UNIVERSITY OF CALIFORNIA, BERKELEY

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CAPITAL PROJECTS
PHYSICAL AND ENVIRONMENTAL PLANNING
300 A & E BUILDING, # 1382
BERKELEY, CALIFORNIA 94720-1382

March 2013

DRAFT SUBSEQUENT EIR

TO THE 2020 LONG RANGE DEVELOPMENT PLAN

ENVIRONMENTAL IMPACT REPORT

Project Title:	Cal Aquatics Center
Project Location:	The approximately one-acre project site is located south of the Campus Park, across Bancroft Way from Edwards Stadium/ Goldman Field. The site address is 2222 Bancroft Way. The site is bounded to the north by Bancroft Way, to the west by Fulton Street, to the south by Durant Avenue, and to the east by the Tang Center.
County:	Alameda County, California
Program EIR:	UC Berkeley 2020 Long Range Development Plan EIR, certified by The Regents January 2005, SCH #2003082131; as updated and amended in July 2009 by LRDP Amendment #1 to address Climate Change.

1. INTRODUCTION & SUMMARY

1.1 INTRODUCTION

The University of California, Berkeley, proposes to construct a new aquatics facility on an existing one acre, 230 parking space, University-owned surface parking lot with frontage on Bancroft Way and Durant Avenue, across Bancroft Way from Edwards Stadium/Goldman Field. The UC Berkeley aquatics programs have a shortage of water space for Intercollegiate Athletics and other users, including recreational swimmers, physical education students, and community partners; the proposed new Aquatics Center would free up water space for these other users.

The facility would consist of three one-story buildings surrounding a 52-meter swimming pool with a dive tower. The main building, fronting Bancroft Way, would contain a team meeting/multi-purpose room, the main entry passage way, and the main pool mechanical rooms. The main entry would be centered between the Edwards Field concrete pylons across the street as a way of visually connecting back to the University and the athletics precinct. The main pool mechanical rooms, located within the east

end of the building, would offer access for chlorine delivery from Bancroft Way. The locker room building would be sited along the west edge of the project site and contain locker rooms, showers and restrooms for the men's and women's water polo, swimming and diving teams. Public restroom would be attached to the north end of the building. The third building would be a pool storage building, sited along the entire 52-meter length of the pool on the east edge of the project site. A mechanical room for the dive spa would be located within the south end of the storage building mass. The dive tower would be 46 feet in height and would be placed at the south end of the pool. The dive tower would have 10-meter, 7.5-meter, five-meter, three-meter and one-meter diving platforms. The dive tower would also have a glass stairway enclosure to protect the divers from the weather as they ascend to the various platforms. Two 10-foot high springboard platforms on either side of the dive tower would accommodate one-meter and three-meter springboard platforms, respectively. A security handrail would extend above and around the top of the platform.

The project would not include any permanent seating for spectators, as the extensive decking around the pool at the Aquatics Center would be used primarily for land-side training. However, in the rare instance when event seating is required, the deck areas would accommodate temporary bleachers for up to 500 spectators. For the rare evening competitive event, the project includes event lighting to meet the Pac 12 Network lighting requirements of a 70-footcandle average maintained over the main deck and pool. This would be achieved with LED fixtures mounted on 25-foot high poles, evenly spaced along the east and west sides of the pool. The lights would only be used at their full illumination for competitions, which would be held approximately four times per year.

The existing mid-block passageway west of the Tang Center, allowing for pedestrians to traverse the block from Durant Avenue through the site to Bancroft Way, would be retained and enhanced. New light pole standards would be added to the mid-block passageway to keep it safely lit at night. For security, the facility would be enclosed with a minimum eight-foot high metal fence. A portion of the existing parking would be retained and reconfigured to allow 49 angled parking spaces along the west edge of the project site. Along Bancroft Way, new street trees and a new sidewalk would replace the existing site border trees and sidewalk. Planters and bicycle parking would also be added along the front of the facility. Please see Section 2, *Project Description*, for additional project information and project plans.

In addition to design approval, a minor text amendment to the Long Range Development Plan is proposed to accommodate the proposed land use on the project site.

In accordance with CEQA (Public Resources Code Section 21000 et seq.), and the University of California Procedures for Implementation of CEQA, this document was prepared to evaluate the Project as a whole, or to examine any changes to the circumstances under which the Project will be undertaken from that described and analyzed in the 2020 LRDP EIR. The analysis herein concludes that the Project is largely consistent with the UC Berkeley 2020 LRDP EIR, certified by The Regents in January 2005. However, the University has determined that a Subsequent EIR (hereafter, SEIR) is required, itself in the form of the additional environmental analysis contained herein, to update and augment the 2020 LRDP EIR to reflect the Project as proposed. The circumstance triggering the need for additional review is the potential for inconsistency with the City of Berkeley's Southside Plan, a circumstance not identified as such or specifically analyzed in the 2020 LRDP EIR.

1.2 ENVIRONMENTAL REVIEW AND SUMMARY OF CONCLUSIONS

An environmental assessment has been prepared in accordance with CEQA, the CEQA Guidelines, and University of California Guidelines for the Implementation of CEQA, to determine the appropriate level of environmental review of the Project.

The environmental analysis for the proposed Project is tiered from the 2020 LRDP Final EIR (State Clearinghouse [SCH] No. 2003082131) certified by the University of California Board of Regents (The Regents) on January, 2005. The LRDP Final EIR is a Program EIR and was prepared in accordance with the California Environmental Quality Act (CEQA) (Public Resources Code, §21000, et seq., specifically, §21094), the CEQA Guidelines (Title 14, California Code of Regulations [CCR], §§15000 et seq.), and the University of California Procedures for the Implementation of CEQA.

Section 15152 of the CEQA Guidelines states, "'Tiering' refers to using the analysis of general matters contained in a broader EIR (such as one prepared for a general plan or policy statement) with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussions from the broader EIR; and concentrating the later EIR or negative declaration solely on issues specific to the later project." CEQA and the CEQA Guidelines encourage the use of tiered environmental documents to eliminate repetitive discussions of the same issues. Therefore, this Subsequent EIR is hereby tiered from the LRDP Final EIR. The LRDP EIR document is available for review at lrdp.berkeley.edu.

The LRDP Final EIR analyzes the direct and indirect impacts resulting from implementation of the development allocation on the campus through the year 2020. Measures to mitigate, to the extent feasible, the significant adverse LRDP project (direct and indirect) and cumulative impacts identified for that development are identified in the Final EIR.

Section 15152(f) of the CEQA Guidelines instructs that when tiering, a later EIR or Negative Declaration shall be prepared only when, in the basis of an Initial Study, the later project may cause significant effects on the environment that were not adequately addressed in the prior EIR or Negative Declaration. Significant environmental effects are considered to have been "adequately addressed" if the lead agency determines that:

(A) they have been mitigated or avoided as a result of the prior environmental impact report and findings adopted in connection with that prior environmental report;

(B) they have been examined at a sufficient level of detail in the prior environmental impact report to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project; or

(C) they cannot be mitigated to avoid or substantially lessen the significant impacts despite the project proponent's willingness to accept all feasible mitigation measures, and the only purpose of including analysis of such effects in another environmental impact report would be to put the agency in a position to adopt a statement of overriding considerations with respect to the effects.

Following review of the proposed LRDP Project and the analysis presented in the LRDP Final EIR, it has been determined that the proposed Cal Aquatics Project is a "project" under CEQA that was not fully addressed in the Final EIR; therefore, additional environmental review is required. Accordingly, this Subsequent EIR has been prepared.

In conjunction with certification of the LRDP Final EIR and approval of the LRDP, The Regents also adopted a Mitigation Monitoring and Reporting Program (MMRP). The MMRP ensures that campus continuing best practices (CBPs) and mitigation measures (MMs) that are the responsibility of the University of California are implemented in a timely manner. As individual projects, such as the proposed Project, are designed and constructed, the projects include features necessary to implement relevant CBPs and MMs. In accordance with The Regents' approval of the LRDP and certification of the Final EIR, all relevant LRDP EIR CBPs and MMs are incorporated into the proposed Project description

and will be implemented as a part of the project and monitored through the MMRP approved for the LRDP Final EIR. Relevant LRDP EIR CBPs and MMs are listed in the introduction to the analysis for each topical issue in Section V, Environmental Evaluation. In addition to CBPs and MMs from the LRDP EIR MMRP relevant to the proposed Project, this SEIR identifies and proposes for adoption new, project-specific mitigation measures to reduce project specific environmental impacts to a less-than-significant level in Utilities; the SEIR finds a significant unavoidable land use impact due to inconsistency of the proposed minor LRDP text amendment with the original land use analysis in the 2020 LRDP EIR.

In summary, this SEIR provides a project-specific environmental analysis to determine if the proposed minor LRDP text amendment and Project would result in any significant impacts not adequately addressed in the LRDP Final EIR and/or if additional mitigation measures beyond those adopted in the MMRP for the LRDP Final EIR would be required to reduce identified impacts to a less than significant level.

The 2020 LRDP EIR indicated that projects implementing the 2020 LRDP would be examined to determine whether subsequent project–specific environmental documents are required. The 2020 LRDP EIR states:

> CEQA and the CEQA Guidelines state that subsequent projects should be examined in light of the program-level EIR to determine whether subsequent project-specific environmental documents must be prepared. If no new significant effects would occur, all significant effects have been adequately addressed, and no new mitigation measures would be required, subsequent projects within the scope of the 2020 LRDP could rely on the environmental analysis presented in the program-level EIR, and no subsequent environmental documents would be required; otherwise, project-specific environmental documents must be prepared (2020 LRDP EIR Vol I page 1-2).

The use of the 2020 LRDP and 2020 LRDP EIR in project review was also specifically addressed in the first Thematic Response to comments received on the 2020 LRDP Draft EIR (2020 LRDP EIR Vol 3a, page 11.1-1). There, the document reiterated the text quoted above, and explained:

> Projects subsequently proposed must be examined for consistency with the program as described in the 2020 LRDP and with the environmental impact analysis contained in the 2020 LRDP EIR; if new environmental impacts would occur, or if new mitigation measures would be required, an additional environmental document would be prepared.

Section 15162 of the CEQA Guidelines (Title 14, California Code of Regulations, Sections 15000 et seq) sets forth the circumstances under which a project may warrant a Subsequent EIR or Negative Declaration:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
    (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
    (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
    (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

As stated above, the analysis herein concludes that the Project is largely consistent with the UC Berkeley 2020 LRDP EIR, certified by The Regents in January 2005. However, the University has determined that a Subsequent EIR (hereafter, SEIR) is required, itself in the form of the additional environmental analysis contained herein, to update and augment the 2020 LRDP EIR to reflect the Project as proposed. The circumstance triggering the need for additional review is the potential for inconsistency with the City of Berkeley's Southside Plan, a circumstance not identified as such or specifically analyzed in the 2020 LRDP EIR.

The University published and circulated a Notice of Preparation (NOP) of a Draft EIR for the Cal Aquatics Center project on February 1, 2013. The University received seven comment letters during the 30-day NOP review period, from the following agencies, groups and individuals:

- Scott Morgan, Director, State Clearinghouse, California Governor's Office of Planning and Research
- Beth Walukas, Deputy Director of Planning, Alameda County Transportation Commission
- Michael Vecchio, City of Berkeley Public Works, Traffic Engineering
- Dan Gallagher, City of Berkeley Senior Forestry Supervisor
- John Caner, Executive Director, Downtown Berkeley Association
- Roland Peterson, Executive Director, Telegraph Business Improvement District
- Ann Slaby (two letters)

Topics of concern in the comment letters included parking supply, Bancroft Way walkability and pedestrian-serving design and programming, street tree protection, facility lighting impacts, and scenic view impacts. Each of these topics is addressed in the SEIR. The letters are included in Appendix H.

Community members are invited to attend a public hearing to provide comment on the SEIR on April 3, 2013 in the University Health Services Tang Center at beginning at 6:00 pm. Comments on the SEIR must be received in the UC Berkeley Planning Office, 300 A&E Building, UC Berkeley, Berkeley, CA 94720-1382 or via email to planning@berkeley.edu, by 5:00 PM on April 24, 2013. For more information contact Jennifer McDougall, Principal Planner, at (510) 642-7720.

Copies of the SEIR, the 2020 LRDP EIR and Addendum #5 thereto, from which the SEIR is tiered, are available for review during normal operating hours at the offices of Capital Projects' Physical and Environmental Planning offices, 3rd floor A&E Building on the UC Berkeley campus; and online at http://www.cp.berkeley.edu.

The project is scheduled for consideration of design approval at the May 2013 meeting of the Regents of the University of California committee on Grounds and Buildings.

1.3 ORGANIZATION OF THIS DOCUMENT/TABLE OF CONTENTS

This Subsequent EIR is organized into the following sections:

2. PROJECT DESCRIPTION

2.1 PROJECT LOCATION

UC Berkeley is located approximately ten miles east of San Francisco, as shown in Figure 1. Interstate 80, Highway 13, Highway 24, and Interstate 580 provide regional vehicular access to the campus. Regional transit access is provided by Bay Area Rapid Transit District (BART) and Alameda-Contra Costa Transit (AC Transit).

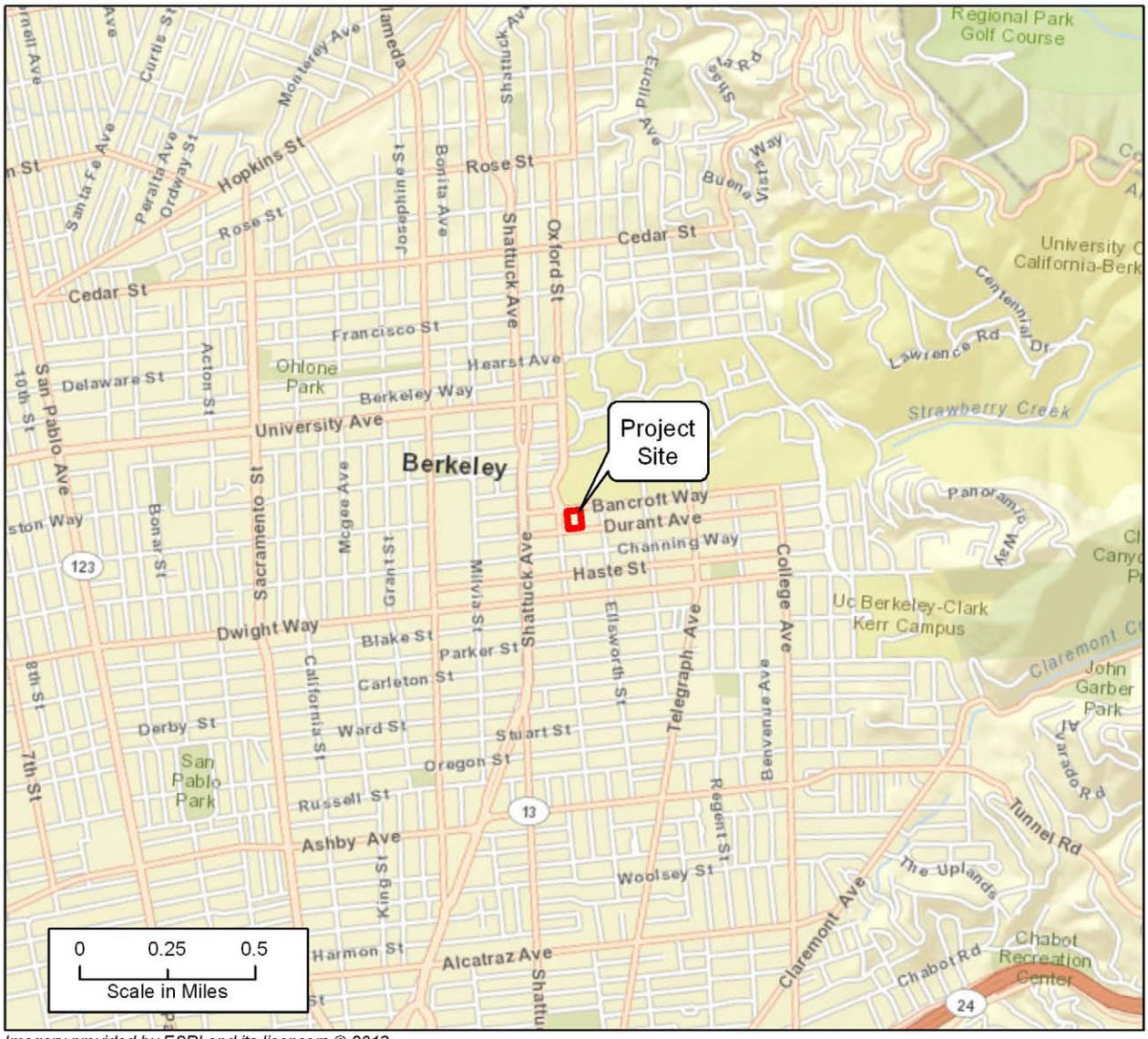
As shown in Figure 2, the project site is located across Bancroft Way from the southwest corner of the campus, just east of the intersection of Fulton Street and Bancroft Way. The site is bordered on the south by Durant Avenue and multi-family residential uses across Durant Avenue; on the west by the UC Public Affairs building; on the north by Bancroft Way and the sports precinct within the Campus Park across Bancroft Way; and on the east by the Tang Center.

2.2 SITE DESCRIPTION

The project site, referred to on campus maps as the Bancroft/Fulton Parking Lot, is a rectangular, paved surface parking lot developed with approximately 230 parking spaces and a small parking kiosk. The site is generally flat, sloping gently to the southwest. The perimeter of the site is lined with non-native landscape and street trees. London plane trees line the Bancroft Way sidewalk frontage, in addition to two pittosporum at the northeast corner of the site. Several eucalyptuses and one live oak tree (of seven inches diameter at breast height) grow just outside of the western property boundary, adjacent to the UC Public Affairs building. The existing mid-block pedestrian passageway along the eastern boundary of the site is lined with ornamental pear trees. Melaleuca trees line the Durant Avenue sidewalk frontage. The parkway along Durant Avenue is also planted with London planes. Low hedges separate the parking lot from the Bancroft Way and Durant Avenue sidewalks. Light standards of approximately 25 feet in height, each with two fixtures, provide night lighting throughout the night, along with street lights on Bancroft Way and Durant Avenue. Figures 3a through 3e show existing conditions on and adjacent to the project site.

The project site is located within the area designated in the 2020 LRDP as the "city environs," defined to include the Adjacent Blocks, the Southside, Other Berkeley Sites, and the Housing Zone in its entirety: in other words, the entire scope of the 2020 LRDP except for the Campus Park and Hill Campus. The areas within the City Environs are similar in consisting mostly of city blocks served by city streets, and include University-owned properties interspersed with non-university properties. Within the city environs, the site is within the designated Adjacent Blocks West land use zone. The Adjacent Blocks West are defined as the blocks defined by Oxford, Virginia, Walnut, Hearst, Shattuck, Durant, Ellsworth, and the Campus Park. Major campus facilities on these blocks include the Tang Health Center, the University Printing Plant, University Hall, 2195 Hearst, and the plant research facilities of the Oxford Tract.

The northern boundary of the project site has frontage along Bancroft Way, a major one-way traffic corridor that forms part of the perimeter street network around the Berkeley campus. The Bancroft sidewalk, and similarly but to a lesser extent the Durant Avenue sidewalk, are intensely used circulation corridors for pedestrians and transit commuters, particularly east of the site as they approach major intersections with Telegraph Avenue. Hundreds of public transit buses and campus shuttles stop on Bancroft Way within a typical school day 24-hour period. Office and institutional buildings line the south side of Bancroft in the project vicinity. Beyond Bancroft Way to the south is the southern portion of the Southside area of the City of Berkeley, with its mixed-use character of residential, institutional and some commercial uses.



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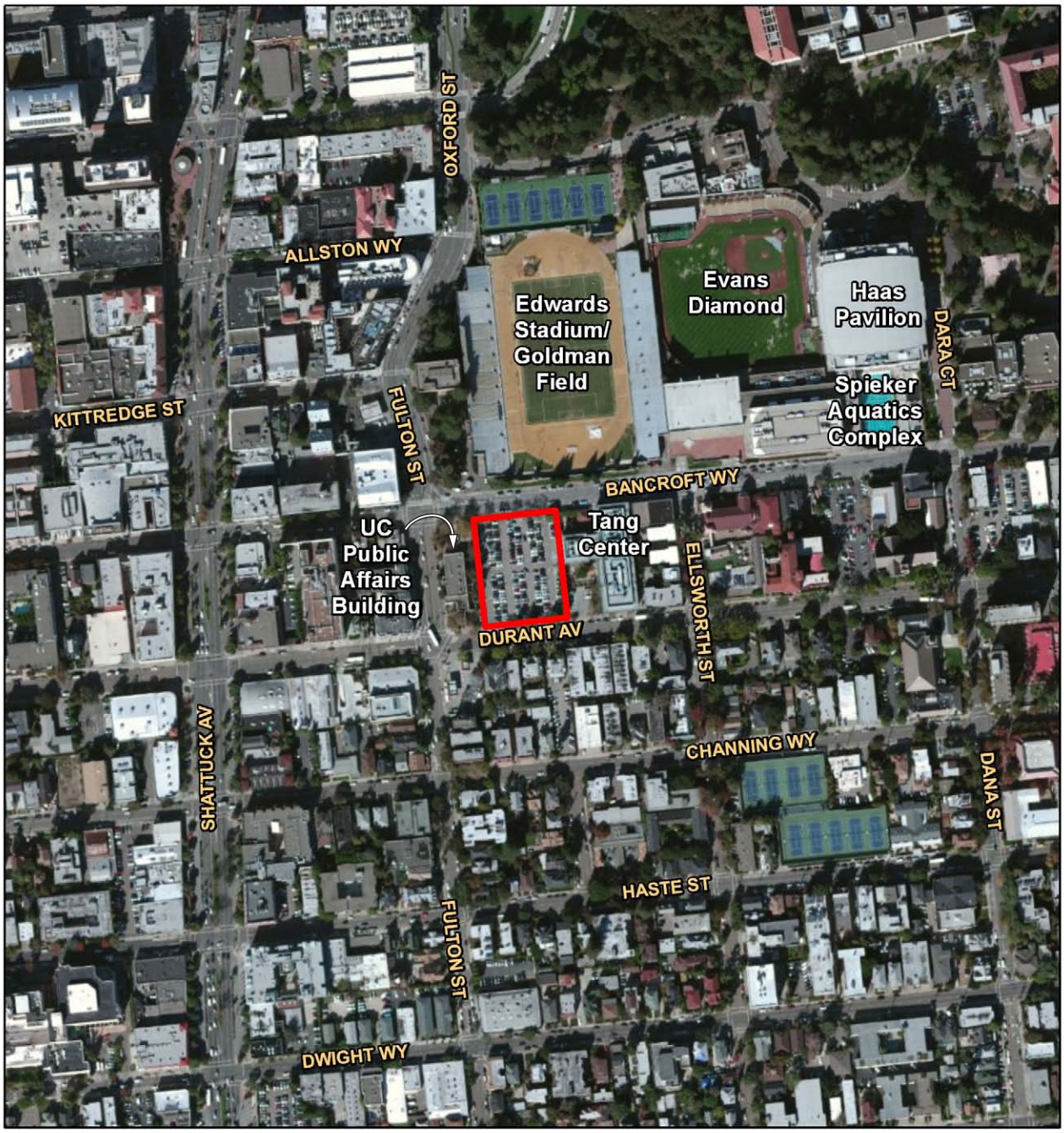
Project Location

Regional Location

Figure 1



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Project Site

N

0 200 400

Feet

Aerial View of Project Site and Surroundings

Figure 2

Photo 1 - View of the project site looking southeast across Bancroft Way. The Tang Center is the building to the left of the frame.

Photo 2 - View of the project site looking north-northwest across Durant Avenue. The obelisks at the wall surrounding Goldman Field are visible across Bancroft Way in the background.

Existing Conditions

Figure 3a

Photo 3 - View looking northeast across the project site from its western boundary. The Tang center is visible directly adjacent to the site and the Kleberger Field House, within the Campus Park, is visible in the left-of-frame background with the Berkeley Hills beyond..

Photo 4 - View across the project site looking southwest from its eastern boundary. The Public Affairs building is visible adjacent to the site, as well as the eucalyptus and single oak tree along its eastern edge.

Existing Conditions

Figure 3b

Photo 5 - View of residential buildings across Durant Avenue from the interior of the project site.

Photo 6 - The project site's Bancroft Way frontage, looking east up Bancroft Way.

Existing Conditions

Figure 3c

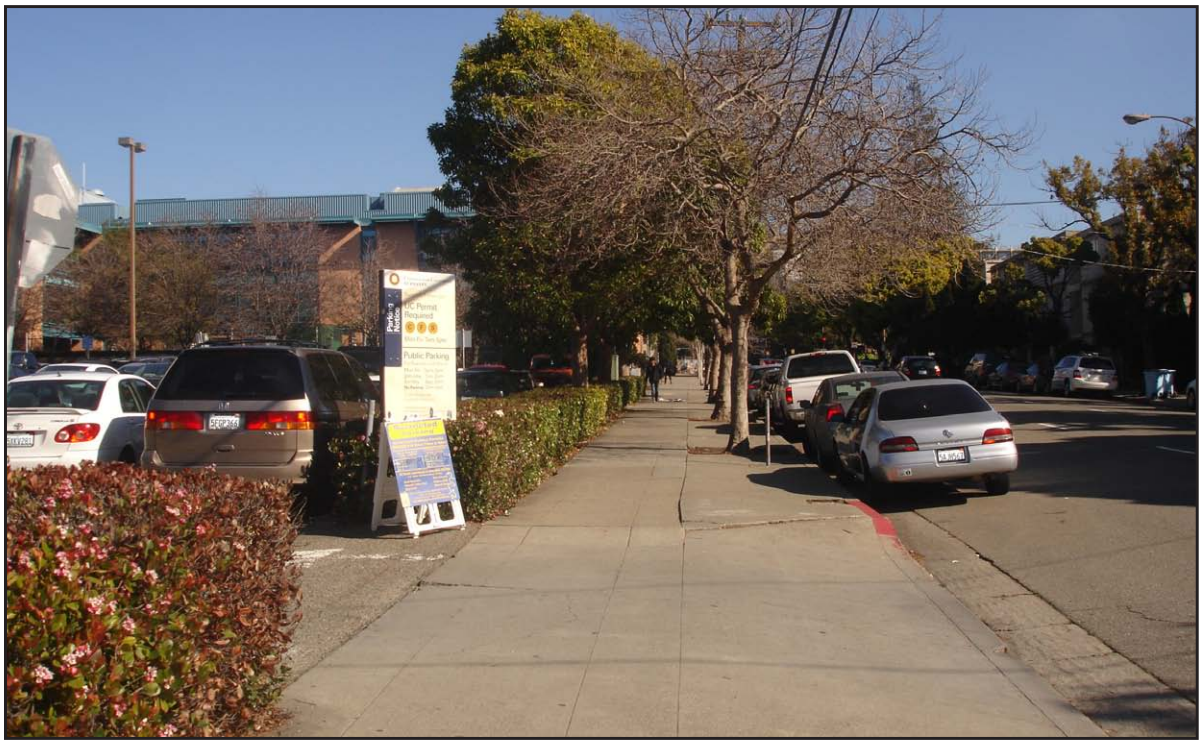


Photo 7 - The project site's Durant Avenue frontage, looking east up Durant Avenue.

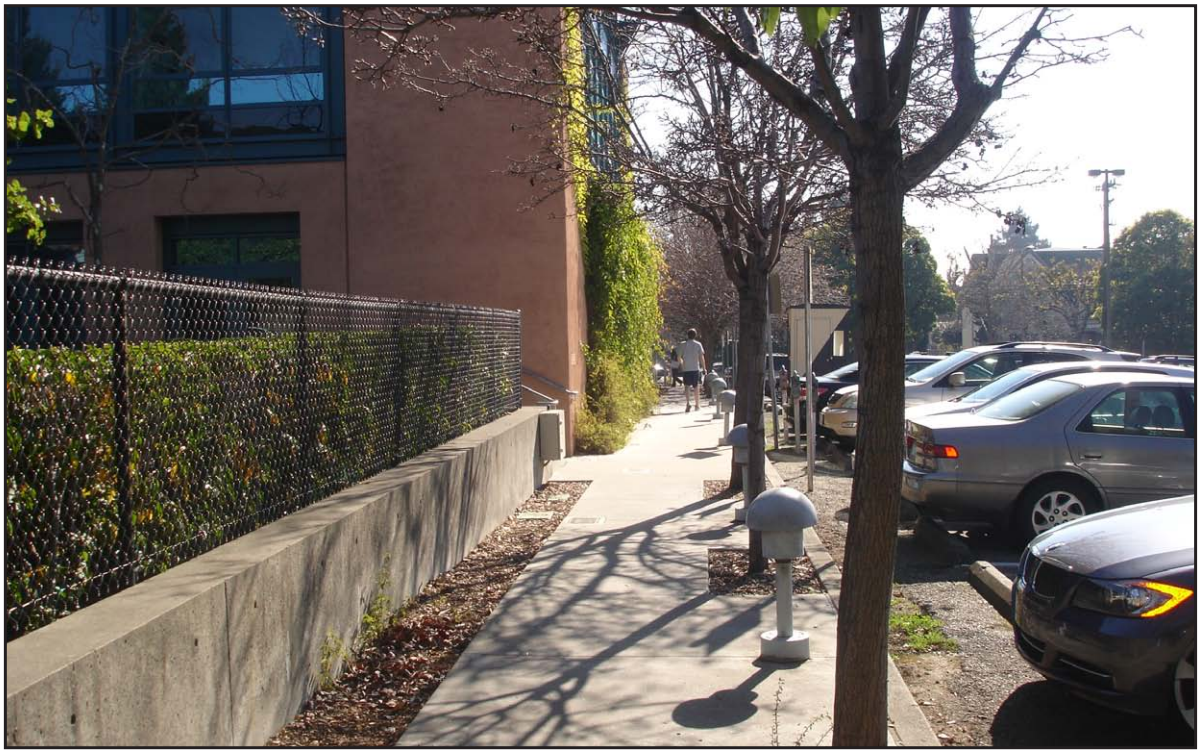


Photo 8 - The existing mid-block pedestrian pathway between the project site and the Tang Center, looking south.

Existing Conditions Figure 3d

Photo 9 - Nighttime view of the project site looking south across Bancroft Way. Four light standards are visible in the parking lot (project site); gas station lighting is visible in the background on the right.

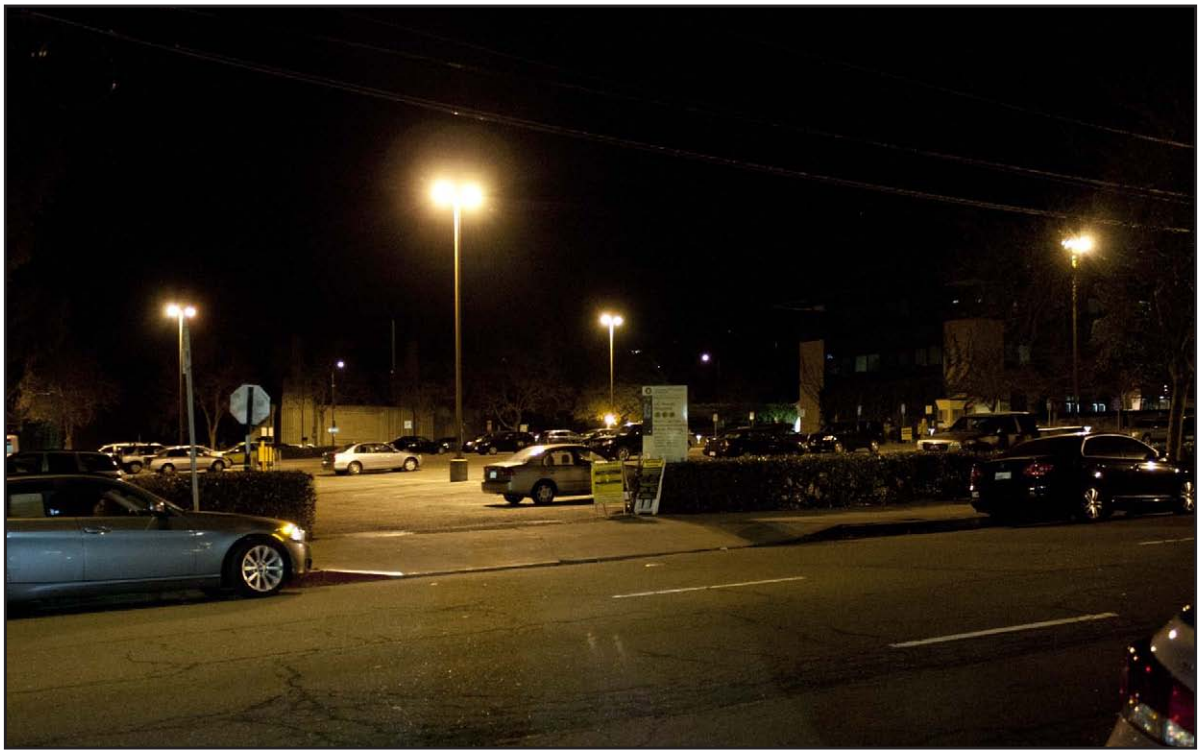


Photo 10 - Nighttime view of the project site looking north across Durant Avenue. Four light standards are visible in the parking lot (project site).

Existing Conditions

Figure 3e

2.3 NEED FOR THE PROJECT

UC Berkeley is one of only three NCAA aquatics programs in the country that provides participation opportunities to athletes in men's swimming and diving, women's swimming and diving, men's water polo, and women's water polo. Nearly 150 student athletes currently compete in these programs at Cal.

Despite the overwhelming success of these programs (with numerous NCAA team championships, individual NCAA championships, and Olympic medals), they are constrained by a lack of capacity for both training and competition, both in terms of times available for practice and amount of water space. In addition, UC Berkeley has no dive tower. The aquatics programs are further hampered by inadequate and obsolete land-side training facilities. The shortage of water space is a significant issue campus-wide for Intercollegiate Athletics and other users, including recreational swimmers, physical education students, and community partners; the proposed new Aquatics Center would free up water space for these other users.

Finally, the increase in pool space would increase pool time availability for Cal athletes, providing greater flexibility in scheduling training and practices around academic schedules. This flexibility would enhance the athletes' ability to complete degree programs in a timely fashion, which would avoid constraining limited student support resources within Cal Athletics. Aquatics athletes are a proportionally large share of the post-eligibility student athletes that are nevertheless on athletic scholarship. Over the last eight years there have been an average of 27 post-eligibility student athletes on athletic scholarship on campus. On average, 34% of those athletes have been in the aquatics program.

2.4 PROJECT OBJECTIVES

The objectives of the proposed project are to:

- Address the current deficit in pool, and land-side training facilities for workouts and training, for the Cal Aquatics program;
- Provide a diving tower (currently competitive Cal divers must travel some distance to Stanford for practice weekly to use a dive tower);
- Reduce scheduling constraints for student athletes in aquatics that limits their ability to complete degree programs in a timely fashion, constraining limited student support resources within Cal Athletics;
- Provide additional aquatics capacity for UC Berkeley in new development in a location near to existing competition-level aquatics facilities and student life;
- Add facilities in an efficient manner, with minimal additional costs; and
- Design and build facilities that aesthetically enhance the city and the campus vicinity over existing conditions.

2.5 PROJECT DESCRIPTION

PROGRAM DESCRIPTION

The main overarching programmatic goal of the project is to alleviate shortage of water space for the UC Berkeley aquatics programs with a new Aquatics Center.

The facility would consist of three one-story buildings surrounding a 52-meter swimming pool with a dive tower. The main building, fronting Bancroft Way, would contain a team meeting/multi-purpose room, the main entry passage way, and the main pool mechanical rooms. The main entry would be

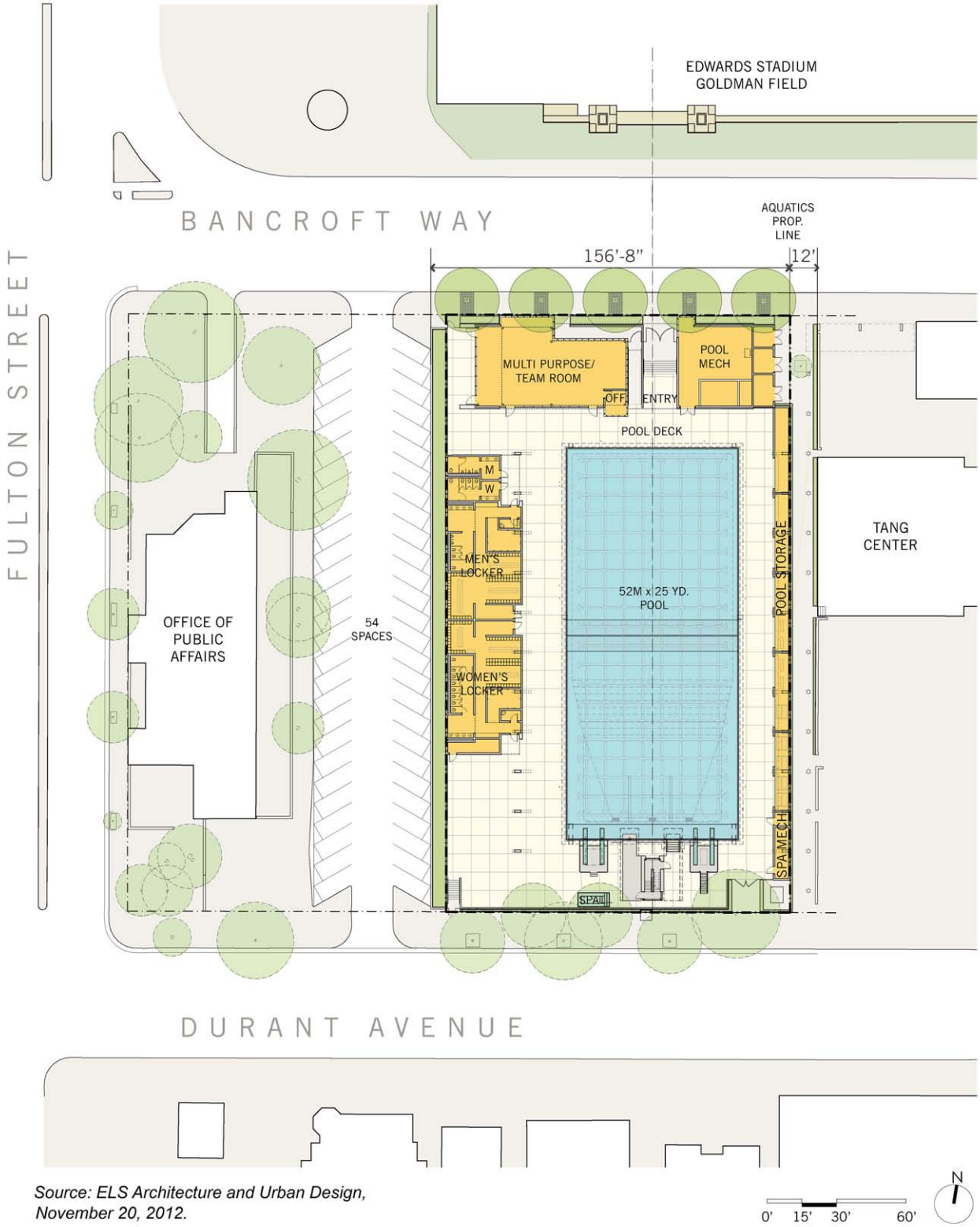
centered between the Edwards Field concrete pylons across the street as a way of visually connecting back to the University and the athletics precinct. The main pool mechanical rooms, located within the east end of the building, would offer access for chlorine delivery from Bancroft Way. The locker room building would be sited along the west edge of the project site and contain locker rooms, showers and restrooms for the men's and women's water polo, swimming and diving teams. Public restroom would be attached to the north end of the building. The third building would be a pool storage building, sited along the entire 52-meter length of the pool on the east edge of the project site. A mechanical room for the dive spa would be located within the south end of the storage building mass.

The dive tower would be 46 feet in height and would be placed at the south end of the pool. The dive tower would have 10-meter, 7.5-meter, five-meter, three-meter and one-meter diving platforms. The dive tower would also have a glass stairway enclosure to protect the divers from the weather as they ascend to the various platforms. Two 10-foot high springboard platforms on either side of the dive tower would accommodate one-meter and three-meter springboard platforms, respectively. A security handrail would extend above and around the top of the platform. Table 1 summarizes the proposed building program. The proposed site plan and site and building elevations are shown in figures 4 through 8.

Table 1:
Building Program Summary

Program Description	Proposed Gross Square Feet	Height
Main Building (team meeting/multi-purpose room, main entry passage way, and main pool mechanical)	4,970	21.2’
Locker Room Building (locker rooms, showers and restrooms)	4,370	15.3’
Pool Storage	1,520	9.3’
Dive Tower	Approx. 20’ x 30’	46’
Springboard Platforms	Approx. 12’ x 19’	3’ / 10’
	Total sf: 10,860	

Source: ELS, November 2012



Source: ELS Architecture and Urban Design, November 20, 2012.

