
		PM		5	10,000		12,340	1.234	F(0)		12,359	1.236	F(0)	0.002
		AM	S/B	5*	9,600		10,390	1.082	F(0)		10,401	1.083	F(0)	0.001
		PM		5*	9,600		6,770	0.705	C		6,783	0.707	C	0.002
6.	Santa Monica Fwy. (I-10) Btwn. Bundy Dr. & San Diego Fwy.	AM	W/B	5	10,000	268,600	7,970	0.797	D	268,800	7,975	0.798	D	0.001
		PM		5	10,000		10,340	1.034	F(0)		10,350	1.035	F(0)	0.001
		AM	E/B	5	10,000		10,580	1.058	F(0)		10,586	1.059	F(0)	0.001
		PM		5	10,000		9,830	0.983	E		9,837	0.984	E	0.001
7.	Santa Monica Fwy. (I-10) Btwn. Overland Ave. & National Bl.	AM	W/B	4	10,000	281,400	7,790	0.779	D	281,800	7,801	0.780	D	0.001
		PM		4	10,000		7,930	0.793	D		7,943	0.794	D	0.001
		AM	E/B	5	8,000		8,810	1.101	F(0)		8,821	1.103	F(0)	0.002
		PM		5	8,000		10,120	1.265	F(1)		10,139	1.267	F(1)	0.002

Note: LOS designations based on criteria detailed in Appendix D, Exhibit D6, page D-40, 1997, Los Angeles County CMP.

MITIGATION MEASURES

As shown in Table 22, the Northwest Campus Housing Infill Project would not result in any significant impacts during the regular session. Four of the 18 study intersections would be significantly impacted during the summer session.

Adaptive Traffic Control System ("ATCS")

The City of Los Angeles is currently phasing installation of the Automated Traffic Surveillance and Control ("ATSAC") system throughout the City, which provides an at least 7 percent increase in capacity and even greater reductions in stops and delay. Technological advancements in traffic control systems have led to the development of the next generation of ATSAC, known as Adaptive Traffic Control System (ATCS), which is able to increase capacity by an additional 3 percent or more. As mitigation for the impacts of the proposed Northwest Campus Housing Infill project during the summer, UCLA could participate in funding the cost of installing ATCS at those intersections where ATCS has not already been installed, or where installation is not already planned.

Mitigation options for each intersection are identified below.

Intersection No. 6—Sunset Boulevard and Bellagio Way

In conjunction with their approval of the Intramural Field Parking Structure project, The Regents adopted a mitigation measure (IFPS C-8.2), to extend the ATCS installation along Sunset Boulevard from Bellagio Way to the eastern intersection of Beverly Glen Boulevard and Sunset Boulevard. Thus, installation of ATCS at Sunset Boulevard and Bellagio Way is not available to mitigate the impact of LRDP implementation at this intersection.

In conjunction with their approval of the Intramural Field Parking Structure project, The Regents adopted a mitigation measure (IFPS C-8.3) for the intersection which includes (1) restriping Bellagio Road north of Sunset Boulevard to modify the two-lane southbound approach to include a left/through optional lane and a right/through optional lane; (2) widening the south side of Sunset Boulevard by two feet to the west of Bellagio Drive and by four feet to the east of Bellagio Drive to provide one left-turn lane and one left/through/right shared lane in the northbound direction; and (3) modification of the signal light to provide north-south opposed phasing. Thus, any potential mitigation for the impact of the Northwest Housing Infill Project (NHIP) would have to be an addition to the planned improvement described above.

To improve the intersection's capacity, additional through or dedicated turn lanes could be provided, including dedicated turn lanes for (1) westbound Sunset for cars turning onto northbound Bellagio Way; (2) southbound Bellagio Way for cars turning onto Sunset Boulevard, and (3) northbound Bellagio Drive for cars turning onto eastbound Sunset. Each of these options would require street widening which would result in the removal of landscaping, and in some instances, mature specimen trees, therefore none of these measures are recommended. No other feasible mitigation measures have been identified to mitigate the potentially significant impact at this location.

Intersection No.9—Montana Avenue and Levering Avenue

This intersection is currently STOP sign controlled, therefore ATCS installation is not available as mitigation at this location. Signalization of this intersection would improve capacity and address the potentially significant impacts of the NHIP. However, prior discussions with local community representatives have indicated opposition to the signalization of this intersection. Therefore this mitigation measure is not

recommended. No other feasible mitigation options have been identified for this intersection.