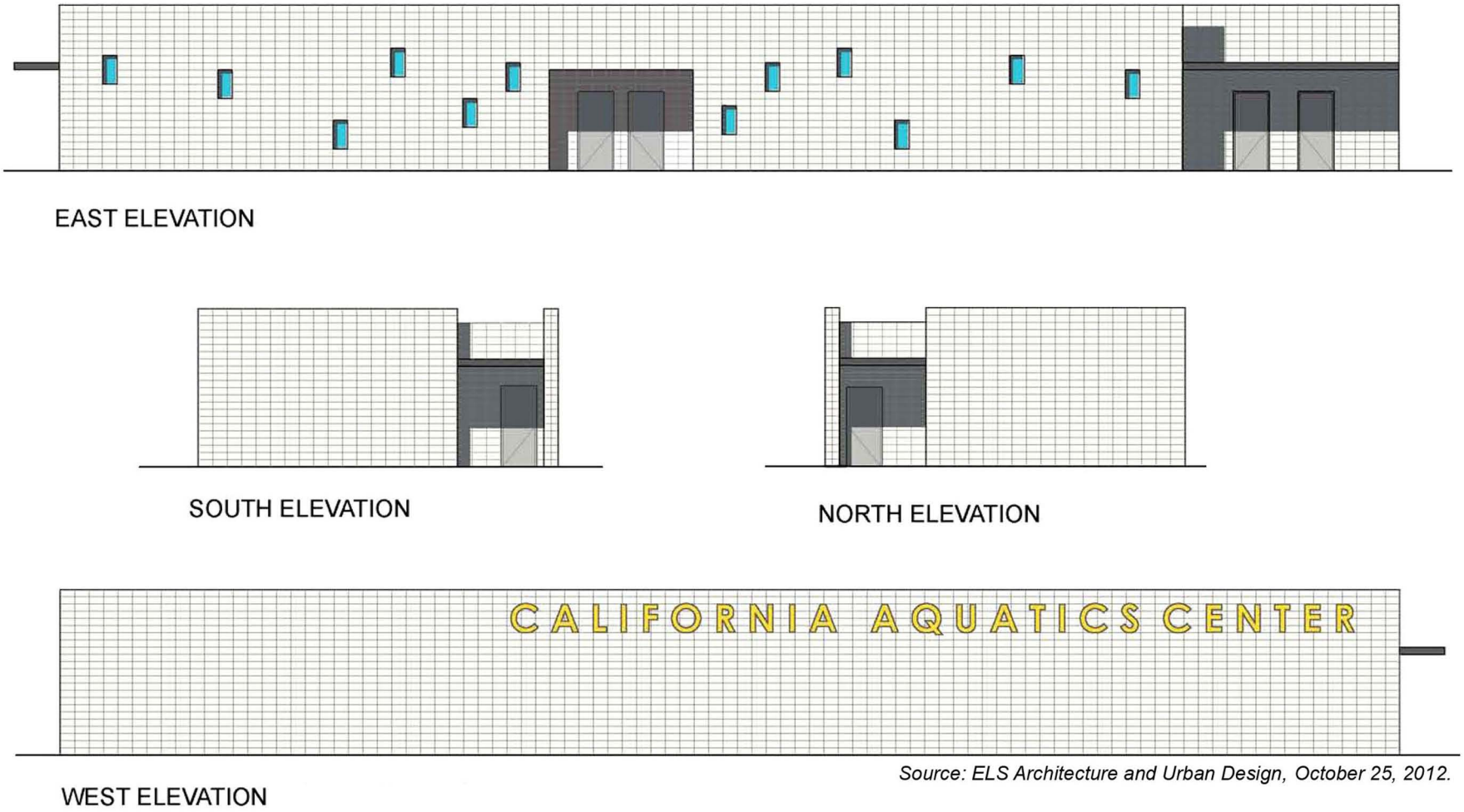
Proposed Site Plan

Figure 4

Source: ELS Architecture and Urban Design
October 25, 2012.

Proposed Elevations - Entry/Team Meeting/Multi-Purpose Building

Figure 5



Source: ELS Architecture and Urban Design, October 25, 2012.

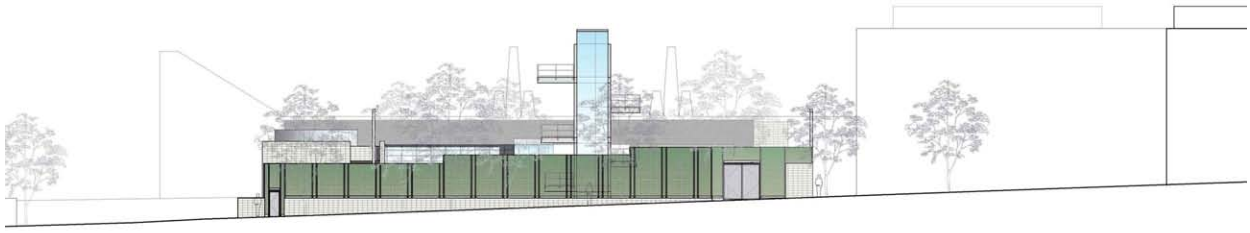
Proposed Elevations - Locker Room Building

Figure 6

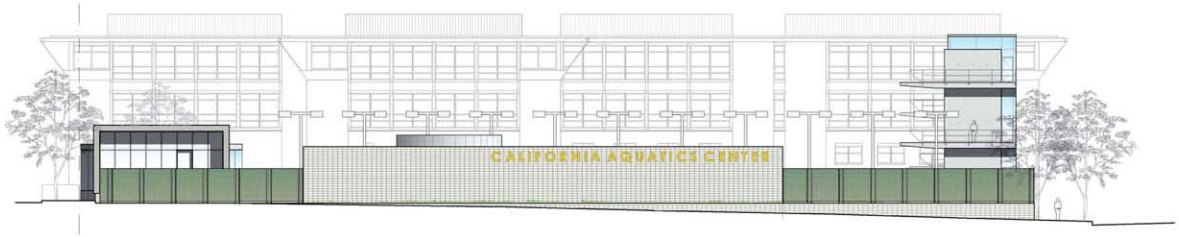
Source: ELS Architecture and Urban Design, November 20, 2012.

Proposed Elevations - Bancroft Way Frontage

Figure 7



SOUTH ELEVATION



WEST ELEVATION

0' 10' 20' 40'

Source: ELS Architecture and Urban Design, November 29, 2012.

Proposed Elevations - West Elevation and Durant Avenue Frontage

Figure 8

Table 2 shows the typical weekly schedule for the proposed Cal Aquatics Center.

Table 2:
Proposed Cal Aquatics Center Pool Schedule, Typical Week

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
6:00am – 7:00am wake-up swim for Water Polo in-season	6:00am – 7:00am wake-up swim for Water Polo in-season	6:00am – 7:00am wake-up swim for Water Polo in-season	6:00am – 7:00am wake-up swim for Water Polo in-season	6:00am – 7:00am wake-up swim for Water Polo in-season	6:00am – 7:00am wake-up swim for Water Polo in-season	6:00am – 7:00am wake-up swim for Water Polo in-season
Swim 7:00am-9:30am	Swim 7:00am-9:30am	Swim 7:00am-9:30am	Swim 7:00am-9:30am	Swim 7:00am-9:30am	Swim 8:00am-10:00am	Pool available to be scheduled by IA Teams
Diving/Open IA Swim 10:00am – 1:00pm	Diving/Open IA Swim 10:00am – 1:00pm	Diving/Open IA Swim 10:00am – 1:00pm	Diving/Open IA Swim 10:00am – 1:00pm	Diving/Open IA Swim 10:00am – 1:00pm	Water Polo 10:00am – 1:00pm	Pool available to be scheduled by IA Teams
Swim 1:30pm – 3:30pm	Swim 1:30pm – 3:30pm	Swim 1:30pm – 3:30pm	Swim 1:30pm – 3:30pm	Swim 1:30pm – 3:30pm	Pool available to be scheduled by IA Teams	Pool available to be scheduled by IA Teams
Water Polo 3:30pm – 6:30pm	Water Polo 3:30pm – 6:30pm	Water Polo 3:30pm – 6:30pm	Water Polo 3:30pm – 6:30pm	Water Polo 3:30pm – 6:30pm	Pool available to be scheduled by IA Teams	Pool available to be scheduled by IA Teams

Source: UC Berkeley Aquatics, February 2013

The project would not include any permanent seating for spectators, as the Aquatics Center would be used primarily for training. Spieker Pool would remain the primary competition venue for Cal Aquatics. In rare instances some competitions may involve use of the new pool, however, allowing meets or competitions to run events simultaneously rather than serially. On occasions when event seating is required, the deck areas would accommodate temporary bleachers for up to 500 spectators. For the rare evening competitive event, the project includes event lighting to meet the Pac 12 Network lighting requirements of a 70-footcandle average maintained over the main deck and pool. This would be achieved with LED fixtures mounted on 25-foot high poles, evenly spaced along the east and west sides of the pool. These lights would only be used at full illumination for competition.

The primary noise sources at the new pool would be whistles, yelling and splashing during workouts and practices. The facility would include a public address system (PA system). The purpose of the PA system would be for use at events, expected to occur rarely at the new pool but for purposes of this EIR assumed to occur four times a year. If it is used for music during training periods, operators would ensure that volume is set so as to be inaudible at residences on Durant Avenue. The PA system would not be used before 7:00 am on any day.

Although not expected to occur even this frequently (personal conversation, Deputy Director of Athletics Teresa Kuehn-Gould), for purposes of analysis in this EIR, events are assumed to occur approximately four times per year.

Under typical (non-event) conditions, ambient lighting on the pool deck would be approximately 15 footcandles, or the minimum needed for coaching functions (for example, reading a clipboard) and safety. All lighting other than building and near ground-level safety lighting would be turned off by 10:00 PM.

The Cal Aquatics Center pool would be used for team practices, competitions and individual skill training for intercollegiate men's and women's water polo, and men's and women's swimming and diving. In addition, there would be activities outside of the water including stretching, cardio work and other related training activities. On occasion, there would be clinics and camps for youth and other non-student-athletes that include individual skill instruction and team activities. Tables 3 through 5 show how aquatics program activities and locations and non-UC pool use would change with implementation of the proposed project. It should be noted that the overall Cal aquatics program would not be expanded with construction of the new aquatics center, but the location of practices would. Community use of the UC facilities would be expected to expand, as shown in Table 5.

Table 3:
Cal Aquatics Center and Spieker Aquatics Complex: UC Program Events

UC Program	Season (Months of Year)	Events (Meets/Matches)						
		Total Number of Home Events	Days of Week	Times of Day	Average # of Spectators	# Visiting Team Buses	TV trucks?	Typical Venue with Project (Spieker or Cal Aquatics Center)
Men's Swimming/ Diving	Oct-Feb	6/year	Thursday - Saturday	11am - 4pm	150-200	1 bus or 3 vans	typically one trailer	All at Spieker*
Women's Swimming/ Diving	Oct-Feb	6/year	Thursday - Saturday	11am - 4pm	150-200	1 bus or 3 vans	typically one trailer	All at Spieker*
Men's Water Polo	Sept-Dec (small # of games in Spring)	7-8/year (if not hosting tournament)	Saturday and Sunday	varies - typically mid-day	250-300	1 bus or 3 vans	typically one trailer	All at Spieker*
Women's Water Polo	Jan-April (small # of games in Fall)	7-8/year (if not hosting tournament)	Saturday and Sunday	varies - typically mid-day	100-150	1 bus or 3 vans	typically one trailer	All at Spieker*

** In the event of a scheduling conflict that would require that a smaller event would be moved over to the new facility, or if tournaments or other larger events hosted at Spieker would need a "warm up" pool or other back-up pool space for various aspects of the event, event lighting and temporary bleachers are included in the project description. This would be estimated to occur a maximum of four times per year. In addition, the diving portion of a competition otherwise held at Spieker would be held at the new facility if tower events were included.*

Source: UC Berkeley Aquatics, February 2013

Table 4:
Cal Aquatics Center and Spieker Aquatics Complex: UC Program Practice/Training

UC Program	Season (Months of Year)	Practice/Training Schedule					
		Days of Week	Times of Day	Average # on-site (either location)	Typical Student-Athlete Travel Mode	Coaching/ Training Staff Parking Location	Typical practice location with Project (CAC = Cal Aquatics Center)
Men's Swimming/ Diving	Year-round	Monday - Saturday	6am-8am; 1-3:30pm 8-10am on Sat.	50	Bike, walk	RSF Parking Lot	Spieker - 75%; CAC - 25%
Women's Swimming/ Diving	Year-round	Monday - Saturday	7-9am; 1:30-3:30pm 8-10am on Sat.	50	Bike, walk	RSF Parking Lot	Spieker - 25%; CAC - 75%
Men's Water Polo	Year-round	Monday - Saturday	8am-11am; 3:30-6:30pm 10am-12pm on Sat.	30	Bike, walk	RSF Parking Lot	Spieker - 75%; CAC - 25%
Women's Water Polo	Year-round	Monday - Saturday	8am-11am; 3:30-6:30pm 10am-12pm on Sat.	30	Bike, walk	RSF Parking Lot	Spieker - 75%; CAC - 25%

Source: UC Berkeley Aquatics, February 2013

Table 5:
Cal Aquatics Center and Spieker Aquatics Complex: Non-UC Program Uses

Use	Existing	Future with Project
CAMPS		
Typical months camps are hosted:	June and July	June through August (and occasional weekends other months)
# camp days per year (weekdays):	approx. 10 days	20-25 days
# camp days per year (weekend days):	approx. 4 days	8-10 days
Typical hours of the camps:	7:00am - 5:00pm	7:00am - 5:00pm
Camp enrollment		
Low:	25 for Weekend Start/Turn Camps	20-25 for specialty clinics
High:	120 for M-F Overnight Camps	120-150, depending on sport
Method of transportation		
Bus (%):	5%	5%
Personal transport (auto drop-off) (%):	90%	90%
Personal transport (bus, bike, walk %):	5%	5%
Location		
Spieker (% of total):	100%	20-25%
Cal Aquatics Center (% of total):		75-80%
PUBLIC LAP SWIMMING		
Months/Days/Times allowed:	Year-round; M-F 10am-1pm and 6pm-9pm; Saturday 12pm-8pm; Sunday 10am-8pm (flexible based on events)	Additional times to be arranged – between 10 and 20% more hours to

Table 5:
Cal Aquatics Center and Spieker Aquatics Complex: Non-UC Program Uses

Use	Existing	Future with Project
		be available
Average number participating:	50-75 depending on session and weather	Expanded days and hours would result in additional participants; numbers not known
Location		
Spieker (% of total):	100%	100%
Cal Aquatics Center (% of total):	0%	0%

Source: UC Berkeley Aquatics, February 2013

The Aquatics Center is not planned to be available for public lap swimming. The new facility is expected to increase the University's capacity to host summer camps and specialty clinics from about 14 days per year to approximately 28 to 35 days per year, during the months of June through August. The camps and clinics, which currently take place at Spieker Pool, would shift to be held at Spieker Pool about 25% of the time and at the Aquatics Center about 75% of the time. The existing camps and clinics range in attendance from 25 to 120 people; attendance would increase by up to 30 people with the new Aquatics Center. The overall amount of days and participants is expected to remain roughly the same or increase only slightly for other UC and non-UC programs.

In caring for the new pool standard pool chemicals would be used, including 12.5% sodium hypochlorite (liquid bleach) stored in a 1,000-gallon dual contained tank within a one-hour rated chemical room; 21% muriatic acid stored in a 150-gallon dual contained tank within a one-hour rated room; and 600 pounds of CO_2 stored in a cryogenic tank inside a one-hour rated chemical room.

BUILDING DESCRIPTION

The building mass of the main building, fronting Bancroft Way, would be a rectangular box made of precision-cut concrete masonry, layered with a perforated metal skin. Translucent glass would weave in and out of the box creating a pattern and rhythm along Bancroft Way similar to the existing adjacent commercial buildings. Within the team meeting/multi-purpose room, located in the west end of the building mass, translucent glass walls on the north side of the room would provide natural light with privacy for team training and meetings. Clear glass walls to the south and west would look out to the pool deck and a patio area respectively.

The locker room building along the west edge of the project site would be mostly rectangular in shape and made of precision-cut concrete masonry accented with punched translucent clerestory windows. The interior walls and floors would be tiled. Translucent skylights in the roof would bring additional natural light into the changing areas and bathrooms.

The pool storage structure, sited along the entire 52-meter length of the pool on the east edge of the project site, would be a rectangular mass constructed of precision-cut concrete masonry. Storage would be accessed through metal roll-up doors placed at regular intervals along the entire building facade.

The dive tower and springboard structures would be made of cast in place concrete. The dive tower would also have a glass stairway enclosure to protect the divers from the weather as they ascend to the various platforms. The dive tower stair core would be internally lighted and produce a soft glow. Conceptual architectural renderings of the project are shown in figures 9 and 10.

Source: ELS Architecture and Urban Design

Architectural Rendering – View Looking Southeast from North Side of Bancroft Way

Figure 9

Source: ELS Architecture and Urban Design

Architectural Rendering - Elevated View
Looking Northwest from Durant Avenue

Figure 10

LANDSCAPE DESCRIPTION

The sidewalk and trees along Bancroft Way adjacent to the existing parking lot would be removed and replaced. The non-native melaleuca trees on the project site along the site's southern boundary would also be removed. However, the existing London plane trees within the City right of way on Durant Avenue would remain. Sidewalk planters in front of the new facility along Bancroft Way would be added and would be planted with gray rush. The existing sidewalk and trees along the existing mid-block passageway along the west edge of Tang Center would also be removed and replaced with new sidewalk and planting pockets. Due to the non-native species and modest sizes of the existing trees on the site, they do not meet the University's definition of "specimen trees." New 14-foot high light poles would replace existing pathway lighting.

ENERGY EFFICIENCY AND "GREEN" FACILITY MEASURES

The project would employ energy efficiency strategies in all building disciplines in order to achieve a 20% energy use reduction. Due to the size of the project, the Performance method would be used to show compliance with Title 24. This method allows building trade-offs among the different building components similar to the energy modeling required by LEED. The building envelope would have insulation values that exceed the requirements of Table 143-A, Climate Zone 03. The envelope would also employ high performance glazing. The interior and exterior lighting would use light fixtures and lamps that would provide required light levels but stay under the maximum allowed lighting power densities (LPD) listed in Table 146-F. The interior spaces would be served by high efficiency direct-expansion (DX) cooling/heating rooftop systems. The plumbing fixtures would be low-flow fixtures with a project target of a 40% water use reduction.

GRADING/EXCAVATION, DRAINAGE AND UTILITIES

Site preparation and grading would involve a net export of 7,118 cubic yards of material. The maximum depth of excavation would be approximately 22 feet.

Stormwater runoff from the buildings and paved areas would be discharged into and filtered through approximately 2,680 square feet of landscape area along the site's western edge prior to discharge to the City Storm drain infrastructure in Bancroft Way. Stormwater runoff from the site would be reduced compared to existing conditions, where virtually the entire site is impervious to infiltration.

Water service and wastewater service would be taken from existing East Bay Municipal Utility District (EBMUD) and City of Berkeley infrastructure under Bancroft Way. Heating for the pool water would be provided by an on-site gas boiler. Electricity would either be brought over from the Campus Park via a line beneath and across Bancroft Way or from standard PG&E service from existing distribution points adjacent to the site.

ACCESS AND PARKING

Pedestrian and bicycle access to the Aquatics Center would be provided from Bancroft Way through the main entrance. Pedestrian access would also be available from Durant Avenue via a mid-block pathway. The existing mid-block passageway west of the Tang Center, allowing for pedestrians to traverse the block from Durant Avenue through the site to Bancroft Way, would be retained and enhanced. New light pole standards would be added to the mid-block passageway to keep it safely lit at night. For security, the facility would be enclosed with a minimum eight-foot high metal fence. Vehicles would enter the lot from Durant Avenue and exit to Bancroft Way. A portion of the existing parking would be retained and reconfigured to allow 49 angled parking spaces along the west edge of the project site. Along Bancroft

Way, new trees and a new sidewalk would replace the existing trees and sidewalk. Planters and bicycle parking would also be added along the front of the facility.

The pool operations require use of chlorine, acid and CO2 that would be delivered to the site approximately every two weeks. Delivery would typically occur in the early mornings by a large truck delivering chlorine and acid and a smaller truck (six-wheeler) delivering CO_2. The trucks would park within 70 feet of the chemical room doors and chemical company personnel would deliver the chemicals through a hose.

ANTICIPATED CONSTRUCTION SCHEDULE

Drilled piers would be used for the Dive Tower. Overall construction of the new Aquatics Center would take 10 to 12 months.

MINOR LRDP TEXT AMENDMENT

The project as proposed includes a minor LRDP text amendment to the City Environs Framework text of the UC Berkeley 2020 LRDP. For additional information see section 2.6, below.

2.6 PLANNING CONTEXT

2020 LRDP

The Cal Aquatics Center is proposed as partial implementation of the UC Berkeley 2020 Long Range Development Plan (2020 LRDP).[1] Adopted by the Regents in January 2005, the 2020 LRDP describes both the scope and nature of development proposed to meet the goals of the University through academic year 2020-2021, including projections of growth in both campus headcount and campus space during this timeframe. The 2020 LRDP also prescribes a comprehensive set of principles, policies, and guidelines to inform the location, scale and design of individual capital projects. These include the Location Guidelines, which establish priorities for the location of campus functions, both within the historic Campus Park and outside of it, including the Adjacent Blocks land use zones identified in the LRDP. The project site is located within the Adjacent Blocks West land use zone. LRDP policies also guide the design of projects in the City Environs; a minor amendment to these policies (see Appendix A) is proposed as part of the Cal Aquatics Center project, in order to align the proposed project with a revised 2020 LRDP.

The Project conforms to the Location Guidelines, which prioritize locations in the LRDP's land use zones. The Location Guidelines identify Student Services, including "Fitness, recreation, intercollegiate athletics," as priority uses within the adjacent blocks. The LRDP also specifically calls out UC-owned surface parking lots in the areas surrounding the Campus Park as candidate sites for realizing implementation of the overall LRDP land use and facilities program.

2020 LRDP EIR

The 2020 LRDP Environmental Impact Report (SCH #2003082131), certified by The Regents of the University of California in January 2005, provides a comprehensive program-level analysis of the 2020 LRDP, and its potential impacts on the environment, in accordance with Section 15168 of the California Environmental Quality Act (CEQA) Guidelines. The 2020 LRDP EIR prescribes Continuing Best Practices and Mitigation Measures for all projects implemented under the 2020 LRDP, as described in **ENVIRONMENTAL REVIEW**, below.

UC DESIGN REVIEW PROCESS

The project was reviewed by the UC Berkeley Design Review Committee at its September 13, 2012 meeting. The committee provided the following comments:

- *Visually open the facility more to the street, rather than walling / fencing off. Aquatics facilities that are visually permeable to passersby are very successful / popular at other campuses; study USC and Stanford for successful / recent examples;*
- *A more visually open facility is particularly important along this stretch of Bancroft Way;*
- *Simplify the design elements of the team building; it is a small, sculptural structure, and does not need several finishes;*
- *Consider shifting the mechanical structure away from the street frontage, possibly placing it under permanent seating; fans / mechanical noise along street not desirable; this would also provide more opportunity for a pool side plaza at the northeast corner, along Bancroft.*
- *Are enough seats provided for spectators, and is the circulation to the seating clearly thought through?*
- *Symmetrically aligning the facility with the obelisks at the Track Stadium across the street is a good design move;*
- *Provide overhead / sun shelter for spectators; very important at other aquatics venues in California*
- *Although the Committee provided comments on this project, members continue to feel that a single level aquatics facility is not the highest / best use for this large, urban, and well-situated campus-owned site.*

UC REGENTS REVIEW

The proposed project is funded by a pledge from a group of donors interested in supporting the Cal aquatics program. Because the project was not anticipated in the University's Capital Financial Plan and the overall cost of the project exceeds $10 million, review of the project by the Regents is required.

CITY OF BERKELEY PLANNING COMMISSION AND DESIGN REVIEW COMMITTEE

The Continuing Best Practices prescribed in the 2020 LRDP EIR include the following requirements for all projects located in the 'City Environs', which includes the areas within Berkeley lying outside the 'Campus Park' and 'Hill Campus': [1]

> UC Berkeley would make informational presentations on all major projects in the City Environs in Berkeley to the Berkeley Planning Commission and, if relevant, the Berkeley Landmarks Preservation Commission for comment prior to schematic design review by the UC Berkeley Design Review Committee … Whenever a project in the City Environs is under consideration by the UC Berkeley DRC, a staff representative designated by the city in which it is located would be invited to attend and comment on the project. (Continuing Best Practice AES-1-e)

The proposed project is located in the City Environs, specifically within the Adjacent Blocks West land use zone of the LRDP, in the City of Berkeley. The project was reviewed by the City of Berkeley Planning Commission at its February 20, 2013 meeting; while expressing concern about cumulative parking loss, desire that the new facility should serve a broader section of the community, and inconsistency of the proposed development with the Downtown Area Plan (see Land Use section below), the commission largely supported the project. The project was reviewed by the City of Berkeley Design Review Committee at its February 21, 2013 meeting; the committee largely supported the project.

[1] In the 2020 LRDP, the "Campus Park" refers to the historic 180 acre central campus defined by Hearst, Oxford/Fulton, Bancroft, and Piedmont. The "Hill Campus" refers to the roughly 800 acres lying east of the Campus Park extending into the eastbay hills.

SOUTHSIDE PLAN

Although owned by and adjacent to the university, and within the scope of the LRDP, the project site is within the City of Berkeley's Southside Plan area. The City of Berkeley City Council adopted the Southside Plan, which includes the area immediately adjacent to campus south of Bancroft Way, at their public hearing of September 27, 2011. Per a 1997 MOU, the campus has acknowledged the Southside Plan as the guide for campus developments in the Southside area. As stated in the City Environs Framework of the LRDP, "the university should as a general rule use the Southside Plan as its guide for the location and design of future projects in the Southside, as envisioned in the Memorandum of Understanding." The LRDP's City Environs Framework includes the following two policies related to the relationship between university projects in the City Environs and the applicable city land use plans and regulations:

Use municipal plans and policies to inform the design of future capital projects in the City Environs.

Use the Southside Plan as a guide to the design of future capital projects in the Southside.

The LRDP also identifies the Southside as "first and foremost, a place where people live. While the Southside Plan recognizes there are many areas within the Southside suitable for new non-residential projects, it also recognizes such projects must be planned to enhance the quality of life for all Southside residents."

The LRDP calls on the university to "make informational presentations of all major projects within the Southside Plan area to the City of Berkeley Planning Commission and, if relevant, the City of Berkeley Landmarks Commission for comment prior to schematic design review by the UC Berkeley Design Review Committee." The outcomes of this process for the proposed Cal Aquatics Center are summarized under the heading City of Berkeley Planning Commission and Design Review Committee, above.

The project site is within the Southside Plan's Residential Mixed Use Subarea, which applies "to areas containing a mix of University, office, and institutional uses as well as multi-family housing and small-scale neighborhood serving commercial uses." The broad intentions stated in the Southside Plan for the Residential Mixed Use Subarea are "allowing a wider variety of land uses than is allowed in other subareas in order to maintain the existing diversity of land uses; meeting the future needs of the many different users and property owners in this subarea; and reducing pressure to locate non-residential or non-retail uses in the other four subareas." The Southside Plan recommends a broad variety of land uses for this subarea, including housing, university academic facilities and offices, religious facilities, schools, social institutions, parking, cultural facilities, hotel uses, and neighborhood serving retail uses. Mixed-use developments that include housing are identified as a preferred use. The Southside Plan also notes that the Residential Mixed Use Subarea contains many of the sites in the plan area with development potential, specifically including surface parking lots. Specific relevant policies in the Southside Plan are discussed in the SEIR analysis under Land Use and Planning.

3. RELATIONSHIP TO 2020 LRDP

BACKGROUND

UC Berkeley's Long Range Development Plan (2020 LRDP) was approved by The Regents in January 2005, and describes both the scope and nature of development proposed to meet the goals of the University through academic year 2020-2021, as well as land use principles and policies to guide the location, scale and design of individual capital projects.

The 2020 LRDP Environmental Impact Report provides a comprehensive program-level analysis of the 2020 LRDP, and its potential impacts on the environment, in accordance with Section 15168 of the California Environmental Quality Act (CEQA) Guidelines. Under CEQA, subsequent projects should be examined in light of the program-level EIR to determine whether subsequent project-specific environmental documents must be prepared. Subsequent documents may rely on the program-level EIR for information on setting and regulatory framework, for analysis of general growth-related and cumulative impacts, and for alternatives to the 2020 LRDP. 2020 LRDP mitigation measures and best practices that reduce potential impacts of the project would be implemented as part of the project, and would be identified in the project-specific review. Additional mitigation measures may also be identified.

2020 LRDP EIR mitigation measures and continuing best practices to be incorporated into the Cal Aquatics Center project are identified in each topical section of the **ENVIRONMENTAL EVALUATION** in this document. The 2020 LRDP and the 2020 LRDP Environmental Impact Report (SCH #2003082131) are available on line at lrdp.berkeley.edu; copies are available for review at the offices of Physical and Environmental Planning/Capital Projects/Facilities Services, Room 1, A&E Building on the Berkeley campus, and are available for review at the Berkeley Public Library and online.

PARAMETERS OF THE 2020 LRDP

The proposed site for the Project is governed by the 2020 LRDP. The project would be located in the area designated in the 2020 LRDP as the Adjacent Blocks West land use zone of the Campus Environs. The 2020 LRDP anticipated up to 1 million net new gross square feet of academic and support space would be developed on the Campus Park over the lifetime of the 2020 LRDP, and over 2.2 million net new gross square feet within the entire area governed by the 2020 LRDP (2020 LRDP EIR Vol 3a, 3.1-14). These growth envelopes were analyzed in the 2020 LRDP EIR. As shown in Table 6 below, the Project would not exceed development levels anticipated in the 2020 LRDP.

The 2020 LRDP also projected increases in campus headcount, broken down by faculty, academic staff and visitors (including researchers and postdocs), and nonacademic staff. Table 7 shows how the Project aligns with the net new headcounts in each category anticipated in the 2020 LRDP, and analyzed in the 2020 LRDP EIR (2020 LRDP EIR Vol 3a, 3.1-14).

The 2020 LRDP includes Location Guidelines for the various campus functions housed on and around the campus. The Project conforms to the Guidelines, as described in Section 2.6, above.

Table 6:
Comparison of Project to 2020 LRDP Program: Space

	# Gross Square Feet		% total LRDP GSF
	By project	totals	
Max New Academic and Support GSF in 2020 LRDP		2,200,000	100%
Max new Academic and Support GSF due to other projects		722,829	33%
Max new Academic and Support GSF due to proposed CAC	10,860		0.49%
Net new Academic and Support GSF remaining		1,466,311	66.51%

Source: UC Berkeley Capital Projects/Facilities Services, February 2013

Table 7:
Comparison of Project to 2020 LRDP Program Adjacent Blocks West: Space

	# Gross Square Feet		% total Area GSF
	By project	#	
Max New Academic and Support GSF in 2020 LRDP		800,000	100%
Max new Academic and Support GSF due to other projects		150,200	18%
Max new Academic and Support GSF due to proposed CAC	10,860		0.13%
Net new Academic and Support GSF remaining		638,940	81.87%

Source: UC Berkeley Capital Projects/Facilities Services, February 2013

The proposed newly built space would add 10,860 of gross square footage to accommodate the existing student population and is not associated with an increase in student or staff FTE for the campus. Rather, the proposed new facility would provide needed additional space for existing UC athletes and other students.

OBJECTIVES OF THE 2020 LRDP

The purpose of the 2020 LRDP is to set forth a framework for land use and capital investment undertaken in support of the campus' academic principles. The 2020 LRDP is driven by the following broad objectives: those which are directly relevant to the Project are shown in **bold type** (2020 LRDP EIR Vol 3a, 3.1-10).

- ***Provide the space, technology and infrastructure we require to excel in education, research, and public service.***
- ***Provide the housing, access, and services we require to support a vital intellectual community and promote full engagement in campus life.***
- *Stabilize enrollment at a level commensurate with our academic standards and our land and capital resources.*
- *Build a campus that fosters intellectual synergy and collaborative endeavors both within and across disciplines.*
- ***Plan every new project to represent the optimal investment of land and capital in the future of the campus.***
- ***Plan every new project as a model of resource conservation and environmental stewardship.***
- ***Maintain and enhance the image and experience of the campus, and preserve our historic legacy of landscape and architecture.***

- ***Plan every new project to respect and enhance the character, livability, and cultural vitality of our city environs.***
- *Maintain the Hill Campus as a natural resource for research, education and recreation, with focused development on suitable sites.*

The following discussion briefly describes the project's fulfillment of the identified LRDP objectives.

- *Provide the space, technology and infrastructure we require to excel in education, research, and public service.*
- *Provide the housing, access, and services we require to support a vital intellectual community and promote full engagement in campus life.*

UC Berkeley is a large and diverse institution; one aspect of the proposed project, namely the reduction of parking supply, would not be uniformly construed as supporting access and services to the campus community. However, the project would provide much-needed additional space for the Cal aquatics program. As discussed above in Section 2.3, Need for the Project, UC Berkeley is one of only three NCAA aquatics programs in the country that provides participation opportunities to athletes in men's swimming and diving, women's swimming and diving, men's water polo, and women's water polo. Despite the overwhelming success of these programs, they are constrained by a lack of capacity for both training and competition, both in terms of times available for practice and amount of water space. The aquatics programs are further hampered by inadequate and obsolete land-side training facilities. The shortage of water space is a significant issue campus-wide for Intercollegiate Athletics and other users, including recreational swimmers, physical education students, and community partners. Cal athletics enrich the student experience at Berkeley and provide a balance to Berkeley's rigorous academic demands, thus supporting the overarching goals of excellence in education, research, and public service as well as supporting full engagement in campus life.

Campus leaders are fully informed about parking reductions. The Cal Aquatics Center supports a vital intellectual community by reducing scheduling constraints for student athletes, and supports excellence in education and athletics.

- *Plan every new project to represent the optimal investment of land and capital in the future of the campus.*

The project site is a suitable location for the proposed aquatics center due to its location adjacent to the university's existing sports complexes. In addition, both the LRDP and Southside Plan identify existing surface parking lots as opportunity sites for new development. As discussed above, the new aquatics facility would be an important investment in the future of the university's athletic programs and campus life. Nevertheless, the proposed use for the project site may be seen as less than optimal from a larger planning perspective, as the site is also highly suitable for other uses. Higher density and a larger scale of development, as well as student housing and mixed use projects, are considered desirable in the Adjacent Blocks West and in the City of Berkeley's Southside Plan areas by the LRDP and the Southside Plan, respectively; therefore, revisions to the 2020 LRDP are proposed to make an exception for the Cal Aquatics Center. Existing plans encourage density, mixed use and housing in these areas to further a number of planning goals including improving and activating the pedestrian environment between downtown and the campus park area in general and on Bancroft Way in particular, and reducing vehicle miles travelled by locating housing in proximity to campus and by developing two or more land uses on a project site. As discussed under Land Use in the environmental analysis below, this is an important land use consideration for the decision makers, but does not rise to the level of a direct policy inconsistency or a significant impact on the environment. The University recognizes that because of other

considerations, such as availability of funding for new development, the theoretical "optimal" use may not always be achievable.

- *Plan every new project as a model of resource conservation and environmental stewardship.*

The proposed aquatics center would employ state-of-the art energy-efficient equipment for pool heating and facility lighting. As discussed in the Environmental Analysis in this SEIR, the project would improve the quality and reduce the quantity of stormwater runoff, and would result in less-than-significant impacts in the issue areas studied related to environmental resource conservation and stewardship. The project involves replacement of a surface parking lot with an athletic facility; the site does not currently support environmental resources, and the existing ornamental trees on the site would be replaced by new landscape trees.

- *Maintain and enhance the image and experience of the campus, and preserve our historic legacy of landscape and architecture.*

The proposed aquatics center would replace a surface parking lot with an active athletic use, which would enhance the image and experience of the project site and surroundings. Use of the site as a student support facility that also supports community activities such as swimming camps, rather than a surface parking lot, would enhance the image and experience of the site with a use linked to ongoing sports and academic uses at the adjacent campus park. The project has been reviewed by the UC Berkeley and City of Berkeley design review committees to ensure that the architecture and landscaping maintain and enhance the image and experience of the campus.

There are currently no historic resources (or buildings of any kind) on the site. The existing landscaping does not include specimen or heritage trees or other unique or historic vegetation or hardscape.

- *Plan every new project to respect and enhance the character, livability, and cultural vitality of our city environs.*

The project site is within the city environs. It is bordered on three sides by UC facilities (athletics, offices and student services) and on one site (across Durant Avenue) by non-UC residential buildings. The project has been designed to complement and not overwhelm the adjacent larger Tang Center and similar-scaled Office of Public Affairs building. Attention to details such as lighting – through using fixtures that minimize light and glare spillover – as well as scale and landscaping, the project is intended to respect both the adjacent university facilities and the residential area across Durant Avenue from the site. The project would enhance the vitality by replacing a surface parking lot with an active use that supports student life and athletic programs but also provides an additional venue for camps that serve the community. As specified in the LRDP, the university is encouraged to be responsive to the interface of campus and city. For this reason, informational presentations at the schematic design stage were made to the City of Berkeley's Planning Commission and Design Review Committee, as discussed above.

2020 LRDP CLIMATE CHANGE AMENDMENT

In June 2009, UC Berkeley published a proposed amendment to the 2020 LRDP, Sustainable Campus chapter, to reflect existing campus commitments to address climate change. The minor LRDP text amendment reflects campus policy, including: "Design all aspects of new projects to achieve short term and long term climate change emission targets established in the campus climate action plan." UC Berkeley targets achievement of 1990 greenhouse gas emission levels by 2014, six years ahead of state mandated targets, and climate neutrality as soon as possible but not later than 2050. The amendment

links the 2020 LRDP and the campus climate action plan, which is updated annually: see http://sustainability.berkeley.edu/calcap.

The amendment to the UC Berkeley 2020 LRDP was approved by the University based on Addendum #5 to the UC Berkeley 2020 LRDP EIR. The Addendum and the LRDP Amendment were approved in July 2009 by the University, following review and consideration of comments from community members. Addendum #5 described existing climate change conditions and evaluates the potential for development under the UC Berkeley 2020 LRDP, with minor amendments to reflect current campus policy, to affect climate change. Addendum #5 provided a summary of the current regulatory framework applicable to climate change, discussing the applicable federal, state, regional, and local agencies that regulate, monitor, and control GHG emissions. Addendum #5 concluded that the proposed amendment to the 2020 LRDP Sustainable Campus chapter did not trigger a need to prepare a subsequent EIR to the 2020 LRDP EIR. The Project complies with University policies on sustainable practices, as further described below. See http://tinyurl.com/UCBClimate for documents and information. The Cal Aquatics Center project would implement the 2020 LRDP, as amended, which includes compliance with emission targets established in the Campus Climate Action Plan and therefore would not conflict with any applicable plan adopted for the purpose of reducing the emissions of greenhouse gases.

4. ENVIRONMENTAL DETERMINATION

The University has prepared this Draft Subsequent Environmental Impact Report (SEIR) to evaluate the Project in accordance with CEQA (Public Resources Code Section 21000 et seq.), and the University of California Procedures for Implementation of CEQA. Based on the SEIR the campus has determined that the Project, which includes a minor text amendment to the LRDP to address siting of the Cal Aquatics Center, is substantially consistent with the UC Berkeley 2020 LRDP EIR which was certified by The Regents in 2005, and includes later addendum and amendments, but that the Project may cause new impacts not considered in the LRDP EIR in the areas of Land Use and Utilities. No other new information of substantial importance, which was not known at the time the LRDP EIR was certified, has become available; and thus the University has prepared a Subsequent EIR to the LRDP EIR. The Project Description, above, and the following impact analysis, including all Appendices, for the Project as currently proposed, serves as the Subsequent EIR (SEIR).

On the basis of the initial evaluation that follows, UC Berkeley finds that:

	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
X	The proposed project MAY have a significant effect on the environment and additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation. In response, this document constitutes a SUBSEQUENT ENVIRONMENTAL IMPACT REPORT.
	The proposed project MAY have a 'potentially significant impact' or 'potentially significant impact unless mitigated' impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable standards and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards; and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, and (c) the project does not involve new information of substantial importance that shows mitigation measures or alternatives which are considerably different from those analyzed in the 2020 LRDP EIR or which were previously considered infeasible, are now feasible; therefore, the 2020 LRDP EIR and the documentation enclosed presents sufficient environmental analysis for the project.

Emily Marthinsen

Emily Marthinsen — Assistant Vice Chancellor, UC Berkeley

5. ENVIRONMENTAL EVALUATION

All answers take account of the whole action involved, including beneficial, direct, indirect, construction-related, operational, and cumulative impacts. A list of references used in the preparation of this Initial Study is included at the end of this document.

Appendix G of the CEQA Guidelines provides only a suggested format to use when preparing an Initial Study. UC Berkeley has adopted a slightly different format with respect to the response column headings (refer to the definitions provided below), while still addressing the Appendix G checklist questions that are relevant to each environmental issue. In the checklist that follows:

2020 LRDP Analysis Sufficient applies to those issues where the environmental review completed for the 2020 LRDP is determined to be sufficient to address impacts of the Project, and where additional CEQA review would be repetitive. Discussion under each issue area marked '2020 LRDP Analysis Sufficient' includes specific reference to the 2020 LRDP EIR setting, pertinent impact analysis, and continuing best practices and mitigation measures incorporated into the Project to address the potential environmental impact in question.

Further Analysis Required is checked for those potential environmental impacts, which may or may not be significant, for which the environmental review completed for the 2020 LRDP does not in itself provide an adequate basis for a determination of no significant impact, and for which further analysis of the Project is required; when checked, the analysis is presented in the text.

AESTHETICS

SETTING

The 2020 LRDP and its EIR, as well as the City of Berkeley's Southside Plan, provide a framework for considering the visual effects of the proposed Cal Aquatics Center. The visual setting of the campus and its environs are described in the 2020 LRDP EIR (Section 4.1). According to the 2020 LRDP, the project site is located within the City Environs. The project site is also located within the City of Berkeley Southside Plan. The University owns roughly 45% of the land in the Southside, including the project site, and students comprise over 80% of Southside residents. The following text summarizes context information for aesthetics relevant to the project.

VISUAL CHARACTER

The heart of UC Berkeley (the Campus Park) is often described as a 'university in a park' and it is this park-like character that unifies its disparate buildings and diverse academic functions, and imparts a unique and memorable identity. UC Berkeley was established on an expansive landscape of rolling hills, framed by the north and south forks of Strawberry Creek.