Intersection No.10—Montana Avenue/Gayley Avenue and Veteran Avenue

This intersection is currently controlled by signal light, and ATCS has not been installed, nor is it currently planned for installation at this location. Therefore installation of ATCS is available as mitigation at this location and would reduce the impact of the NHIP during the summer session to a less-than-significant level.

Beyond ATCS installation at this location, physical modification of the intersection could also be used to mitigate potential impacts. In conjunction with the environmental review of previous UCLA projects, one potential option for a physical improvement has been identified, to widen Gayley Avenue, east of Veteran Avenue, to create a dedicated right turn lane for westbound vehicles turning north onto Veteran Avenue. However, this measure has previously been identified as infeasible due to the presence of a utility vault, which would have to be relocated. The vault would either have to be relocated in the area occupied by the jogging path (which could pose a safety hazard to joggers and pedestrians) or the area currently occupied by landscaping and mature trees along the Gayley and Veteran boundaries of the Southern Regional Library facility. In addition, loss of on-street parking could occur, depending on the length of the turn lane. Therefore these alternative measures are not recommended. Except for installation of ATCS, no other feasible mitigation measures have been identified to mitigate the potentially significant impact at this location.

Intersection No. 11—Strathmore Place and Gayley Avenue

ATCS has not been installed, nor is currently planned for installation at this location. Thus, installation of ATCS is available as mitigation at this location and would mitigate the impact of the NHIP to a less-than-significant level.

Physical modification of the intersection could also be used to mitigate potential impacts. In conjunction with their approval of the Westwood Replacement Project, The Regents adopted a mitigation measure (AHC C-7) to restripe Gayley Avenue to create a dedicated northbound right turn lane (for vehicle turning onto Strathmore Place) and a right turn/through lane. This modification will result in the removal of on-street parking to accommodate the dedicated turn lane. Provision of additional dedicated lanes would require restriping and loss of on-street parking, or widening, which would result in the loss of parkway landscaping and could result in the loss of on-street parking. Further physical modification (beyond the previously adopted mitigation measure for this intersection) would result in the loss of landscaping, which may include specimen trees. Therefore these alternative measures are not recommended. No other feasible mitigation measures have been identified at this location.

Residual Impacts

As described previously, mitigation measures are recommended for two of the significantly impacted study intersections. However, with the implementation of all mitigation measures (that were not recommended), Table 24 indicates that impacts at two of the study intersections would remain significant and unavoidable during the summer session. These intersections are summarized below.

No.	Intersection
6.	Sunset Boulevard and Bellagio Way
9.	Montana Avenue and Levering Avenue

It should also be noted that the signal and physical street improvements outlined in this report are beyond the control of the University of California, Board of Regents. While all measures are all technically feasible, these measures may not be implemented by the City of Los Angeles. Therefore potentially significant traffic impacts may remain at all four intersections if the identified feasible mitigation measures are not implemented.

Table 24(a)
Critical Movement Analysis Summary
Existing and Future (2011) Conditions -- With Project Plus Mitigation
(Regular Session)

No.	Intersection	Peak Hour	Existing		Future Without Project		Future With Project			Future With Project + Mitigation		
			CMA	LOS	CMA	LOS	CMA	LOS	Impact	CMA	LOS	Impact
6.	Sunset Boulevard and Bellagio Way	AM	0.941	E	0.971	E	0.974	E	0.003	0.974	E	0.003
		PM	1.008	F	1.063	F	1.066	F	0.003	1.066	F	0.003
9.	Montana Avenue and Levering Avenue	AM	1.012	F	1.188	F	1.190	F	0.002	1.190	F	0.002
		PM	0.837	D	0.957	E	0.963	E	0.006	0.963	E	0.006
10.	Montana Avenue/Gayley Avenue and Veteran Avenue	AM	0.866	D	0.952	E	0.953	E	0.001	0.923	E	-0.029
		PM	0.999	E	1.085	F	1.089	F	0.004	1.059	F	-0.026
11.	Strathmore Place and Gayley Avenue	AM	0.697	B	0.736	C	0.741	C	0.005	0.711	C	-0.025
		PM	0.619	B	0.705	C	0.721	C	0.016	0.691	B	-0.014

Table 24(b)
Critical Movement Analysis Summary
Existing and Future (2011) Conditions -- With Project Plus Mitigation
(Summer Session)

No.	Intersection	Peak Hour	Existing		Future Without Project		Future With Project				Future With Project + Mitigation			
			CMA	LOS	CMA	LOS	CMA	LOS	Impact		CMA	LOS	Impact	
6.	Sunset Boulevard and Bellagio Way	AM	0.939	E	0.885	D	0.909	E	0.024	*	0.909	E	0.024	*
		PM	1.042	F	1.066	F	1.084	F	0.018	*	1.084	F	0.018	*
9.	Montana Avenue and Levering Avenue	AM	0.859	D	1.011	F	1.034	F	0.023	*	1.034	F	0.023	*
		PM	0.748	C	0.855	D	0.895	D	0.040	*	0.895	D	0.040	*
10.	Montana Avenue/Gayley Avenue and Veteran Avenue	AM	0.778	C	0.855	D	0.874	D	0.019		0.844	D	-0.011	
		PM	0.969	E	1.053	F	1.085	F	0.032	*	1.055	F	0.002	
11.	Strathmore Place and Gayley Avenue	AM	0.623	B	0.658	B	0.721	C	0.063	*	0.691	B	0.033	
		PM	0.466	A	0.532	A	0.621	B	0.089		0.591	A	0.059	

* Denotes a project significant impact.

APPENDIX A

DESCRIPTION OF BUS LINES

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Detailed below are the 19 public bus lines that collectively provide access between the Campus and areas as far west as Pacific Palisades and the City of Santa Monica, as far east as Montebello, as far south as the Los Angeles International Airport (LAX) and as far north as Santa Clarita. These 19 bus lines are operated by the following six outside public transit operators: Santa Monica Municipal Bus Lines (SMMBL), Culver CityBus (CCB), the Los Angeles County Metropolitan Transportation Authority (LACMTA), the Los Angeles Department of Transportation (LADOT), the Antelope Valley Transit Authority (AVTA), and Santa Clarita Transit (SCT).

- Line 1 (SMMBL) operates between Venice Beach and the UCLA Bus Terminal on Hilgard Avenue, traveling primarily by way of Westwood Boulevard, Santa Monica Boulevard, Ocean Avenue and Main Street. In route, this line also serves Westwood Village, St. John's Hospital and the Santa Monica Place & 3rd Street Promenade. In the vicinity of the UCLA Campus, Line 1 travels via Westwood Boulevard and Hilgard Avenue, stopping within walking distance of Campus. Weekday access to the Campus is provided by Line 1 between 6:00 AM and midnight. Ten-minute headways prevail throughout most of the day and decrease to 30-minutes after 7:00 PM. Access to the Campus is also provided on Saturdays, Sundays and holidays on headways that range from 15- to 30-minutes.

- Line 2 (SMMBL) provides weekday service between the UCLA Bus Terminal and Venice High School and, in route, also accesses Westwood Village, the VA Hospital and the Santa Monica Place & 3rd Street Promenade. Line 2 generally travels via Wilshire Boulevard, 4th Street, Pacific Avenue and California Avenue. Line 2 provides weekday access to Campus from 7:20 AM to 10:00 PM, and offers 15-

minute headways during peak travel periods, 20-minute headways throughout the remainder of the day, and 30-minute headways after 7:30 PM. Line 2 also accesses the Campus on weekends and holidays with 20-minute headways in each travel direction.

- Line 3 (SMMBL) connects UCLA and the UCLA Bus Terminal with the El Segundo Green Line station, traveling primarily by way of Montana Avenue, Lincoln Boulevard, and Manchester Avenue. In route, Line 3 also accesses Westwood Village, Brentwood, Downtown Santa Monica and Marina Del Rey. Weekday and Saturday access to Campus via Line 3 occurs between 7:00 AM and 10:00 PM. Headways in each travel direction are generally 20-minutes. Line 3 operates on Sunday but does not access the UCLA Bus Terminal.

- Line 8 (SMMBL) operates between the UCLA Bus Terminal and Downtown Santa Monica primarily by way of Westwood Boulevard, National Boulevard, Ocean Park Boulevard, and Main Street. Major destinations within close proximity include the Westside Pavilion, the Santa Monica Municipal Airport, the Ocean Park Industrial Park and the Santa Monica Place & 3rd Street Promenade. Line 8 provides weekday access to Campus from 6:30 AM to approximately 11:15 PM. Headways are generally 15-minutes per direction until 6:30 PM, when service frequency decreases to every 30-minutes. Line 8 also serves UCLA on weekends and holidays, with 30-minute headways in each travel direction.