The project site is located adjacent to the Campus Park, within the area designated in the 2020 LRDP as the "City Environs," defined to include the Adjacent Blocks, the Southside, Other Berkeley Sites, and the Housing Zone in its entirety: in other words, the entire scope of the 2020 LRDP except for the Campus Park and Hill Campus. The areas within the City Environs are similar in consisting mostly of city blocks served by city streets, and include University-owned properties interspersed with non-university properties.

Similar to the Campus Park, the City Environs have continued to evolve over the years, and in some areas single-family homes have given way to multifamily buildings. Because this development has occurred project by project, many residential districts have an eclectic mix of older one-and two-family homes and newer, larger apartment buildings. According to the 2020 LRDP, the project site is located within the Adjacent Blocks West district, which is defined by Oxford, Virginia, Walnut, Hearst, Shattuck, Durant, Ellsworth, and the Campus Park. Major campus facilities on these blocks include the Tang Health Center, the University Printing Plant, University Hall, 2195 Hearst, and the plant research facilities of the Oxford Tract. The City Environs – the Adjacent Blocks, the Southside, and the Housing Zone – consist of a grid of city blocks developed with a dense but almost entirely low-rise mix of residential, commercial, and institutional buildings. One- to four-story buildings with street level shops and services as well as office or residences on upper floors predominate along arterials, while interior blocks tend to be exclusively residential. According to the 2020 LRDP, development in the Adjacent Blocks West area offers enormous potential to enhance the synergy of campus and city.

As shown in Figure 2, the project site is located across Bancroft Way from the southwest corner of the campus, just east of the intersection of Fulton Street and Bancroft Way. The site is bordered on the south by Durant Avenue and older, modest-sized multi-family residential buildings across Durant Avenue; on the west by the UC Public Affairs building; on the north by Bancroft Way and the sports precinct within the Campus Park across Bancroft Way; and on the east by the Tang Center.

The project site, referred to on campus maps as the Bancroft/Fulton Parking Lot, is a rectangular, paved surface parking lot developed with approximately 230 parking spaces and a small parking kiosk. The site is generally flat, sloping gently to the southwest. Light standards of approximately 25 feet in height, each with two fixtures, provide night lighting throughout the night, along with street lights on Bancroft Way and Durant Avenue. Refer to Figures 3a through 3d for a visual representation of existing conditions on and adjacent to the project site.

SCENIC VISTAS, HISTORIC RESOURCES AND LANDSCAPE

The project site is generally flat and almost entirely paved, and is used exclusively for surface parking. Scenic vistas in the vicinity of the project site include views of the East Bay hills to the northeast and of the San Francisco Bay and the Marin Headlands looking west along Bancroft Way. However, views of these scenic resources are not currently visible from or through the project site, with the exception of glimpses of the hills from western portions of the existing parking lot. The project site is visible from Bancroft Way, Durant Avenue, and Fulton Street. None of these roadways have been officially designated by the UC or City of Berkeley as scenic highways[2]. There are no historic resources (or buildings of any kind) on the project site. The wall at the Edwards Stadium, located north of the project site across Bancroft Way, was placed on the National Register of Historic Places in 1993; it is visible from the site. The perimeter of the site is lined with non-native landscape and street trees. London plane trees line the Bancroft Way sidewalk frontage, in addition to two pittosporum trees, at the northeast corner of the site. Several eucalyptus and one live oak tree grow just outside of the western property boundary, adjacent to the UC Public Affairs building. The existing mid-block pedestrian passageway along the eastern boundary of the site is lined with ornamental pear trees. Melaleuca trees line the Durant Avenue sidewalk frontage. The parkway along Durant Avenue is also planted with London planes. Low hedges separate the parking lot from the Bancroft Way and Durant Avenue sidewalks.

REGULATORY SETTING

2020 LRDP & 2020 LRDP EIR

Review of individual projects under the 2020 LRDP would affect the visual quality of the campus and its City Environs by guiding the location, scale, form and design of new University projects. The 2020 LRDP includes a number of policies and procedures for individual project review to support the Objectives of the 2020 LRDP. One of the 2020 LRDP Objectives and one of the Policies are particularly relevant to aesthetics:

- **Plan every new project to respect and enhance the character, livability, and cultural vitality of our city environs (Objective).**
- **Use the Southside Plan as a guide to the design of future capital projects in the Southside (Policy).**

As specified in the LRDP, the University is encouraged to be responsive to the interface of campus and city. For this reason, informational presentations at the schematic design stage were made to the City of Berkeley's Planning Commission and Design Review Committee.

The project was reviewed by the UC Berkeley Design Review Committee at its September 13, 2012 meeting. The committee provided the following comments:

- *Visually open the facility more to the street, rather than walling / fencing off. Aquatics facilities that are visually permeable to passersby are very successful / popular at other campuses; study USC and Stanford for successful / recent examples;*
- *A more visually open facility is particularly important along this stretch of Bancroft Way;*
- *Simplify the design elements of the team building; it is a small, sculptural structure, and does not need several finishes;*
- *Consider shifting the mechanical structure away from the street frontage, possibly placing it under permanent seating; fans / mechanical noise along street not desirable; this would also provide more opportunity for a pool side plaza at the northeast corner, along Bancroft.*
- *Are enough seats provided for spectators, and is the circulation to the seating clearly thought through?*

- *Symmetrically aligning the facility with the obelisks at the Track Stadium across the street is a good design move;*
- *Provide overhead / sun shelter for spectators; very important at other aquatics venues in California*
- *Although the Committee provided comments on this project, members continue to feel that a single level aquatics facility is not the highest / best use for this large, urban, and well-situated campus-owned site.*

Although the University is constitutionally exempt from local regulations when using its property in furtherance of its educational purposes, it is University policy to evaluate proposed projects for consistency with local plans and policies. According to the 2020 LRDP EIR, projects on the Adjacent Blocks that lie within the area of the Southside Plan should use the Southside Plan, described below, as a guide.

SOUTHSIDE PLAN

In 1997 the City of Berkeley and UC Berkeley signed a Memorandum of Understanding, which states 'the city and the University will jointly participate in the preparation of a Southside Plan...the campus will acknowledge the Plan as the guide for campus developments in the Southside area.'

The City and University have since collaborated on a draft Southside Plan, which was adopted by the Berkeley City Council on September 27, 2011. The University would, as a general rule, use the design guidelines and standards prescribed in the Southside Plan as its guide for the location and design of projects implemented under the 2020 LRDP within the geographic area of the Southside Plan. The project site is located in the Residential Mixed Use Subarea (R-SMU) of the Southside. The R-SMU area is characterized by many distinctive and architecturally significant buildings, such as the Tang Center and the Berkeley Art Museum/Pacific Film Archive, several churches located along Bancroft Way and Dana Street, social/service institutions such as the Berkeley City Club and the YWCA, several small office buildings, some apartment buildings and large houses, and numerous sites used as parking lots.[3]

The Southside plan contains design guidelines that are intended to ensure that new development respects the existing architectural context of the R-SMU area, while complimenting the scale and character of the remaining portions of Southside. The proposed project's consistency with the 2020 LRDP and the City of Berkeley Southside Plan is discussed below in Initial Study checklist item number four.

SPECIMEN TREES

UC Berkeley has an existing campus program that it uses to guide the evaluation and designation of specimen trees. Other plants (shrubs, groundcover or grasses) which meet the criteria may also be considered as specimen flora. The Campus Landscape Architect makes the determination of status, using the following criteria: to be considered a specimen, the tree or plant should be in good health and not pose a hazard to pedestrian and automotive traffic, existing buildings or utilities, and should have one or more of the following qualities:

Aesthetics: The tree is an integral part of an architectural theme, or plays an important role in framing or screening a building or other feature.

Historical: The tree was planted as part of a memorial planting or is a particularly outstanding example of the original botanical garden plantings. The tree is identified by landmark status, named with a plaque, is identified as a contributing feature in an historic structures report and/or identified in the LHP as a character defining feature of the landscape.

Educational: The tree represents a special taxonomic or morphological feature, is unique to the Campus or the San Francisco Bay Area, is a particularly outstanding example of California flora, is part of an experimental planting with a special landscape or agricultural value, or is regularly used by campus instructors as an example of the species.

Strawberry Creek: Removal of the tree would significantly increase erosion potential, affect the natural species diversity of the Creek as a riparian corridor.
Natural Area: The tree is located within the Wickson, Grinnell or Goodspeed Natural Areas.[4]

Determination of specimen status may extend to a group of trees which has importance as a group, even though the individual trees may not in themselves meet the specimen criteria.

Under this program, the retention of existing specimen trees, shrubs and grass areas is a priority in the final design of proposed projects. Projects are reviewed with the UC Berkeley Design Review Committee to minimize impacts to specimens. Site preparation is conducted to minimize removal and/or damage of specimen trees or plant species to the fullest feasible extent. Sensitive construction practices are used to avoid possible damage to trees to be retained, including construction setbacks, installation of temporary construction fencing around individual trees to be preserved, and monitoring by a certified arborist of any required limb removal or disturbance within the dripline of trees to be retained. Grading, vegetation removal and replacement plans, where necessary, are coordinated with the Campus Landscape Architect. Specimens impacted are replaced by successful transplanting, or must be replaced by new planting at a ratio of 3 to 1 in closest available sizes. Disturbed landscaped areas are restored to the full feasible extent. [5]

MITIGATION MEASURES & CONTINUING BEST PRACTICES
Design and construction of the proposed project would be reviewed by the UC Berkeley Design Review Committee, based on project specific design guidelines informed by the provisions of the City of Berkeley General Plan, the Southside Plan, and the 2020 LRDP. The University would make informational presentations on the proposed project to the City Planning Commission and, if relevant, the City Landmarks Commission for comment prior to schematic design review by the UC Berkeley Design Review Committee.

The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon aesthetics. Where applicable, the Project would incorporate the following mitigation measures and/or continuing best practices:

2020 LRDP Continuing Best Practice AES-1-b: Major new campus projects would continue to be reviewed at each stage of design by the UC Berkeley Design Review Committee. The provisions of the 2020 LRDP, as well as project specific design guidelines prepared for each such project, would guide these reviews.

2020 LRDP Continuing Best Practice AES-1-e: UC Berkeley would make informational presentations of all major projects in the City Environs in Berkeley to the Berkeley Planning Commission and, if relevant, the Berkeley Landmarks Commission for comment prior to schematic design review by the UC Berkeley Design Review Committee. Major projects in the City Environs in Oakland would similarly be presented to the Oakland Planning Commission and, if relevant, to the Oakland Landmarks Preservation Advisory Board.

2020 LRDP Continuing Best Practice AES-1-h: Assuming no further substantive changes are made by the city prior to adoption, the University would as a general rule use the design guidelines and standards prescribed in the Southside Plan as its guide for the location and design of University projects implemented under the 2020 LRDP within the area of the Southside Plan.

2020 LRDP Mitigation Measure AES-3-a: Lighting for new development projects would be designed to include shields and cut-offs that minimize light spillage onto unintended surfaces and minimize

atmospheric light pollution. The only exception to this principle would be in those areas where such features would be incompatible with the visual and/or historic character of the area.

2020 LRDP Mitigation Measure AES-3-b: As part of the design review procedures described in the above Continuing Best Practices, light and glare would be given specific consideration, and measures incorporated into the project design to minimize both. In general, exterior surfaces would not be reflective: architectural screens and shading devices are preferable to reflective glass.

AESTHETICS

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Have a substantial adverse effect on a scenic vista?		●

The 2020 LRDP identified preservation areas, into which new buildings should not intrude, in order to protect scenic vistas. As shown in Figure 7 of the 2020 LRDP, all preservation areas are located within the Campus Park and not within the Southside area. Therefore, no aspect of the project is located within a preservation area. The scope of new construction and improvements would generally preserve existing views of the campus from the site; the historic Edwards wall would remain visible from the Bancroft Way frontage and from the proposed entryway, and from portions of the Aquatics Center's interior.

As discussed in the 2020 LRDP EIR, the City Environs are mostly flat and densely urbanized, and since future University projects in the City Environs are expected to be of the same general scale as private projects on similar sites, no significant impacts on scenic vistas were anticipated. The Southside Plan identifies views of the San Francisco Bay and the Marin Headlands as significant views along Bancroft Way. The proposed project would be a 1-story structure, would be of similar height as the existing University-owned building west of the site, and would be smaller than the adjacent Tang Center. As such, the proposed project would not block scenic views of the San Francisco Bay or the Marin Headlands, which are only visible around the site by looking directly down Bancroft Way. Furthermore, the 2020 LRDP envisioned buildout of the project site (see, for example, the potential project as proposed for the site at illustrative concept Figure 3B in the LRDP, p. 3.1-21 of Vol 1 of the 2020 LRDP EIR) and the proposed Aquatics Center would not be larger in scale than the scale of development reasonably assumed in the 2020 LRDP EIR. Therefore, the Project would not introduce any impacts not considered in the LRDP EIR and would not have a substantial adverse effect on a scenic vista. Impacts would be less than significant.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?		●

The project site is currently developed with a surface parking lot and does not include rock outcroppings or historic buildings. The Campus Landscape Architect has reviewed the existing trees on site and has determined that due to the non-native species and modest size of the existing trees on the site, they do not meet the University's definition of "specimen trees."[6] The existing site landscaping does not include specimen or heritage trees, or otherwise unique vegetation. In addition, there are no scenic or historic resources within the project vicinity that would be visible from a state scenic highway, nor would the

project result in damage to scenic resources in the vicinity of the proposed project. Moreover, as previously mentioned, the 2020 LRDP envisaged buildout of the project site and the proposed Aquatics Center would not have a greater impact on scenic resources than the impacts reasonably assumed in the 2020 LRDP EIR. Impacts to scenic resources would be less than significant.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Create a new source of substantial light or glare which would adversely affect day- or night-time views in the area?		●

EXISTING SOURCES OF NIGHTTIME LIGHTING

Figures 1 and 2 in the introductory sections of this SEIR show the project's location and urban context. Bounded by Bancroft Way on the north and Durant Avenue on the south, the project lies within the Southside portion of the Campus, in an urbanized area at the edge of downtown Berkeley.

With respect to nighttime lighting in the immediate project vicinity, sensitive receptors are limited to several two and three story residences located across from the site, on the south side of Durant Avenue. Sight lines from these residences toward the project site are largely obstructed by mature deciduous and broadleaf evergreen street trees that line both sides of Durant Avenue. Photographs 1, 2, 5 and 7 illustrate the presence of vegetation screening between the project site and residences located across the street on Durant Avenue (refer to figures 3a, 3c, and 3d).

Nighttime lighting in the area is generally typical of an urban environment that includes a mixture of commercial, residential and institutional uses. Pole mounted street lights provide nighttime illumination on nearby or adjacent streets and sidewalks. Street lights in the project vicinity generally operate between dusk and dawn, with light poles typically ranging in height from approximately 25 to 30 feet. Additional sources of nighttime lighting include residential and commercial lighting as well as lighting associated with campus facilities such as the adjacent Tang Center. Nearby sources of commercial night lighting include a gas station that closes at 10:00 PM, located immediately southwest at Fulton Street and Durant Avenue, and another gas station that operates 24 hours, located along Oxford Street within approximately 300 feet to the northwest.

The project site is currently used as a parking lot with spaces for approximately 230 vehicles. Four sets of double light fixtures that are mounted approximately 30 feet high on metal light standards illuminate the parking lot throughout the night, from dusk until dawn. In addition, a lower, single pole-mounted fixture is located near the driveway at Bancroft Way. Photographs 9 and 10 are nighttime views of the project site, as seen from Bancroft Way and Durant Avenue (refer to Figure 3e).

PROPOSED PROJECT LIGHTING AND EXTERIOR MATERIALS

The Proposed Project includes lighting for safety, security and architectural design treatment. Figure 4 shows the proposed project layout and Figures 7 and 8 are elevation drawings. The event lighting described below is depicted on the Site Plan and West Elevation drawings shown respectively on Figures 4 and 8. Figures 9 and 10 are two conceptual, rendered illustrations of the proposed project. The renderings provide an impression of the project's nighttime appearance.

The proposed project would include building-mounted and near ground-level perimeter safety lighting as well as 25 foot high pole-mounted event lighting at the pool area. Along the mid-block passageway west of the Tang Center, new 16 foot pole-mounted lights would be installed for night-time safety. The new buildings, as well as the 46-foot dive tower core, would be illuminated on the interior with lighting

designed to create a soft glow. In addition, some glass wall panels and windows would increase night-time visibility of the facility. All lighting fixtures would be designed to include shields and other devices to minimize light spillage and atmospheric light pollution. All lighting other than building and near ground-level safety lighting would be turned off by 10:00 PM or earlier.

Event lighting includes LED light fixtures mounted on 25 feet high poles with two LED fixtures on each pole. The 22 light poles would be evenly spaced along the east and west sides of the pool and include LED fixtures that focus light downward and on site, with little spill. For the rare (estimated 4 times per year) evening competitive event, the project event lighting would meet the Pac 12 Network lighting requirements of a 70-footcandle average illumination maintained over the main deck and pool. Under typical (non-event) conditions, ambient lighting on the pool deck would be approximately 15 footcandles, or the minimum needed for safety and coaching functions (for example, reading a clipboard). For reference, full daylight is approximately 1,000 footcandles and an overcast day is approximately 100 footcandles.

Exterior materials for the new facility buildings and perimeter walls would consist of a varied palette including textured gray masonry and gray cast-in place concrete, patterned gray aluminum panel siding and translucent non glare, tinted blue glass. The materials are generally non-reflective. As described below, final selection of these elements is subject to design review procedures (LRDP Mitigation Measure AES- 3-b).

POTENTIAL NIGHTTIME LIGHTING AND GLARE EFFECTS

The project would involve replacing an existing surface parking lot that is illuminated by approximately 30-foot tall overhead lights from dawn to dusk with a modern aquatic facility that would include nighttime lighting that would not be operated past 10:00 PM. The new project lighting would be designed to meet safety, security and architectural design objectives using energy efficient, non-glare fixtures. The new lighting proposed as part of the project would generally appear consistent and compatible with existing nighttime lighting that is present in the immediate vicinity. In addition, proposed exterior materials would include a palette of visually coherent, non-reflective treatment.

Daily use of the new pool facility would not occur past 6:30 PM. However, on limited occasions, estimated at four times per year, event lighting would be used to illuminate the pool and deck area. The proposed project includes removal of all of the existing parking lot lighting and potential relocation of some of the lighting to the smaller reconfigured parking area. Given the proposed lighting design and layout changes and the proposed schedule of operation, the proposed project would result in an overall decrease in the amount of nighttime lighting that occurs regularly at the project site.

The new buildings would generally screen views of the event lighting fixtures from Bancroft Avenue. Direct views of lighting from Durant Avenue would be minimized because the event lighting fixtures are designed to point downward with an orientation facing east-west. In addition, existing mature street trees provide considerable screening with respect to potential nighttime lighting effects on residences located along the south side of Durant Avenue.

As described above, nighttime lighting associated with the proposed project would not increase lighting over levels anticipated in the 2020 LRDP EIR: event lighting would be infrequent, would be low and directed, and would be turned off after competition use, contrasted with existing site lighting. Therefore the project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Further, Mitigation Measures AES-3-a and AES-3-b from the 2020 Long Range Development Plan (LRDP) would ensure the project's potential light and glare are less than significant.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
4. Substantially degrade the existing visual character or quality of the site and its surroundings?		●

The proposed new aquatics center would replace an existing surface parking lot with low to modest visual quality and character with an architect-designed new facility that has undergone review by the City's and the University's respective design review committees. The new facility, which consists of one-story buildings and a 46-foot dive tower, would be compatible in terms of scale with the surrounding one, two and three-story buildings. Moreover, as previously mentioned, the 2020 LRDP envisaged buildout of the project site and the proposed Aquatics Center's modest scale would not have a greater aesthetic impact than the impacts reasonably assumed in the 2020 LRDP EIR; buildout under the LRDP could reasonable accommodate a much larger structure on the site (see, for example, the potential project as proposed for the site at illustrative concept Figure 3B in the LRDP, p. 3.1-21 of Vol 1 of the 2020 LRDP EIR) . The project would not substantially degrade the existing visual character or quality of the site and its surroundings or result in additional or increased impacts than those studied in the LRDP EIR. As a supplement to this analysis, consistency with the UC's and the City's guidelines for development on the site follows.

UC BERKELEY PROJECT SPECIFIC DESIGN GUIDELINES

UC Berkeley developed project specific design guidelines for the project site in 2008 (these guidelines are included in this SEIR as Appendix B). The project specific design guidelines were developed based on the conversion of the existing parking lot to either office, administrative, and housing uses, including a training or competitive aquatics venue. These project specific design guidelines also reference and incorporate the design guidelines contained in the City of Berkeley Southside Plan.

The project specific design guidelines provide a general approach offering a broad overview of guidelines and objectives for the development of the project site. Those guidelines that are relevant to the proposed Cal Aquatics Center and that relate in some form to analysis of visual character and quality are discussed below. Guidelines applicable only to residential projects are not included.

- *The project should be designed to respect and enhance the character, livability, cultural vitality of the city;*
- *New construction or renovation should respect historic integrity, enhancing and complementing, rather than competing with retained or surrounding buildings;*
- *Buildings shall enhance the aesthetics and utility of the streetscape for pedestrians.*
- *Utilize massing, setbacks, articulation, roof form and materials to create a modulated building mass appropriate in scale to the context of this subarea. (Southside Plan Design Guidelines, 189)*
- *For projects with over 100 feet of street frontage, avoid the appearance of a large building mass in favor of a series of medium-size elements placed next to one another, or incorporate recesses or projections in the facade plane.*
- *Locate new buildings parallel to the street to reinforce the dominant existing pattern of building placement.*
- *The structure should be appropriately scaled so as not to conflict with the lower density residential buildings along Durant…*
- *The building massing should be sensitive to views from and if practicable preserve views of the Campanile and glimpses of the East Bay hills from the site…*

- *New construction on the site should seek to restore as much of this open space as practicable the University's need for the site.*

The project site is within the City Environs. It is bordered on three sides by UC facilities (athletics, offices and student services) and on one side (across Durant Avenue) by non-UC residential buildings. Through the use of massing, setbacks, and building materials, the Project has been designed to complement and not overwhelm the adjacent larger Tang Center and similar-scaled Office of Public Affairs building. Additionally, through attention to details such as lighting, scale and landscaping, the Project is intended to respect both the adjacent university facilities and the residential area across Durant Avenue. The Project would enhance the vitality and utility of the area by replacing a surface parking lot with an active use that supports student life and athletic programs but also provides an additional venue for camps that serve the community. The main entry would be centered between the Edwards Stadium concrete pylons across the street as a way of visually connecting back to the University and the historic wall at Edwards Stadium.

As shown in Figure 4, the project would have over 156 feet of street frontage. The proposed project would consist of three one-story buildings surrounding a 52-meter swimming pool. As shown in Figure 7, the Bancroft Way façade would incorporate recesses and projections in the façade plane, including the main entryway. Translucent glass would weave in and out of the façade, accentuating the varying façade plane. The placement of the proposed facility would be parallel to Bancroft Way, similar to surrounding development, such that placement of the new facility would reinforce the dominant pattern of existing building placement. Views of the Campanile and glimpses of the East Bay hills would still be available to divers and pool users from some portions of the site. The project site is currently developed with a surface parking lot and does not contain areas of open space. The proposed Aquatics Center would provide greater landscaped areas compared to existing conditions, but would not provide large areas of open space.

Additionally, the campus design guidelines suggest that new buildings incorporate an entry plaza or terrace at the main entrance in order to serve as a site for casual interactions and socialization. The Project, as proposed, would not incorporate an entry plaza or terrace in the main entrance (refer to the comments provided by the UC Design Review Committee). The project does include a substantial breezeway and entry "patio;" this feature would add visual relief and articulation but would not be open to the public on a regular basis. Thus the design of the proposed project would be somewhat inconsistent with this element of the campus design guidelines. However, the inconsistency with this design guideline would not result in a significant impact to the visual character of the project site or its surroundings, especially as the site is currently developed with a surface parking lot rather than an active recreational use which would serve the University and the community.

CITY OF BERKELEY SOUTHSIDE PLAN DESIGN GUIDELINES

As previously stated, the Southside plan contains design guidelines, which are intended to ensure that new development respects the existing architectural context of the R-SMU area, while complimenting the scale and character of the remaining portions of Southside. The design guidelines include language similar to that in the Southside Plan, with additional provisions and specificity. Selected applicable excerpts include the following:

> *…The design should unify the neighborhood and create consistent architectural character within the subarea. New construction can be creative but should complement existing buildings. Additionally, large underused sites create opportunities for contemporary design that respects the historical context. Mixed use with ground-floor retail should be encouraged along Bancroft Way in order to create a linkage to Downtown. Streetscape*

amenities such as street lighting, landscaping, or architectural fixtures are encouraged to further create this linkage…

…The design guidelines for this subarea are intended to ensure that new construction respects the existing architectural context of this subarea and complements the scale and character of the rest of the Southside. The design should help unify the neighborhood and create consistent architectural character within the subarea. New construction can be creative but should complement existing buildings. Additionally, large underused sites create opportunities for contemporary design that respects the historical context…

…New buildings should reflect and reinforce the height, scale, massing, rhythm, and proportion of buildings in this subarea…

…Create pedestrian interest at the ground floor…

The Southside area contains a mixture of land use types including residential, institutional, and recreational uses. The proposed project would be located across from existing UC Berkeley athletics facilities (i.e. Edwards Stadium and Evan's Diamond) and is approximately 550 feet north of the Channing Tennis Courts, which are located in the Southside area of Berkeley. As previously mentioned, the project has been designed to compliment rather than overwhelm existing buildings in the vicinity of the project site. The development of the new facility would include siting the main entry way such that the proposed Aquatics Center would be visually linked to other UC facilities and the historic wall at Edwards Stadium thereby respecting the historic integrity of the wall. The scale falls within the range of development in the immediate vicinity, which includes buildings from one to three stories in height. The modern design is compatible with the right angles and solid planes of the adjacent Tang Center and Public Affairs building. The extensive glass and substantial entryway return would create a level of interest and pedestrian interaction at the ground floor. Finally, the City's Design Review Committee offered the following generally favorable comments on the design and overall program at their hearing of February 21, 2013:

- This is a nice project and will be a nice addition to Bancroft.
- Trees removed on site should be replaced with as close to the same number as possible, and as large as possible.
- Consider a higher quality fence material than chain link proposed.
- Strongly recommend using solar panels.
- Consider if there is a better choice than jasmine on the west-facing trellis that may be more vigorous and less maintenance, and work better with the heat-gain from the asphalt to the west.
- Add street trees wherever possible.
- Although a use issue, and not design, it would be great if Berkeley High could use the pool when possible.

The Southside Plan encourages mixed-use projects with ground-floor retail along Bancroft Way, which would not be provided by the proposed project. As the proposed project is not a mixed-use project that incorporates ground-floor retail, the location of the proposed Aquatics Center is inconsistent with the intent of development on this particular site. However, the intent to encourage development of mixed-use projects on the along Bancroft Way is a matter of land use policy and would not result in significant impacts to the visual character of the project site and its surroundings. Moreover, the project would include streetscape amenities such as street lighting, landscaping, and architectural fixtures which could serve to create a linkage to the Downtown area and would contribute more to the pedestrian environment than the existing parking lot.

As discussed above, the proposed design of the new Aquatics Center would not be in conflict with the general objectives of the project specific design guidelines as well as the majority of the general design guidelines contained in the Southside Plan. Design and construction of the proposed project would be reviewed by the UC Berkeley Design Review Committee, based on project specific design guidelines informed by the provisions of the City of Berkeley General Plan, the Southside Plan, and the 2020 LRDP. The proposed project would be located across from existing UC recreational uses (i.e. Edwards Stadium and Evan's Diamond) and would be located approximately 550 feet north of the Channing Tennis Courts, which are located in the Southside area of Berkeley. As the Southside area contains a mixture of land use types, building forms, and architectural designs, and the project site is located in close proximity to other (UC and non-UC) recreational uses, the proposed project would be generally consistent with the varied visual character of the Southside area and the City Environs.

Furthermore, the Project would implement the provisions of the 2020 LRDP EIR (Best Practices AES-1-b, AES-1-e, and AES-1-h) with respect to the visual character of the building and landscape.

SUMMARY OF AESTHETICS ANALYSIS

The 2020 LRDP EIR determined projects implementing the 2020 LRDP, which would incorporate design provisions of the 2020 LRDP and mitigation measures relating to light and glare, would not result in significant aesthetic impacts (2020 LRDP EIR Vol 1, 4.1-15 to 4.1-19); nor would the project-level implementation of the 2020 LRDP make a cumulatively considerable contribution to adverse aesthetic impacts (2020 LRDP EIR Vol 1, 4.1-22 to 4.1-24). As described above, the proposed project would not change the less than significant impact conclusions reached in the LRDP EIR related to scenic vistas, scenic resources, light and glare, and the existing visual character of the site and its surroundings associated with implementation of the LRDP. The proposed project would be developed in accordance with the design guidelines contained in the 2020 LRDP and would use the design guidelines contained in the Southside Plan as a general guide for the design of the proposed project. As previously discussed, the Southside Plan encourages mixed-use development with ground-floor retail along Bancroft Way, and the proposed project would not be consistent with the type of development encouraged by the Southside Plan. However, this inconsistency is a matter primarily of land use policy; as discussed in the analysis above, the project would not result in significant impacts related to visual resources and the changes to the aesthetic environment are within the scope of the 2020 LRDP EIR analysis.

AIR QUALITY

SETTING

The air quality setting of the campus is described in the 2020 LRDP EIR (Section 4.2). The following text summarizes context information for air quality relevant to the Cal Aquatics Center.

Construction Emissions. Construction activities are a source of dust emissions that can have temporary impacts on local air quality by possibly exceeding State air quality standards. These emissions are generated from land clearing, ground excavation, cut and fill operations, demolition and the construction of project facilities. Dust emissions vary from day to day depending on the level of activity, the specific operations and the prevailing weather. Air emissions modeling completed for the 2020 LRDP EIR assumed up to one million gross square feet of space could be under construction at any one time under the 2020 LRDP.

Dust from construction and demolition activities would be addressed by Bay Area Air Quality Management District (BAAQMD) Regulation 1, Section 301, which states that sources cannot emit air contaminants that cause nuisances to 'any considerable number of persons or the public,' and by

adherence to construction emission mitigation measures incorporated into construction contracts. The project site is located on an existing surface parking lot occupied by a parking kiosk. Therefore, no demolition or alteration of existing buildings will be required; therefore, no asbestos-containing building materials are expected to be encountered.

In June 2010, the BAAQMD Board of Directors adopted thresholds of significance to assist in the review of projects under the California Environmental Quality Act (CEQA). On March 5, 2012 the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds contained in its 2010 CEQA Guidelines (BAAQMD Homepage, accessed January 2013). As such, lead agencies need to determine appropriate air quality thresholds of significance based on substantial evidence in the record. Lead agencies may rely on the BAAQMD's CEQA Guidelines (updated May 2011) for assistance in calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures. However, the BAAQMD has been ordered to set aside the thresholds. Lead agencies may continue to rely on the BAAQMD's 1999 Thresholds of Significance and to make determinations regarding the significance of an individual project's air quality impacts based on substantial evidence in the record for that project.

For this EIR, UC Berkeley has determined that the significance thresholds in the BAAQMD's May 2011 CEQA Guidelines for project operations within the San Francisco Bay Area Air Basin are the most appropriate thresholds for use to determine air quality impacts of the proposed Cal Aquatics Facility. UC Berkeley has used the May 2011 BAAQMD thresholds in previous environmental analyses under CEQA and found them to be reasonable thresholds for assessing air quality impacts. In addition, these thresholds are lower than the 1999 BAAQMD thresholds, and thus use of the thresholds in the May 2011 CEQA Guidelines is more conservative. Therefore, these thresholds are considered reasonable for use in this EIR.

The 2020 LRDP EIR includes mitigation measures and best practices that substantially align with BAAQMD-recommended project-specific control measures for construction; other measures are part of campus best practices in contracting. The eight basic control measures in the most recent BAAQMD CEQA Guidance document (BAAQMD CEQA Guidelines, May 2012, page 8-3) are listed below along with their counterparts in the 2020 LRDP EIR:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

Counterpart: 2020 LRDP Continuing Best Practice AIR-4-a (reprinted below)

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

Counterpart: 2020 LRDP Continuing Best Practice AIR-4-a (reprinted below)

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

Counterpart: 2020 LRDP Mitigation Measure AIR-4-a (reprinted below)

4. All vehicle speeds on unpaved roads shall be limited to 15 mph.

Counterpart: 2020 LRDP Mitigation Measure AIR-4-a (reprinted below)

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

Counterpart: 2020 LRDP Mitigation Measure AIR-4-a (reprinted below) and 2020 LRDP Continuing Best Practice HYD-2-d which states: UC Berkeley shall continue to develop and implement the recommendations of the Strawberry Creek Management Plan and its updates, and construct improvements as appropriate. These recommendations include, but shall not be limited to, minimization of the amount of land exposed at any one time during construction as feasible; use of temporary vegetation or mulch to stabilize critical areas where construction staging activities must be carried out prior to permanent cover of exposed lands; installation of permanent vegetation and erosion control structures as soon as practical; protection and retention of natural vegetation; and implementation of post-construction structural and non-structural water quality control techniques.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

Counterpart: 2020 LRDP EIR Continuing Best Practice AIR-4-b (reprinted below).

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

Counterpart: Campus contractors are required to comply with applicable law and regulation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the BAAQMD shall also be visible to ensure compliance with applicable regulations.

Counterpart: All campus construction projects have posted contact information as part of standard practice, with a person responsible for action.

All construction projects implementing the 2020 LRDP remain in substantial compliance with BAAQMD-recommended best practices and controls.

At the time of the 2020 LRDP EIR, BAAQMD did not require lead agencies to estimate emissions from construction, nor did the guidelines provide any numerical thresholds to evaluate the significance of emissions, should those be quantified. However, for informational purposes only, the 2020 LRDP EIR included analysis of estimated criteria pollutant construction emissions from the maximum assumed construction scenario under the 2020 LRDP, using the URBEMIS model. A maximum assumed construction area of 1,000,000 GSF was used as a worst-case condition to characterize emissions from LRDP-related construction. The results significantly exceed BAAQMD's project level construction-related thresholds included in the May 2011 CEQA Guidelines. See Table 8 below.

Table 8:
2020 LRDP Emissions Modeling Results

Pollutant	BAAQMD Project Construction Threshold (lbs/day)	Estimated Daily Construction-related Emissions, 2020 LRDP (lbs) (Table 4.2-8, 2020 LRDP EIR)
ROG	54	1,123
NOX	54	1,565
PM 10 (exhaust)	82	12
PM 2.5 (exhaust)	54	Not calculated
PM 10/PM 2.5 fugitive dust	Best management practices	Best management practices applied

As a project, implementation of the 2020 LRDP exceeds BAAQMD thresholds; however, the LRDP analysis, conducted for the hypothetical construction of the entirety of the 2020 LRDP program, was particularly conservative.

Based on available construction details for the Cal Aquatics Center, construction emissions estimates were generated for onsite development using the CalEEMod v.2011.1 computer model and are shown in Table 9. It was assumed that construction would begin on or around June 1, 2013 and that construction would last for 10 months. The use of a shortened construction period represents a conservative approach as the significance thresholds are based on a unit of pounds per day; compressing the construction period would increase construction activity during any one day. In addition, the results shown in Table 9 do not include implementation of the mitigation measures and best practices included in the 2020 LRDP EIR, which align with BAAQMD-recommended project-specific control measures for construction. Therefore, actual emissions during construction would be lower than shown in Table 9.

Table 9:
Maximum Daily Unmitigated On-Site and Off-Site Construction Air Pollutant Emissions

	Emissions (lbs/day)			
	ROG	NOx	Exhaust PM_{10}	Exhaust $PM_{2.5}$
2013	4.87	39.14	1.94	1.94
2014	15.94	22.08	1.47	1.47
Maximum lbs/day [a]	**15.94**	**39.14**	**1.94**	**1.94**
BAAQMD Thresholds	54	54	82	54
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: CalEEMod; see Appendix C for calculations.
[a] *Maximum daily on and off-site emissions based on highest day in any construction year, i.e. 2013 or 2014.*

Operational Emissions. In addition, heating for the pool water will be provided by an on-site gas boiler, which will result in operational emissions at the site. Depending on the heat input rating of the boiler to be included at the site, the following BAAQMD requirements could apply:

- Natural gas or LPG fired boilers with a rated heat input >2 to <10 MM BTU/hr need to be Registered with BAAQMD.

- Boilers with a rated heat input ≥10 MM BTU/hr are required to have a BAAQMD Permit to Operate.
- Dual fuel boilers ≥1 MM BTU/hr are required to have a BAAQMD Permit to Operate.

Electricity would either be brought over from the Campus Park via a line beneath and across Bancroft Way or from standard PG&E service from existing distribution points adjacent to the site.

The 2020 LRDP FEIR concluded that projects implemented as part of the 2020 LRDP, guided by compliance with local regulations, campus policies and programs to reduce emissions and risk of toxic air contaminant releases, and incorporating existing best practices and 2020 LRDP FEIR mitigation measures would, with the exception of incremental campus growth overall, not result in new significant air quality impacts (2020 LRDP FEIR Vol. 1 p. 4.220 to 4.226). Cumulatively, the 2020 LRDP EIR noted that projects implementing the 2020 LRDP, in combination with other foreseeable projects, may result in a cumulatively considerable increase in nonattainment pollutants that conflicts with the Clean Air Plan (2020 LRDP FEIR Vol. 1 p. 4.231) and could contribute to a cumulatively considerable increase in toxic air contaminants, primarily from diesel particulate matter, from stationary and area sources (2020 LRDP FEIR Vol 1 p. 4.2-33).

The Cal Aquatics Center would not be a significant source of pollutants, TACs or diesel particulate matter. In addition, based on the screening levels for criteria pollutants included in the May 2011 BAAQMD CEQA Guidelines, the proposed project would be well below the screening threshold for criteria pollutants for all of the land uses included in Table 3-1 of that document. Based on this, the proposed Cal Aquatics Center contribution to the calculated 2020 LRDP implementation exceedance would not be cumulatively considerable.

In addition, the 2020 LRDP EIR found traffic associated with development under the 2020 LRDP would not contribute to a cumulatively considerable increase in or expose receptors to substantial CO concentrations. Using measured CO concentrations associated with peak hour vehicle volumes for the intersection of Mission Boulevard and Jackson Street/Foothill Boulevard in Hayward as a 'worst-case' comparable in the same air basin as the campus, the 2020 LRDP EIR found changes at local intersections resulting from implementation of the 2020 LRDP would not result in significant impacts. The project would reduce rather than expand campus parking supply, and the project is not expected to contribute to vehicle traffic that might equal or exceed levels analyzed in the 2020 LRDP EIR.

2020 LRDP & 2020 LRDP EIR

The 2020 LRDP would influence air quality by guiding the location, scale, form and design of new University projects. The 2020 LRDP includes a number of policies and procedures for individual project review to support the Objectives of the 2020 LRDP. While several of the 2020 LRDP Objectives bear directly or indirectly on air quality, two are particularly relevant:

- **Provide the housing, access, and services we require to support a vital intellectual community and promote full engagement in campus life.**
- **Plan every new project as a model of resource conservation and environmental stewardship.**

With respect to access, the 2020 LRDP anticipates increasing the supply of parking to accommodate unmet demand and future growth; reducing demand for parking through incentives for alternate travel modes; and collaborating with local cities and transit providers to improve service to the campus. Policies under the second objective include incorporating sustainable design principles into capital investment decisions; developing a campus standard for sustainable design specific to the UC Berkeley

site, climate, and facility inventory; designing new campus buildings to a standard equivalent to LEED 2.1; and designing new campus laboratory buildings to a standard equivalent to LEED 2.1 and LABS 21 environmental performance criteria.

MITIGATION MEASURES & CONTINUING BEST PRACTICES

Design and construction of the Cal Aquatics Center project would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon air quality. Where applicable, the Project would incorporate the following mitigation measures and/or continuing best practices:

Continuing Best Practice AIR-4-a: UC Berkeley shall continue to include in all construction contracts the measures specified below to reduce fugitive dust impacts:

- All disturbed areas, including quarry product piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using tarps, water, (non-toxic) chemical stabilizer/suppressant, or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or (non-toxic) chemical stabilizer/suppressant.
- When quarry product or trash materials are transported off-site, all material shall be covered, or at least two feet of freeboard space from the top of the container shall be maintained.

LRDP Mitigation Measure AIR-4-a: In addition, UC Berkeley shall include in all construction contracts the measures specified below to reduce fugitive dust impacts, including but not limited to the following:

- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- When demolishing buildings, water shall be applied to all exterior surfaces of the building for dust suppression.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from paved areas of construction sites and from adjacent public streets as necessary. See also CBP HYD 1-b.
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions by utilizing sufficient water or by covering.
- Limit traffic speeds on unpaved roads to 15 mph.
- Water blasting shall be used in lieu of dry sand blasting wherever feasible.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with slopes over one percent.
- To the extent feasible, limit area subject to excavation, grading, and other construction activity at any one time.
- Replant vegetation in disturbed areas as quickly as possible.

Continuing Best Practice AIR-4-b: UC Berkeley shall continue to implement the following control measure to reduce emissions of diesel particulate matter and ozone precursors from construction equipment exhaust:

- Minimize idling time when construction equipment is not in use.

LRDP Mitigation Measure AIR-4-b: UC Berkeley shall implement the following control measures to reduce emissions of diesel particulate matter and ozone precursors from construction equipment exhaust:

- To the extent that equipment is available and cost effective, UC Berkeley shall require contractors to use alternatives to diesel fuel, retrofit existing engines in construction equipment and employ diesel particulate matter exhaust filtration devices.
- To the extent practicable, manage operation of heavy-duty equipment to reduce emissions, including the use of particulate traps.