- Line 12 (SMMBL) provides weekday service between the UCLA Bus Terminal and the Pico/Robertson intersection. Line 12 also extends beyond the Pico/Robertson intersection to serve the Rimpau Transit Center during peak weekday travel periods. Near the UCLA campus, this line travels via Westwood Boulevard and stops within short walking distance of the campus. Beyond UCLA, Line 12 travels primarily by

way of Westwood Boulevard, Sepulveda Boulevard, Palms Boulevard, Robertson Boulevard and Pico Boulevard. Direct access is provided to Westwood Village, Westside Pavilion, Mar Vista Park and Hamilton High School. In the study area, weekday service is provided from 7:00 AM to 10:00 PM with approximately 20-minute headways in each direction. Line 12 operates on weekends and holidays from 7:15 AM to 6:15 PM with 30-minute headways.

- UCLA Commuter (SMMBL) provides peak period service between National Place and Overland Avenue, and Ackerman Plaza on the UCLA campus. It provides connections with other Santa Monica Municipal Bus Lines routes, as well as Culver City Bus and MTA routes. In the study area, it operates along Westwood Boulevard/Plaza. It operates 10 northbound runs in the morning on a 14 to 22 minute headway. During the evening, this route provides 11 southbound runs on an 18 to 30 minute headway. This line does not operate during the mid-day, evening, weekends or holidays.

- Line 431 (LADOT) provides peak period express bus service between Westwood and Downtown Los Angeles, traveling via the Santa Monica (I-10) Freeway between the two destinations. In the study area, Line 431 travels along Gayley Avenue and stops within close walking distance of the campus. This line allows passengers to board in Westwood only in the morning and disembark in Westwood only in the evening. Four eastbound runs to Downtown Los Angeles are provided in the morning, and four westbound runs to Westwood are provided in the afternoon. The morning trips serve the project area between 6:20 AM and 7:50 AM on 30-minute headways, while the afternoon trips serve the project vicinity from 5:30 PM to 6:50 PM on 25- to 30-minute headways. This peak period express bus service does not operate on weekends or holidays.

- Line 534 (LADOT) provides peak period express bus service between Downtown Los Angeles and West Los Angeles, with service to Westwood. Line 534 accesses the UCLA campus at Wilshire Boulevard and Glendon Avenue, as well as Wilshire Boulevard and Westwood Boulevard. These stops are walking distance to Campus. The morning trips serve Campus with 4 runs between 7:35 AM and 9:35 AM, with headways ranging from 30-50 minutes. The afternoon, eastbound trips depart Westwood 4 times between 3:20 PM and 5:29 PM with headways ranging from 30-52 minutes. This peak period express bus service does not operate on weekends or holidays.

- Line 573 (LADOT) provides peak period express bus service between Encino/Granada Hills and Westwood/Century City. Service also occasionally extends to Santa Clarita. In the vicinity of project, Line 573 travels along Gayley Avenue and stops within close walking distance of the project site. There are generally no boarding/disembarking restrictions placed upon passengers, with the exception of passengers traveling between Westwood and Century City who may not use this line as a "local" service. Southbound runs to Westwood/Century City access the project area in the morning between 6:30 AM and 10:30 AM, and in the evening at approximately 5:30 PM and 6:15 PM. Northbound service to Encino/Granada Hills accesses the project area between 7:15 AM and 10:15 AM, offers a 12:20 PM bus, and serves the area again between 2:20 PM and 7:00 PM. Morning and evening headways generally range from 15- to 20-minutes in the peak direction of travel (southbound in AM and northbound in PM) and transitions to 30- to 45-minute headways during off-peak hours. This express bus service does not operate on weekends or holidays.

- Line 6 (CCB) operates between the UCLA Bus Terminal and the LAX Transit Center and, in route, also accesses Westwood Village and the Fox Hills Mall. Line 6 generally travels via Sepulveda Boulevard. In the campus vicinity, it also travels along Le Conte Avenue and Westwood Boulevard and stops within walking distance of the project site. Line 6 provides weekday access to the campus from about 5:45 AM to 11:45 PM, and offers 12-minute headways during peak travel periods, 20-minute headways midday, and 60-minute headways at night. Line 6 also accesses the campus area on Saturdays, Sundays and holidays with 30- to 40-minute headways in each travel direction.

- Line 786 (AVTA) provides peak period commuter service between Lancaster (Lancaster Transit Center) and West LA (Santa Monica Boulevard and Fairfax Avenue) with a stop in Westwood. The Westwood stop is at the intersection of Wilshire Boulevard and Westwood Boulevard which is within walking distance from the UCLA campus or UCLA shuttle system stops. Line 786 makes two morning (westbound) runs, arriving in Westwood at 7:26 AM and 7:56 AM. The evening routes to Lancaster (eastbound) depart from Westwood at 5:05 PM and 5:35 PM. Line 786 does not provide service for weekends nor holidays.

- Lines 792 and 797 (SCT) provide peak period express service between Santa Clarita (Santa Clarita Metrolink Station) and Century City, with two stops in Westwood. In the study area, service is provided at the intersections of Gayley Avenue and Strathmore Drive and further south of the Campus at Wilshire Boulevard and Glendon Avenue which is within walking distance from the UCLA campus or UCLA shuttle system stops. In the morning peak period, Line 797 provides service between 6:45 AM and 8:17 AM, with approximately 30- to 60-minute headways. In the evening, it operates from 4:56 PM to 6:51 PM, with

headways ranging from 30-55 minutes. Line 792 provides the reverse commute with morning departures from Westwood between 7:13 AM and 8:46 AM and evening arrivals between 4:07 PM to 6:12 PM. Both lines do not operate on weekends or holidays.

- Lines 2 and 302 (MTA) provide weekday service between Pacific Palisades and Downtown Los Angeles and, in route, also access UCLA. These lines generally travel along Sunset Boulevard until they reach Downtown Los Angeles, where they traverse Broadway and Hill Street. In the vicinity of the campus, Lines 2 and 302 travel by way of Gayley, Le Conte and Hilgard Avenues, and stop within close walking distance of the project site. Together, these lines provide weekday access to the project area from 6:00 AM to 1:00 AM, and generally offer at least 10-minute headways throughout most of the AM and PM peak travel periods, and 20- to 40-minute headways the remainder of the time. Although Line 302 operates weekdays only, MTA Line 2 accesses the project area on weekends and holidays with 12- to 24-minute headways in each travel direction.

- Lines 20 and 21 (MTA) operate between Santa Monica and Downtown Los Angeles and, in route, accesses Westwood Village, Beverly Hills, LA County Art Museum, La Brea Tar Pits, several Metro Red Line Stations, Southwestern University and MacArthur Park. These lines generally travel by way of Westwood Boulevard, Wilshire Boulevard and 7th Street. In the study area, Lines 20 and 21 traverses along Hilgard Avenue, Le Conte Avenue, Westwood Boulevard, and Wilshire Boulevard and stops within close walking distance of the project site. Line 20 provides weekday service from 5:30 AM to 4:15 AM with 10- to 20-minute headways per direction. Line 21 operates during the weekdays between 6:30 AM and 8:00 PM with 25- to 30-minute headways per direction, but become more frequent (i.e., every

10- to 20-minutes) in the westbound direction for the morning peak hour and in the eastbound direction for the afternoon peak travel period. Service is also provided on weekends and holidays via Line 20 with 10- to 35-minute headways throughout most of the day. Line 21 does not operate on Sundays or holidays. A variation of this route operates as Line 22 and serves San Vicente Boulevard, but does not serve the UCLA Transit Center.

- Line 429 (MTA) provides peak period express bus service between Westwood and Hollywood, traveling primarily by way of Sunset Boulevard and Hollywood Boulevard. Near the study area, this line travels along Westwood Boulevard, Le Conte Avenue, and Hilgard Avenue. Line 429 provides four runs each direction on weekday mornings, and five eastbound and four westbound runs on weekday afternoons. Morning eastbound service accesses the campus area between 5:50 AM and 8:15 AM on 55-minute headways, while morning westbound runs operate on 35- to 55-minute headways between 7:15 AM and 10:00 AM. On weekday afternoons, eastbound buses access the campus area between 3:30 PM and 6:00 PM every 30- to 60-minutes, and the westbound buses serve the area from 5:00 PM to 7:30 PM on 60-minute headways. No service is provided on weekends or holidays.