Continuing Best Practice AIR-5: UC Berkeley will continue to implement transportation control measures such as supporting voluntary trip-reduction programs, ridesharing, and implementing facilities.

AIR QUALITY

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Conflict with or obstruct implementation of the applicable air quality plan?		●

The 2020 LRDP EIR conservatively found operational emissions from implementation of the 2020 LRDP may hinder the attainment of the Clean Air Plan, because the 2020 LRDP EIR conservatively assumed that growth under the 2020 LRDP was not included in local area projections (2020 LRDP EIR Vol 1, 4.2-26). The 2020 LRDP analysis anticipated up to 2,200,000 million net new gross square feet within the area governed by the 2020 LRDP, of which this Project represents a net increase of 10,860 gsf, or about 0.5 percent. As prescribed in the 2020 LRDP EIR, the campus would work with the City of Berkeley, ABAG, and BAAQMD to ensure that campus growth is accurately addressed in the Clean Air Plan, and would continue to develop and implement transportation control measures (Best Practice AIR-5, Mitigation AIR-5). The Project is within the scope of the LRDP EIR and further analysis is not required.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		●

The 2020 LRDP EIR examined the potential for vehicle and stationary source emissions under the 2020 LRDP to violate state and federal air quality standards or contribute to existing air quality violations, and determined implementation of the 2020 LRDP would not violate the carbon monoxide (CO) standard or expose sensitive receptors to substantial CO concentrations (2020 LRDP EIR Vol 1, 4.2-20).

The 2020 LRDP EIR further found traffic associated with development under the 2020 LRDP would not contribute to a cumulatively considerable increase in or expose receptors to substantial CO concentrations. Using measured CO concentrations associated with peak hour vehicle volumes for the intersection of Mission Boulevard and Jackson Street/Foothill Boulevard in Hayward as a 'worst-case' comparable in the same air basin as the campus, the 2020 LRDP EIR found changes at local intersections resulting from implementation of the 2020 LRDP would not result in significant impacts.

The project is not expected to result in any significant air quality impacts not anticipated in the 2020 LRDP EIR; the growth in campus space largely relieves existing demands for pool time at the Spieker Aquatics Complex and is within the parameters of campus growth anticipated in the analysis.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Expose sensitive receptors to substantial air pollutant concentrations?		●

Independently and in contrast to some types of manufacturing or production uses, University operations are not typically significant emission sources. The 2020 LRDP EIR evaluated whether construction and development activities under the 2020 LRDP would expose sensitive receptors, including nearby schools, to substantial pollutant concentrations. The campus completed a Health Risk Assessment for the 2020 LRDP, which evaluated risks from toxic air contaminants to sensitive receptors, including schools, hospitals, day care centers and senior care facilities. The 2020 LRDP EIR evaluated the maximum exposure risk to sensitive receptors from conditions existing at the time, and estimated the maximum exposure risk to sensitive receptors with build out of the LRDP program (2020 LRDP EIR Vol 1, 4.2-15 and 4.2-22).

The proposed Project does not include laboratory research space. However, heating for the pool water will be provided by an on-site gas boiler. Depending on the heat input rating of the boiler to be included at the site, the following BAAQMD requirements could apply:

- Natural gas or LPG fired boilers with a rated heat input >2 to <10 MM BTU/hr need to be Registered with BAAQMD.
- Boilers with a rated heat input ≥10 MM BTU/hr are required to have a BAAQMD Permit to Operate.
- Dual fuel boilers ≥1 MM BTU/hr are required to have a BAAQMD Permit to Operate.

All required BAAQMD registrations/permits would be obtained as part of the project. The project would not contribute excess pollutant concentrations beyond those analyzed in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
4. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		●

The 2020 LRDP EIR found the 2020 LRDP, in combination with other reasonably foreseeable projects, had the potential to result in a cumulatively considerable increase in non-attainment pollutants and thereby conflict with the Clean Air Plan (2020 LRDP EIR Vol 1, 4.2-31). But as noted in response to Air Quality item 1, the 2020 LRDP EIR conservatively assumed that growth under the 2020 LRDP was not included in local area projections. As prescribed in the 2020 LRDP EIR, the campus would work with the City of Berkeley, ABAG, and BAAQMD to ensure that campus growth is accurately addressed in the Clean Air Plan, and would continue to develop and implement transportation control measures (Best Practice AIR-5, Mitigation AIR-5). The proposed Project represents a net increase of 10,860 gsf, or about 0.5 percent of the planned 2,200,000 million net new gross square feet within the area governed by the 2020 LRDP. Based on this, the proposed Project's contribution to the calculated 2020 LRDP implementation exceedance would not be cumulatively considerable.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
5. Expose people to substantial levels of toxic air contaminants (TACs), such that the exposure could cause an incremental human cancer risk greater than 10 in one million or exceed a hazard index of one for the maximally exposed individual?		●

As described in Air Quality item 3 above, the project would not result in a new source of substantial air pollutant emissions. The total 2020 LRDP development envelope is expected to result in a maximum cancer risk of 5.4 in one million for the maximally exposed individual, well below the significance standard of 10 in one million. The 2020 LRDP EIR is sufficient and comprehensive to address this issue adequately.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
6. Cause objectionable odors affecting a substantial number of people?		●

Existing campus facilities are not commonly sources of odors, and no element of the proposed project is anticipated to result in new odors that may affect a substantial number of people.

SUMMARY OF AIR QUALITY ANALYSIS

The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP, guided by compliance with regulation, campus policies and programs to reduce emissions and risk of toxic air contaminant releases, would, with one exception, not result in new significant air quality impacts (2020 LRDP EIR Vol 1 p. 4.2-20 to 4.2-26). As the one exception, the 2020 LRDP EIR conservatively estimated that the Bay Area Air Quality Management District's (BAAQMD) Clean Air Plan did not include an increment for growth at UC Berkeley, and found that campus growth overall may not comply with the Clean Air Plan, and may result in a cumulatively considerable increase in non-attainment pollutants that conflicts with the Clean Air Plan (2020 LRDP EIR Vol 1 p. 4.2-26, and p. 4.2-31). The conclusion relates to the overall LRDP program and the proposed project would not provide an opportunity to further alter or mitigate this finding.

Construction period emissions were evaluated and disclosed in the 2020 LRDP EIR, as described above. Emissions conservatively calculated for the entire LRDP program would exceed project-level emission guidelines. Construction details for the Cal Aquatics Center are not yet available; however, daily construction emissions would be expected to be below the May 2011 BAAQMD project thresholds**.**

Since certification of the 2020 LRDP FEIR, there have been no substantial changes to the 2020 LRDP or to the circumstances surrounding 2020 LRDP development with respect to air quality that were not adequately analyzed and, as necessary, mitigated, and no new information is available.

As discussed in the analysis above, the Project would not result in significant impacts related to air quality and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis.

BIOLOGICAL RESOURCES

SETTING

The biological resources setting of the campus is described in the 2020 LRDP EIR (Section 4.3). The following text summarizes context information for biological resources relevant to the proposed Project.

The project site is in the City Environs, the area identified in the 2020 LRDP as the lands to the south, north and west of the Campus Park. The city environs are extensively developed, primarily with residential, commercial, and institutional uses. Sensitive vegetation and wildlife resources are generally absent in the City Environs.

Impervious surfaces and structures provide little opportunity for use by wildlife and species found in the vicinity are typical of those found in urbanized areas. The proposed Project site is a developed parking lot with perimeter landscaping. The trees and shrubs may provide marginal nesting and foraging opportunities for both resident and migratory bird species. There are several non-native trees and one coast live oak tree (of seven inches diameter at breast height) around the perimeter of the site.

Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Acts or other regulations, as well as species considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The proposed Project site is a paved parking lot in a highly urbanized environment and thus does not provide suitable habitat for special-status plant or animal species.

2020 LRDP & 2020 LRDP EIR

The provisions of the 2020 LRDP would eliminate or minimize the effect on biological resources by guiding the location, scale, form and design of new University projects. The 2020 LRDP includes a number of policies and procedures for individual project review to support the Objectives of the 2020 LRDP. While several of the 2020 LRDP Objectives apply directly or indirectly to biological resources, one is relevant:

- **Plan every new project as a model of resource conservation and environmental stewardship.**

The City Environs framework in the 2020 LRDP states that in response to future space demand by campus programs, capital investment on Adjacent Blocks through 2020 may result in a net increase in program space of up to 1,250,000 GSF, and up to 1,900 net new parking spaces. New space on the Adjacent Blocks would be produced by more intensive redevelopment of existing university owned sites. New space may also be produced on other sites by the university directly or through joint ventures. Because the City Environs is heavily developed, there are no specific guidelines or development parameters affecting biological resources within the Adjacent Blocks West area.

Specimen Trees. As discussed under Aesthetics, the 2020 LRDP includes the Campus Specimen Tree Program. The Campus Landscape Architect has evaluated the existing trees on the proposed Project site. None have been identified as specimen trees (Jim Horner, Campus Landscape Architect, September 2012.

MITIGATION MEASURES & CONTINUING BEST PRACTICES

Design and construction of the proposed Project would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon biological resources. Where applicable,

the proposed Project would incorporate the following mitigation measures and/or implement best practices. LRDP Mitigation Measure BIO-1-a focuses on projects implemented in the Campus Park and Hill Campus; however, the MBTA is applicable to all areas where potential nesting trees would be removed. Thus, for the purpose of this evaluation, BIO-1-a also applies to the proposed Project site.

LRDP Mitigation Measure BIO-1-a: UC Berkeley will, to the full feasible extent, avoid the disturbance or removal of nests of raptors and other special-status bird species when in active use. A pre-construction nesting survey for loggerhead shrike or raptors, covering a 100 yard perimeter of the project site, would be conducted during the months of March through July prior to commencement of any project that may impact suitable nesting habitat on the Campus Park and Hill Campus. The survey would be conducted by a qualified biologist no more than 30 days prior to initiation of disturbance to potential nesting habitat. In the Hill Campus, surveys would be conducted for new construction projects involving removal of trees and other natural vegetation. In the Campus Park, surveys would be conducted for construction projects involving removal of mature trees within 100 feet of a Natural Area, Strawberry Creek, and the Hill Campus. If any of these species are found within the survey area, grading and construction in the area would not commence, or would continue only after the nests are protected by an adequate setback approved by a qualified biologist. To the full feasible extent, the nest location would be preserved, and alteration would only be allowed if a qualified biologist verifies that birds have either not begun egg-laying and incubation, or that the juveniles from those nests are foraging independently and capable of survival. A pre-construction survey is not required if construction activities commence during the non-nesting season (August through February).

Continuing Best Practice BIO-1-c: Because trees and other vegetation require routine maintenance, as trees age and become senescent, UC Berkeley would continue to undertake trimming, thinning, or removal, particularly if trees become a safety hazard.

BIOLOGICAL RESOURCES

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. 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 (CDFG) or US Fish and Wildlife Service (USFWS)?		●

The biological resources evaluation within the 2020 LRDP EIR focuses on potential impacts to the natural areas occurring within both the Hill Campus and Campus Park areas. No specific discussion is provided for the City Environs area. As stated in the 2020 LRDP EIR, the urban lands surrounding Campus Park have limited value to wildlife because of the extent of existing development and intensity of human activity. Impervious surfaces and structures provide little opportunity for use by wildlife, and species found in the vicinity are typically observed in urbanized areas. Because of the extent of past development, the Adjacent Blocks West, like the Campus Park, does not provide suitable habitat for special-status plant or animal species. However, while the possibility is remote, raptors and/or migratory bird species could nest within adjacent trees.

Tree removal or construction in the vicinity of a nest in active use could result in its abandonment. Conducting a preconstruction survey and suspending construction as warranted, as required per LRDP Mitigation Measure BIO-1-a, would serve to avoid the potential loss of any active raptor nests. (2020 LRDP EIR Vol 1, 4.3-24)

As prescribed in the 2020 LRDP EIR, a preconstruction nesting survey, covering a 100 yard perimeter of the site, would be conducted during the months of March through July, no more than 30 days prior to commencement of activity which could impact suitable nesting habitat (Mitigation BIO-1-a), if construction activity commences during the nesting season.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. 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 CDFG or USFWS?		●

The proposed Project site is a developed parking lot. There are no riparian areas or sensitive natural communities as identified in local or regional plans, policies or regulations by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS) on or in proximity to the proposed Project site. Thus, these resources would not be affected by the proposed Project.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption or other means?		●

There were no federally protected wetlands as defined by Section 404 of the Clean Water Act observed on the proposed Project site during a February 2013 site visit by Rincon Consultants, Inc. Thus, wetland resources would not be adversely affected by the proposed Project.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
4. 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?		●

The Adjacent Blocks West area is located within the urbanized City Environs land use area. The proposed Project site is a parking lot and does not link habitat areas nor provide the only or a unique means of travel for wildlife within the area. No native resident or migratory fish species or wildlife species use the City Environs area or proposed Project site as a migratory corridor or nursery site. Implementation of LRDP Mitigation Measure BIO-1-a would avoid or minimize potential impacts to migratory bird species and/or nesting raptors using trees or shrubs around the perimeter of the site.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
5. Conflict with any local policies or ordinances protecting biological resources?		●

The proposed Project site is located within the City of Berkeley. Section 4.3.3 of the 2020 LRDP EIR identifies local ordinances that address sensitive biological resources. The City of Berkeley Coast Live Oak Tree Removal Ordinance (No. 6462-N.S.) and Preservation and Restoration of Natural Watercourses Ordinance (No. 5961) apply to resources within the City Environs surrounding Campus Park. Local ordinances do not apply to campus projects, because the University is a state agency exempt from local controls. No natural watercourses occur on or in proximity to the proposed Project site. One coast live oak tree is located on the Public Affairs building site adjacent to and west of the proposed Aquatics Center site. However, no disturbance is proposed to the tree or within its dripline.

As noted above, the Campus Landscape Architect has reviewed the existing trees on site and determined that none are specimen trees or associated with a memorial setting. Tree removal to accommodate the proposed Project would not conflict with the Specimen Tree program. No other local ordinances protecting biological resources are applicable to the proposed Project site. Thus, the proposed Project would not conflict with local policies or ordinances protecting biological resources.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
6. Conflict with any adopted Habitat Conservation Plan, Natural Communities Conservation Plan or other approved local, regional or state habitat conservation plan?		●

The Adjacent Blocks West area is not located within any area designated for an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. No additional analysis is required.

SUMMARY OF BIOLOGICAL RESOURCES ANALYSIS

The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP, incorporating existing best practices and 2020 LRDP EIR mitigation measures, would not result in new significant impacts upon biological resources (2020 LRDP EIR Vol 1, 4.3-22 to 4.3-30). The Project site is within the Adjacent Blocks West area. This is an urbanized area within the City of Berkeley adjacent to the Campus Park land use area as defined within the 2020 LRDP. No sensitive species are known to occur at the Project site. Measures to reduce possible impacts to nesting species and specimen trees would be implemented as part of the proposed Project. Since certification of the 2020 LRDP FEIR, there have been no substantial changes to the 2020 LRDP or to the circumstances surrounding 2020 LRDP development with respect to biological resources that were not adequately analyzed and, as necessary, mitigated, and no new information is available. As discussed in the analysis above, the Project would not result in significant impacts related to biological resources and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis.

CLIMATE CHANGE

SEE DISCUSSION UNDER **GREENHOUSE GAS EMISSIONS**, BELOW

CULTURAL RESOURCES

SETTING

The cultural resources setting of the UC Berkeley campus is described in the 2020 LRDP EIR (Section 4.3). The following text summarizes context information for cultural resources relevant to the Cal Aquatics Center project.

HISTORICAL RESOURCES

In the 2020 LRDP EIR, the numerous historical resources located within the geographic scope of the 2020 LRDP were divided into two separate categories: Primary Historical Resources and Secondary Historical Resources. Primary Historical Resources include those listed on the California Register of Historical Resources. Secondary Historical Resources include resources listed on local registers, as well as resources listed on the state Inventory. Secondary Historical Resources are presumed significant *unless* a preponderance of evidence demonstrates otherwise.[7] Historic resources covered here include buildings, sites (which include landscapes), structures (such as bridges), and objects (such as Founders' Rock). Neither resource list includes the existing site or resources adjacent to the proposed site, and there are no structures on the site except for a parking kiosk and planters. The Adjacent Blocks West land use zone contains three CRHR properties, which are listed in Table 4.4-5 of the 2020 LRDP EIR. The resource nearest the proposed Project, the Masonic Temple/Crocker Bank (Berkeley Conference Center) buildings is located at 2015 Bancroft Way approximately 1 ½ blocks west of the site. Table 4.4-6 in the 2020 LRDP EIR lists the 43 Secondary Historical Resources in the Adjacent Blocks West area. The resources nearest the proposed Project site are located at 2126 and 2177-99 Bancroft Way and 2125 Durant Avenue. All are located on the block west of Fulton Street, the street closest to the western site boundary.

ARCHAEOLOGICAL RESOURCES

Prehistoric archaeological sites have been recorded in the Adjacent Blocks areas. The nearest to the proposed Project site was a human burial recovered from the Adjacent Blocks West area in the 1950s during ground clearing activities near Strawberry Creek northwest of the site. Per the 2020 LRDP EIR, given the long development history of the adjacent blocks, the likelihood of any significant prehistoric archaeological resources remaining intact is slim, except in areas close to Strawberry Creek. This area would not be affected by the proposed Project. No paleontological resources are known to exist within the Adjacent Blocks area; however, based upon local geology, it is possible that excavations within previously undisturbed areas that contain Quaternary alluvium could encounter limited fossils. There are no known historic archaeological resources in the adjacent blocks area.

2020 LRDP & 2020 LRDP EIR

In recognition of the fact that more than a third of UC Berkeley buildings are over 50 years old; and thus, potentially eligible for the National Register, the 2020 LRDP includes several objectives that seek to protect potential historic resources for future generations. They include:

- **Plan every new project as a model of resource conservation and environmental stewardship.**
- **Maintain and enhance the image and experience of the campus, and preserve our historic legacy of landscape and architecture.**
- **Plan every new project to respect and enhance the character, livability, and cultural vitality of our city environs.**

For projects in the City Environs, the 2020 LRDP would continue implementing the existing UC Berkeley practice of presenting all major City Environs projects to the relevant city planning commission and

landmarks commission for information and comment, prior to schematic design review by the UC Berkeley Design Review Committee. The project has been reviewed by the city of Berkeley Planning Commission and Design Review Committee.

MITIGATION MEASURES & CONTINUING BEST PRACTICES

Design and construction of the proposed Project would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon cultural resources. Where applicable, the proposed Project would incorporate the following mitigation measures and/or continuing best practices:

Continuing Best Practice CUL-1: In the event that paleontological resource evidence or a unique geological feature is identified during project planning or construction, the work would stop immediately and the find would be protected until its significance can be determined by a qualified paleontologist or geologist. If the resource is determined to be a 'unique resource,' a mitigation plan would be formulated and implemented to appropriately protect the significance of the resource by preservation, documentation, and/or removal, prior to recommencing activities.

LRDP Mitigation Measure CUL-4-b: If a resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 35 feet of the find shall cease. UC Berkeley shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project, as outlined in Continuing Best Practice CUL-3-a. UC Berkeley would implement the recommendations of the archaeologist.

Continuing Best Practice CUL-4-b: In the event human or suspected human remains are discovered, UC Berkeley would notify the County Coroner who would determine whether the remains are subject to his or her authority. The Coroner would notify the Native American Heritage Commission if the remains are Native American. UC Berkeley would comply with the provisions of Public Resources Code Section 5097.98 and CEQA Guidelines Section 15064.5(d) regarding identification and involvement of the Native American Most Likely Descendant and with the provisions of the California Native American Graves Protection and Repatriation Act to ensure that the remains and any associated artifacts recovered are repatriated to the appropriate group, if requested.

Continuing Best Practice CUL-4-c: Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify UC Berkeley if any are found. In the event of a find, UC Berkeley shall implement LRDP Mitigation Measure CUL-4-b.

CULTURAL RESOURCES

Would the Cal Aquatics Project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Cause a substantial adverse change in the significance of a historical resource as defined in CCR Section 15064.5 ?		●

No historic resources are located on or adjacent to the proposed Project site. As noted, the nearest historic resource is located approximately 1 ½ blocks west of the site and would not be affected by the proposed Project.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Directly or indirectly destroy a unique paleontological resource, or site, or unique geologic feature?		●

The 2020 LRDP EIR states there are no known paleontological resources or unique geologic features in the geographic scope of the 2020 LRDP (2020 LRDP EIR Vol 1, 4.4-48). As prescribed in the 2020 LRDP EIR, should such resources be revealed work must stop immediately and any found resource would be protected until its significance can be determined (Best Practice CUL-1). If a resource is determined to be a 'unique resource' by a qualified paleontologist or geologist, a mitigation plan would be formulated and implemented to protect the resource by preservation, documentation and/or removal, prior to resuming activity.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CCR Section 15064.5?		●

In conformance with the 2020 LRDP EIR (Mitigation CUL-4-a), UC Berkeley has completed an internal document: a UCB Campus Archaeological Resources Sensitivity Map. The site of the proposed Project is not within the area of a known or potential archaeological resource according to the map. However, if a resource is discovered during construction, all soil disturbing work within 35 feet of the find must cease and a qualified archaeologist will be contacted to examine the deposit and assess appropriate action (Mitigation CUL-4-b). Archaeological resources would be treated in conformance with the protocols established by the 2020 LRDP EIR (Mitigation CUL-4-b and Best Practices CUL-4-b, CUL-4-c).

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
4. Disturb any human remains, including those interred outside of formal cemeteries?		●

The proposed Project site is fully developed. Human remains are not anticipated at the Project site. However, in the event human or suspected human remains are discovered, UC Berkeley would notify the County Coroner who would notify the Native American Heritage Commission as appropriate and in accordance with state law (Best Practice CUL-4-b).

SUMMARY OF CULTURAL RESOURCES ANALYSIS

The 2020 LRDP EIR noted that under certain circumstances, projects developed under the 2020 LRDP could cause substantial adverse changes in the significance of historical resources, which would remain a significant and unavoidable impact despite recordation of the resource (2020 LRDP EIR Vol 1, 4.4-55) However, no historical resources occur on or in proximity to the proposed Project site.

Measures to reduce possible impacts to unknown archaeological resources are incorporated into the project. As discussed in the analysis above, the Project would not result in significant impacts related to

cultural resources and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis.

GEOLOGY, SEISMICITY, AND SOILS

SETTING

The geological setting of the campus is described in the 2020 LRDP EIR (Section 4.5). The following text summarizes context information for geology, seismicity, and soils relevant to the Cal Aquatics Center project.

The San Francisco Bay Area is considered one of the more seismically active areas in the world, based on its record of historical earthquakes and its position relative to the North American and Pacific Plate boundaries.[8] The Hayward fault is most relevant to UC Berkeley, since it passes through the eastern part of the campus[9], roughly 1 mile east of the Project site.

A study assessing the probability of earthquakes across California was released in 2007 by the USGS Working Group on California Earthquake Probabilities (WGCEP 2007). The results of the study indicate there is a 63 percent probability of at least one magnitude 6.7 or greater earthquake striking the Bay Area in the 30-year period after 2007. As part of the study, individual probabilities for generating a magnitude 6.7 quake or greater were assigned to specific known major faults. The study estimated that the Hayward-Rodgers Creek fault has a 31 percent probability of generating a M≥6.7 in the analyzed 30-year period.[10]

A new report specifically for the Cal Aquatics Center project is in preparation, in accordance with University policy. Based on information in the geotechnical report prepared for the adjacent Tang Center (Provenzano & Associates, 1990), the water table in the vicinity of the project site is at a depth of approximately 23.5 feet, though during periods of extended rainfall, it is anticipated that ground water can temporarily rise to within 12 feet of ground surface. Soil conditions at the adjacent Tang Center site were found to contain 5 to 8 feet of old fills which varied from loose to medium density. Soils consisted of clayey silts and clayey sands with varying amounts of gravel. Underlying soils to average depths of 25 feet consisted of random deposits of cohesionless soils in a dense state.[11]

2020 LRDP & 2020 LRDP EIR

The 2020 LRDP guides the location, scale, form and design of new University projects with sensitivity to geology, seismicity and soils considerations. Two of the 2020 LRDP Objectives are particularly relevant:

- **Provide the space, technology and infrastructure we require to excel in education, research, and public service.**
- **Plan every new project to represent the optimal investment of land and capital in the future of the campus.**

MITIGATION MEASURES & CONTINUING BEST PRACTICES

Design and construction of the Cal Aquatics Center would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon geology, seismicity and soils. Where applicable, the proposed Project would incorporate the following mitigation measures and/or continuing best practices:

Continuing Best Practice GEO-1-a: UC Berkeley will continue to comply with the California Building Code and the *University Policy on Seismic Safety*.

Continuing Best Practice GEO-1-b: Site-specific geotechnical studies will be conducted under the supervision of a California Registered Engineering Geologist or licensed geotechnical engineer and UC Berkeley will incorporate recommendations for geotechnical hazard prevention and abatement into project design.

Continuing Best Practice GEO-1-c: The Seismic Review Committee (SRC) shall continue to review all seismic and structural engineering design for new and renovated existing buildings on campus and ensure that it conforms to the California Building Code and the *University Policy on Seismic Safety*.

Continuing Best Practice GEO-1-d: UC Berkeley shall continue to use site-specific seismic ground motion specifications developed for analysis and design of campus projects. The information provides much greater detail than conventional codes and is used for performance-based analyses.

Continuing Best Practice GEO-1-g: As stipulated in the *University Policy on Seismic Safety*, the design parameters for specific site peak acceleration and structural reinforcement will be determined by the geotechnical and structural engineer for each new or rehabilitation project proposed under the 2020 LRDP. The acceptable level of actual damage that could be sustained by specific structures would be calculated based on geotechnical information obtained at the specific building site.

Continuing Best Practice GEO-1-i: The site-specific geotechnical studies conducted under GEO-1-b will include an assessment of landslide hazard, including seismic vibration and other factors contributing to slope stability.

Continuing Best Practice GEO-2: Campus construction projects with potential to cause erosion or sediment loss, or discharge of other pollutants, would include the campus Stormwater Pollution Prevention Specification. This specification includes by reference the "Manual of Standards for Erosion and Sediment Control" of the Association of Bay Area Governments and requires that each large and exterior project develop an Erosion Control Plan.

GEOLOGY, SEISMICITY AND SOILS

Would the Cal Aquatics Center project:
Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Rupture of a known earthquake fault?		●

The 2020 LRDP EIR noted the Hayward fault runs directly through the eastern portion of the UC Berkeley campus. However, given continuing campus best practices including compliance with the University Policy on Seismic Safety and incorporation of geotechnical recommendations that reduce hazards, the 2020 LRDP EIR determined the risk to people or structures due to surface fault rupture hazards would not be significantly increased with implementation of the 2020 LRDP (2020 LRDP EIR Vol 1, 4.5-17). Consistent with the *University Policy on Seismic Safety*, design and construction of the Project will as a minimum, comply with the current seismic provisions of CCR, Title 24, California Building

Standards Code, or local seismic requirements, whichever requirements are more stringent. In addition, provisions shall be made for adequate anchorage for seismic resistance of nonstructural building elements with respect to potential hazards to persons in the event of seismic disturbances. The Project site is located roughly 1 mile from the Hayward fault. Therefore, the facility will not be constructed on the trace of an active geological fault as prohibited in the *University Policy on Seismic Safety*.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Strong seismic ground shaking?		●

UC Berkeley is located in a seismically active region. Ground shaking has the potential to damage buildings. The University has implemented a process for the design of new buildings that applies the best available engineering procedure to maximize safety and resiliency, which are incorporated into the 2020 LRDP EIR (Best Practices GEO-1-a through GEO-1-g) and will be applied, where applicable to the proposed Project. Also, as noted in response to Geology item 1, design and construction of the Project will be consistent with the *University Policy on Seismic Safety*. Given these practices, the 2020 LRDP EIR determined the impacts to people and property due to seismic ground shaking are less than significant.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Seismic -related ground failure, including liquefaction?		●

The 2020 LRDP EIR states that "the Adjacent Blocks and the Hill Campus are not located in a liquefaction hazard zone, except at the Memorial Stadium site." (2020 LRDP EIR Vol 1, 4.5-10). Memorial Stadium is located approximately 0.8 miles east of the site. In addition, Figure 4.5-3 of the 2020 LRDP EIR indicates that the Project site is not located within liquefaction hazard zone. The 2020 LRDP EIR is sufficient and comprehensive to address this issue adequately. No additional analysis is required for the Cal Aquatics Center project.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
4. Landslides?		●

Landslide risk in the 2020 LRDP area is described as restricted primarily to the hill areas (2020 LRDP EIR, Vol. 1, 4.5-19). The project site is relatively flat and is surrounded by urban development. As shown on Figure 4.5-3 of the 2020 LRDP EIR, the Project site is not located within an area of landslide risk (2020 LRDP EIR Vol. 1, 4.5-12). Therefore, no further analysis is required.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
5. Result in substantial soil erosion or the loss of topsoil?		●

As prescribed in the 2020 LRDP EIR, campus construction projects with potential to cause erosion or sediment loss, or discharge of other pollutants, are undertaken in accordance with the campus Stormwater Pollution Prevention Specification. The specification includes by reference the "Manual of Standards for Erosion and Sediment Control" of the Association of Bay Area Governments, and requires development of an erosion control plan (Best Practice GEO-2). With the inclusion of this practice as part of the Project, no significant erosion impact is anticipated.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
6. Be located on a geologic unit or soil that is unstable, or would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction or collapse?		●

As prescribed in the 2020 LRDP EIR, site-specific geotechnical studies would be conducted. UC Berkeley would incorporate the recommendations relating to geotechnical hazard prevention and abatement into project design, prior to construction of the Project (Best Practice GEO-1-b). The 2020 LRDP EIR is sufficient and comprehensive to address this issue adequately. No additional analysis is required for the Cal Aquatics Center project.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
7. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property?		●

Soil surveys indicate that soils in the 2020 LRDP area range from low shrink-swell potential, found primarily in the Hill Campus, to low-to-high shrink-swell potential soils, which exist in the remainder of the 2020 LRDP area. Soil expansiveness potential likely varies across the Campus Park and in the other land use zones given the variety of geologic units underlying the area (2020 LRDP EIR Vol 1. 4.5-13).

As prescribed in the 2020 LRDP EIR, site-specific geotechnical studies would be conducted. UC Berkeley would incorporate the recommendations relating to geotechnical hazard prevention and abatement into project design, prior to construction of the Project (Best Practice GEO-1-b). The 2020 LRDP EIR is sufficient and comprehensive to address this issue adequately. No additional analysis is required for the Cal Aquatics Center project.

SUMMARY OF GEOLOGY, SEISMICITY AND SOILS ANALYSIS

The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP, incorporating existing best practices and 2020 LRDP EIR mitigation measures, would not result in new significant impacts in the area of geology, seismicity, or soils (2020 LRDP EIR Vol 1 p. 4.5-17 to 4.5-24). The Project site is not at high risk for geologic hazards such as landslide, fault rupture or liquefaction. Since certification of the 2020 LRDP FEIR, there have been no substantial changes to the 2020 LRDP or to the circumstances surrounding 2020 LRDP development with respect to geology, seismicity and soils that were not adequately analyzed and, as necessary, mitigated, and no new information is available. As discussed in the analysis above, the Project would not result in significant impacts related to geology, seismicity and soils and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis.

GREENHOUSE GAS EMISSIONS

SETTING

An addendum to the 2020 LRDP EIR, completed in 2009, describes existing climate change conditions and evaluates the potential for development under the UC Berkeley 2020 LRDP, including construction, to affect climate change. As described and demonstrated in the addendum, implementation of the 2020 LRDP would not cause significant effects to global climate change; implementation of the 2020 LRDP facilitates implementation of the campus climate action plan (see sustainability.berkeley.edu) and would

reduce UC Berkeley's greenhouse gas emissions. The 2012 Campus Sustainability Report indicates that campus greenhouse gas emissions have decreased by 3.7%, or by about 7,000 metric tons CO_2 equivalent, relative to 2010, achieving the lowest annual level of emissions since 2006 (see sustainability.berkeley.edu; see also www.facilities.berkeley.edu/GreenBuildings).

As described in the Addendum to the LRDP EIR, per capita emissions associated with the implementation of the 2020 LRDP would be below plan-level significance thresholds available at the time the document was published (Climate Change Addendum, p. 32). Per capita emissions are also below the June 2010 plan-level thresholds published by BAAQMD, prior to the March 2012 court action.

The Addendum also calculated emissions from 2020 LRDP-related construction. The 2020 LRDP EIR assumed that up to one million gross square feet of space could be under construction at any time during the course of 2020 LRDP implementation. These construction emissions are not reported in the campus CalCAP inventory, due to the fact that the campus does not directly control construction companies; emissions calculations for construction vehicles would be reported and regulated by construction businesses at their business address. Modeling shows that annual CO_2 emissions of 1,264 metric tons would result from construction activities of this scale (Source: Environmental Resources Management, Koehler, December 2008, with data translated to metric tons, included in Climate Change Addendum Attachment 1).

2020 LRDP & 2020 LRDP EIR

The Project would support 2020 LRDP policies (as amended July, 2009: see tinyurl.com/UCBClimate) to:

- Design new buildings to outperform the required provisions of Title 24 of the California Energy Code by at least 20 percent or systemwide sustainability policy standards, whichever is more stringent.
- Design new projects to minimize energy and water consumption and wastewater production.
- Design all aspects of new projects to achieve campus short term and long term climate change emission targets established in the campus Climate Action Plan.

2020 LRDP EIR Continuing Best Practices Incorporated into the Project as Proposed Include the Following:

Continuing Best Practice CLI-1: UC Berkeley would continue to implement provisions of the UC Policy on Sustainable Practices including, but not limited to: Green Building Design; Clean Energy Standards; Climate Protection Practices; Sustainable Transportation Practices; Sustainable Operations; Recycling and Waste Management; and Environmentally Preferable Purchasing Practices.

Continuing Best Practice CLI-2: UC Berkeley would 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.

Continuing Best Practice CLI-3: UC Berkeley would continue to annually monitor and report upon its progress toward its greenhouse gas emission targets. UC Berkeley would continue to report actions undertaken in the past year, and update its climate action plan annually to specify actions that UC Berkeley is planning to undertake in the current year and future years to achieve emission targets.

GREENHOUSE GAS EMISSIONS

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?		*GHG addressed in amended 2020 LRDP EIR*

The proposed Project would not be a major source of greenhouse gas emissions. The Cal Aquatics Center is planned, designed and would be managed to comply with the University Policy on Sustainable Practices and incorporates best practices and specific design elements, as outlined in Section 2.5 and in the table below, as partial implementation. Further, the project is consistent with the 2020 LRDP as amended and would not generate greenhouse gas emissions in a manner that substantially exceeds those predicted to occur as a result of implementation of the 2020 LRDP.

Lead agencies, including municipalities, counties, and universities, have adopted climate action plans in an effort to meet state mandated greenhouse gas reduction targets through comprehensive efforts. Where the focus of CEQA is commonly on the immediate impact of a single new development proposal, on-going pre-existing operations are often the greatest contributors of greenhouse gas emissions. As previously explained herein, the 2020 LRDP was amended to reference the campus climate action plan, a stringent campus greenhouse gas reduction strategy, in July, 2009, and the 2020 LRDP EIR was amended to consider how implementation of the 2020 LRDP impacts climate change / greenhouse gas emissions. Cumulatively, the 2020 LRDP EIR determined that the impact of implementation of the 2020 LRDP, with incorporation of all best practices and implementation of UC Berkeley's Climate Action Plan, on climate change would be less than significant (2020 LRDP EIR Addendum #5, page 55). In addition, the 2020 LRDP EIR determined that the implementation of the 2020 LRDP would not impede or conflict with the emissions reductions targets and strategies prescribed in or developed to implement AB 32, given the provisions of the 2020 LRDP and campus best practices (2020 LRDP EIR Addendum #5, page 45). The proposed Project would not alter these conclusions.

The California Attorney General has published suggested measures to reduce climate impacts. The table below indicates measures to be implemented by the proposed Cal Aquatics Center.

Table 10:
Consistency with Climate Change Strategies

ID	Attorney General Project-Specific Climate Change Suggested Mitigation Measures	Implemented by project?
Energy Efficiency		
GCC-1-1	Design buildings to be energy efficient. Site buildings to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use.	*Yes. This project would employ energy efficiency strategies in all building disciplines in order to achieve a 20% energy use reduction below Title 24 requirements. Translucent skylights in the roof would bring additional natural light into the changing areas and bathrooms.*
GCC-1-2	Install efficient lighting and lighting control systems.	*Yes. The interior and exterior lighting*

Table 10:
Consistency with Climate Change Strategies

ID	Attorney General Project-Specific Climate Change Suggested Mitigation Measures	Implemented by project?
	Use daylight as an integral part of lighting systems in buildings.	*would use light fixtures and lamps that will provided required light levels but stay under the maximum allowed lighting power densities (LPD) listed in Table 146-F. Translucent skylights in the roof would bring additional natural light into the changing areas and bathrooms.*
GCC-1-3	Install light colored "cool" roofs, cool pavements, and strategically placed shade trees	*Roof materials are yet to be determined. The project would be reducing the amount of paved area at the site. Trees removed during construction would be replaced.*
GCC-1-4	Provide information on energy management services for large energy users.	*n/a*
GCC-1-5	Install energy efficient heating and cooling systems, appliances and equipment, and control systems.	*Yes. The project would employ state-of-the art energy-efficient equipment for pool heating. Project would utilize high efficiency, direct-expansion (DX) cooling/heating rooftop heat pumps. HVAC unit controls would be integrated with the campus Energy Management System (Automatic Logic Control). HVAC systems will contribute to the goal of exceeding Title 24 by 20% via the Performance Method.*
GCC-1-6	Install light emitting diodes (LEDs) for traffic, street and other outdoor lighting.	*Yes. LED lighting would be used for outdoor and event lighting.*
GCC-1-7	Limit the hours of operation of outdoor lighting.	*Yes. Outdoor lighting after 10:00 PM would be limited to street lighting and lighting along the existing mid-block crossing and would provide required light levels for safety but stay under the maximum allowed lighting power densities (LPD) listed in Table 146-F, Climate Zone 03. Lighting within the site would be according to occupancy schedule.*
GCC-1-8	Use solar heating, automatic covers, and efficient pumps and motors for pools and spas.	*Heating for the pool water would initially be provided by an on-site gas boiler. The project will also explore using alternative sources to heat the water, such as a solar thermal technology. The pool would have a manual cover. The new pumps and motors would be more efficient than those in most existing pools.*
GCC-1-9	Provide education on energy efficiency.	*n/a*
Renewable Energy		
GCC-1-10	Install solar and wind power systems, solar and tankless hot water heaters, and energy-efficient heating ventilation and air conditioning. Educate consumers about existing incentives.	*The project is designed to maximize natural ventilation and daylighting. Water heating would be accomplished using an on-site gas boiler, though the project will also explore use of*

Table 10:
Consistency with Climate Change Strategies

ID	Attorney General Project-Specific Climate Change Suggested Mitigation Measures	Implemented by project?
		alternative source for water heating, such as solar thermal technology. Project would utilize high efficiency, direct-expansion (DX) cooling/heating rooftop heatpumps. HVAC unit controls will be integrated with the campus Energy Management System (Automatic Logic Control). HVAC systems will contribute to the goal of exceeding Title 24 by 20% via the Performance Method. The project is aiming to achieve LEED Gold certification.
GCC-1-11	Install solar panels on carports and over parking areas.	*No. Not proposed at this time.*
GCC-1-12	Use combined heat and power in appropriate applications.	*No. Not proposed at this time.*
Water Conservation and Efficiency		
GCC-1-13	Create water-efficient landscapes.	*Yes. Where new planting occurs, primarily native, drought-resistant materials would be used. It should be noted that the project would not have extensive landscaped areas.*
GCC-1-14	Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.	*No, not proposed at this time. It should be noted that the project would not have extensive landscaped areas. Stormwater runoff from the buildings and paved areas would be discharged into the landscaped area along the site's western edge.*
GCC-1-15	Use reclaimed water for landscape irrigation in new developments and on public property. Install the infrastructure to deliver and use reclaimed water.	*No, not proposed at this time. It should be noted that the project would not have extensive landscaped areas.*
GCC-1-16	Design buildings to be water-efficient. Install water-efficient fixtures and appliances.	*Yes. The plumbing fixtures would be low-flow fixtures.*
GCC-1-17	Use graywater. (Graywater is untreated household waste water from bathtubs, showers, bathroom wash basins, and water from clothes washing machines.) For example, install dual plumbing in all new development allowing graywater to be used for landscape irrigation.	*No, not proposed at this time.*
GCC-1-18	Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.	*Stormwater runoff would be better controlled due to the conversion of the site from an existing surface parking lot. Net impervious area at the site would be reduced by 37%.*
GCC-1-19	Restrict the use of water for cleaning outdoor surfaces and vehicles.	*n/a this phase, operational measure*
GCC-1-20	Implement low-impact development practices that maintain the existing hydrologic character of the site to manage storm water and protect the environment. (Retaining storm water runoff on-site can drastically reduce the need for energy-intensive imported water at the site.)	*Stormwater would be better controlled due to the conversion of the site from an existing surface parking lot. Net impervious area at the site would be reduced by 37%. Stormwater runoff from the buildings and paved areas would be discharged into and filtered*

Table 10:
Consistency with Climate Change Strategies

ID	Attorney General Project-Specific Climate Change Suggested Mitigation Measures	Implemented by project?
		through a landscape planter box prior to discharge to the City storm drain system. The project would add an additional 2,600 sf of planted and stormwater infiltration area.
GCC-1-21	Devise a comprehensive water conservation strategy appropriate for the project and location. The strategy may include many of the specific items listed above, plus other innovative measures that are appropriate to the specific project.	*Yes. All plumbing fixtures would be low-flow fixtures with a project target of a 40% water use reduction. Where new planting occurs, primarily native, drought-resistant materials would be used.*
GCC-1-22	Provide education about water conservation and available programs and incentives.	*The campus has existing programs to educate staff and students about water conservation.*
Solid Waste Measures		
GCC-1-23	Reuse and recycle construction and demolition waste (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard).	*Yes. The campus has an existing policy to increase diversion of construction and demolition waste.*
GCC-1-24	Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas.	*Yes. Recycling and composting containers are accommodated in all trash rooms.*
GCC-1-25	Recover by-product methane to generate electricity.	*n/a*
GCC-1-26	Provide education and publicity about reducing waste and available recycling services.	*The campus has existing programs to educate students and staff about recycling, re-use and composting. Planning is underway to achieve zero waste goals, with events and training.*
Land Use Measures		
GCC-1-27	Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.	*Yes. The project would intensify use on an existing surface parking lot and would be located within close walking distance of the campus park.*
GCC-1-28	Educate the public about the benefits of well-designed, higher density development.	*n/a*
GCC-1-29	Incorporate public transit into project design.	*Yes. The project site is accessible from a number of transit lines that run along Bancroft Way and Durant Avenue which border the site.*
GCC-1-30	Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.	*Yes. The project would remove and replace trees along Bancroft Way and the mid-block passageway along the west edge of the Tang Center.*
GCC-1-31	Develop “brownfields” and other underused or defunct properties near existing public transportation and jobs.	*The project would result in infill development of an existing surface parking lot. The site is served by a number of existing bus transit lines and is located approximately 1,600 feet (0.3 miles) from the Downtown Berkeley BART station.*
GCC-1-32	Include pedestrian and bicycle-only streets and plazas within developments. Create travel routes that ensure	*Yes. Project will preserve and enhance the existing pedestrian mid-block*

Table 10:
Consistency with Climate Change Strategies

ID	Attorney General Project-Specific Climate Change Suggested Mitigation Measures	Implemented by project?
	that destinations may be reached conveniently by public transportation, bicycling or walking.	*crossing adjacent to the Tang Center. Bicycle parking will be added along the front of the facility.*
Transportation and Motor Vehicles		
GCC-1-33	Limit idling time for commercial vehicles, including delivery and construction vehicles.	*Yes. This is part of any project implementing the 2020 LRDP.*
GCC-1-34	Use low or zero-emission vehicles, including construction vehicles.	*Campus exploring use of low emission fleet vehicles. Not currently part of campus construction requirements.*
GCC-1-35	Promote ride sharing programs e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides.	*Campus implements and promotes ridesharing programs.*
GCC-1-36	Create car sharing programs. Accommodations for such programs include providing parking spaces for the car share vehicles at convenient locations accessible by public transportation.	*Campus supports car sharing programs.*
GCC-1-37	Create local "light vehicle" networks, such as neighborhood electric vehicle (NEV) systems.	*n/a*
GCC-1-38	Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations.	*No, not proposed at this time. EV charging stations are provided at the Hearst parking structure located within Campus Park.*
GCC-1-39	Increase the cost of driving and parking private vehicles by, e.g., imposing tolls and parking fees.	*Yes. The remaining parking spaces at the site will be subject to a parking fee.*
GCC-1-40	Build or fund a transportation center where various public transportation modes intersect.	*n/a*
GCC-1-41	Provide shuttle service to public transit.	*No. Multiple modes of public transit are within walking distance of project. Hundreds of public transit buses and campus shuttles stop on Bancroft Way within a typical school day 24-hr period.*
GCC-1-42	Provide public transit incentives such as free or low-cost monthly transit passes.	*Yes. Students can purchase a Class Pass which provides reduced cost access to AC Transit. Campus subsidizes transit for employees.*
GCC-1-43	Promote "least polluting" ways to connect people and goods to their destinations.	*Yes. The project is within walking distance of campus and would improve the pedestrian environment by enhancing the existing mid-block passageway, and includes bicycle parking near the aquatics center entrance.*
GCC-1-44	Incorporate bicycle lanes and routes into street systems, new subdivisions, and large developments.	*The campus Parking & Transportation website provides comprehensive information for campus bicyclists, see; http://pt.berkeley.edu/around/bike/info*
GCC-1-45	Incorporate bicycle-friendly intersections into street design.	*n/a*
GCC-1-	For commercial projects, provide adequate bicycle	*Yes. Project includes bicycle parking,*

Table 10:
Consistency with Climate Change Strategies

ID	Attorney General Project-Specific Climate Change Suggested Mitigation Measures	Implemented by project?
46	parking near building entrances to promote cyclist safety, security, and convenience. For large employers, provide facilities that encourage bicycle commuting, including, e.g., locked bicycle storage or covered or indoor bicycle parking.	*as described above.*
GCC-1-47	Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.	*n/a*
GCC-1-48	Work with the school district to restore or expand school bus services.	*n/a*
GCC-1-49	Institute a telecommute work program. Provide information, training, and incentives to encourage participation. Provide incentives for equipment purchases to allow high-quality teleconferences.	*n/a for this project, however, campus expects to upgrade infrastructure for teleconferencing.*
GCC-1-50	Provide information on all options for individuals and businesses to reduce transportation-related emissions. Provide education and information about public transportation.	*n/a for this project, however, the campus Parking and Transportation Department provides information on pedestrian, bicycle and transit opportunities for commuters. All students can obtain low-cost yearly bus passes.*

	Additions or Changes to LRDP EIR Required	LRDP EIR Analysis Sufficient
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?		*GHG addressed in amended 2020 LRDP EIR*

As described previously, in July 2009 the University adopted an amendment to the UC Berkeley 2020 LRDP to address climate change. That amendment includes the policy, "Design all aspects of new projects to achieve campus short and long term climate change emissions targets established in the campus climate action plan" (see http://tinyurl.com/UCBClimate).

Embodied GHG emissions are emissions that are created through the extraction, processing, transportation, construction and disposal of building materials as well as emissions created through landscape disturbance (by both soil disturbance and changes in above ground biomass). The Cal Aquatics Center would involve excavation of the existing surface parking lot at the Project site, transportation of construction waste and building materials, and construction of a new aquatics center; each aspect of construction would entail emission of greenhouse gases.

A February 2009 report from the federal Environmental Protection Agency[12] notes that

> Greenhouse gas emissions from the construction industry result from a wide range of activities by hundreds of thousands of companies and sites across the country, producing 6% of all U.S. industrial GHG emissions in 2002. Although aggregate emissions from this large sector are high, no single construction site or company is a significant contributor. (p. 29)

As part of the LRDP EIR addendum, prepared in accordance with CEQA, to consider the LRDP climate change amendment, construction (including demolition) emissions for UC Berkeley were calculated. Calculations assumed the total area to be disturbed over the course of any given 12-month period would be 45.9 acres, representing the maximum construction year under the LRDP 2020. This methodology reflects that at any moment in time, more than one LRDP project could be under construction, and each project could be at different points in the construction process. Modeling shows that annual CO_2 emissions of 1,264 metric tons would result from construction activities of this scale. For comparison, emissions associated with campus water consumption equaled 1,955 metric tons of carbon dioxide equivalent (CO_2e) in 2007. At its peak the Cal Aquatics Center project would have approximately 10,860 square feet of building space under construction, or a maximum of one acre across the site. Combined with other campus projects that may be under construction at the same time (see Appendix G, Cumulative Projects), this is well within the one million gross square feet of new space that could be underway at any one time within the Campus Park, Adjacent Blocks, Southside and Hill Campus land use zones as analyzed in the 2020 LRDP and 2020 LRDP EIR Addendum.

Operational emissions associated with operation of the on-site gas boiler and electricity use at the site would contribute to overall greenhouse gas emissions generated by implementation of the 2020 LRDP. However, the project is consistent with the 2020 LRDP as amended and would not generate greenhouse gas emissions in a manner that substantially exceeds those predicted to occur as a result of implementation of the 2020 LRDP. In addition, the Cal Aquatics Center is planned, designed and would be managed to comply with the University Policy on Sustainable Practices. The Cal Aquatics Center project would implement the 2020 LRDP, as amended, which includes compliance with emission targets established in the Campus Climate Action Plan and therefore would not conflict with any applicable plan adopted for the purpose of reducing the emissions of greenhouse gases (see http://tinyurl.com/UCBClimate). The 2020 LRDP EIR determined that the implementation of the 2020 LRDP would not impede or conflict with the emissions reductions targets and strategies prescribed in or developed to implement AB 32, given the provisions of the 2020 LRDP and campus best practices (2020 LRDP EIR Addendum #5, page 45). The proposed Project would not alter these conclusions.

SUMMARY OF GREENHOUSE GAS EMISSIONS ANALYSIS

The Cal Aquatics Center project would provide infill on an existing surface parking lot and is planned, designed and would be managed to comply with the University Policy on Sustainable Practices, as partially outlined in the table "Attorney General Project-Specific Climate Change Suggested Mitigation Measures" above. The Cal Aquatics Center project would implement the 2020 LRDP, as amended, which includes compliance with emission targets established in the Campus Climate Action Plan and therefore would not conflict with any applicable plan adopted for the purpose of reducing the emissions of greenhouse gases (see http://tinyurl.com/UCBClimate). As discussed in the analysis above, the Project would not result in significant impacts related to climate change and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis.

HAZARDOUS MATERIALS

SETTING

This section assesses the potential adverse impacts on human health and the environment due to exposure to hazards and hazardous materials that could be encountered as a result of implementation of the proposed Cal Aquatics Center project. The potential for impacts from toxic air emissions is considered in Air Quality, above.

The Cal Aquatics Facility would be designed, constructed, operated and maintained consistent with the California Health and Safety Code Division 2.5, Chapter 3, Section 1797.182, California Code of Regulations (CCR) Title 22, Chapter 20 and California Building Code Title 24, Chapter 31B. California Health and Safety Code, Section 25500, et seq., and the related regulations in 19 CCR 2620, et seq., address the storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases. Those using and storing hazardous materials are required to submit a Hazardous Materials Business Plan (HMBP) to their local Certified Unified Program Agency (CUPA) and report releases to the CUPA or lead agency. The threshold quantities for hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure. The storage of sodium hypochlorite and muratic acid on-site in the quantities proposed would require preparation of a HMBP.

The UC Berkeley Office of Environment, Health, and Safety (EH&S) has primary responsibility for coordinating the management of hazardous materials on campus in compliance with applicable laws, regulations, and standards and oversee the storage, use and disposal of hazardous materials campus-wide. The UC Berkeley EH&S Department Emergency Response Team (ERT), staffed by health and safety professionals, hazardous materials technicians, and licensed hazardous materials drivers, responds to most hazardous materials incidents reported on campus. Currently, the ERT is able to respond to an incident within 15 minutes. In the infrequent cases when outside assistance is required, the ERT may request assistance from other nearby agencies, including the Berkeley Fire Department (BFD) and Alameda County Fire Department (ACFD), or from emergency response contractors. With respect to on-campus swimming pools, EH&S shares responsibility for pool operation and maintenance with the UCB Athletics Facilities Department.

All hazardous materials would be required by existing regulations to be handled and stored in accordance with applicable codes and regulations referenced above. Specific requirements of the California Fire Code Title 24, Part 9 that reduce the risk of fire or the potential for a release of hazardous materials that could affect public health or the environment include:

- Provision of an automatic sprinkler system for indoor hazardous material storage areas.
- Provision of an exhaust system for indoor hazardous material storage areas.
- Separation of incompatible materials by isolating them from each other with a noncombustible partition.
- Spill control in all storage, handling, and dispensing areas.
- Separate secondary containment for each chemical storage system. The secondary containment is required to hold the entire contents of the tank plus the volume of water for the fire suppression system that could be used for fire protection for a period of 20 minutes in the event of a catastrophic spill.

In addition, the HMBP will include an inventory and location map of hazardous materials onsite and an emergency response plan for hazardous materials incidents. Specific topics to be covered in the plan include:

- Facility identification
- Emergency contacts
- Chemical inventory information (for every hazardous material)
- Site map
- Emergency notification data

- Procedures to control actual or threatened releases
- Emergency response procedures
- Training procedures
- Certification

The HMBP will be filed with the Office of EH&S and updated annually in accordance with applicable regulations. The Office of EH&S will ensure review by and distribution to other potentially affected agencies including the City of Berkeley Fire Department.

In accordance with emergency response procedures specified in the HMBP, designated personnel will be trained on appropriate methods to mitigate and control accidental spills.

2020 LRDP & 2020 LRDP EIR

While the 2020 LRDP does not contain specific policies about hazardous materials, it does present objectives and policies that indirectly support the safe use of these materials. Three 2020 LRDP Objectives are particularly relevant:

- **Plan every new project as a model of resource conservation and environmental stewardship.**
- **Provide the space, technology and infrastructure we require to excel in education, research, and public service.**
- **Plan every new project to represent the optimal investment of land and capital in the future of the campus.**

MITIGATION MEASURES & CONTINUING BEST PRACTICES

Design and construction of the proposed Project would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP related to hazardous materials. Where applicable, the proposed Project would incorporate the following mitigation measures and/or continuing best practices:

Continuing Best Practice HAZ-4: UC Berkeley shall continue to perform site histories and due diligence assessments of all sites where ground-disturbing construction is proposed, to assess the potential for soil and groundwater contamination resulting from past or current site land uses at the site or in the vicinity. The investigation will include review of regulatory records, historical maps and other historical documents, and inspection of current site conditions. UC Berkeley would act to protect the health and safety of workers or others potentially exposed should hazardous site conditions be found.

Continuing Best Practice HAZ-5: UC Berkeley shall continue to perform hazardous materials surveys prior to capital projects in existing campus buildings. The campus shall continue to comply with federal, state and local regulations governing the abatement and handling of hazardous materials and each project shall address this requirement in all construction.

HAZARDOUS MATERIALS

Would the Cal Aquatics project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Create a significant hazard to the public or the environment through the routine transport, use, production, or disposal of hazardous materials?		●

As proposed, the Project would use the following chemicals to treat and disinfect the pool water: a 12.5% sodium hypochlorite (liquid chlorine bleach) solution; a 21% muratic acid solution and carbon dioxide (CO2). All are commonly used in the treatment of swimming pool water. Muratic acid and CO2 are used in the four existing campus pools. Dry chlorine pellets with automated feeder systems are currently used on campus rather than liquid sodium hypochlorite.

As proposed, the sodium hypochlorite would be stored in a 1,000-gallon dual-contained (double wall) tank; the muratic acid solution would be stored in a 150-gallon double wall tank. Approximately 600 pounds of carbon dioxide (CO2) would be stored on-site in a cryogenic tank. All chemicals would be stored within containment areas as required per the California Fire Code. Use of these chemicals would be managed by UCB Office of EH&S personnel consistent with existing methods and protocol.

Chemicals would be delivered to the site approximately every two weeks by truck. The primary access routes would be Durant Avenue and Bancroft Way. Trucks would park adjacent to the chemical room and transfer chemicals directly into the tanks via a hose. It is expected that deliveries would be made early in the morning to avoid delays and congestion caused by traffic and pedestrians and that delivery personnel would make multiple stops on campus as occurs under existing conditions. Activities associated with hazardous materials transportation (packaging, identifying, loading, and warning the public of the hazard) are regulated by the California Highway Patrol and the U. S. Department of Transportation (USDOT) per Title 13 of the California Code of Regulations, Division 2, Chapter 6.

Compliance with regulations related to the storage, handling and use of hazardous materials would minimize or avoid significant impacts related to the routine transport, use or disposal of hazardous materials. The campus routinely transports and uses hazardous materials in servicing existing campus swimming pools; UC Berkeley works to strictly adhere to applicable regulations, as outlined in the 2020 LRDP EIR, in handling of all hazardous materials (see, for example, discussion at 2020 LRDP EIR Vol 1, pp 4.6-29 through 4.6-31) . Compliance with regulations applicable to the storage, use and transport of hazardous materials would reduce potential impacts to less than significant levels.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. 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?		●

As discussed above, hazardous materials used at the proposed Cal Aquatics facility would be managed by UCB Office of EH&S consistent with current methods and protocols for all UCB swimming pools consistent with applicable regulations. Thus, the proposed Project would not create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?		●

A campus childcare facility (2340 Durant Avenue) is located within ¼ mile of the proposed site. The proposed Project would store and use hazardous materials. However, the hazardous materials used on-site would be managed consistent with applicable state regulations and UCB Office of EH&S protocol; thus, potential impacts to schools or child care facilities would not be greater than or different from what was described in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
4. Be located on a hazardous materials site as listed on the 'Cortese List' (compiled pursuant to Government Code Section 65962.5) and as a result create a significant hazard to the public or the environment?		●

Rincon Consultants reviewed available data from the California State Water Resources Control Board online GeoTracker database and California Department of Toxic Substances Control online EnviroStor database for evidence indicating the presence of known hazards or hazardous materials on or proximity to the proposed project site. The closest known hazard is the Shell Service Station Leaking Underground Storage Tank (LUST) site located at 2200 Durant Avenue (Geotracker, accessed February 25, 2013). This site is located south and west of the proposed project site on the southeast corner of the Durant Avenue/Fulton Street intersection. Groundwater below this site is reported to have been impacted by petroleum hydrocarbons from one or more LUSTs. As discussed in Section 4.7 of the 2020 LRDP EIR, the proposed project site is located within the East Bay Plain groundwater basin. Groundwater is expected to flow south/southwest. The Shell Service Station site is located hydrologically down-gradient from the subject property; and thus, any residual petroleum in the groundwater would not be expected to impact the project site. Potential exposure of construction workers and campus occupants or the general public to potentially unknown contaminated soil or groundwater would be minimized through the implementation of campus continuing best practices prescribed in the 2020 LRDP EIR, which require site histories and due diligence assessments of all sites where ground disturbing construction is proposed (Best Practice HAZ-4).

SUMMARY OF HAZARDOUS MATERIALS ANALYSIS

The storage, use and transport of hazardous materials associated with swimming pool operation and maintenance were not specifically addressed in the 2020 LRDP EIR. However, required adherence to applicable existing rules and regulations affecting the storage, use and transport of these chemicals and existing best practices and 2020 LRDP EIR mitigation measures, would avoid new or significant hazardous materials-related impacts. Since certification of the 2020 LRDP FEIR, there have been no substantial changes to the 2020 LRDP or to the circumstances surrounding 2020 LRDP development with respect to hazardous materials that were not adequately analyzed and, as necessary, mitigated. As discussed in the analysis above, the Project would not result in significant impacts related to climate change and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis.

HYDROLOGY AND WATER QUALITY

SETTING

The hydrology and water quality setting of the campus is described in the 2020 LRDP EIR (Section 4.7). The following text summarizes context information for hydrology and water quality relevant to the proposed Project.

The Adjacent Blocks West land use zone generally drains through culverts into lower Strawberry Creek in locations west of the Campus Park. In this portion of the watershed, all overland flow is collected by curb-and-gutter systems and delivered through side inlets to the storm drainage culverts beneath local streets. With the exception of the narrow landscaped perimeter, the entire project site is currently paved and impervious; thus, the vast majority of site runoff is conveyed directly to existing storm drains.

2020 LRDP & 2020 LRDP EIR

The 2020 LRDP would influence hydrology and water quality by guiding the location, scale, form and design of new University projects. The 2020 LRDP includes a number of policies and procedures for individual project review to support the 2020 LRDP Objectives. Those 2020 LRDP Objectives relevant to hydrology and water quality are shown below:

- **Plan every new project to serve as a model of resource conservation and environmental stewardship.**
- **Maintain and enhance the image and experience of the campus, and preserve our historic legacy of landscape and architecture.**

The 2020 LRDP includes a number of policies and procedures for individual project review to support these Objectives. For each new project to serve as a model of resource conservation and environmental stewardship, the 2020 LRDP envisions developing a campus standard for sustainable design specific to its site, climate, and facility inventory.

CLEAN WATER ACT SECTION 402—NPDES PERMITS

The National Pollutant Discharge Elimination System (NPDES) stormwater permitting program, under Section 402(d) of the federal Clean Water Act (CWA), is administered by the Regional Water Quality Control Boards on behalf of Environmental Protection Agency (EPA) and establishes a framework for regulating nonpoint-source stormwater discharges (33 U.S. Code [U.S.C.] 1251). The objective of the NPDES program is to control and reduce discharges of pollutants to water bodies from surface water, which includes both municipal and industrial wastewater and stormwater runoff. Under the CWA, discharges of pollutants to receiving water are prohibited unless the discharge is in compliance with an NPDES permit. The NPDES permit specifies discharge prohibitions, effluent limitations, and other provisions such as monitoring deemed necessary to protect water quality based on criteria specified in the National Toxics Rule, the California Toxics Rule, and the San Francisco Bay Basin Plan.

The State Water Resources Control Board (SWRCB) has adopted a State-wide NPDES general permit for stormwater discharges associated with construction activities (Construction General Permit) (Order 2009-0009-DWQ), which became effective on July 1, 2010. Compliance with the Construction General Permit and preparation and implementation of a stormwater pollution prevention plan (SWPPP) that meets Construction General Permit conditions is required for sites that disturb 1 acre or more and drain to a separate storm sewer system. Construction activities subject to the Construction General Permit include clearing, grading, stockpiling, and excavation. Dischargers must eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. The permit also requires dischargers to consider the

use of permanent post-construction management measures that would remain in service to protect water quality throughout the life of the project. All NPDES permits also have inspection, monitoring, and reporting requirements. The requirements of the Municipal Regional Stormwater NPDES Permit (adopted October 14, 2009) are implemented by local agencies through the Alameda Countywide Clean Water Program.

MITIGATION MEASURES & CONTINUING BEST PRACTICES

Design and construction of the proposed Project would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon hydrology and water quality. Where applicable, the Project would incorporate the following mitigation measures and/or continuing best practices:

Continuing Best Practices HYD-1-a: During the plan check review process and construction phase monitoring, UC Berkeley (EH&S) will verify that the proposed project complies with all applicable requirements and BMPs.

Continuing Best Practice HYD-1-b: UC Berkeley shall continue implementing an urban runoff management program containing BMPs as published in the Strawberry Creek Management Plan, and as developed through the campus municipal Stormwater Management Plan completed for its pending Phase II MS4 NPDES permit. UC Berkeley will continue to comply with the NPDES stormwater permitting requirements by implementing construction and post construction control measures and BMPs required by project-specific SWPPPs and, upon its approval, by the Phase II SWMP to control pollution. SWPPPs would be prepared as required by the appropriate regulatory agencies including the Regional Water Quality Control Board and where applicable, according to the UC Berkeley Stormwater Pollution Prevention Specification to prevent discharge of pollutants and to minimize sedimentation resulting from construction and the transport of soils by construction vehicles.

Continuing Best Practice HYD-2-a: In addition to Hydrology Continuing Best Practices 1-a and 1-b above, UC Berkeley will continue to review each development project, to determine whether project runoff would increase pollutant loading. If it is determined that pollutant loading could lead to a violation of the Basin Plan, UC Berkeley would design and implement the necessary improvements to treat stormwater. Such improvements could include grassy swales, detention ponds, continuous centrifugal system units, catch basin oil filters, disconnected downspouts and stormwater planter boxes.

Continuing Best Practice HYD-2-c: Landscaped areas of development sites shall be designed to absorb runoff from rooftops and walkways. The Campus Landscape Architect shall ensure open or porous paving systems be included in project designs wherever feasible, to minimize impervious surfaces and absorb runoff.

Continuing Best Practice HYD-3: In addition to Best Practices 1-a, 1-b, 2-a and 2-c above, UC Berkeley will continue to review each development project, to determine whether rainwater infiltration to groundwater is affected. If it is determined that existing infiltration rates would be adversely affected, UC Berkeley would design and implement the necessary improvements to retain and infiltrate stormwater. Such improvements could include retention basins to collect and retain runoff, grassy swales, infiltration galleries, planter boxes, permeable pavement, or other retention methods. The goal of the improvement should be to ensure that there is no net decrease in the

amount of water recharged to groundwater that serves as freshwater replenishment to Strawberry Creek. The improvement should maintain the volume of flows and times of concentration from any given site at pre-development conditions.

Continuing Best Practice HYD-4-e: UC Berkeley shall continue to manage runoff into storm drain systems such that the aggregate effect of projects implementing the 2020 LRDP is no net increase in runoff over existing conditions.

HYDROLOGY & WATER QUALITY

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Violate any water quality standards or waste discharge requirements?		●

UC Berkeley's Wastewater Quality Program manages discharges to the sanitary sewers using innovative educational outreach and waste minimization incentives. The program has served as a model to others: its success at preventing pollution was recognized in 2003 when the campus was one of two honorees to be awarded EBMUD's Pollution Prevention Award for "exemplary performance in complying with discharge requirements." The campus instituted the Drain Disposal Policy that sets forth various drain disposal restrictions to ensure compliance with sanitary sewer discharge standards. (2020 LRDP EIR Vol. 1, 4.7-23)

Excavation, grading, and construction within the site would require temporary disturbance of surface soils and removal of existing on-site pavement. Grading would use scrapers, dump trucks, and bulldozers. All construction staging would be located within the site. During construction, excavation and grading activities would expose soil to water runoff and entrain sediment in the runoff. Construction of the proposed Project may require dewatering if groundwater is encountered during excavation of the pool.

The groundwater elevation at the site are estimated based on a geotechnical report prepared for the adjacent Tang Center and on monitoring data from the nearest groundwater well which is located on the Shell Service Station site at 2200 Durant Avenue. This location is at the southeast corner of the Durant Avenue/Fulton Street intersection across the street and southwest of the proposed site. A total of 32 groundwater depth measurements were taken between October, 1999 and September, 2011 (Conestoga-Rovers & Associates, 2012). The average depth to groundwater at the well site over the monitoring period was 26.02 feet below the surface; however, groundwater was recorded at 14.21 feet below the surface in 2006. Excavation for the proposed project would be a maximum of 22 feet below the surface. Assuming groundwater at the monitoring well is representative of groundwater levels in the vicinity, groundwater is not expected to be encountered during construction. However, if construction were to occur during periods of heavy and sustained precipitation, groundwater could be encountered. Under these circumstances, ponding may also occur. In either case, dewatering may be required.

Groundwater and/or stormwater runoff could contain sediments and may require settling before discharge into Strawberry Creek and San Francisco Bay. Sediment in discharge water as well as soil and debris on the haul truck tires, which in turn can be deposited on local streets, could cause increased sediment to be carried off site into the storm drain/sewer, potentially clogging inlets and reducing the

functional capacity of the pipes to convey flows. In addition, such mobilized sediment could accumulate in new locations as runoff occurs and block stormwater flows.

To minimize or avoid potentially adverse water quality impacts, runoff will be managed in accordance with the requirements set forth in the State-wide NPDES Construction General Permit (Order 2009-0009-DWQ). The Construction General Permit requires preparation of a SWPPP to reduce/eliminate surface water pollution throughout the project's construction period. The SWPPP would include, at a minimum, specific and detailed management measures designed to mitigate construction-related pollutants. The SWPPP typically includes the following specific information:

- The pollutants that are likely to be used during construction that could be present in stormwater drainage and non-stormwater discharges, including fuels, lubricants, and other types of materials used for equipment operation;
- Spill prevention and contingency measures, including measures to prevent or clean up spills of hazardous waste and of hazardous materials used for equipment operation, and emergency procedures for responding to spills;
- Personnel training requirements and procedures that must be used to ensure that workers are aware of permit requirements and proper installation methods for management measures specified in the SWPPP; and
- The appropriate personnel responsible for supervisory duties related to implementation, inspection, and maintenance of management measures.

Should dewatering be necessary during construction, the effluent may require on-site treatment before being discharged to the storm drain and San Francisco Bay. The Construction General Permit requires that any discharge resulting from dewatering activities be impounded in a sediment retention basin or other holding facility to settle the solids and provide treatment before discharge to receiving water to meet effluent limits for priority pollutants. Dewatering holding and/or treatment facilities will be located within the project site and will be operated throughout construction as needed and in compliance with applicable regulations. As stated in the Construction General Permit, all dewatering effluent must:

- Be filtered or treated, using appropriate technology;
- Meet the numeric effluent limitations and numeric action levels for pH and turbidity; and
- Not cause or contribute to a violation of water quality standards.

Although authorized non-stormwater discharges are allowed under the NPDES Construction General Permit from uncontaminated groundwater dewatering (SWRCB, 2010), it is unknown at this time whether dewatering effluent would be uncontaminated. If dewatering effluent is contaminated, the San Francisco Bay RWQCB may require an individual NPDES permit for dewatering effluent discharges. Therefore, through compliance with these requirements and regulations, construction-related impacts would not be significant.

Under existing conditions, the project site is comprised primarily of an impervious asphalt pavement. Thus, the project would not increase the area of pervious surfaces. Stormwater hardscape runoff would be reduced, as the pool would collect a portion of rainwater and deck runoff, and the proposed vegetated area along the western boundary would collect additional site runoff. A portion of stormwater runoff would be treated on-site prior to release into the existing stormwater system which will continue to discharge into Strawberry Creek. This system would provide stormwater management benefits by treating hardscape runoff and detaining peak flows and volumes.

The project would not be considered a new land use not previously analyzed in the 2020 LRDP EIR; thus, there is no expectation that operation would significantly alter campus wastewater discharge or violate water quality standards. Treated swimming pool water may be discharged into the sanitary sewer periodically to maintain water quality and quantity requirements. Discharge quantities will vary but are not expected to exceed the growth parameters assessed in the 2020 LRDP EIR, which found the potential impact on water quality standards and waste discharge requirements to be less than significant, given existing campus practices. (Best Practices HYD-1-a through HYD-1-d).

With required adherence to existing regulations, LRDP mitigation measures and UC Berkeley's Continuing Best Practices, no impacts to water quality standards or water discharge requirements greater than or different from what was evaluated in the 2020 LRDP EIR would occur with the proposed Project.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Substantially deplete groundwater supplies or quality, 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)?		●

The 2020 LRDP EIR requires that if rainwater infiltration to groundwater is affected, UC Berkeley would design and implement improvements to retain and infiltrate stormwater to ensure there is no net decrease in the amount of water recharged to groundwater that serves to replenish Strawberry Creek: the volume of flows and times of concentration must be maintained at pre-development conditions. (Best Practice HYD-3). The proposed Project would decrease the impervious surfaces on the site, resulting in an incremental increase in onsite infiltration. There would be no adverse impact.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Substantially alter existing drainage patterns of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion, siltation or flooding on- or off- site?		●

The proposed Project would replace an existing paved parking lot with new pervious and impervious surfaces. In combination with on-site retention and stormwater collection, the project would decrease the rate and volume of surface runoff. The 2020 LRDP EIR requires that new projects be sited and designed so the aggregate effect of projects under the 2020 LRDP is no net increase in runoff over existing conditions (Best Practice HYD-4-e). The proposed Project would be consistent with Best Practice HYD-4-e. No stream or drainage courses are located on-site; thus, the proposed Project would not alter drainage patterns or adversely affect post-construction hydrology or water quality. Impacts under this threshold would be similar to what was evaluated in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
4. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?		●

The proposed Project would replace an existing paved parking lot with new pervious and impervious surfaces, decreasing the rate and volume of surface runoff. Stormwater hardscape runoff would be treated on-site prior to release into the existing stormwater system which will continue to discharge into Strawberry Creek. Thus, volumes are not expected to exceed the capacity of the existing system. Impacts would not be greater than those evaluated in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
5. Otherwise substantially degrade water quality?		●

The proposed Project is consistent with development patterns previously analyzed in the 2020 LRDP EIR; and thus, it would not significantly alter wastewater discharges from the campus, or violate water quality standards. The proposed Project fits within the parameters of growth assessed in the 2020 LRDP EIR, which found the potential impact on water quality standards and waste discharge requirements to be less than significant, given existing campus practices. (Best Practices HYD-1-a through HYD-1-d). Impacts under this threshold would be similar to what was evaluated in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
6. 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?		●

The proposed Project does not include housing nor is the site within a 100-year flood boundary, as illustrated on Figure 4.7-2 of the 2020 LRDP EIR Vol 1, 4.7-13. Thus, no housing would be placed within a 100-year flood hazard area.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
7. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?		●

The Project is outside the 100-year flood zone, as illustrated on Figure 4.7-2 of the 2020 LRDP EIR Vol 1, 4.7-13. Thus, no structures would be placed within a 100-year flood hazard area.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
8. 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?		●

The Campus Park, Hill Campus and City Environs are outside the inundation hazard area for Berryman and Summit Reservoirs which are both located north of the site. The proposed Project would not expose people or structures to inundation as a result of dam or levee failure.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
9. Be subject to inundations by seiches, tsunamis, or mudflows?		●

The City Environs is sufficiently inland and at a sufficiently high elevation that tsunamis and mudflows are not an anticipated risk. No large, open bodies of water that would represent a substantial seiche risk are located on or around the campus. The proposed Project site would not be adversely affected by seiches, tsunamis or mudflows.

SUMMARY OF HYDROLOGY ANALYSIS

The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP, incorporating existing best practices and 2020 LRDP EIR mitigation measures, would not result in new significant hydrology and water quality impacts (2020 LRDP EIR Vol 1, 4.7-24 to 4.7-35). Since certification of the 2020 LRDP FEIR, there have been no substantial changes to the 2020 LRDP or to the circumstances surrounding 2020 LRDP development with respect to hydrology and water quality that were not adequately analyzed and, as necessary, mitigated, and no new information is available. The proposed Project would improve existing storm runoff conditions on the site by increasing pervious surfaces. As discussed in the analysis above, the Project would not result in significant impacts related to hydrology and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis.

LAND USE

SETTING

The project site lies at the southeastern corner of the area designated in the 2020 LRDP as the Adjacent Blocks West. The Adjacent Blocks West land use zone is defined in the 2020 LRDP as the blocks defined by Oxford, Virginia, Walnut, Hearst, Shattuck, Durant, Ellsworth, and the Campus Park. Major campus facilities on these blocks include the Tang Health Center, the University Printing Plant, University Hall, 2195 Hearst, and the plant research facilities of the Oxford Tract. The land use setting of the project site is generally described in the 2020 LRDP EIR (Section 4.8) in the discussions of the Adjacent Blocks West and the Southside land use zones. The site is directly adjacent to the campus park to the north and the Southside to the south, and near the boundary with the Adjacent Blocks South to the east.

2020 LRDP & 2020 LRDP EIR

Review of individual projects under the 2020 LRDP would influence land use impacts by guiding the location, scale, form and design of new University projects. The 2020 LRDP includes a number of policies and procedures for individual project review to support the Objectives of the 2020 LRDP. While all the 2020 LRDP Objectives bear directly or indirectly on land use, the following are particularly relevant to the Project:

- *Provide the space, technology and infrastructure we require to excel in education, research, and public service.*
- *Provide the housing, access, and services we require to support a vital intellectual community and promote full engagement in campus life.*

- *Plan every new project to represent the optimal investment of land and capital in the future of the campus.*
- *Plan every new project as a model of resource conservation and environmental stewardship.*
- *Maintain and enhance the image and experience of the campus, and preserve our historic legacy of landscape and architecture.*
- *Plan every new project to respect and enhance the character, livability, and cultural vitality of our city environs.*

The 2020 LRDP requires that while the design of each campus building should reflect its own time and place, it should also reflect the enduring values of elegance and quality, and contribute to a memorable identity for the University as a whole. Toward this goal, major capital projects would be reviewed at each stage of design by the UC Berkeley Design Review Committee, as prescribed by Best Practice AES-1-b.

The 2020 LRDP includes Location Guidelines, which prescribe location priorities for the various campus functions by land use zone. As explained in the LRDP:

> "In order to optimize the use of campus resources, future capital investment and space utilization at UC Berkeley shall be informed by the Location Guidelines shown below. For each new capital project, the policy reviews undertaken at phase 1 and phase 2 of the Campus Project Approval Process, described in section 18 [of the LRDP], shall include a finding that the project conforms to the Location Guidelines, or state why an exception is warranted."

The project conforms to the Location Guidelines, which prioritizes locations in the Adjacent Blocks for "[f]itness, recreation, [and] intercollegiate athletics" (LRDP Table 4).

MITIGATION MEASURES & CONTINUING BEST PRACTICES

Design and construction of the proposed Cal Aquatics Center project would be implemented in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon land use. Where applicable, the project would incorporate the following continuing best practices:

Continuing Best Practice LU-2-b: UC Berkeley would make informational presentations of all major projects in the City Environs in Berkeley to the Berkeley Planning Commission and, if relevant, the Berkeley Landmarks Preservation Commission for comment prior to schematic design review by the UC Berkeley Design Review Committee. Major projects in the City Environs in Oakland would similarly be presented to the Oakland Planning Commission and, if relevant, to the Oakland Landmarks Preservation Advisory Board. Whenever a project in the City Environs is under consideration by the UC Berkeley DRC, a staff representative designated by the city in which it is located would be invited to attend and comment on the project.

Continuing Best Practice LU-2-c: Each individual project built in the Hill Campus or the City Environs under the 2020 LRDP would be assessed to determine whether it could pose potential significant land use impacts not anticipated in the 2020 LRDP, and if so, the project would be subject to further evaluation under CEQA. In general, a project in the Hill Campus or the City Environs would be assumed to have the potential for significant land use impacts if it:

- Includes a use that is not permitted within the city general plan designation for the project site, or
- Has a greater number of stories and/or lesser setback dimensions than could be permitted for a project under the relevant city zoning ordinance as of July 2003.

Continuing Best Practice LU-2-d: Assuming the City adopts the Southside Plan without substantive changes, the University would as a general rule use, as its guide for the location and design of University projects implemented under the 2020 LRDP within the area of the Southside Plan, the design guidelines and standards prescribed in the Southside Plan, which would supersede provisions of the City's prior zoning policy.

LAND USE

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Physically divide an established community?		●

The proposed project site is a University-owned property with frontage on two public streets and University office and student service buildings on its other two boundaries. No new roads or other linear features that would decrease circulation or access for the surrounding neighborhood are proposed. Pedestrian and vehicular access through the site would be maintained. The project would not physically divide an established community and there would be no impact.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Conflict with any 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?	●	

LRDP CONSISTENCY

As discussed above in Section 3.0, Relationship to 2020 LRDP, the project would result in a scale of development below levels anticipated in the 2020 LRDP for the Adjacent Blocks West and for the LRDP area as a whole, but could also be considered generally consistent with the applicable LRDP objectives. Consistency with specific applicable LRDP policies in support of the objectives is discussed below.

Policy: *design future projects to minimize energy and water consumption and wastewater production*
Policy: *Incorporate sustainable design principles into capital investment decisions.*
Policy: *Design new buildings to a standard equivalent to LEED 2.1 certification.*
-Design new laboratory buildings to a standard equivalent to LEED 2.1 certification and LABS 21 environmental performance criteria.
-Design new buildings to outperform the required provisions of Title 24 of the California Energy Code by at least 20 percent.

The new Aquatics Center would employ energy efficiency strategies in all building disciplines in order to achieve the 20% energy use reduction. Due to the size of the project, the Performance method would be used to show compliance with Title 24. This method allows building trade-offs among the different building components similar to the energy modeling required by LEED. The building envelope would have insulation values that exceed the requirements of Table 143-A, Climate Zone 03 of the California Energy Commission's Building Energy Efficiency Standards. The interior and exterior lighting would use light fixtures and lamps designed to provide required light levels but stay under the maximum allowed lighting power densities (LPD) listed in Table 146-F of the Standards. The interior spaces would be served

by high efficient direct-expansion (DX) cooling/heating rooftop systems. The plumbing fixtures would be low-flow fixtures; the overall project target is for a 40% water use reduction.

Policy: *Accommodate new and growing academic programs primarily through more intensive use of University owned land on and adjacent to the Campus Park.*

Although the aquatics program is not an academic program and is not new, the proposed new facility would provide additional space for existing intercollegiate athletics aquatics uses and a modest expansion in community aquatics use. The project would be a more intensive use of a University owned property adjacent to the Campus Park.

Policy: *Prioritize Campus Park space for programs that directly engage students in instruction and research.*
-Prioritize Space on the Adjacent Blocks for other research, cultural and service programs that require campus park proximity.

The team-sports use of the proposed Cal Aquatics Center would be generally in line with "other…cultural and service programs," and would therefore be appropriately sited on the Adjacent Blocks.

Policy: *Preserve and enhance recreational aquatics facilities.*

The proposed new aquatics center would provide additional needed aquatics program space to enhance the overall set of facilities to support Cal aquatics and community programs such as camps. It should be noted that the discussion under this policy in the LRDP (Page 32) also states that "Strawberry Canyon Recreation Area is a precious recreational resource for both campus and community, but the 2002 closure of the east pool has significantly increased the pressure on other campus pools to accommodate both athletics and recreational users. UC Berkeley should prepare and implement a plan to improve the pool complex at Strawberry Canyon as part of a comprehensive strategy for campus aquatics facilities." The proposed new aquatics center, while focused on facilities for intercollegiate athletics and not for recreational use, should nonetheless be considered an additional aspect of a comprehensive strategy for campus aquatics facilities. Please see also the discussion of an alternative involving the Strawberry Canyon Recreation Area in Section 6, Alternatives.

Policy: *Increase the supply of parking to accommodate existing unmet demand and future campus growth.*
Policy: *Replace and consolidate existing University parking displaced by new projects.*

The proposed project would decrease, rather than increase, the supply of parking in the short term. However, these policies recognize that new projects may displace existing parking, and encourage that replacement parking be consolidated. It should be noted that the LRDP (in Chapter 7) specifically identifies surface parking lots as suitable for more intensive development in the Adjacent Blocks. Nevertheless, the university acknowledges the need for and challenge of providing sufficient parking in consolidated locations to serve the university and campus environs; in February 2013, UC Berkeley published a Request for Qualifications for construction of a parking structure at Maxwell Family Field site, east of the Campus Park. The University's Parking and Transportation Department continues to support development of shared parking agreements between the City, the University and private parking providers, looking at opportunities to construct additional parking, and is actively managing the University parking supply to best serve University-generated demand. Please see also the discussion of parking under the Transportation section of this document, below.