- Lines 233 and 561 (MTA) generally operate between the community of Westwood and the Sylmar/San Fernando Metrolink Station, with periodic service extensions to the LAX Bus Center on the southern end of the route. Line 561 periodically travels to the community of Lake View Terrace (Line 233) instead of the Metrolink Station, on the northern end of the route. The basic route travels primarily by way of Sunset Boulevard, Sepulveda Boulevard, the I-405 Freeway and Van Nuys Boulevard. Major destinations served include the UCLA community, the Federal Building, the

Sherman Oaks Galleria, the Van Nuys Metrolink/Amtrak Station and the Panorama Mall. When the route extends south to the LAX Transit Center, it also serves the Fox Hills Mall and the Metro Green Line at the Aviation Boulevard/I-105 Station. In the campus vicinity, Line 561 travels by way of Westwood Boulevard, Le Conte Avenue, Hilgard Avenue, and traverses the north portion of Campus via Sunset Boulevard. Weekday access to the project area occurs between 5:00 AM and 12:30 AM. Headways in each direction generally range from 10 to 20 minutes during peak travel hours and 30 minutes for the remainder of the day, except after 9:00 PM when frequencies decrease to hourly service. Weekday service extensions to the LAX Transit Center generally occur during the same hours, but on 60-minute headways. Line 561 also operates on weekends and holidays with similar service characteristics to those described for weekdays, but with longer headways (i.e., 30-minutes per direction in the project vicinity). Line 233 operates as a variation to Line 561 and serves the UCLA Transit Center only in the southbound direction.

- Line 576 (MTA) provides peak period express bus service between Pacific Palisades and south Los Angeles and, in route, also serves the communities of Brentwood, Westwood, Beverly Hills and Vernon. This line generally travels by way of Sunset Boulevard, La Cienega Boulevard, the Santa Monica (I-10) Freeway, Western Avenue and Vernon Avenue. In the project vicinity, Line 576 travels along Gayley, Le Conte, and Hilgard Avenues and stops within short walking distance of the Campus. Line 576 provides five westbound trips during the morning peak period and seven eastbound trips during the afternoon peak period. The morning westbound buses access the project area between 6:50 AM and 9:15 AM on approximately 35- minute headways, and the afternoon eastbound buses serve the project vicinity between 3:00 PM and 5:50 PM on 20- to 40- minute headways. This express bus service operates on weekdays only.

- Line 720 (MTA) provides rapid bus service between Santa Monica and Montebello (Montebello Metrolink Station), and, in route, also serves Brentwood, Westwood, Koreatown, Downtown LA and East LA. In the vicinity of the Campus, Line 720 stops at Wilshire Boulevard and Westwood Boulevard. This route generally runs along Wilshire Boulevard, but travels along 6th Street in Downtown Los Angeles and Whittier Boulevard east of Downtown. Westbound morning buses access Westwood at approximately 5:00 AM and continually serve on 2-12 minute headways until approximately 12:45 PM. Service is provided in the afternoon until 6:30 PM with approximate 10 minute headways in both directions. Weekend service operates on 10-15 minute headways.

APPENDIX B

HISTORICAL CORDON COUNT VOLUMES

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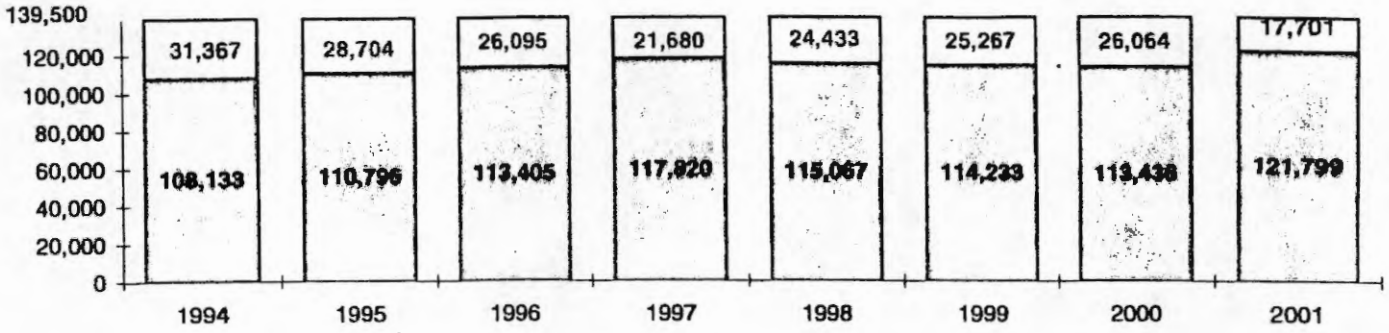
HISTORICAL CORDON COUNT VOLUMES

A "cordon count" of all vehicles entering and exiting the UCLA Campus has been conducted annually. In summary, the Cordon Count study complies with the Traffic Mitigation Monitoring Agreement (TMMA) and UCLA's Long Range Development Plan (Existing LRDP). The study is used to compare UCLA's annual average weekday Fall vehicle trips with the daily trip cap (139,500 vehicles), AM Peak trip cap (24,320 vehicles) and PM Peak trip cap (37,122 vehicles).