Policy: *Evaluate a full range of alternate solutions in capital investment decisions.*

The University considered at least two alternative ways to meet the project objectives: a more intense development scenario for the project site and an offsite alternative (Strawberry Canyon). These are discussed in Section 6, Alternatives.

Policy: *Use municipal plans and policies to inform the design of future capital projects in the City Environs.*
-Use the Southside Plan as a guide to the design of future capital projects in the Southside.
-Prepare project specific design guidelines for each major new project.

Project specific guidelines were developed for the proposed project site. These are discussed above under Aesthetics. Consistency with the Downtown Area Plan and the Southside Plan is discussed below.

CITY OF BERKELEY ZONING ORDINANCE, SOUTHSIDE PLAN AND DOWNTOWN AREA PLAN CONSISTENCY

The only land use regulatory agency with jurisdiction over the proposed Cal Aquatics Center is the University of California. However, as discussed above, the LRDP requires that the University "[u]se the Southside Plan as a guide to the design of future capital projects in the Southside." In addition to this policy, Continuing Best Practice LU-2-c suggests that a significant impact related to land use would occur if a proposed project were not consistent with certain provisions of the City's zoning regulations or a proposed use is not consistent with the City's General Plan. The following discussion addresses consistency with the City's Downtown Area Plan, Southside Plan and zoning ordinance.

Downtown Area Plan. Although the project site is within the area of Southside Plan, the site is also discussed in the City of Berkeley's Downtown Area Plan (DAP). Goal LU-6 encourages University uses in downtown that will benefit the greater downtown area, adjacent to the "outer core" of downtown. Policy LU-6.1 states "To the extent possible, UC buildings should line streets and public open spaces with retail and other public serving uses that encourage activity and meet the needs of Downtown residents, workers and visitors" (DAP p. LU-16-17). Specific discussion of the Tang Center Parking Lot states:

> *The parking lot site adjacent to the Tang Center between Bancroft and Durant is associated with UC planning in the Downtown Area, but is guided by the Southside Plan. Relative to sites located in the Downtown Area, encourage UC to make the Tang Center site a relatively low priority for near-term development. A multicultural center is encouraged on the site, which could bring together Berkeley High School students, UC students and other young adults. Office and storefronts are considered appropriate ground floor uses for the site facing Bancroft. The south side of the site is appropriate for housing at a scale that relates to nearby existing residential uses.*

The proposed project implements a concept that substantively differs from these Downtown Area Plan provisions.

Southside Plan. The project site is within the Southside Plan's Residential Mixed Use (R-SMU) subarea. The plan describes the R-SMU subarea as "the subarea where the greatest diversity of land uses currently exists, including housing, offices, religious facilities, schools, social institutions, parking lots, cultural facilities, a hotel, and several retail uses. This subarea also contains much University property, including a wide range of academic and student serving uses and administrative offices." The plan continues:

The intentions for this subarea include: allowing a wider variety of land uses than is allowed in other subareas in order to maintain the existing diversity of land uses; meeting the future needs of the many different users and property owners in this subarea; and reducing pressure to locate non-residential or non-retail uses in the other four subareas.

A broad variety of land uses are recommended for this subarea, including: housing, University academic facilities and offices, religious facilities, schools, social institutions, parking, cultural facilities, hotel uses, and neighborhood serving retail uses. Mixed-use developments that include housing are a preferred use.

The Residential Mixed Use Subarea contains many of the sites where development is possible: on surface parking lots, as additions to existing buildings, and on sites that contain single-story buildings with no architectural or historic merit.

The proposed project would be generally consistent with the stated intent of the R-SMU Subarea because it would be generally within the broad variety of uses identified and would occur on a surface parking lot, which is an existing land use identified as presenting development opportunities. However, it would not be the "preferred use" of mixed use including housing.

A discussion of the proposed project's consistency with specific applicable policies from the Southside Plan follows. These policies are from the Plan's Land Use, Transportation and Community Character elements.

Southside Plan Policy LU-A2: *Housing and mixed-use projects with housing for students should be the University of California's highest priority for the use of University-owned opportunity sites in the Southside except those with frontage on Bancroft.*

As the project site has frontage on Bancroft Way, it would be excluded from those sites where mixed use development with student housing should be the "highest priority" use. The project would therefore be consistent with this policy.

Southside Plan Policy LU-C1: *Suitable sites that are the highest priority for redevelopment and reuse in the Southside, in order of priority, include:*

…• Surface parking lots and single-level parking garages on Bancroft, Durant, and Telegraph Avenue…

The project site is a surface parking lot; the project would therefore be consistent with this policy.

Southside Plan Policy LU-D1*: Encourage development of infill buildings along the south side of Bancroft Way so that it becomes a more vital corridor serving students and other users of the Southside.*

A. Encourage mixed-use buildings. (See Residential-Mixed Use Subarea and Commercial Subarea policy sections (under Objective LU-F) for recommended zoning changes and preferred land uses.)
B. Encourage pedestrian-oriented uses on ground floor street frontages.
C. Screen parking from view.

The project would not be mixed use, and would thus not meet the intent of this policy. However, the proposed use is not prohibited by the policy; rather, mixed use is "encouraged." Thus, although the project does not meet the intent, it is not in full conflict. This, combined with the broad range of allowed

land uses in the subarea, indicates that the City's policy is not that all lots with development/infill potential in the R-SMU Subarea must be developed with mixed use projects.

Although the ground floor would not be a pedestrian-oriented use per se, it would be actively used by student athletes and accessed primarily by pedestrians and cyclists, replacing the surface parking lot. The parking that would be retained on site would be a long, narrow lot oriented perpendicular to the street frontages, minimizing its visibility from the street, and planters are proposed on either side of the driveway flares to screen views of cars.

> ***Southside Plan Policy LU-D3:*** *Improve the pedestrian environment along Bancroft Way with better bus stops, wider sidewalks wherever possible, sidewalk lighting, additional street trees, and other streetscape amenities.*

Although the project would not add amenities listed in the policy that are lacking along this segment of Bancroft Way such as wider sidewalks and bus stops, at Bancroft Way it would include replacement of site-edge trees with street trees at the outer edge of the proposed new sidewalk, which is more consistent with the City's preferred streetscape/sidewalk design patterns. Sidewalk lighting would be improved due to the glow of the building façade's glass and from entryway lighting, which would replace light from the existing tall parking lot light standards on the site interior.

> ***Southside Plan Policy LU-D4****: Make the entries to all public buildings and public parking along Bancroft Way more visible from the street.*

The entry to the proposed aquatics center would open onto and be accessed directly from Bancroft Way.

> ***Southside Plan Policy LU-E3:*** *The specific location of land uses and the design of new buildings in each subarea should reinforce the pedestrian, bicycle, and transit orientation of the Southside.*

The new Aquatics Center would be primarily a student-serving use adjacent to the campus park. It would be accessed primarily by students walking or bicycling to the site, and would be well-served by existing transit routes on Bancroft Way, Durant Avenue and other surrounding streets.

> ***Southside Plan Policy LU-F8:*** *Allow in the Residential Mixed Use Subarea a variety of different land uses including housing; university facilities, offices, and student support services; religious, social and cultural institutions with associated offices, facilities, and ancillary uses; educational uses; recreation facilities; hotels; appropriate neighborhood-serving retail uses; and parking garages. Mixed-use developments that include housing are the preferred use.*

The proposed new Aquatics Center would be a "university facility" and thus would be consistent with this policy. However, as noted above, the project would not be a mixed use development including housing and so would not be the "preferred use."

> ***Southside Plan Policy LU-F9:*** *Encourage new infill development in the Residential Mixed Use Subarea.*

The new Aquatics Center would be new infill development in the Residential Mixed Use Subarea. However, as noted above, the project would not be a mixed use development including housing and so would not be the "preferred use" for infill development.

Southside Plan Policy LU-F10: *Encourage mixed-use buildings in the Residential Mixed Use Subarea that combine two or more of the allowed land uses.*

Ss noted above, the project would not be a mixed use development so would not further this policy. However, it would not fully conflict with the policy either; the policy merely encourages such development. This, combined with the broad range of allowed land uses, indicates that the City's policy is not that all lots with development/infill potential in the R-SMU Subarea must be developed with mixed use projects.

Southside Plan Policy LU-F11: *Encourage infill buildings on surface parking lots in the Residential Mixed Use Subarea.*

A. New or replacement parking should be placed inside or underneath new buildings, or in consolidated parking garages, and serve multiple users whenever possible.
B. Prohibit new public surface parking lots or expansion of existing public surface parking lots.

The proposed Cal Aquatics Center would be infill development on a surface parking lot. As discussed below under Transportation, those displaced drivers that would continue to drive to and from campus rather than taking advantage of public transit or other modes of travel would be expected to park in other consolidated campus parking lots or private lots in the area. The policy encourages new or replacement parking to be inside or underneath new buildings, when proposed. The project does not include new or replacement parking.

Southside Plan Policy LU-F13: *Utilize the Southside Design Guidelines to ensure that the design of new buildings is compatible with existing buildings in the Residential Mixed Use Subarea and will not detract from the significance of nearby landmark and historically significant buildings and sites.*

A. Require review under the Design Review Ordinance for new construction of, and exterior alteration to, Commercial, Community and Institutional and Mixed Use buildings built in this subarea...

Although the City of Berkeley's Design Review Ordinance is not applicable to university projects on UC-owned property, the project was brought to the City's Design Review Committee at its February 21, 2013 meeting for review and comment. As detailed in Aesthetics, above, the committee was supportive of the project.

Southside Plan Policy T-C6: *Encourage preservation of existing north-south midblock pedestrian passageways, such as passageways between Bancroft and Channing, west of Telegraph. Encourage developers to consider creation of new safe and inviting midblock pedestrian passageways where appropriate and complementary with the goals of new development. Address street crossing safety concerns where pedestrian passageways are located or under consideration.*

The existing Durant Avenue-Bancroft Way mid-block pedestrian passageway would be retained and enhanced with new landscaping and security lighting. As discussed below under Transportation, students would often cross Bancroft Way on foot to access the new facility. High-visibility crosswalks with in-pavement flashing lights are currently provided across Bancroft Way at the intersections with Ellsworth Street and Dana Street. The pedestrians walking between Spieker Pool and the proposed Aquatics Center would be expected to utilize these high-visibility crosswalks. Bancroft Way provides sidewalk widths that range between 6 and 9 feet, and crosswalks that are at least 7 feet wide. Existing and

proposed pedestrian facilities within the vicinity of the Project site are expected to be adequate for pedestrians traveling to and from the proposed Aquatics Center.

Southside Plan Policy T-D3: *Implement streetscape improvements to calm traffic and facilitate pedestrian crossing.*

A. *Consider bulb-outs at intersections*
B. *Add a series of stop signs and traffic signals at key intersections throughout the neighborhood, including:*
    - *A traffic signal at Dana Street and Bancroft Way to slow traffic and facilitate pedestrian crossing.*
    - *A stop sign at Ellsworth Street and Bancroft Way.*
D. *New traffic signals should be all-way stop signals that allow pedestrians to cross in any direction without contending with automobiles making turns.*
E. *New signals should be accessible pedestrian signals.*

Southside Plan Policy T-E1: *Develop shared parking agreements between the City, the University and private parking providers to efficiently share and better utilize existing Southside parking, particularly short-term customer parking. Encourage UC to allow visitors using disabled placards and plates to have access to existing parking at different locations on campus to allow equal access to campus amenities.*

Southside Plan Policy T-E5: *Strongly encourage sponsors and organizers of sports events at Memorial Stadium, Haas Pavilion, and Edwards Field, performances at Zellerbach, and special events on Telegraph and elsewhere in the Southside to promote and encourage use of transit by people attending events. All advertising for sports events and other events should include transit information. Advertising should also include information regarding traffic congestions and parking problems in the Southside and surrounding neighborhoods. Encourage advertising at BART stations and on AC Transit buses.*

The proposed project would be consistent with these Southside Area Plan policies, and no additional improvements as envisioned in the policies are indicated by the project impact analysis provided above. Specifically, with regard to Policy T-D3, the project would not generate enough new vehicle traffic nor sufficient additional pedestrian or bicycle demand to warrant a traffic signal at Bancroft Way/Dana Street nor a stop sign at Bancroft Way/Ellsworth Street. With regard to Policy T-E1, the University's Parking and Transportation Department continues to support development of shared parking agreements between the City, the University and private parking providers, and is actively managing the University parking supply to best serve University-generated demand. Finally, with regard to Policy T-E5, the University Parking and Transportation Department works with the Athletics Department to ensure that transit and other alternative travel mode options are communicated to spectators for all major athletics events.

Southside Plan Policy CC-C1: *Require Design Review of commercial, mixed use, and community and institutional buildings in the Residential Mixed Use subarea to ensure that these structures are compatible with, and help to improve and repair, the architectural character of this subarea.*

The project has been reviewed by both UC Berkeley's and the City of Berkeley's design review committees. The design of the project was strongly endorsed by the City's design review committee at their meeting of February 21, 2013; in September 2012 the UC Berkeley design review committee expressed concern that the project underutilizes land close to campus, and asked designers to maximize openness of the facility along Bancroft for visual permeability to support an active street front. The current design responds in part to the latter concern.

Zoning Ordinance. As discussed above, a significant impact related to land use could result if the proposed project includes a greater number of stories and/or lesser setback dimensions than could be permitted for a project under the City's zoning ordinance. The project site is zoned by the City of Berkeley as Residential Mixed Use Subarea. Pursuant to Berkeley Municipal Code Section 23D.52.070, Development Standards, setbacks of zero may be permitted for projects located north of Durant Avenue. The maximum building height in the Residential Mixed Use Subarea is 60 feet, while the proposed project's buildings would be a maximum of 22 feet and the proposed dive tower would be 46 feet in height. Therefore the provisions of Continuing Best Practice LU-2-c would be met and impacts would be less than significant.

The Project includes a minor amendment to the 2020 Long Range Development Plan to acknowledge that site development does not meet the intent of the Southside Plan for infill development nor the intention of the LRDP for intensity of uses on land near campus. The amendment addresses the fact that the proposed Cal Aquatics Center conflicts with the existing applicable land use plan, and was not envisioned in the 2020 LRDP and 2020 LRDP EIR. Therefore, the amendment results in a significant and unavoidable land use impact not foreseen in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Conflict with any applicable habitat conservation plan or natural community conservation plan?		●

The Project is not located within any area designated for an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan.

SUMMARY OF LAND USE ANALYSIS

The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP, incorporating existing best practices and 2020 LRDP EIR mitigation measures, would not result in new significant land use impacts (2020 LRDP EIR Vol 1, 4.8-15 to 4.8-21). Since certification of the 2020 LRDP FEIR, there have been no substantial changes to the 2020 LRDP or to the circumstances surrounding 2020 LRDP development with respect to land use that were not adequately analyzed and, as necessary, mitigated. The project is consistent with the LRDP Location Guidelines, which prioritize locations in the Adjacent Blocks for "[f]itness, recreation, [and] intercollegiate athletics" (LRDP Table 4). The project would not further the City of Berkeley Southside Plan's goal of developing dense and street-level active/pedestrian serving mixed use projects on the Southside in the R-SMU Subarea. However, it would be generally consistent with the Southside Plan's allowed uses for the subarea. The Project includes a minor amendment to the 2020 Long Range Development Plan to acknowledge that site development does not meet the intent of the Southside Plan for infill development nor the intention of the LRDP for intensity of uses on land near campus. Without amendment of the 2020 Long Range Development Plan, inconsistency of the Project with the 2020 LRDP land use provisions would be a significant impact of the Project; with the minor text amendment recognizing that the Cal Aquatics Center is an exception to the land use provisions of the 2020 LRDP, the Project would not result in significant impacts related to land use. The minor text changes to the LRDP are outside the scope of the LRDP EIR land use analysis, however; the significant unavoidable land use impact is analyzed above.

NOISE

SETTING

The noise setting of the campus is described in the 2020 LRDP EIR (Section 4.9). The following text summarizes context information for noise relevant to the Cal Aquatics Center project. This is in part based on information contained with the 2020 LRDP EIR as well as the *Cal Aquatics Facility Berkeley, CA, Noise and Vibration Assessment* (February 2013) included in Appendix D.

The noise environment on the UC Berkeley campus and the surrounding city environs results primarily from vehicular traffic on the street network. Intermittent noise resulting from jet aircraft overflights contributes to the noise environment to a lesser extent. In the Campus Park, sounds generated by people including conversations, musical instruments, and personal transportation devices such as skateboards and bicycles, are heard where people congregate and circulate. Away from these areas, the natural sounds of water moving in the streams, wind in the trees, birds, and Sather Tower (The Campanile) chimes are heard.

Noise levels on the Campus Park are highest at its edges, where it adjoins Hearst Avenue, Oxford Street, Bancroft Way, and Gayley Road. Previous measurements indicate average noise levels of 64 to 71 dBA L_{eq} along these heavily-traveled streets, including a measurement of 68 dBA Leq at the intersection of Bancroft Way and Fulton Street, 150 feet west of the project site (2020 LRDP EIR Vol 1, Table 4.9-3, page 4.9-10).

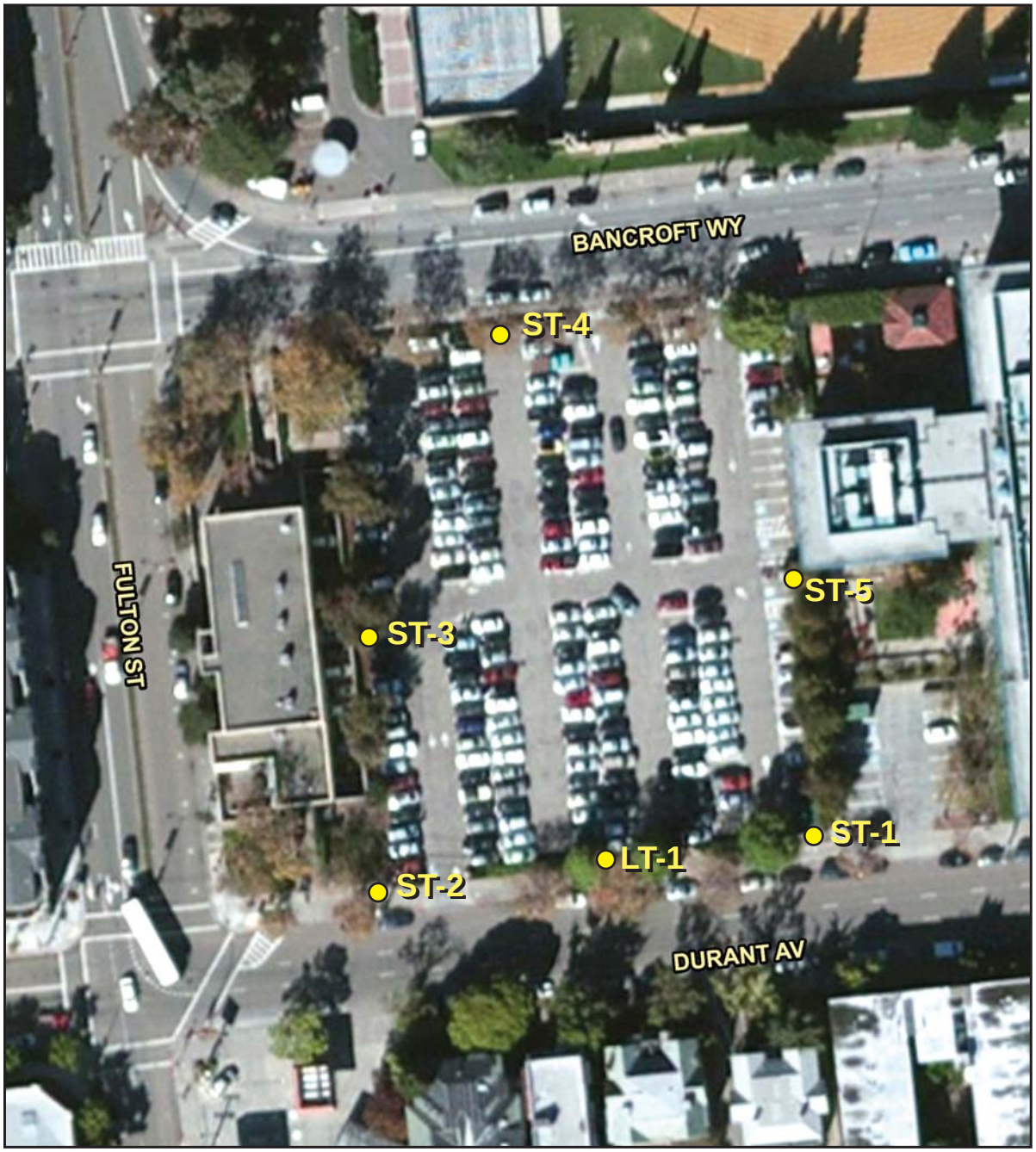
There are no residential receptors adjoining the north, east, or west project boundaries. The site is bordered by Edwards Field and Bancroft Way on the north, the Tang Medical Center on the east, and an office building on the west. Vehicular traffic is the only significant source of noise affecting the project site and surrounding areas.

Existing ambient noise levels were measured in the vicinity of the Project site in February 2013. A measurement over a 48-hour period was made along Durant Avenue at the project site in order to characterize the noise environment at residences located across the street from the site. Short-term noise levels were measured at the site's north, east, and west boundaries to complete the survey. The measurement locations are shown on Figure 11. For further details see Appendix D.

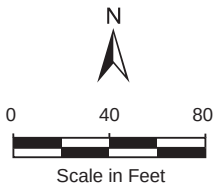
Noise levels at residences located along Durant Avenue result from vehicular traffic on the roadway. The day/night average sound level (Ldn) was 68 dBA Ldn on each of the two days of measurements. Hourly average noise levels during the daytime typically ranged from about 63 dBA Leq to 71 dBA Leq. Hourly average noise levels at night typically ranged from about 51 dBA Leq during the middle of the night to about 63 dBA Leq during the hour between 6:00 AM and 7:00 AM. Maximum noise levels resulting from louder vehicles on the roadway typically range between 80 and 90 dBA with occasional excursions above 90 dBA. Maximum noise levels in this range occurred regularly between about 4:00 AM and 11:00 PM.

In addition, short-term spot measurements were made on Monday, February 4, 2013 and Thursday, February 7, 2013 at five locations around the project perimeter to characterize variations in the noise environment and complete quantification of noise levels in the area. The results of the noise measurements are summarized in Table 11 below.

Measurement Locations ST-1 and ST-2 adjoin Durant Avenue. Maximum sound levels resulted from louder vehicles on the roadway, including trucks, buses, and motorcycles. During the morning measurements, there was a heavy volume of traffic that elevated background noise levels and average



Source: Illingworth & Redkin, 2013, Imagery provided by ESRI and its licensors © 2013.



Noise Monitoring Locations

Figure 11

noise levels as compared to the afternoon measurement. Noise levels were similar to the Durant Avenue exposure along the Bancroft Way exposure of the site characterized by location ST-4. Noise levels were lower at the interior measurements along the western and eastern site boundaries (ST-3 and ST-5) given that they are located further from the roadways and the adjacent land uses are not significant noise generators.

Table 11:
Short-Term (10-Minute) Noise Measurement Results (DBA)

Location	Day/Time	Lmax	L1	L10	L50	L90	Lmin	Leq
ST-1 (SE corner of site ~ 35' from Durant centerline)	2-4-13/3:30pm	79	75	68	60	51	47	64
	2-7-13/8:00am	75	73	69	63	58	55	65
ST-2 (SW corner of site ~ 35' from Durant centerline)	2-4-13/4:01pm	76	68	60	59	58	58	60
	2-7-13/8:10am	74	72	66	61	56	53	63
ST-3 (west site boundary between Bancroft & Durant)	2-4-13/4:12pm	74	61	56	52	48	45	54
	2-7-13/8:21am	72	68	61	57	54	53	59
ST-4 (Site frontage along Bancroft ~ 40' from centerline)	2-4-13/4:23pm	75	77	67	61	56	52	64
	2-7-13/12:10pm	72	69	64	60	55	49	61
ST-5 (east site boundary between Bancroft & Broadway)	2-4-13/4:35pm	65	62	58	54	52	49	55
	2-7-13/12:21pm	71	67	59	55	52	50	57

Source: Illingworth & Rodkin, Inc, February 2013 (Appendix D)

2020 LRDP & 2020 LRDP EIR

While the 2020 LRDP does not contain any policies that specifically address noise, several Objectives bear directly or indirectly on the noise environment, most importantly:

- **Maintain and enhance the image and experience of the campus, and preserve our historic legacy of landscape and architecture.**
- **Plan every new project to respect and enhance the character, livability, and cultural vitality of our city environs.**

Specific policies relevant to reducing noise impacts on and around the campus include: locating all new university housing within a mile or 20 minutes of campus by transit; reducing demand for parking through incentives for alternate travel modes; collaborating with cities and transit providers to improve service to campus; and minimizing private vehicle traffic in the Campus Park.

Noise impacts resulting from development and operation of the 2020 LRDP were assessed in the 2020 LRDP EIR using several methods. Analyses were conducted using baseline noise levels quantified using noise measurements conducted in March-April, 2001 and February-March, 2003.

Increases in traffic noise levels in the area were calculated based on traffic data generated for the 2020 LRDP. The compatibility of proposed developments was assessed in accordance with State guidelines developed by the Office of Noise Control and discussed in the Regulatory Framework Section (2020 LRDP EIR Vol 1, Section 4.9.2, page 4.9-5). Noise and vibration impacts resulting from construction activities were calculated based on generic construction noise and vibration levels and assessed with respect to existing ambient levels, limits proposed in local ordinances, and other thresholds to protect against vibration effects.

The campus office of EH&S works with construction project teams to implement noise reduction measures and performs noise monitoring at any specific site, upon the request of the campus community.

MITIGATION MEASURES & CONTINUING BEST PRACTICES

Design and construction of the Cal Aquatics Center project would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon the noise environment. Where applicable, the proposed Project would incorporate the following mitigation measures and/or continuing best practices:

Continuing Best Practice NOI-2: Mechanical equipment selection and building design shielding would be used, as appropriate, so that noise levels from future building operations would not exceed the City of Berkeley Noise Ordinance limits for commercial areas or residential zones as measured on any commercial or residential property in the area surrounding a project proposed to implement the 2020 LRDP. Controls that would typically be incorporated to attain this outcome include selection of quiet equipment, sound attenuators on fans, sound attenuator packages for cooling towers and emergency generators, acoustical screen walls, and equipment enclosures.

Continuing Best Practice NOI-4-a: The following measures would be included in all construction projects:

- Construction activities will be limited to a schedule that minimizes disruption to uses surrounding the project site as much as possible. Construction outside the Campus Park area will be scheduled within the allowable construction hours designated in the noise ordinance of the local jurisdiction to the full feasible extent, and exceptions will be avoided except where necessary.
- As feasible, construction equipment will be required to be muffled or controlled.
- The intensity of potential noise sources will be reduced where feasible by selection of quieter equipment (e.g. gas or electric equipment instead of diesel powered, low noise air compressors).
- Functions such as concrete mixing and equipment repair will be performed off-site whenever possible.

For projects requiring pile driving:

- With approval of the project structural engineer, pile holes will be pre-drilled to minimize the number of impacts necessary to seat the pile.
- Pile driving will be scheduled to have the least impact on nearby sensitive receptors.
- Pile drivers with the best available noise control technology will be used. For example, pile driving noise control may be achieved by shrouding the pile hammer point of impact, by placing resilient padding directly on top of the pile cap, and/or by reducing exhaust noise with a sound-absorbing muffler.
- Alternatives to impact hammers, such as oscillating or rotating pile installation systems, will be used where possible.

Continuing Best Practice NOI-4-b: UC Berkeley would continue to precede all new construction projects with community outreach and notification, with the purpose of ensuring that the mutual needs of the particular construction project and of those impacted by construction noise are met, to the extent feasible.

LRDP Mitigation Measure NOI-4: UC Berkeley will develop a comprehensive construction noise control specification to implement additional noise controls, such as noise attenuation barriers, siting of construction laydown and vehicle staging areas, and the measures outlined in Continuing Best Practice NOI-4-a as appropriate to specific projects. The specification will include such information as general provisions, definitions, submittal requirements, construction limitations, requirements for

noise and vibration monitoring and control plans, noise control materials and methods. This documentation will be modified as appropriate for a particular construction project and included within the construction specification.

LRDP Mitigation Measure NOI-5: The following measures will be implemented to mitigate construction vibration:

- UC Berkeley will conduct a pre-construction survey prior to the start of pile driving. The survey will address susceptibility ratings of structures, proximity of sensitive receivers and equipment/ operations, and surrounding soil conditions. This survey will document existing conditions as a baseline for determining changes subsequent to pile driving.
- UC Berkeley will establish a vibration checklist for determining whether or not vibration is an issue for a particular project.
- Prior to conducting vibration-causing construction, UC Berkeley will evaluate whether alternative methods are available, such as:
  - Using an alternative to impact pile driving such as vibratory pile drivers or oscillating or rotating pile installation methods.
  - Jetting or partial jetting of piles into place using a water injection at the tip of the pile.
- If vibration monitoring is deemed necessary, the number, type, and location of vibration sensors would be determined by UC Berkeley.

NOISE

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, without mitigation?	●	

The Cal Aquatics Center would consist of three single-level buildings surrounding a 52-meter swimming pool with a dive tower. The dive tower would include platform diving and board diving. The buildings would be located along Bancroft Way and the west edge of the project site. The facility would be enclosed with a minimum 8-foot high metal fence. Planted vines would be used to grow up the fence to create a visual barrier. The facility would be used primarily for training Monday through Saturday between 7:00 AM and 6:30 PM, but may be used for lap swimming as early as 6:00 AM. Before 7:00 AM, whistling would be minimized and no music would be played on the PA system. During other times, operators would ensure that volume on the PA system is set so as to be inaudible at residences on Durant Avenue. In the rare instances where event seating is required, the deck areas will accommodate temporary bleachers for up to 500 spectators. Events may extend into the evening, so the project includes event lighting.

A noise survey was conducted at Spieker Pool on Bancroft Way on February 7, 2013 to establish noise levels resulting from activities anticipated at the new Cal Aquatics Center. During the morning, activities included lap swimming, water polo practice, diving practice, and a dual swim meet. Noise levels were monitored on the elevated deck overlooking the pool at various locations necessary to characterize noise from the individual activities. Reference noise levels were measured at Spieker Pool at shown in Table 12.

Table 12:
Noise levels as Measured at Spieker Pool

Noise Sources	Noise levels (approximately 100 feet from source)	
	L_{eq}	L_{max}
Women's Water Polo Practice (splash, voice, whistle)	68	74 – 80
Swim Practice (splash)	63	67 – 68
Diving Practice (board bounce, splash, voice)	65	75 – 78
Swim Meet (PA, splash, voice, air horns)	77	84 – 87

Measured noise levels were used to model noise levels that would occur as a result of typical activities at the new Cal Aquatics Center. The results of the modeling at the most affected receptors along Durant Avenue are shown in Table 13 below. See Appendix D for more information on the model used and outputs produced.

Table 13:
Potential Project Noise Sources and Levels

Noise Sources	Noise levels (dBA) at Durant Ave Residences	
	L_{eq}	L_{max}
Women's Water Polo Practice (splash, voice, whistle)	63	69-75
Swim Practice (splash)	56	60-61
Diving Practice (board bounce, splash, voice)	65	75 – 78

The project would cause a significant impact if typical daily activities exceed the noise limits established in the Berkeley Noise Ordinance or cause a substantial increase in noise at sensitive receptors. The Berkeley Noise Ordinance establishes exterior noise limits, but in locations where the measured ambient noise level is greater than the limits established in the ordinance, the exterior noise limit is raised to the ambient noise level. The ambient noise level along Durant Avenue in the vicinity of the project site exceeds the referenced noise limits, so the ambient level becomes the significance threshold. Two noise metrics, the hourly average noise level (Leq) and the instantaneous maximum level (Lmax), are used to establish the ambient and assess the impacts from the project. The ambient daytime average noise level is 67 dBA Leq and maximum noise levels throughout the daytime when the pool may be used typically range from 75 to 85 dBA Lmax. Noise levels from typical daily activities at the pool, shown in the preceding table, would not exceed the significance thresholds. Although practice would start as early as 6:00 AM on some days, the PA system would not be used for music during these times and whistling would be minimized. During the rare time when the pool would include a special event noise levels would be up to 72 dBA Leq, exceeding the ambient noise levels by up to 5 dBA, and be somewhat intrusive at the nearest residences located directly across Durant Avenue from the site. However, special events at this pool are expected to be rare, occurring no more than four times per year: the competition venue on the main campus, Spieker Pool, would remain the primary special event location for aquatics. Also, special events would be limited to the daytime and evening. Given that there would be no more than four events per year, and the activity would not occur during the nighttime, impacts from operations of the pool, including the infrequent special events, would be less than significant.

The primary noise source associated with a special event would be the PA system. The PA system measured at Spieker Pool resulted in maximum noise levels at 84 to 87 dBA measured 100 feet from the loudspeakers during the swim meet. The second most significant noise source during a swim meet with 500 spectators would be the cheering. During water polo events use of air horns would also occur. Although these activities would occur no more than four times per year, and associated impacts would therefore be less than significant, there are measures that could be incorporated into the project to reduce the intrusiveness of the noise during these events. The PA system could be designed to reduce

unintended spillage of sound to areas outside the pool area by orienting the speakers in the northerly direction away from the residences and carefully controlling the amplitude of the PA system so as to provide adequate acoustical coverage of the seating area, but not at unnecessarily elevated levels. A second measure would be to construct the 8-foot fence proposed along the south side of the facility out of a solid material so it could serve as a noise barrier fence. To be effective as a noise barrier, the fence would need to be solid over its face and sealed at the base, and have a minimum surface weight of 2- to 3 lbs/ft^2. Materials could be visually opaque or transparent. The incorporation of these measures into the project design would further reduce the already less than significant impacts from sound on those rare occurrences when the facility is used for special events.

In addition, heating, ventilating, and air-conditioning equipment associated with new buildings may generate noise heard near the buildings. The noise could affect sensitive areas on the Campus Park, or other University properties, or on adjacent non-university properties. As prescribed in the 2020 LRDP EIR, mechanical equipment selection and shielding would be utilized to ensure noise levels from future Project operations do not cause City of Berkeley Noise Ordinance limits to be violated within the Project vicinity. Measures to be incorporated to achieve this requirement include selection of quiet equipment, sound attenuators on equipment, and architectural enclosure of roof top equipment (Best Practice NOI-2). Pursuant to the 2020 LRDP EIR, Continuing Best Practice NOI-2 would mitigate this to a less than significant impact.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Result in a substantial permanent increase in ambient noise levels in the project vicinity, without appropriate mitigation?	●	

Substantial permanent increases in ambient noise levels from mechanical equipment and building design, and increased vehicular traffic in the project vicinity, were reviewed and addressed within the 2020 LRDP EIR. As discussed under Noise Item 1 above, mechanical equipment selection and shielding would be utilized to ensure noise levels from future Project operations do not cause City of Berkeley Noise Ordinance limits to be violated within the Project vicinity. Measures to be incorporated to achieve this requirement include selection of quiet equipment, sound attenuators on equipment, and architectural enclosure of roof top equipment (Best Practice NOI-2).

The significance of noise impacts resulting from increased vehicular traffic was analyzed in the 2020 LRDP EIR. A substantial permanent increase in noise would occur if traffic noise levels are projected to increase by greater than 3 dBA Ldn along roadway segments with adjoining noise sensitive land uses. The increase in vehicular traffic noise was calculated by comparing traffic resulting from the implementation of the 2020 LRDP to existing traffic volumes along the roadway segments at the 74 intersections analyzed in the 2020 LRDP EIR. The predicted increase in vehicular traffic noise is 0 to 1 dB Ldn throughout the street network. Such an increase is imperceptible and would result in a less than significant impact.

(See also Noise item 1.)

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity, without appropriate mitigation?	●	

For a discussion of special event noise, please see items 1 and 2, above. Noise resulting from demolition and construction activities would, in some instances, cause a substantial temporary or periodic increase in noise levels, in excess of local standards prescribed in Section 13.40.070 of the City of Berkeley Noise Ordinance at affected residential or commercial property lines.

The 2020 LRDP Draft EIR recognized that construction and demolition activities would occur within the 2020 LRDP in proximity to residential and commercial land uses. Construction activities planned at the Cal Aquatics Facility, because of their location at the edge of the campus area, would intermittently result in noise levels exceeding limits set forth in the Berkeley Noise Ordinance. Noise levels would intermittently and periodically substantially exceed existing ambient noise levels at the receiving properties. Implementation of Continuing Best Practices NOI-4-a, NOI-4-b, and LRDP Mitigation Measure NOI-4 would control construction-related noise to the extent that is reasonable and feasible. The schedule for construction and demolition activities generating noise in the community would, to the extent possible, reflect the Berkeley Noise Ordinance provisions. Truck traffic is assumed to use major roadways. The siting of staging and laydown areas would consider minimizing noise as stipulated in Continuing Best Practice NOI-4-b. Even after implementation of these continuing best practices and mitigation measures, the noise impact from construction would be significant and unavoidable (2020 LRDP EIR Vol 1, 4.9-16 to 4.9-25). The Project would not introduce any new potential impacts not already assessed in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
4. Expose people to or generate excessive ground-borne vibration or ground-borne noise levels, without mitigation?		●

Construction activities could expose nearby receptors to ground borne vibrations or ground borne noise levels, including from the drilled piers for the dive tower.

Construction activities can cause vibration that varies in intensity, depending on several factors. Of all construction activities, use of pile driving equipment typically generates the highest ground-borne vibration level, followed by vibratory compaction equipment. The current plan for construction of the Cal Aquatics Facility does not envision the use of pile drivers. If piles are required for the dive tower, they would be drilled piles, which do not generate higher noise levels than the standard construction equipment that would be used for overall site preparation and construction. Small impact equipment such as pavement breakers or jackhammers to remove the existing paving, and vibratory soil compactors could be required. This equipment would not generate excessive vibration that could damage structures. Vibration could be perceptible inside adjacent and nearby buildings.

The Project would not introduce any new potential impacts not already assessed in the 2020 LRDP EIR. Applicable portions of LRDP Mitigation Measure NOI–5 would reduce potential impacts to a less than significant level.

SUMMARY OF NOISE ANALYSIS

The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP, even with incorporation of existing best practices and 2020 LRDP EIR mitigation measures, could result in significant noise impacts resulting from demolition and construction activities (2020 LRDP EIR Vol 1, 4.9-16 to 4.9-25). The proposed Project may incrementally contribute to significant environmental impacts previously identified in the 2020 LRDP EIR, but will not result in those impacts being more severe than as described in the 2020 LRDP EIR, SCH #2003082131. Analysis of noise impacts associated with typical daily activities indicates that these would not exceed the noise limits established in the Berkeley Noise Ordinance or cause a substantial increase in noise at sensitive receptors and therefore impacts would be less than significant. No additional mitigation measures have been identified that would further lessen previously identified impacts.

POPULATION

SETTING

The population setting of the campus is described in the 2020 LRDP EIR (Section 4.10). The 2020 LRDP describes campus population growth in terms of campus headcount. Campus headcount is the number of individuals enrolled or employed at UC Berkeley, plus an estimate of average daily visitors and vendors. Students make up the largest percentage of campus headcount, followed by nonacademic staff, academic staff, and faculty; the academic staff category includes postdoctoral fellows and visiting scholars. The staff figures are adjusted to exclude student workers to avoid double-counting. Under the 2020 LRDP, regular term campus headcount is projected to increase by up to 12 percent over what it was in 2001-2002, compared to a projected increase of 6 percent in the city of Berkeley population, and 20 percent in the regional population, during the period 2000-2020. The project site is a surface parking lot and no housing is present.

2020 LRDP & 2020 LRDP EIR

The 2020 LRDP would influence population and housing by guiding the location, scale, form and design of new University projects. The 2020 LRDP includes a number of policies and procedures for individual project review to support the Objectives of the 2020 LRDP. 2020 LRDP Objectives particularly relevant to population and housing include:

- **Provide the housing, access, and services we require to support a vital intellectual community and promote full engagement in campus life.**
- **Stabilize enrollment at a level commensurate with our academic standards and our land and capital resources.**
- **Plan every new project to respect and enhance the character, livability, and cultural vitality of our city environs.**

The proposed project does not include the construction of housing nor would housing be removed or otherwise affected as a result of the proposed project. Thus, there are no continuing best practices within the 2020 LRDP EIR that are applicable to the proposed project.

POPULATION

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?		●

The 2020 LRDP EIR determined population growth associated with increased enrollment and employment at UC Berkeley under the 2020 LRDP program would be accommodated in the Bay Region without significant adverse impacts (2020 LRDP EIR, section 4.10). The proposed Project would provide recreational opportunities for existing and future students, faculty and staff. The project would not cause a growth in campus headcount. The project would not introduce new impacts not already assessed in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere?		●

The proposed Project would not displace any housing; thus, the construction of housing elsewhere would not be required. The project would not introduce different or greater impacts than were assessed in the 2020 LRDP EIR.

SUMMARY OF POPULATION ANALYSIS

The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP, incorporating existing best practices and 2020 LRDP EIR mitigation measures, would not result in new significant impacts related to population and housing (2020 LRDP EIR Vol 1 p. 4.10-10 to 4.10-19). Since certification of the 2020 LRDP FEIR, there have been no substantial changes to the 2020 LRDP or to the circumstances surrounding 2020 LRDP development with respect to population and housing that were not adequately analyzed and, as necessary, mitigated. No new information is available. As discussed in the analysis above, the Project would not result in significant impacts related to population and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis.

PUBLIC SERVICES

SETTING

The public services setting of the campus is described in the 2020 LRDP EIR (Section 4.11). The following text summarizes context information for public services relevant to the Cal Aquatics Center project.

Police services in the Adjacent Blocks area are shared by the University of California Police Department (UCPD) and the City of Berkeley Police Department (BPD). UCPD and BPD partner to ensure appropriate service levels in areas proximate to the campus and coordinate at many levels. The plan check and design review process would continue to minimize police service impacts of development under the 2020 LRDP. Through this process, the UCPD completes a plan review of all proposed University buildings to maximize public safety features in and around proposed buildings

The Berkeley Fire Department (BFD) provides fire protection and emergency medical services to the Adjacent Blocks. Primary response to the campus area from BFD comes from Station Number 2 at 2129 Berkeley Way. Stations 3 and 5 at 2710 Russell Street and 2680 Shattuck Avenue, respectively, offer supplemental support. The BFD provides 24 hour response for emergencies, including fire suppression, medical emergencies, hazardous materials events, and other life threatening situations. The BFD also supports these efforts with fire prevention, disaster preparedness, and public education programs, as well as training for all BFD staff.

UC Berkeley directly employs a campus fire marshal and deputy fire marshals who are responsible for fire prevention activities, including fire and life safety inspections of campus buildings for code compliance, fire and evacuation drills, and development of self-help educational materials for use by residence halls and campus departments.[13]

The UC Berkeley Environmental Health and Safety Department Emergency Response Team (ERT), staffed by health and safety professionals and hazardous materials technicians, responds to most hazardous materials incidents reported on campus. Response times vary depending on the nature of the incident and nature and time of the spill and can be up to one hour during off hours. In the infrequent cases when outside assistance is required, the ERT may request assistance from other nearby agencies, including the BFD and Alameda County Fire Department, or from emergency response contractors.[14]

The Office of Emergency Preparedness supports the Berkeley campus community by implementing programs in emergency planning, to build, sustain, and improve the capacity of the University to mitigate against, prepare for, respond to, and recover from emergency disasters.[15]

MITIGATION MEASURES & CONTINUING BEST PRACTICES

Design and construction of the Cal Aquatics Center project would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon public services. Where applicable, the Project would incorporate the following mitigation measures and/or continuing best practices:

Continuing Best Practice PUB-1.1: UCPD would continue its partnership with the City of Berkeley police department to review service levels in the City Environs.

Continuing Best Practice PUB-2.1-b: UC Berkeley would continue on-going implementation of the Hill Area Fuel Management Program.

Continuing Best Practice PUB-2.3: UC Berkeley would continue its partnership with LBNL, ACFD, and the City of Berkeley to ensure adequate fire and emergency service levels to the campus and UC facilities. This partnership shall include consultation on the adequacy of emergency access routes to all new University buildings.

LRDP Mitigation Measure PUB-2.4-a: In order to ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, campus project management staff would consult with the UCPD, campus EH&S, the BFD and ACFD to evaluate alternative travel routes and temporary lane or roadway closures prior to the start of construction activity. UC Berkeley will ensure the selected alternative travel routes are not impeded by UC Berkeley activities.

LRDP Mitigation Measure PUB-2.4-b: To the extent feasible, the University would maintain at least one unobstructed lane in both directions on campus roadways at all times, including during construction. At any time only a single lane is available due to construction-related road closures, the University 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 the complete closure of a roadway, UC Berkeley would provide signage indicating alternative routes. In the case of Centennial Drive, any complete road closure would be limited to brief interruptions of traffic required by construction operations.

PUBLIC SERVICES

POLICE PROTECTION

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Result in the need for new or physically altered police facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, service times, or other performance objectives for police protection?		●

Police protection services for the Berkeley campus and Adjacent Blocks area are provided by the University of California Police Department and the City of Berkeley Police Department. The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP could increase the demand for police services, but are not anticipated to result in construction of new or altered facilities. As shown in Figures 3.1-2 and 3.1-3B of the 2020 LRDP EIR, the project site was identified for infill development in the 2020 LRDP and its contribution to the cumulative need for police facilities was assessed in the 2020 LRDP EIR. Though no specific details as to the use to be developed at the site was provided in the previous documentation, an enclosed sports facility, primarily for use by athletes, would not be expected to generate substantially more police calls than average for other uses that could be accommodated on the site. Furthermore, as discussed in Section 3.0, Relationship to 2020 LRDP, the proposed Cal Aquatics Center would not be larger in scale than the scale of development reasonably assumed in the 2020 LRDP EIR. Therefore, the project would not introduce any new potential impacts not already assessed in the 2020 LRDP EIR.

FIRE AND EMERGENCY PROTECTION

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Result in the need for new or physically altered fire or emergency medical services facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, service times or other performance objectives for fire and emergency protection?		●

The 2020 LRDP EIR determined that implementation of the 2020 LRDP could have direct effects on the need for fire and emergency services as a result of new University facilities and the people they accommodate. The 2020 LRDP EIR found that growth anticipated at UC Berkeley is a fraction of growth anticipated within the City of Berkeley in its General Plan EIR (2020 LRDP EIR Vol 1, 4.11-13). Measures

prescribed in the 2020 LRDP EIR include continuing the campus partnership with Lawrence Berkeley National Laboratory, the Alameda County Fire Department station at LBNL, and the City of Berkeley to ensure adequate fire and emergency service levels (Best Practice PUB-2.3).

As further support of this partnership, in May of 2005 the Chancellor and the Mayor of the City of Berkeley signed an agreement earmarking $600,000 annually in campus funds to the City of Berkeley to support emergency and fire protection.

As discussed under Police Protection Services item 1, the project site was identified for infill development in the 2020 LRDP and its contribution to the cumulative need for fire or emergency medical services facilities was assessed in the 2020 LRDP EIR. As noted previously, an enclosed sports facility, primarily for use by athletes, would not be expected to generate substantially more fire or emergency medical service calls than average for other uses that could be accommodated on the site. Furthermore, as discussed in Section 3.0, Relationship to 2020 LRDP, the proposed Cal Aquatics Center would not be larger in scale than the scale of development reasonably assumed in the 2020 LRDP EIR. Therefore, the project would not introduce any new potential impacts not already assessed in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Expose people or structures to a significant risk of loss, injury or death involving wildland fires?		●

The Campus Park and its environs, including the Adjacent Blocks area, are presently urbanized and are not subject to wildland fires.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?		●

As required by the California Building Code, the project would be designed to include adequate egress capacity and evacuation areas proximate to building load for decanting. In addition, the proposed project would not alter the alignment or capacity of any streets or access routes in the vicinity of the project site or otherwise change existing circulation patterns in the area. The proposed project would also maintain pedestrian and car access through the site through retention and enhancement of the existing mid-block passageway west of the Tang Center and provision of 54 angled parking spaces along the west edge of the project site.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
4. Result in inadequate emergency access?		●

Implementation of Continuing Best Practice PUB-2.3 requires consultation on the adequacy of emergency access routes to all new University buildings and would ensure adequate emergency access to the proposed Cal Aquatics Center. Also, see previous item and Transportation and Traffic items 4 and 5.

SCHOOLS

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Result in the need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, service times or other performance objectives for schools?		●

The 2020 LRDP EIR concluded any expanded demand for schools associated with expanded enrollment and employment at UC Berkeley under the 2020 LRDP would not create a need for new or altered facilities (2020 LRDP EIR Vol 1, 4.11-20). The Cal Aquatics Center would not result in a substantial increase in student or faculty population that would result in additional school-age children being present in the area and a subsequent increase in demand for school facilities. Therefore, the project would not introduce any new potential impacts not already assessed in the 2020 LRDP EIR.

PARKS AND RECREATION

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Result in the need for new or physically altered parks and recreational facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, service times or other performance objectives?		●

The 2020 LRDP EIR concluded any expanded demand for recreation under the 2020 LRDP would not increase the demand for recreation facilities to a point resulting in substantial physical deterioration of parks and recreation facilities, nor create the need for new or expanded facilities to maintain acceptable service ratios (2020 LRDP EIR Vol 1, 4.11-26). The project would not introduce any new potential impacts not already assessed in the 2020 LRDP EIR. It should be noted that the proposed Project would alleviate existing demands for water time at the Spieker aquatics facility by providing additional training and competition space for the University's aquatics teams. The proposed Project would provide additional water space at the Spieker facility for users such as recreational swimmers, physical education students, and community partners.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. 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?		●

See previous item.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	●	

The purpose of this EIR is to evaluate potential environmental impacts associated with the Cal Aquatics Center and is being prepared to fulfill the documentation requirements under CEQA, as identified in Continuing Best Practice PUB-4.3. As discussed throughout this EIR the proposed project would be developed in accordance with the design principles and guidelines established in the 2020 LRDP. In addition, all relevant 2020 LRDP mitigation measures and continuing best practices would be incorporated into the design and construction of the facility. The remaining sections of this EIR address whether the Cal Aquatics Facility would be consistent with the findings of the 2020 LRDP EIR for each individual environmental issues area or if it would result adverse physical effects on the environment.

SUMMARY OF PUBLIC SERVICES ANALYSIS

The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP, incorporating existing best practices and 2020 LRDP EIR mitigation measures, would not result in new significant impacts upon public services (2020 LRDP EIR Vol 1, 4.11-11 to 4.11-15; 4.11-10; 4.11-26 to 4.11-28; 4.11-32 to 4.11-33). The Project does not alter assumptions of the 2020 LRDP with regard to emergency access and emergency services demand, or schools. Since certification of the 2020 LRDP FEIR, there have been no substantial changes to the 2020 LRDP or to the circumstances surrounding 2020 LRDP development with respect to these public services that were not adequately analyzed and, as necessary, mitigated, and no new information is available. As discussed in the analysis above, the Project would not result in significant impacts related to public services and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis.

TRANSPORTATION

SETTING

The transportation setting of the campus is described in the 2020 LRDP EIR (Section 4.12), including bicycle, pedestrian and transit modes as well as automobiles. The following information supplements the LRDP information for the immediate project vicinity, generally defined as the area bounded by Dana Street, Fulton Street, Bancroft Way and Durant Avenue.

Roadway Network and Peak Hour Traffic Volumes

Local access to the Project area is provided via major streets and corridors such as Telegraph Avenue, Shattuck Avenue, Dwight Way, and University Avenue. The roadways that bound the Project site are described in Table 14 below. The traffic count data is included in the Transportation Technical Appendix, Appendix E to this SEIR.

Table 14:
Existing Roadway Network and Peak Hour Traffic Volumes

Boundary	Street	Orientation	Class[1]	Lanes	Parking	Peak Hour Volumes[2]	
						AM	PM
North	Bancroft Way	One-Way (WB)	Collector	3	Metered Both Sides	750	1,050
East	Ellsworth St	One-Way (NB)	Local	2	Unmetered Both Sides	220	240

Table 14:
Existing Roadway Network and Peak Hour Traffic Volumes

Boundary	Street	Orientation	Class[1]	Lanes	Parking	Peak Hour Volumes[2]	
						AM	PM
South	Durant Ave	One-Way (EB)	Collector	3	Unmetered Both Sides	530	520
West	Fulton St (N. of Durant Ave)	Two-Way	Major	4	Metered East Side Only	1,260	1,385

Notes:
1. *The City of Berkeley General Plan classifies streets within their roadway network according to the following typology:*
   a. *Major: primary roadways for the movement of automobiles, trucks, buses, pedestrians, and bicycles across the city, and that provide connections to the regional transportation network*
   b. *Collector: roadways that serve as an interface between local and major roadways, and provide for the movement of automobiles, buses, pedestrians, and cyclists between neighborhoods and across the city*
   c. *Local: roadways serving primarily slow-moving traffic, bicyclists, and pedestrians within a neighborhood*
2. *Peak hour volumes for all streets with the exception of Fulton Street are based on counts collected on Tuesday, February 5, 2013. Fulton Street peak hour volumes are based counts collected by Fehr & Peers in 2006.*

The City of Berkeley General Plan designates all east-west streets within the Southside neighborhood as emergency access and evacuation routes. These include Bancroft Way and Durant Ave, which border the Project site. These streets must be maintained for emergency access and evacuation in the case of a major disaster.

Pedestrian Facilities and Volumes

Typical pedestrian facilities include sidewalks, crosswalks, and pedestrian signals at signalized intersections. Sidewalks are provided along all roadway frontages within the vicinity of the Project site. Based on peak period field observations collected in February 2013, sidewalk widths in the vicinity of the Project site are adequate to serve peak hour pedestrian demand. The following are the sidewalk widths adjacent to the Project site:

- Bancroft Way sidewalks range between 6 and 9 feet wide
- Durant Avenue sidewalks range between 6 and 11 feet wide
- Fulton Street sidewalks range between 6 and 10 feet wide
- Ellsworth Street sidewalks range between 6 and 8 feet wide

Crosswalks are provided at the following four intersections in the vicinity of the Project area:

- Bancroft Way/Ellsworth Street (side-street-stop controlled)
- Bancroft Way/Fulton Street (signalized)
- Durant Avenue/Ellsworth Street (signalized)
- Durant Avenue/Fulton Street (signalized)

The crosswalk widths at each of the intersections listed above range between 7 and 10 feet. High-visibility crosswalks are provided on the east leg of the Bancroft Way/Ellsworth Street intersection and on the north leg of the Bancroft Way/Fulton Street intersection. The high-visibility crosswalk on the east leg of the Bancroft Way/Ellsworth Street intersection also provides in-pavement flashing lights that are activated by push-buttons on either side of the crosswalk. Another high-visibility crosswalk with in-pavement flashers is provided east of the Project site, at the east leg of the Bancroft Way/Dana Street intersection.

Pedestrian signal heads without push-buttons are provided at each of the signalized intersections surrounding the Project site. The pedestrian signal heads are activated for all signal cycles throughout the day.

Pedestrian counts and peak period field observations were collected by Fehr & Peers transportation consultants at the Ellsworth Street intersections with Bancroft Way and Durant Avenue on Tuesday, February 5, 2013. Table 15 summarizes the AM and PM peak hour pedestrian crossing volumes at each of the two intersections. The pedestrian count data is included in the Transportation Technical Appendix.

Mid-block crossings are not provided within the Project area. Based on field observations, jaywalking across Bancroft Way, Durant Avenue, Fulton Street, and Ellsworth Street was minimal during the AM and PM peak periods. The overwhelming majority of pedestrians appropriately utilize the marked crossing facilities within the Project area.

Table 15:
Existing Weekday Peak Hour Pedestrian Volumes

Intersection	Crosswalk Location	Peak Hour Pedestrian Volumes	
		AM	PM
Bancroft Way & Ellsworth St	North Leg	216	325
	South Leg	270	422
	East Leg	184	236
	West Leg[1]	0	0
Durant Ave & Ellsworth St	North Leg[2]	16	29
	South Leg	103	167
	East Leg[2]	8	10
	West Leg	143	244

Notes:
1. *Crosswalk not provided on west leg of Bancroft Way/Ellsworth Street intersection.*
2. *The north and east leg crosswalks of the Durant Avenue/Ellsworth Street intersection were closed to pedestrians due to construction activity on Tuesday, February 5, 2013. However, pedestrians still utilized both crosswalks during the AM and PM peak hours.*

Bicycle Facilities and Volumes

The one-way street grid in the vicinity of the Project area facilitates the flow of vehicle traffic through the Southside, but as noted in the 2008 Berkeley Southside Plan EIR, also undermines the pedestrian/bicycle orientation of the neighborhood. For example, to avoid circuitous routes to campus, bicyclists are often observed riding against the flow of traffic on one-way streets. In response, the City of Berkeley has in recent years taken steps to improve bicycle infrastructure in the Southside neighborhood. There is an existing north-south bike lane along Fulton Street / Oxford Street north of Bancroft Way, with plans to extend it south to Dwight Way. Channing Way, which runs one block south of Durant Ave, is one of seven designated bicycle boulevards, or bicycle priority streets, in the City of Berkeley, where modifications such as landscaped diverters, traffic circles, and bicycle activated loop detectors have been introduced to calm traffic and improve bicyclists' safety. Bike facilities also exist along Dana Street, Bowditch Avenue, and Telegraph Avenue. Finally, Class 2.5 bike routes have been proposed along Bancroft Way and Gayley Road/Piedmont Avenue, which will provide connections to the east side of campus. Table 16 summarizes on-street bike facilities within the Project area. Table 17 summarizes peak hour bicycle volumes at the intersections of Bancroft/Ellsworth and Durant/Ellsworth, based on counts collected on Tuesday, February 5, 2013.

Numerous bike racks, mostly clustered along Bancroft Avenue and Telegraph Avenue, and in the downtown area, were installed in the last few years, and unused parking meters along Bancroft between Fulton and Piedmont were retrofitted with new post-and-ring bike racks. In addition, multiple inverted-U bicycle racks have been installed at the southwest corner of Dana Street and Bancroft Way.

The Downtown Berkeley BART station also hosts one of four BART bike stations, where on weekdays between 7:00 AM and 9: PM, commuters can access free bike valet parking, rentals, repairs, and sales. 24 hour self-service parking is also available, with capacity for 268 bikes. Other bicycle amenities near the project site include a shower facility at the Recreational Sports Facility (RSF), which is open to members.

Table 16:
Existing and Proposed On-Street Bicycle Facilities

Status	Facility Type	Street Name	Orientation	Extent
Existing	Bike Lane	Fulton Street / Oxford Street	Two-Way (N/S)	Between Bancroft Way and Hearst Avenue
Existing	Bike Blvd (Striped)	Channing Way	Two-Way (E/W)	Between Martin Luther King Jr Way and Piedmont Avenue
Existing	Bike Lane	Dana Street	One-Way (SB)	Between Bancroft Way and Dwight Way
Existing	Bike Route	Telegraph Avenue	One-Way (NB)	Between Bancroft Way and Dwight Way
Existing	Bike Lane	Bowditch Street	Two-Way (N/S)	Between Bancroft Way and Dwight Way
Proposed	Bike Lane	Fulton Street	One-Way (SB)	Between Bancroft Way and Dwight Way
Proposed	Bike Route (Class 2.5)	Bancroft Way	One-Way (WB)	Between Piedmont Avenue and Fulton Street
Proposed	Bike Route (Class 2.5)	Piedmont Avenue / Gayley Road	Two-Way (N/S)	Between Hearst Avenue and Dwight Way

1. *The City of Berkeley Bicycle Plan (2005) classifies bike facilities within their roadway network according to the following typology:*
    a. *Bike Path (Class 1): provides completely separated right of way for the exclusive use of bicycles and pedestrians with cross-traffic minimized*
    b. *Bicycle Boulevard: roadways that have been modified to enhance bicyclists' safety and convenience; intended to serve as Berkeley's primary bikeways*
    c. *Bike Lanes (Class 2): provides a striped lane on a roadway for the exclusive use of bicyclists (with certain regulated exceptions)*
    d. *Bike Route (Class 2.5): roadways that are signed and improved to provide direct access and connections to destinations in Berkeley; do not feature dedicated striped lanes*
    e. *Bike Route (Class 3): roadways signed as a bikeway to provide overall continuity in the overall bikeway network, or that identifies a route which is somehow preferable to immediately adjacent streets*

Table 17:
Existing Weekday Peak Hour Bicycle Volumes

Intersection	Approach	Peak Hour Bicycle Volumes	
		AM	PM
Bancroft Way & Ellsworth St	NB	27	13
	SB	0	4
	*EB**	*3*	*8*
	WB	36	64
	Total	64	89
Durant Ave & Ellsworth St	NB	36	17
	SB	1	5
	EB	13	28
	*WB**	*1*	*7*
	Total	51	57

**Bicyclists approaching the intersection in this direction are riding against the flow of one-way traffic.*

Transit Service

The Project site is about a six-minute walk from the Downtown Berkeley BART station, which not only anchors the downtown area but also serves as a focal point for AC Transit buses and campus-operated shuttles. The three different systems are described below, and summarized in the tables that follow.

BART (Table 5): Two BART lines serve the Downtown Berkeley BART station: the Richmond-Fremont line and the Richmond-Daly City/Millbrae line. The Richmond-Daly City/Millbrae line provides direct service to San Francisco Monday through Saturday, during the daytime only. A transfer is required outside of these hours, and typically occurs at MacArthur Station.

AC Transit (Table 6): Seventeen AC Transit lines converge and radiate outwards from the downtown area, providing both local and regional connectivity. Five of these lines operate along the Bancroft Way / Durant Avenue corridors fronting the Project site, providing direct access to Rockridge BART and Downtown Oakland to the south, the City of Albany to the northwest, and San Francisco to the west. All but one of these lines operates seven days per week. Two specialized school shuttle routes also operate along the Bancroft Way / Durant Ave corridor, providing a single trip each during the morning and afternoon commutes. While many of the stops along Bancroft Way and Shattuck Avenue feature amenities such as bus shelters, benches, and route and schedule information, the two stops directly adjacent to the Project site (Bancroft Way at Ellsworth Street and Durant Avenue at Ellsworth Street) do not feature these amenities, and are identified by a simple pole and metal sign.

Bear Transit (Table 7): In addition to the regional connectivity provided by BART and AC Transit, UC Berkeley operates a free campus shuttle service (Bear Transit) for members of the campus community. Route P operates along the perimeter of the campus in a clockwise direction. Two stops serve the project site: one on Bancroft Way in front of the RSF, and another on Bancroft Way at Ellsworth Street. Night safety shuttles, to-your-door, and door-to-door routes extend Bear Transit daytime service into the late evening and early morning hours.

Table 18:
BART Service Characteristics

Route	Description	General Hours of Operation[1]	Headways Peak (Offpeak)	Nearest Stop	Average Weekday Station Entries[2]
Richmond-Fremont Line	Richmond to Fremont via Oakland	4 :00 am - Midnight	15 (20)	Downtown BART Shattuck Ave & Center St	11,109
Richmond-Daly City/Millbrae	Richmond to Millbrae via Oakland and San Francisco	4:00 am – 8:00 PM	15 (15)		

Notes:
1. Richmond-Daily City/Millbrae line does not operate on Sundays or Holidays
Source: January 2013 BART Monthly Ridership Report

Table 19:
AC Transit Service Characteristics

Route	Description	Route Type[1]	Weekday Headways Peak (Offpeak)	Nearest Stop	Max Daily Load @ Stop
1	Berkeley BART to Bay Fair BART via Telegraph Ave., International Blvd., and E. 14th St.	Trunk	15(20)	Bancroft Way / Durant Avenue @ Ellsworth	1.2
1R	International Rapid – U.C. Berkeley campus to Bay Fair BART via Berkeley BART, Telegraph Ave., International Blvd., and E. 14th St.	Trunk	7-12	Bancroft Way @ Telegraph Avenue / Durant Avenue @ Dana Street	1.2
7	El Cerrito del Norte BART to Berkeley BART via Arlington Ave. and Shattuck Ave.	Crosstown	40	Berkeley BART	N/A
12	Berkeley BART to Downtown Oakland via Martin Luther King Jr. Way, 55th St., Temescal District, Piedmont Ave. and Grand Ave.	Crosstown	20(30)	Berkeley BART	N/A
18	University Village, Albany, to Montclair via Solano Ave., Shattuck Ave., Children's Hospital, Martin Luther King Jr. Way, downtown Oakland, and Park Blvd.	Trunk	15(30)	Shattuck Avenue @ Durant Avenue	1.0
25	Two-way loop: El Cerrito Plaza BART, Central Ave, Pierce St., University Village, Gilman St., Hopkins St., Martin Luther King Jr. Way, Berkeley BART, Martin Luther King Jr. Way, Solano Ave., Colusa Ave., Fairmount Ave.	Crosstown	40	Berkeley BART	1.2
49	Two-way loop: Rockridge BART, College Ave., Ashby Ave., 7th St., Dwight Way, Shattuck Ave., Berkeley BART, Bancroft Wy. / Durant Ave., Piedmont Ave., Warring St., Derby St., Claremont Blvd., Claremont Ave. and College Ave.	Crosstown	30	Bancroft Way / Durant Avenue @ Ellsworth Street	1
51B	Rockridge BART to Berkeley Amtrak or Berkeley Marina via College Ave., Bancroft Way / Durant Ave., Shattuck Ave., Berkeley BART, and University Ave.	Trunk	10(20)	Bancroft Way / Durant Avenue @ Ellsworth Street	1.5
52	University Village to UC Campus via University Village, Cedar St., Sacramento St., and University Ave., looping the UC Campus via Hearst Ave., Gayley St., Bancroft Way, and Shattuck Ave. (Berkeley BART).	Crosstown	15(35)	Bancroft Way @ Ellsworth Street	0.7
65	Berkeley BART to Lawrence Hall of Science or Senior Ave. and Grizzly Peak Blvd. via Hearst Ave., Euclid Ave. and Grizzly Peak Blvd	Crosstown	30	Berkeley BART	N/A
67	Berkeley BART to Grizzly Peak Blvd. and Spruce St. via Oxford St. and Spruce St. Weekends serves Tilden Park	Crosstown	35-40	Berkeley BART	1.0
88	From Berkeley BART to Lake Merritt BART via University Ave., Sacramento	Trunk	20(30)	Berkeley BART	N/A

Table 19:
AC Transit Service Characteristics

Route	Description	Route Type[1]	Weekday Headways Peak (Offpeak)	Nearest Stop	Max Daily Load @ Stop
	St., Market St. and downtown Oakland				
604	North Berkeley BART to Hebrew Day School, Head Royce High School and Bentley School via University Ave., UC Campus South, College Ave. and Ashby Ave.	School	Single Trip	Bancroft Way / Durant Avenue @ Ellsworth Street	N/A
605	University Ave. & Shattuck Ave., Berkeley, to Head Royce High School via UC Campus South, College Ave., Broadway Terrace, and Montclair.	School	Single Trip	Bancroft Way / Durant Avenue @ Ellsworth Street	N/A
800	All Nighter. Richmond BART to Market St. and Van Ness Ave., S.F., via Macdonald Ave., San Pablo Ave., University Ave., Telegraph Ave. and downtown Oakland. Returns via Market St., the Transbay Temporary Terminal, and West Oakland BART.	Owl	60	Shattuck Avenue @ Kittredge Street	N/A
851	All Nighter. Downtown Berkeley to Fruitvale BART via UC Campus South, College Ave., Broadway, downtown Oakland, Webster St., Santa Clara Ave., Broadway, and Fruitvale Ave.	Owl	60	Bancroft Way / Durant Avenue @ Ellsworth Street	N/A
F	UC Campus to Transbay Temporary Terminal, San Francisco via Shattuck Ave., Adeline St. and 40th St.	Transbay	30	Bancroft Way @ Ellsworth Street	0.9

Notes:
1. *AC Transit provides three basic types of service, according to their "Making Transit Integral to East Bay Communities" report published in 2004.*
    a. *Trunk routes provide frequent service on heavily used corridors*
    b. *Crosstown routes connect neighborhoods to trunk routes and BART*
    c. *Express/Transbay routes take passengers directly (via the freeway) to major destinations such as Downtown San Francisco*

Source: AC Transit, February 2013

Table 20:
Bear Transit Service Characteristics

Route	Description	General Hours of Operation	Headways Peak (Offpeak)	Nearest Stop to Project Site	Average Weekday Boardings @ Stop[1]
P	Campus Perimeter	7 AM – 7 PM	15 (30)	Bancroft Way @ RSF	23

Notes:
1. *From "Bear Transit Efficiency Study" (CHS Consulting Group, 2012)*

Source: UC Berkeley Parking and Transportation, February 2013

Parking

Bancroft/Fulton Lot

There are a total of 230 parking stalls on the Bancroft/Fulton Lot (the project site), of the following types:

- 1 space is reserved for the City CarShare program

- 1 space is reserved for service maintenance vehicles
- 2 spaces are reserved for Carpool Permit S
- 3 spaces are reserved for Carpool Permit F
- 3 metered parking spaces are provided within the lot
- 6 spaces are reserved for handicapped permits
- 16 space are reserved for vehicles with University Health Services parking permits
- 198 spaces are reserved for UC permit C, F, or S

A UC permit is required to park at the Bancroft/Fulton Lot Monday through Friday between 7:00 AM and 5:00 PM. The general public can park at the lot during the following hours:

- Monday through Friday from 5:00 PM to 2:00 AM
- Saturday from 7:00 AM to 2:00 AM
- Sunday from 9:00 AM to 2:00 AM

No parking is allowed from 2:00 AM to 5:00 AM daily. The parking fee during public parking hours is $3.00 for the first hour and $2.00 per each additional hour, with a daily maximum cap of $15.00.

The UC Berkeley Parking & Transportation Department collects parking occupancy data every semester at each of the parking lots operated by the University. According to the Parking & Transportation Department data from the Spring and Fall semesters of 2012, the parking occupancy at the Bancroft/Fulton lot exceeds 95% on a typical weekday between the hours of 10:00 AM and 2:00 PM. The parking occupancy data confirms that the existing parking lot is generally full on weekdays; typically only the disabled permit parking stalls remain unoccupied. Parking occupancy data for the Bancroft/Fulton Lot in addition to other on-campus parking lots is included in the Transportation Technical Appendix.

To determine the vehicle trip generation of the Bancroft/Fulton lot, vehicle counts at each of the three driveways serving the lot were collected for the 48-hour period on Tuesday February 5 and Wednesday February 6, 2013. Table 21 summarizes the weekday AM and PM peak hour traffic counts at the parking lot driveways. The lot generates about 120 trips during each peak hour, with most trips inbound in the AM peak hour and outbound in the PM peak hour.

Table 21:
Bancroft/Fulton Lot Existing Weekday Peak Hour Driveway Volumes

Peak Hour	In	Out	Total
AM Peak Hour	110	9	119
PM Peak Hour	16	108	124

Source: Fehr & Peers, February 2013

On-Street Parking

On-street parking is provided along the four roadways that bound the Project site. On-street parking is controlled by parking ticket kiosk or by Residential Parking Permits (RPP), which limit parking by non-residents to two hours or less between 8:00 AM and 7:00 PM on weekdays and Saturdays. A $1.50 per hour fee applies to on-street metered parking spaces between 9:00 AM and 6:00 PM on weekdays and Saturdays. The following on-street parking is provided along the four roadways that bound the project site:

- Bancroft Way: 1-hour and 2-hour metered parking
- Durant Avenue: 2-hour limit without a RPP, residents with RPP I park for free without time restrictions
- Fulton Street: 90-minute metered parking
- Ellsworth Street: 2-hour limit without a RPP, residents with RPP I park for free without time restrictions

On-street parking in the vicinity of the Project site is free on Sundays.

2020 LRDP Mitigation Measures and Continuing Best Practices

Design and construction of the Cal Aquatics Center project would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon transportation and traffic. Where applicable, the project would incorporate the following mitigation measures and/or continuing best practices:

Continuing Best Practice TRA-1-b: UC Berkeley will continue to do strategic bicycle access planning. Issues addressed include bicycle access, circulation and amenities with the goal of increasing bicycle commuting and safety. Planning considers issues such as bicycle access to the campus from adjacent streets and public transit; bicycle, vehicle, and pedestrian interaction; bicycle parking; bicycle safety; incentive programs; education and enforcement; campus bicycle routes; and amenities such as showers.

Continuing Best Practice TRA-3-a: Early in construction period planning UC Berkeley shall meet with the contractor for each construction project to describe and establish best practices for reducing construction-period impacts on circulation and parking in the vicinity of the project site.

Continuing Best Practice TRA-3-b: For each construction project, UC Berkeley will require the prime contractor to prepare a Construction Traffic Management Plan which will include the following elements:

- Proposed truck routes to be used, consistent with the City truck route map.
- Construction hours, including limits on the number of truck trips during the a.m. and p.m. peak traffic periods (7:00 – 9:00 a.m. and 4:00 – 6:00 p.m.), if conditions demonstrate the need.
- Proposed employee parking plan (number of spaces and planned locations).
- Proposed construction equipment and materials staging areas, demonstrating minimal conflicts with circulation patterns.
- Expected traffic detours needed, planned duration of each, and traffic control plans for each.

Continuing Best Practice TRA-3-c: UC Berkeley will manage project schedules to minimize the overlap of excavation or other heavy truck activity periods that have the potential to combine impacts on traffic loads and street system capacity, to the extent feasible.

Continuing Best Practice TRA-5: The University shall continue to work to coordinate local transit services as new academic buildings, parking facilities, and campus housing are completed, in order to accommodate changing demand locations or added demand.

Continuing Best Practice PUB-2.3: UC Berkeley would continue its partnership with LBNL, ACFD, and the City of Berkeley to ensure adequate fire and emergency service levels to the campus and UC

facilities. This partnership shall include consultation on the adequacy of emergency access routes to all new University buildings.

Southside Area Plan Policies

The following transportation policies are relevant to the Project site. These are taken from the 2011 Update to the Southside Area Plan Transportation Element.

Southside Plan Policy T-D3: Implement streetscape improvements to calm traffic and facilitate pedestrian crossing.

C. Consider bulb-outs at intersections
D. Add a series of stop signs and traffic signals at key intersections throughout the neighborhood, including:
   - A traffic signal at Dana Street and Bancroft Way to slow traffic and facilitate pedestrian crossing.
   - A stop sign at Ellsworth Street and Bancroft Way.

D. New traffic signals should be all-way stop signals that allow pedestrians to cross in any direction without contending with automobiles making turns.
E. New signals should be accessible pedestrian signals.

Southside Plan Policy T-E1: Develop shared parking agreements between the City, the University and private parking providers to efficiently share and better utilize existing Southside parking, particularly short-term customer parking. Encourage UC to allow visitors using disabled placards and plates to have access to existing parking at different locations on campus to allow equal access to campus amenities.

Southside Plan Policy T-E5: Strongly encourage sponsors and organizers of sports events at Memorial Stadium, Haas Pavilion, and Edwards Field, performances at Zellerbach, and special events on Telegraph and elsewhere in the Southside to promote and encourage use of transit by people attending events. All advertising for sports events and other events should include transit information. Advertising should also include information regarding traffic congestions and parking problems in the Southside and surrounding neighborhoods. Encourage advertising at BART stations and on AC Transit buses.

PROJECT TRANSPORTATION EVALUATION

Planned Project Usage and Transportation Characteristics

University Aquatics Program Usage

The purpose of the Project is to construct an Aquatics Center, primarily to provide more water space for practices for the Cal aquatics programs. The size of the programs (number of participants, number of meets, and attendance at meets) is not planned to increase with the Project. The proposed Project would consist of three one-story buildings surrounding a 52-meter swimming pool with a dive tower. The Aquatics Center would serve primarily as a practice facility for UC student athletes that participate in swimming, diving and water polo team sports. Each aquatics team is expected to continue to utilize the existing Spieker Pool in addition to the Aquatics Center facilities for practice. Competitions and public lap swimming would continue to occur at Spieker Pool. The Aquatics Center is expected to host competitions on rare occasions (approximately four times a year).

The majority of the student athletes participating in aquatics team sports are expected to access the Aquatics Center by walking, biking, or transit. Most student athletes live in the vicinity of the university. Because the proposed Aquatics Center would be located within 800 feet of Spieker Pool, student athletes and coaching staff for each of the aquatics teams are not expected to change their commute patterns once the Aquatics Center is built. Coaching staff and trainers are also expected to access the Aquatics Center by walking from the existing Spieker Pool, from parking lots that they currently park in, or from nearby public transit stops. Therefore, based on the planned regular program usage of the new Aquatics Center, no additional vehicle trips would be generated by the University Aquatics programs during typical weekday conditions.

Other Usage

The Aquatics Center is not planned to be available for public lap swimming. The new facility is expected to increase the University's capacity to host summer camps and specialty clinics from about 14 days per year to approximately 28 to 35 days per year, during the months of June through August. The camps and clinics, which currently take place at Spieker Pool, would shift to be held at Spieker Pool about 25% of the time and at the Aquatics Center about 75% of the time. The existing camps and clinics range in attendance from 25 to 120 people; attendance would increase by up to 30 people with the new Aquatics Center. Based on past experience, about 90% of attendees are dropped off, 5% take the bus, and 5% walk or bike to the camps/clinics. (As described above, the overall amount of days and participants is expected to remain roughly the same or, as for example in the case of public lap swimming at Spieker, increase only slightly for other UC and non-UC programs.)

Smaller size camps/clinics of 20-25 people would be single weekday camps, while the larger camps of 120-150 people would be overnight weekday camps. The majority of participant drop-offs would be expected to continue to occur at the drop-off zone adjacent to Spieker Pool and the RSF, which would then walk down and across Bancroft Way to access the Aquatics Center. Summer camp/clinic participants would likely utilize the crosswalks at the intersections of Bancroft Way/Ellsworth Street. Participant drop-offs would also likely occur at the drop-zone in front of the Tang Center on Bancroft Way, adjacent to the proposed Aquatics Center. The majority of drivers that drop off summer camp participants would not be expected to park around the campus area, but instead would travel back home or to work. Given that traffic volumes are lower during the summer months and that Bancroft Way is three lanes wide in the vicinity of the Project site, summer camp vehicle drop-off queuing would not be expected to significantly affect traffic operations along Bancroft Way.

Participants of the overnight camps are expected to lodge at the Unit 3 dormitory on Durant Avenue, between Telegraph Avenue and Dana Street. These participants would access the Project site via sidewalks along Durant Avenue and crosswalks at the Durant Avenue intersections with Dana Street and Ellsworth Street. Pedestrian access to the Aquatics Center would be available from Durant Avenue via a mid-block pathway. Because the increase in camp days is small, and would take place in the summer months when local traffic volumes are substantially lower due to the reduced class schedule during the summer semester, the camps would not affect typical weekday conditions in the study area. Thus, significant impacts on the surrounding transportation network are not anticipated from the increase in summer camps and clinics with the construction of the Aquatics Center.

Weekday Peak Hour Vehicle Trip Generation

Traffic Changes On-Site

The primary change in the Project site's vehicle trip generation on typical weekdays would be related to the loss in parking. The existing Bancroft/Fulton Lot provides a total of 230 parking spaces; with the proposed Project, 49 spaces would remain, resulting in a net loss of 181 parking stalls on-site. Table 22

presents the expected change in trip generation at the Project site driveways. As shown in Table 22, the net reduction of 181 parking stalls on-site is expected to result in a reduction of 94 trips during the AM peak hour and 98 trips during the PM peak hour.

Traffic Changes Related to Displaced Parkers

As described in more detail in the Parking discussion below, the Bancroft-Fulton lot parkers displaced by the Project are expected to either park in one of the other University parking lots or structures, in other private or City-operated structures, or on street, or they may change to a non-single-occupant vehicle travel mode. Because parking occupancies in most campus, City and private parking facilities are high, and the Project area is well-served by transit, it is reasonable to anticipate that some percentage of the regular Bancroft-Fulton lot users will change their travel mode. However, the majority can be expected to continue to drive, and their trips will be distributed to the other parking options noted. If a 10 percent mode change were assumed, this would yield 85 AM peak hour trips and 88 PM peak hour trips that would travel to/from other parking locations instead of the Bancroft-Fulton lot. Because the possible new parking destinations are distributed throughout the Southside, greater campus area, and downtown, it is not possible to quantify the effect at specific intersections, but the impact on any one intersection would be minimal due to the wide distribution of re-routed trips, and the fact that these trips are already on the City roadways.

Table 22:
Cal Aquatics Center Vehicle Trip Generation Estimates

Land Use	Size[1]	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Proposed Aquatics Center [2]	49 Spaces	23	2	25	3	23	26
Existing Bancroft/Fulton Lot[2]	230 Spaces	-110	-9	-119	-16	-108	-124
Net New Trips		***-87***	***-7***	***-94***	***-13***	***-85***	***-98***

1. Trip generation is determined on the number of parking stalls provided on-site.

2. Based on following rates developed from observations at existing driveways of the Bancroft/Fulton Lot.
AM: 0.52 trips per parking space; Enter = 92%, Exit = 8%
PM: 0.54 trips per parking space; Enter = 13%, Exit = 87%

Source: Fehr & Peers, February 2013

The remaining trips at the site would enter via Durant Avenue and exit onto Bancroft Way, based on the current site plan which provides a single aisle with a northbound flow direction, with angled parking spaces.

Weekday Peak Hour Traffic Operations

The loss of 181 parking stalls would reduce the number of trips that travel to and from the Project site by about 94 trips during the AM peak hour and 98 trips during the PM peak hour, assuming typical weekday conditions (see also discussion below, Parking Changes, for a broader discussion of the loss of parking). The intersections and roadway segments adjacent to the Project site are therefore expected to experience slightly lower average delay during peak hour conditions due to the reduction in trips traveling to and from the Project site. Because the Project would reduce vehicle trips immediately adjacent to the Project site, no Project or Cumulative impact on local traffic volumes and operations is identified.

Pedestrian Access and Circulation

The majority of student athletes that participate in aquatic sports generally live in campus housing or apartments near campus. Most student athletes are expected to access the Aquatics Center by walking. First year student athletes typically live in the Unit 3 dormitory. Student athletes living in Unit 3 would access the Project site via sidewalks along Durant Avenue and crosswalks at the Durant Avenue intersections with Dana Street and Ellsworth Street. Pedestrian access to the Aquatics Center would be available from Durant Avenue via a mid-block pathway. The existing mid-block passageway west of the Tang Center, allowing for pedestrians to traverse the block from Durant Avenue through the site to Bancroft Way, would be retained and enhanced.

Student athletes and coaching/training staff for the aquatics teams are expected to continue to practice and compete at the existing Spieker Pool, which is about 800 feet east of the proposed Aquatics Center on Bancroft Way. Student athletes and coaches/trainers would often walk to the Aquatics Center from Spieker Pool and vice-versa. High-visibility crosswalks with in-pavement flashing lights are provided across Bancroft Way at the intersections with Ellsworth Street and Dana Street. Based on current pedestrian behavior, as described above, it is expected that pedestrians walking between Spieker Pool and the proposed Aquatics Center would utilize these high-visibility crosswalks, particularly the one at Ellsworth Street.

As previously mentioned, the Aquatics Center is expected to host competitions approximately four times a year. Buses containing visiting student athletes would continue to park at the RSF parking lot. Athletes would walk down and across Bancroft Way to access the Aquatics Center, using the crosswalks provided at the intersection of Bancroft Way/Ellsworth Street. Spectators for the competitions hosted at the Aquatics Center would likely park on street or in off-street parking lots in the vicinity of the Project site and walk to the Aquatics Center utilizing the pedestrian facilities along Bancroft Way, Durant Avenue, Fulton Street, and Ellsworth Street.