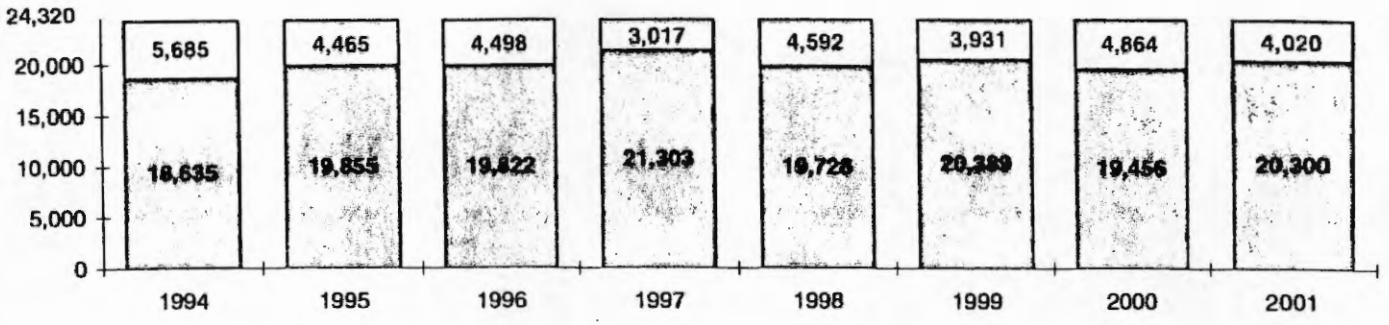
As shown in Graph 1 (Source: 2001 UCLA Trip Cap, March 18, 2002), UCLA has consistently remained below the trip cap. The historical cordon counts show that the Campus was below the trip cap by 12.7 percent, 16.5 percent and 15.9 percent for the daily, AM Peak and PM Peak periods, respectively. In addition, while Campus trips have generally fluctuated from year to year, they have increased by less than 8 percent since 1996.

Graph 1
TOTAL DAILY AND PEAK PERIOD VEHICLE TRIPS
Historical Comparison

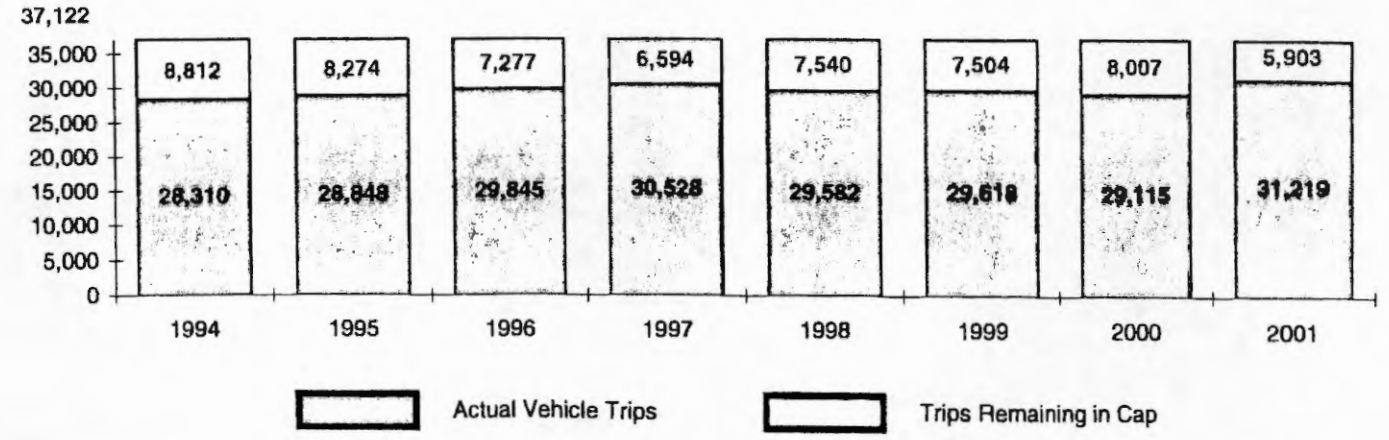
TOTAL DAILY VEHICLE TRIPS



AM PEAK PERIOD TRIPS
7:00 - 9:30 AM



PM PEAK PERIOD TRIPS
3:00 - 6:30 PM



APPENDIX C

COMPUTER MODEL SUMMARY

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COMPUTER MODEL SUMMARY

Introduction

This report documents the procedures and results of the computerized transportation model developed to forecast traffic flows in and around the University of California at Los Angeles ("UCLA") campus in the year 2011. The model was developed as part of the ongoing Long Range Development Plan and was conducted to assist in the decision-makers in analyzing potential near- and long-term transportation impacts of the plan. However, not only does this report present information to more effectively make current decisions, the report documents the model, itself as an important tool which can be utilized to help monitor the growth within the University and surrounding area.

The transportation model being used is based on a computer model developed by the Southern California Association of Governments ("SCAG"). The SCAG model incorporates a regional land use database that was developed in close consultation with the local jurisdictions. The highway network was also developed based on input from transportation agencies throughout the region. The parameters within the model (trip generation rates, roadway capacity, etc.) have been calibrated to closely replicate the transportation patterns unique to the Southern California region.

The modeling software being utilized to edit networks and assign trips is EMME/2. This software is in use for other subregion studies in the Los Angeles area and for detailed transportation studies throughout the United States. Also utilized are a series of micro-computer programs specially developed by Crain & Associates to emulate the SCAG procedures.

Zone System Development

The transportation planning zone system used in this study was based on the socio-economic zones utilized by SCAG. However, there are several noteworthy variations, most of which have to do with the number of zones used. For this study it was desirable to have more detail within the campus, Westwood Village and surrounding areas and less detail in the more distant areas of Orange, San Bernardino, Riverside and Ventura Counties. To accomplish this, it was necessary to aggregate some of the outlying analysis zones into larger regional subareas. The aggregated model still represents all of the traffic volumes and distributions, but only utilizes one centroid per regional subarea. These aggregated zones are far enough from UCLA that precise individual zone connections are not necessary for accurate street and highway vehicle assignments in and near the campus. Every effort was made to ensure that area zones with like qualities and general distribution patterns were combined. Areas aggregated by this method were San Bernardino, Riverside, Orange, Ventura and distant parts of Los Angeles Counties. For the area surrounding the UCLA study area, the analysis zones used by SCAG in the regional study was further disaggregated into smaller zones.

Highway Network Update

The SCAG model highway network includes all freeways and most of the significant primary and secondary streets in Los Angeles County. However, in order to more precisely represent traffic patterns within the UCLA study area, several modifications to the modeling network were made as described below.

- Additional links were added to represent numerous roadways in and around the project site. The number of lanes on the links in the study area was also updated to mirror current conditions.

- New centroids were also added to the network to represent zones that were disaggregated from the TAZ and Census Tract levels. Centroid connectors were added and also adjusted to more accurately reflect driveway and minor street locations.

- In the study area, the original two-way links representing the freeways were replaced by one-way links, whereby each freeway segment was replicated by an individual link. Likewise, the two-way links representing the freeway ramps were replaced by individual one-way links, one link for each individual ramp.

- All of the preceding modifications were made to the future 2011 model network as well as the existing 2001 model network. In addition, those improvements considered "reasonably assured" were also represented in the "Future 2011 model conditions.

Development of Demographics

As with other sections of the model, the demographic information used was based on SCAG data produced for the regional study. Demographic information for areas outside the University study area for the year 2001 and 2011 model data sets were obtained by linear interpolation between SCAG data sets for 1997 and 2015.

Within the study area, more detail was needed in the demographic data used for trip generation purposes. Year 2000 and 2015 land use data at the census tract level was used instead of land use data at the CTP model TAZ level. The land use data at the census tract level was further divided into smaller zones or sub-zones. Disaggregation was conducted by comparing the size of each of the smaller zones devoted to each use to that of the overall zone. The demographic data within the study area is also increased, if necessary, to account for all identified proposed ("related") projects from

Table 13. The growth from the related projects is compared to the difference between the data for years 2011 and 2001. The related projects growth would be added to the year 2001 data if its growth is greater than the growth between the 2011 and 2001 data.

APPENDIX D

CRITICAL MOVEMENT ANALYSIS (CMA) WORKSHEETS

(Under Separate Cover)