Based on the above assessment, the existing and proposed pedestrian facilities in the study area and on-site are expected to be adequate for pedestrians traveling to and from the proposed Aquatics Center.

Bicycle Access and Circulation

In addition to walking, student athletes living in campus housing or apartments near campus have the option of biking to the Aquatics Center. The most direct routes from Unit 3, where the majority of freshman and sophomore student athletes reside, are Bancroft Way and Durant Avenue. Neither of these streets includes on-street bicycle facilities. However, both Bancroft Way and Durant Avenue are three lanes wide in the vicinity of the Project site, which provides vehicles room to safely bypass bicyclists on the roadway. The shortest trip to the proposed Aquatics Center from Unit 3 that complies with the current circulation plan requires bicyclists to travel westbound along Channing Way (a designated bicycle boulevard), head north along Ellsworth Street (one-way, no bike facilities), and then west on Bancroft Way (one-way, no bike facilities) in order to access the facility entrance. Given the circuitous routing of this path, some bicyclists may travel the wrong way down Durant Avenue to access the mid-block passageway to Bancroft Way.

Bicyclists arriving at the site would find bicycle parking near the front of the proposed Aquatics Center along Bancroft Way. The Project would provide approximately five bicycle parking spaces indicated through conformance with 2020 LRDP Continuing Best Practice TRA-1-b.

Transit Access

Athletes and other users of the facility arriving via AC Transit, Bear Transit, or BART would alight at one three locations. The first, at Durant Avenue and Ellsworth Street, is across the street from the facility, and requires transit users to cross Durant Street at a signalized intersection, and use the midblock pathway to access the entrance on Bancroft Way. The second, on Bancroft Way west of Ellsworth Street, is also across the street from the facility. Because the crosswalk at this intersection is on the east leg of the intersection, transit users must first walk eastbound to access the crosswalk to cross Bancroft Way, then cross Ellsworth Street to continue west to the Project entrance Bancroft Way. Given this somewhat circuitous path, some transit users alighting at this stop may cross Bancroft Way on the south leg of the intersection with Ellsworth Street, which does not provide a crosswalk. However, based on observed pedestrian behavior in the area, this is not expected to be a common occurrence. Finally, patrons alighting at or in the vicinity of the Downtown Berkeley BART station have the choice of accessing the site via a number of pedestrian routes utilizing Shattuck Avenue, Fulton Street, Allston Way, Kittredge Street, and Bancroft Way.

Available information suggests that additional capacity exists on many of the routes serving the project site. Of the 15 routes providing access to the site, vehicle loads factors were available for nine of them, including 4 of the 5 heavily used trunk lines. Only one of these routes (Line 51B) operated with a maximum peak hour load factor in excess of 1.25 (the industry standard threshold for crowding) near the Project site.

Parking Changes

While parking changes are not considered environmental effects under CEQA, the secondary effect of parking losses can include additional vehicle circulation as drivers search for scarcer and scarcer parking spaces. Therefore, the following assessment is provided. The UC Berkeley Parking Map is provided in the Technical Appendix for reference.

Parking Supply Changes – Project and Cumulative

The proposed Project would result in a net loss of 181 parking stalls on the existing Bancroft/Fulton Lot, which would not be replaced elsewhere on campus. In addition to the parking loss due to the Project, the University Hall parking structure, which is a quarter mile north of the Bancroft/Fulton Lot, is expected to lose approximately 234 parking spaces due to the construction of the proposed Berkeley Art Museum. At the same time, construction of a new childcare facility on Dwight will reduce the number of parking spaces available at that small lot by 15 spaces. The loss of parking at the University Hall structure coupled with the loss of parking at the Bancroft/Fulton Lot and at the Dwight Way lot would result in a net loss of about 430 parking spaces within the west and south sides of campus. The parking loss associated with the Project, when added to the loss associated with the Berkeley Art Museum project, would put additional pressure on the remaining campus parking supply, private parking lots, and on-street parking in the Southside and other areas adjacent to campus.

Impact on Regular Weekday Lot Users

The Southside and Downtown are well served by BART, AC Transit buses, and Bear Transit campus shuttles. It is reasonable to assume that some portion of drivers displaced from the Bancroft/Fulton Lot would change their travel mode from auto to transit when traveling to and from campus when the Aquatics Center is constructed. The displaced drivers that would continue to drive to and from campus would park in other campus parking lots, private lots in the downtown or Southside, or on-street. The general lack of available on-street parking spaces in the project vicinity, as well as the RPP designation which limits non-residents to two-hour parking, would minimize drivers circulating in the project vicinity in search of on-street parking. Rather, it is expected that displaced parkers who continue to drive

would park in downtown garages, other University parking garages or lots, or other less-utilized on-street parking areas. Spectators for competitions hosted at the Aquatics Center would likely park on-street or in off-street parking lots in the vicinity of the Project site; however, competitions are only expected to occur approximately four times a year.

Table 23 provides recent occupancy data for University parking garages or lots in the vicinity of the Project site, excluding the Bancroft/Fulton Lot. As shown in Table 23, the majority of parking garages/lots experienced parking occupancies over 80% during typical weekdays of the 2012 Spring and Fall semesters. Lots that have excess capacity in the vicinity of the Project site include the Ellsworth structure, the Banway Lot, Underhill structure, Bancroft structure, Genetics structure, Dwinelle Lot, and the Lower and Upper Hearst structures. It is likely that average parking occupancy at nearby University structures or lots would increase with the construction of the Aquatics Center.

Table 23:
February 2013 Existing Average Weekday Parking Occupancy of University Parking Garages/Lots[1]

Location	Parking Supply	Spring 2012 Semester	Fall 2012 Semester
University Hall Parking Garage	348	94%	92%
Ellsworth Parking Garage	179	81%	74%
Dana/Durant Lot	83	100%	100%
RSF Parking Garage	182	100%	100%
Banway Lot	41	38%	32%
Cleary Hall Parking Garage	37	100%	Data Not Available
Dwight Way Lot	25	25%	33%
Underhill Parking Garage	952	93%	86%
Bancroft Parking Garage	125	88%	93%
Genetics Parking Garage	278	83%	66%
Dwinelle Lot	87	92%	93%
Lower Hearst Parking Garage	576	86%	91%
Upper Hearst Parking Garage	287	85%	91%

Notes:

1. *Data represents average parking occupancy for typical weekdays between 10:00 AM and 2:00 PM. Only lots/structures in the vicinity of the Project site are included; the Bancroft/Fulton Lot is not included in summary.*

Source: UC Berkeley Parking & Transportation Department, February 2013

The associated student body of the University plans on voting on a referendum in the April 2013 student elections for a potential Health and Wellness Center. The Health and Wellness Center would be up to 35,000 square feet and would provide health and wellness programs and fitness equipment. One of the potential sites for this new center includes the existing building at the corner of Fulton and Bancroft, and includes the 49-stall parking lot that would otherwise be retained under Aquatics Center project. If the April 2013 referendum is successful, the Aquatics Center parking lot may potentially be replaced by the Health and Wellness Center in the future. Eliminating the 49-stall parking lot would reduce the number of vehicle trips that travel to and from the Project site and likely improve traffic operations on adjacent streets and intersections; however, the displaced vehicles would put additional pressure on the remaining campus parking supply, private parking lots, and on-street parking in the Southside and other areas adjacent to campus.

The University recognizes that it faces challenging parking shortage realities in the coming years. A 2011 Transportation Demand Management[2] study recommends a number of steps, including calls for the University to work with the City of Berkeley, surrounding businesses, and the community at large to

[2] *University of California, Berkeley Parking and Transportation Demand Management Master Plan,* Nelson Nygaard, February 2011

develop a long term parking plan that meets the needs of the University as it continues to expand in years to come. Some of the strategies to offset the loss of parking on the west and south sides of campus may include:

- Implementation and comprehensive marketing of transportation demand management (TDM) programs
- Increasing attendant parking at lots owned by the University
- Increasing permit pricing for students and staff of the University
- Providing variable pricing options at lots open to the general public
- Installing parking space counting systems to provide drivers real-time parking availability
- Exploring public-private partnerships to lease parking in areas of focused need
- Implementing mobile internet applications that provide real-time parking availability for lots surrounding the campus area

Impact on Event Use of the Bancroft-Fulton Lot

The Bancroft-Fulton lot is used to varying degrees by spectators for many athletic events held at Haas Pavilion, Evans Diamond, Edwards Field, and Spieker Aquatics Center, and other visitors to special events held in the southwest area of campus. These users typically park in the lot outside the weekday hours (7:00 AM to 5:00 PM) when it is limited to campus permit holders. With the loss of 181 spaces on this lot, these spectators and visitors will need to park in other University lots, such as Ellsworth, Bancroft, Dana/Durant, Underhill, and others; or adjust to a non-auto travel mode. University parking lot occupancies on weekday evenings and on weekends is much lower than on weekdays, and the non-weekday vacancies are expected to be able to absorb the displaced spectator/visitor parking demand. For the larger-attendance events, particularly men's basketball games, the University will adjust the parking directions for ticket-buyers, and parking pass assignments for season ticket holders, to adjust to the change. In addition, when multiple larger-attendance events coincide, special parking accommodations such as attendant parking, provision of BEAR Transit service to more distant University lots, or other measures may be implemented.

Consistency with Southside Area Plan Policies

The Project is consistent with the Southside Area Plan policies referenced in the Setting, and no additional improvements as envisioned in the policies are indicated by the Project impact analysis provided above. Specifically, with regard to Policy T-D3, the project does not generate new vehicle traffic nor sufficient additional pedestrian or bicycle demand to warrant a traffic signal at Bancroft Way/Dana Street nor a stop sign at Bancroft Way/Ellsworth Street. With regard to Policy T-E1, the University's Parking and Transportation Department continues to support development of shared parking agreements between the City, the University and private parking providers, and is actively managing the University parking supply to best serve University-generated demand. Finally, with regard to Policy T-E5, the University Parking and Transportation Department works with the Athletics Department to ensure that transit and other alternative travel mode options are communicated to spectators for all major athletics events.

TRANSPORTATION AND TRAFFIC

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	●	

The analysis provided above demonstrates that the Project would not introduce any new significant impacts not already assessed in the 2020 LRDP.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?		●

The 2020 LRDP EIR found the 2020 LRDP program as a whole, if fully implemented, would cause seven Alameda County CMP and MTS designated roadways to exceed the level of service established by the Congestion Management Agency, as a result of increased parking supply and related vehicle trips. No mitigations are feasible, and the impact was determined to be significant and unavoidable (2020 LRDP EIR Vol 1, 4.12-54). The Project would not expand parking supply and vehicle trips, and would not introduce any new potential impacts not already assessed in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. 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 Project is not anticipated to affect or contribute to air traffic.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
4. Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? Create unsafe conditions for pedestrians or bicyclists?	●	

As described above, the Project would not itself cause any significant change in the road or path system, nor introduce any new types of vehicles, that could create new hazards.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
5. Result in inadequate emergency access?		●

The project site would be accessible directly from two major streets via standard driveways and street frontage. In addition, the project would be required to adhere to Continuing Best Practice PUB-2.3, which calls for UC Berkeley to continue its partnership with the City of Berkeley to ensure adequate fire and emergency service levels to the campus and UC facilities, including consultation on the adequacy of emergency access routes to all new University buildings.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	●	

The 2020 LRDP describes alternative transportation modes and includes policies to promote and expand their use. The analysis provided above demonstrates that the Project would not introduce any new significant impacts not already assessed in the 2020 LRDP. Furthermore, the number of new bike parking spaces would meet or exceed the number calculated by determining 10% of the average peak building use, as described in the Campus Bicycle Plan.

SUMMARY OF TRANSPORTATION AND TRAFFIC ANALYSIS

The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP, incorporating existing best practices and 2020 LRDP EIR mitigation measures, would as a whole result in some significant impacts upon traffic and transportation, specifically upon indicated intersections and roadways, primarily due to proposed increases in campus parking supply (2020 LRDP EIR Vol 1, 4.12-48 to 4.12-54).

As discussed in the analysis above, the Project would not result in significant impacts related to climate change and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis. No additional mitigation measures have been identified that would further lessen the previously identified impact.

UTILITIES AND SERVICE SYSTEMS

SETTING

The utilities and service systems of the campus are described in the 2020 LRDP EIR (Section 4.13). The following text summarizes context information for utilities and service systems relevant to the Cal Aquatics Center.

Water. Water supply and distribution to much of Alameda and Contra Costa County is provided by the East Bay Municipal Utilities District (EBMUD). EBMUD conducted a water supply assessment of the 2020 LRDP in January 2004. EBMUD indicated that, based on extensive forecasting in its water supply management program as well as recent land use based demand forecasting, the projected water demand of 277 million gallons per day (mgd) can be reduced to 229 mgd with successful water recycling and conservation programs in place. The 2020 LRDP would not change the EBMUD 2020 demand projection.[16]

The proposed project would be served from EBMUD existing water supplies. EBMUD's Berryman Pressure Zone, with a service elevation between 200 and 400 feet, would serve the proposed project.[17]

Wastewater. EBMUD provides wastewater collection for the entire 2020 LRDP area located in Alameda County, and provides wastewater treatment for all of the 2020 LRDP area. Sanitary sewage flows toward the San Francisco Bay through a network of pipes and mains that connect into the EBMUD regional interceptor line, which conveys the sewage south to the EBMUD Special District No. 1 (SD-1) Wastewater Treatment Plant, which then discharges the treated effluent into the Bay from a submerged outfall pipe under the Bay Bridge.[18]

Wastewater discharge is regulated under the National Pollutant Discharge Elimination System (NPDES) permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant. Wastewater from the Project site would be treated by EBMUD which has an NPDES Direct Discharge permit to discharge treated wastewater into the San Francisco Bay. Under this permit, EBMUD imposes effluent guidelines and discharge limitations pursuant to the National Pretreatment Program on the campus via the local EBMUD ordinance and by the EBMUD discharge permit issued to the campus.[19]

UC Berkeley owns and maintains its own sanitary sewer infrastructure serving the Campus Park. UC Berkeley facilities adjacent to the Campus Park either feed into the University-owned system or connect directly to the city's system.[20] In this instance, the project site would connect directly to the city's system via an 8-inch sewer line beneath Bancroft Way.

Stormwater. The City of Berkeley is responsible for stormwater conveyance within the Adjacent Blocks area of the 2020 LRDP. Currently, stormwater from the Adjacent Blocks flows to Strawberry Creek. The Adjacent Blocks West drains through culverts into lower Strawberry Creek in locations west of the Campus Park. In this portion of the watershed, all overland flow is collected by curb-and-gutter systems and delivered through side inlets to the storm drainage culverts beneath local streets.

A capital improvement program managed by the City of Berkeley maps the entire storm drain system, and schedules needed improvements, such as pipe replacements and enlargements. Ongoing maintenance programs include catch basin cleaning, street/sidewalk sweeping, site inspection, testing and monitoring, runoff control from new development, and public information and participation such as catch basin stenciling. Maintenance and improvements of the system are paid for by the General Fund and through hook-up fees paid by new development.

Steam. UC Berkeley owns and operates a steam heating distribution system for all buildings and facilities at UC Berkeley. Steam is generated from a co-generation plant, fueled by natural gas, located behind the Evans Memorial Stadium. Steam is distributed from the central heating plant via a piping system to individual buildings.[21] The cogeneration plant is owned and maintained privately. Peak demand for steam is currently 249,000 pounds per hour and the plant's capacity is 353,000 pounds per hour; in 2002, UC Berkeley used 749 million pounds of steam. [22]

Whenever UC Berkeley develops a preliminary project design for a new development, the Physical Plant/Campus Services Engineering and Utilities Department reviews the project to determine whether existing capacity of the steam system at the point of connection is adequate. If the capacity of the steam system is determined inadequate, the University upgrades the system to provide adequate service to the

project site before or as part of the project. In the event there is not enough capacity in the steam system, the campus would use natural gas or electricity for building heating and cooling.

On April 22, 2011, UC Berkeley published Addendum #8 to the UC Berkeley 2020 LRDP EIR, for the proposed design and construction of Electrical Switching Station #6. The project was approved on May 17, 2011. The addendum also analyzes a proposed brief amendment to the UC Berkeley 2020 LRDP, Campus Space and Infrastructure chapter, in order to reflect the need for improvements to the distribution system as may be required to accommodate 2020 LRDP development. The addendum is available on the web at http://www.cp.berkeley.edu/CP/PEP/Documents/EIR/SS6_FinalAddendum.pdf and incorporated herein by reference; the 2020 LRDP and related documents are available on the web at http://www.cp.berkeley.edu/LRDP_2020.htm.

2020 LRDP & 2020 LRDP EIR
MITIGATION MEASURES & CONTINUING BEST PRACTICES

Design and construction of the Cal Aquatics Center project would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effect of the implementation of the 2020 LRDP upon utilities and service systems. Where applicable, the Project would incorporate the following mitigation measures and/or continuing best practices:

Continuing Best Practice USS-1.1: For campus development that increases water demand, UC Berkeley would continue to evaluate the size of existing distribution lines as well as pressure of the specific feed affected by development on a project-by-project basis, and necessary improvements would be incorporated into the scope of work for each project to maintain current service and performance levels. The design of the water distribution system, including fire flow, for new buildings would be coordinated among UC Berkeley staff, EBMUD, and the Berkeley Fire Department.

Continuing Best Practice USS-2.1-b: UC Berkeley will analyze water and sewer systems on a project-by-project basis to determine specific capacity considerations in the planning of any project proposed 2020 under the LRDP.

Continuing Best Practice USS-2.1-d: UC Berkeley will continue to incorporate specific water conservation measures into project design to reduce water consumption and wastewater generation. This could include the use of special air-flow aerators, water-saving shower heads, flush cycle reducers, low-volume toilets, weather based or evapotranspiration irrigation controllers, drip irrigation systems, the use of drought resistant plantings in landscaped areas, and collaboration with EBMUD to explore suitable uses of recycled water.

Continuing Best Practice USS-3.1: UC Berkeley shall continue to manage runoff into storm drain systems such that the aggregate effect of projects implementing the 2020 LRDP is no net increase in runoff over existing conditions.

Continuing Best Practice USS-5.1: UC Berkeley would continue to implement a solid waste reduction and recycling program designed to reduce the total quantity of campus solid waste that is disposed of in landfills during implementation of the 2020 LRDP.

Continuing Best Practice USS-5.2: In accordance with the Regents-adopted green building policy and the policies of the 2020 LRDP, the University would develop a method to quantify solid waste

diversion. Contractors working for the University would be required under their contracts to report their solid waste diversion according to the University's waste management reporting requirements.

LRDP Mitigation Measure USS-5.2: Contractors on future UC Berkeley projects implemented under the 2020 LRDP will be required to recycle or salvage at least 50% of construction, demolition, or land clearing waste. Calculations may be done by weight or volume, but must be consistent throughout.

UTILITIES AND SERVICE SYSTEMS

WATER

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Exceed the capacity of existing and planned water entitlements and resources?		●

The Project includes three one-story buildings surrounding a 25-yard by 52-meter swimming pool with a dive tower. New gross square feet planned for the site equals 10,860. The Project represents less 0.5% of the total net new gross square feet anticipated under the 2020 LRDP. The 2020 LRDP increase was found not to result in a significant impact on water entitlements and resources, nor warrant the construction of new or altered facilities (2020 LRDP EIR Vol 1, 4.13-5). This has been confirmed through correspondence with EBMUD regarding the proposed project's contribution to cumulative demands on water resources.[23]

It should be noted that Section 31 of EBMUD's Water Service Regulations requires that water service shall not be furnished for new or expanded service unless all the applicable water-efficiency measures described in the regulation are installed at the project sponsor's expense. Consistent with Continuing Best Practice USS-2.1-d, specific water conservation measures have been included in the project design to reduce water consumption and wastewater generation. EBMUD has also requested that the proposed project comply with the California Model Water Efficient Landscape Ordinance (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495); the recommendation has been forwarded to the design team, in order to further reduce the already less than significant impact to water supplies.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Require or result in the construction of new or expansion of existing water facilities, the construction of which could cause significant adverse effects?		●

Please see response to Water item 1, above. The proposed project would not require or result in the construction of new or expanded water facilities.

WASTEWATER
Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	●	

The net new space in the Project (10,860 GSF) represents less than 0.5% percent of the total growth (2,200,000 GSF) anticipated under the 2020 LRDP EIR. The 2020 LRDP EIR determined the increased demand for wastewater treatment resulting from implementation of the 2020 LRDP would not result in significant impacts on capacity, and construction of new or altered wastewater collection facilities would not result in significant environmental impacts. (2020 LRDP EIR Vol 1, 4.13-10) This conclusion is consistent with information provided by EBMUD, which anticipates that its Main Wastewater Treatment Plant (MWWTP) and interceptor system would have adequate dry weather capacity to treat the proposed wastewater flows from this project, provided that the project and the wastewater generated by the project meet the requirements of the current EBMUD Wastewater Control Ordinance. However, wet weather flows may be an issue due to ongoing problems caused by stormwater infiltration during storm events. EBMUD has historically operated three Wet Weather Facilities to provide treatment for high wet weather flows that exceed the treatment capacity of the MWWTP. On January 14, 2009, due to Environmental Protection Agency's (EPA) and the State Water Resources Control Board's (SWRCB) reinterpretation of applicable law, the Regional Water Quality Control Board (RWQCB) issued an order prohibiting further discharges from EBMUD's Wet Weather Facilities. In addition, on July 22, 2009, a Stipulated Order for Preliminary Relief issued by EPA, SWRCB, and RWQCB became effective. This order requires EBMUD to perform work that will identify problem infiltration/inflow areas, begin to reduce infiltration/inflow through private sewer lateral improvements, and lay the groundwork for future efforts to eliminate discharges from the Wet Weather Facilities.

Currently, there is insufficient information to forecast how these changes will impact allowable wet weather flows in the individual collection system subbasins contributing to the EBMUD wastewater system, including the subbasin in which the proposed project is located. It is reasonable to assume that a new regional wet weather flow reduction program may be implemented in the East Bay, but the schedule for implementation of such a program has not yet been determined. As a result, the incremental contribution of the proposed project to cumulative wet weather flows could exceed allowable wet weather flows and therefore capacity of the wastewater system.

The project site is currently a paved surface parking lot. Addition of the proposed Project to the site would introduce wastewater flows from bathroom and locker room facilities, which would be equipped with low-flow fixtures. Wastewater would also be discharged as a result of the backwashing of the pool and spa filters, which would occur on average once per week. The timeframe over which this could occur can be programmed based on the capacity of the sewer system but on average is anticipated to take 80 minutes. This process would discharge an estimated 16,304 gallons to the sewer system each time the process occurs. This increase in discharge to the sewer system could add to existing cumulative impacts to wastewater treatment capacity if it occurs during wet weather flows. To address potential impacts to wastewater treatment capacity during wet weather the following mitigation measures would be required:

MM-UTIL-1 Backwash activities shall not occur within 24 hours before an anticipated rain event or within 48 hours after a rain event, until implementation of a regional wet weather flow reduction program in the affected sub-basin is completed.

MM-UTIL-2 Any new or replacement wastewater collection system infrastructure required to serve the project, including sewer lateral lines, shall be constructed to prevent infiltration/inflow to the maximum extent feasible.

It should be noted that, with the exception of the narrow landscaped perimeter, the entire project site is currently paved and impervious; thus, the vast majority of site runoff is conveyed directly to existing storm drains. The proposed Project would replace the existing paved parking lot with new pervious and impervious surfaces. In combination with on-site retention and stormwater collection, the project would decrease the rate and volume of surface runoff and thus would incrementally reduce stormwater infiltration during storm events in the project area.

In addition, the 2020 LRDP EIR also noted localized clusters of new development could exceed the capacity of individual sub-basins, and incorporated measures to minimize possible collection capacity impacts, including project-by-project analysis of sewer system capacity considerations (Continuing Best Practices USS-2.1-b and USS-2.1-d through USS-2.1-e). As further support of this effort, in May of 2005 the UC Berkeley Chancellor and the mayor of the City of Berkeley signed an agreement earmarking $200,000 annually in campus funds to the City of Berkeley to support sewer and storm drain infrastructure projects.

Should it be determined that increases to sewer system collection capacity are required, any replacement/rehabilitation of existing sewer collection lines and construction of new sewer lateral lines would occur within an existing road (Bancroft Way) in a fully urbanized area. As such, though construction-related effects, such as disruption to traffic flows and construction noise, could occur, these would be temporary and would be addressed through standard measures, such as traffic control and adherence to timing restrictions in the City of Berkeley Noise Ordinance. Therefore, no significant adverse effects to the environment would occur in meeting wastewater needs of the Project.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Require or result in the construction of new or expansion of existing wastewater treatment facilities, the construction of which could cause significant adverse effects?	●	

See Utilities and Service Systems - Wastewater Item 1.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
3. Exceed wastewater treatment requirements of the Regional Water Quality Control Board?		●

EBMUD regulates UC Berkeley's wastewater discharge to its treatment plant through a source control program designed to ensure compliance with their NPDES permit conditions. UC Berkeley is required to comply with conditions of EBMUD's Ordinance 311 and the Main Campus Wastewater Discharge Permit

issued by EBMUD's Source Control Division and applicable to all campus laboratory, construction and municipal operations.

UC Berkeley's program has served as a model to others. The program's success at preventing pollution was recognized in 2003 when the campus was one of two honorees to be awarded EBMUD's Pollution Prevention Award for 'exemplary performance in complying with discharge requirements.'

The project would not be considered a new land use not previously analyzed in the 2020 LRDP EIR; thus, there is no expectation that operation would significantly alter campus wastewater discharge or violate water quality standards. Treated swimming pool water may be discharged into the sanitary sewer periodically to maintain water quality and quantity requirements. The water quality is suitable for sustained human contact; and thus, would not violate water quality standards. Discharge quantities would vary but are not expected to exceed the growth parameters assessed in the 2020 LRDP EIR, which found the potential impact on water quality standards and waste discharge requirements to be less than significant, given existing campus practices. (Best Practices HYD-1-a through HYD-1-d) Also, see Hydrology and Water Quality item 1.

STORMWATER

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Require or result in the construction of new or expansion of existing stormwater drainage facilities, the construction of which could cause significant adverse effects?		●

As described under *Hydrology and Water Quality*, the campus would continue to manage runoff into storm drain systems such that the aggregate effect of projects implementing the 2020 LRDP is no net increase in runoff to storm sewers over existing conditions. (Best Practice USS-3.1)

The proposed Project would replace an existing paved parking lot with new pervious and impervious surfaces. In combination with on-site retention and stormwater collection, the project would decrease the rate and volume of surface runoff. The 2020 LRDP EIR requires that new projects be sited and designed so the aggregate effect of projects under the 2020 LRDP is no net increase in runoff over existing conditions (Best Practice HYD-4-e). The proposed Project would be consistent with Best Practice HYD-4-e. As the proposed Project will reduce the amount of stormwater runoff entering the storm drain system, no upgrades to the City's storm drain system would be necessary. See also Hydrology and Water Quality items 3 and 4.

SOLID WASTE

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Violate any applicable federal, state, and local statutes and regulations related to solid waste?		●

The campus is committed through campus policy to continuing and improving waste reduction and minimization efforts. The project represents less than 0.5 percent of the total net development growth anticipated under the 2020 LRDP, and the 2020 LRDP EIR found this growth would not result in solid waste impacts that would violate any applicable federal, state or local statute or regulation related to

solid waste. In addition, given the type of activity that would occur at the site, primarily training by University aquatics teams, the site is expected to result in a minimal contribution to solid waste generation at the University.

Implementation of LRDP Mitigation Measure USS-5.2 would require recycling or salvage at least 50% of construction and demolition waste generated during construction of the proposed project.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Exceed the permitted capacity of a landfill that serves the project's solid waste disposal needs?		●

UC Berkeley is exempt from county requirements to dispose of solid waste in the county, and therefore selects landfill sites based on lowest cost. In accordance with the Regents-adopted Policy on Sustainable Practices and the policies of the 2020 LRDP, contractors working for the University would be required to report their solid waste diversion according to the University's waste management reporting requirements. The project is not anticipated to result in solid waste impacts that would violate any applicable federal, state or local statute or regulation related to solid waste. (2020 LRDP EIR Vol 1, 4.13-21 and 4.13-22)

ENERGY

Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Require or result in the construction of new or expansion of existing energy production and/or transmission facilities, the construction of which could cause significant adverse effects?		●

The Project represents less than 0.5 percent of the total of the total net development growth anticipated under the 2020 LRDP, and the 2020 LRDP EIR found this growth is not anticipated to result in the need for new or altered energy production and/or transmission facilities. (2020 LRDP EIR Vol 1, 4.13-25).

Electricity would either be brought over from the Campus Park via a line beneath and across Bancroft Way or from standard PG&E service from existing distribution points adjacent to the site. Should installation of a line beneath Bancroft Way be required, construction activity would occur within an existing roadway in a fully urbanized area. As such, though construction-related effects, such as disruption to traffic flows and construction noise, could occur these would be temporary and would be addressed through standard measures, such as traffic control and adherence to timing restrictions in the City of Berkeley Noise Ordinance. Therefore, no significant adverse effects to the environment would occur.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
2. Would the project encourage the wasteful or inefficient use of energy?		●

The proposed Project would contribute to UC Berkeley continuing to exceed Title 24 energy conservation requirements for new buildings by 20%, and incorporate energy efficient design elements, in accordance with existing policies and 2020 LRDP goals. (2020 LRDP EIR Vol 1, 4.13-26).

STEAM AND CHILLED WATER
Would the Cal Aquatics Center project:

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
1. Require or result in the construction of new or expansion of existing steam and/or chilled water facilities, the construction of which could cause significant adverse effects?		●

Heating for the pool water would be provided by an on-site gas boiler. Therefore, the proposed project would not result the need for new or expanded steam or chilled water facilities.

SUMMARY OF UTILITIES AND SERVICE SYSTEMS ANALYSIS
The Project represents less than 0.5 percent of the total net development growth anticipated under the 2020 LRDP. The 2020 LRDP EIR concluded that projects implementing the 2020 LRDP, incorporating existing best practices and 2020 LRDP EIR mitigation measures, would not result in new significant utilities and service systems impacts (2020 LRDP EIR Vol 1, 4.13-5, 4.13-10 to 4.13-12, 4.13-15 to 4.13-16, 4.13-18, 4.13-21 to 4.13-22, 4.13-25 to 4.13-28). While this remains true, for steam and/or chilled water facilities, energy production and/or transmission facilities and solid waste capacity concerns, the 2009 RWQCB order prohibiting further discharges from EBMUD's Wet Weather Facilities requires that mitigation measures be implemented to address potential impacts to wastewater treatment capacity during wet weather periods. In addition, the Project would replace an existing paved parking lot with new pervious and impervious surfaces. In combination with on-site retention and stormwater collection, the project would decrease the rate and volume of surface runoff reducing capacity demands on the existing stormwater system. As discussed in the analysis above, the Project would not result in significant impacts related to utilities and service systems and the minor text changes to the LRDP, and the Project itself, are within the scope of the LRDP EIR analysis.

MANDATORY FINDINGS OF SIGNIFICANCE

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		●

The project does not pose new concerns about the quality of the environment not analyzed in the 2020 LRDP EIR. Potential impacts of new construction and other 2020 LRDP activities upon fish, wildlife, plant or animal communities, special status species, or important examples of the major periods of California history or prehistory are examined at section 4.3 of the 2020 LRDP EIR, Vol 1, Biological Resources, and section 4.4 of the 2020 LRDP EIR, Vol 1, Cultural Resources. No significant unavoidable impacts upon Biological Resources are anticipated in implementation of the 2020 LRDP. The project would have no impact on historic resources and less-than-significant impacts on other cultural resources, with required adherence to continuing best practices and LRDP mitigation measures identified in this analysis. See also Chapter 6 of the 2020 LRDP EIR, Vol 1, CEQA-required assessment conclusions.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
Does the project have impacts that are individually limited but cumulatively considerable? ('Cumulatively considerable' means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other projects, and the effects of probable future projects)?		●

Cumulative impacts of the 2020 LRDP are analyzed in the 2020 LRDP EIR beginning at the following pages: Aesthetics, 4.1-21; Air Quality, 4.2-29; Biological Resources, 4.3-33; Cultural Resources, 4.4-60; Geology, Seismicity and Soils, 4.5-22; Hazardous Materials, 4.6-32; Hydrology and Water Quality, 4.7-31; Land Use, 4.8-19; Noise, 4.9-23; Population and Housing, 4.10-17; Public Services, 4.11-29; Transportation and Traffic, 4.12-59; Utilities and Service Systems, 4.13-27. The 2020 LRDP EIR found significant cumulative impacts on the traffic network due to trips generated by implementation of the 2020 LRDP (see page 4.12-59 of the 2020 LRDP EIR, Vol 1); significant cumulative noise impacts due to construction noise exceedances of local standards (see page 4.9-24 of the 2020 LRDP EIR, Vol 1); potential significant cumulative impacts upon the resource base of historical or archaeological resources (see page 4.4-61 of the 2020 LRDP EIR, Vol 1); and a potential continuing cumulative exceedance of toxic air contaminant emissions (see page 4.2-34 of the 2020 LRDP EIR, Vol 1). The project may incrementally contribute to significant environmental impacts previously identified in the 2020 LRDP EIR, but will not result in those impacts being more severe than as described in the 2020 LRDP EIR, SCH #2003082131. No additional mitigation measures have been identified that would further lessen the previously identified impact, and no additional analysis is required. The incremental impacts of the Cal Aquatics Center project would not be cumulatively considerable and have been sufficiently addressed in the 2020 LRDP EIR.

	Further Analysis Required	2020 LRDP EIR Analysis Sufficient
Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		●

Potential adverse effects on human beings, directly or indirectly, are addressed in the 2020 LRDP EIR sections on Air Quality; Geology, Seismicity and Soils; Hydrology; Noise; Public Services – Fire and Emergency Protection; Transportation and Traffic. Implementation of the 2020 LRDP, including implementation of best practices and mitigation measures, is anticipated to reduce adverse effects on human beings. As the Project generally implements the 2020 Long Range Development Plan, this environmental analysis relies on the 2020 LRDP EIR program document for consideration of cumulatively considerable effects. See the 2020 LRDP EIR Vol 1, as revised by Vol 3a, within each topic area.

6. ALTERNATIVES

The University evaluated alternatives to the Cal Aquatics Center: (1) No Project Alternative, (2) Mixed Use alternative (retail, office and residential in addition to aquatics uses), and (3) Strawberry Canyon Site Alternative.

No Project Alternative. Under this alternative, the existing surface parking lot would be maintained on the project the site as it currently exists. There would be no changes to the existing environment.

The No Project alternative would not result in any of the contributions to the impacts studied in the LRDP EIR as identified in this SEIR. Neither would it achieve the objectives of the proposed project.

Mixed Use Alternative. Under this alternative, two rectangular buildings – one five-story building containing retail and office uses with parking at a below-grade level and one four-story building containing residential and aquatics uses – would flank the pool and dive tower, with their shorter ends fronting Bancroft Way and Durant Avenue. A similar conceptual project was described as "Scheme B: Bar Scheme" in the Intercollegiate Aquatic Center Concept Plan prepared by Gensler et al in 2008. The following points summarize this alternative:

- The long-course pool (50m.) is combined with a dive well and the resulting 67 metre pool is oriented in a north-south direction parallel to Fulton Street.
- The Dive Tower is oriented facing north over the diving well at the southern end of the water area adjacent to Durant Avenue.
- The main entrance to pools and bleachers is located directly south of Edwards Arena on Bancroft Way, with potential grade separation between spectators and athletes as visitors enter the Aquatic Center. A secondary entrance for service is located adjacent to the Tang Center service area south-east of the project site.
- The main bleachers are located west of the pool, looking east. This location reduces over-shadowing of the pool.
- Emergency egress may be provided to both Bancroft Way and Durant Avenue.
- Aquatics program is located beneath the bleachers and provides up to 21,000 square feet of designated space for lockers and other aquatics program. Additional space for periodic uses is incorporated in the mixed-use buildings.
- Pool operations and maintenance space is provided parallel to the water on the east side, under the residential component of the project. This area provides storage area for solar blankets, and other equipment necessary for the aquatics programs.
- A single mixed-use building is located parallel to Fulton Street. A single plate of parking provides up to 55 spaces. Ground floor retail provides up to 18,000 gross square feet of neighborhood retail and potential front-of-house uses for UCB. A minimum of four floors of mixed-use / office space are located above the retail, and provide up to 20,000 gross square feet per floor, providing a minimum of 80,000 gross square feet total. A standard width of 80 feet is used for mixed-use buildings on both Fulton and Bancroft frontages. The Fulton floor plate may be reduced by 10 feet to provide a wider sidewalk in front of the retail façade.
- Residential opportunity is established on the eastern edge of the project site over the deck storage areas facing the Tang Center. This provides up to 30,000 gross square feet of space, and may yield up to 50 units of faculty or graduate student housing. No need for parking is assumed consistent with the SSP.

- There is limited capacity to provide parking for these units. Units front the mid-block crossing between Bancroft Way and Durant Avenue. Should residential uses not prove feasible, this space may be reallocated to provide additional space for aquatics programs, or may be transferred to the mixed-use building to the west to increase its potential yield.
- A mid-block connection between Durant Way and Bancroft Avenue is reinforced, with a clear landscape area defined by the eastern edge of the project, providing potential views over the outdoor pool area. An entrance and congregation area is located at the corner of Bancroft Way and Fulton Street. This area is potentially enlarged through bulb-outs, and provides a visual and functional connection to the Edwards Glade. The intersection of Fulton Street and Durant Avenue may also include bulb-outs and additional gathering space—and may provide a convenient and sunny location for outdoor dining affiliated with a neighborhood café or other local vendor at this corner site.

The Mixed Use Alternative would have similar impacts to the proposed project for most of the issue areas studied in this SEIR, as it would have a similar overall development footprint and would similarly be within the overall development envelope of the LRDP and LRDP EIR. It would have a similar amount of residual parking and a similarly modest impact on traffic and circulation, as it would locate campus-related uses adjacent to the campus park and increase the availability of housing within walking distance of the campus, campus services and downtown. Although it would be larger in scale than the proposed project and the immediately surrounding buildings, it would be generally consistent with the scale in the larger vicinity, being similar in height to buildings along Fulton Street north of the site towards downtown. The project's less-than-significant lighting and noise impacts to residences across Durant Avenue would be slightly reduced due to the increase in intervening structures. It would also be more consistent with the Southside Plan and LRDP in providing a mixed-use project on the site with a more active pedestrian interface at street level. Although feasible from a planning and use standpoint, other considerations such as availability of funding for new development and the present offer from donors for this important aquatics facility, which would not accommodate the additional development contemplated in this alternative, make this alternative financially infeasible.

Strawberry Canyon Site Alternative. In this alternative, a similar project would be constructed at the existing Strawberry Canyon recreation site, on the south side of Centennial Drive just north of its intersection with Stadium Rim Way. This site was built in 1959 and is used primarily for UC student, faculty, staff and community use. The natural, wooded canyon site provides a popular resource for recreational swimming, and the Haas clubhouse provides locker, shower, meeting and office facilities for the complex. The project would replace the lower (westerly) of the existing two pools on the site.

The Strawberry Canyon Site Alternative would have similar impacts to the proposed project for most of the issue areas studied in this SEIR, as it would have a similar overall development footprint and would similarly be within the overall development envelope of the LRDP and LRDP EIR. It would have a potentially greater impact on traffic and circulation, as it would be farther from main bus lines, downtown Berkeley and the campus. Impacts related to aesthetics and biological resources would also be potentially greater, given the more natural setting and proximity to habitat, mature native trees and drainages. It would also be more consistent with the Southside Plan and LRDP as it would not preclude a more intensive mixed use project on the Bancroft/Fulton parking lot in the future if such a project could be funded. Because it would not result in a significant adverse land use impact, and would not require a text amendment to the 2020 LRDP, it would be the environmentally preferred alternative; however, it would not meet project objectives. Although feasible from a planning and use standpoint, locating the new Aquatics Center at a location as far from the existing aquatics programs would be less practical and

convenient from a programming and access standpoint, and thus would not achieve the objectives to the extent that the proposed project would.

APPENDIX A

CAL AQUATICS CENTER - DRAFT MINOR LRDP TEXT AMENDMENT

3.1.14 CITY ENVIRONS FRAMEWORK

PLAN EVERY NEW PROJECT TO RESPECT AND ENHANCE THE CHARACTER, LIVABILITY, AND CULTURAL VITALITY OF OUR CITY ENVIRONS.

….

PROJECT DESIGN

UC Berkeley serves the entire state of California, and thus has a mission that can not always be met entirely within the parameters of municipal policy. In the City Environs, however, the objectives of UC Berkeley must be informed by the plans and policies of neighboring cities, to respect and enhance their character and livability through new university investment.

POLICY: USE MUNICIPAL PLANS AND POLICIES TO INFORM THE DESIGN OF FUTURE CAPITAL PROJECTS IN THE CITY ENVIRONS.
USE THE SOUTHSIDE PLAN AS A GUIDE TO THE DESIGN OF FUTURE CAPITAL PROJECTS IN THE SOUTHSIDE.
PREPARE PROJECT SPECIFIC DESIGN GUIDELINES FOR EACH MAJOR NEW PROJECT.

ADJACENT BLOCKS

City of Berkeley land use regulations for the Adjacent Blocks in place as of July 2003, particularly the height and density provisions of the zoning ordinance, reflect a strong preference toward residential and mixed-use projects. However, in order to meet the demands for program space created by enrollment growth and by ongoing growth in research, sites on the Adjacent Blocks must provide adequate capacity to accommodate these demands, in order to maintain UC Berkeley as the compact, interactive campus described in **Campus Land Use.**

While maximizing the capacity of limited campus lands may be the rule, a rare exception may be made to continue to support excellence, as in the Cal Aquatics Center example. The Cal Aquatics Center would provide needed training facilities for UC Berkeley's outstanding athletes in a low density single use facility in the Adjacent Blocks.

Major capital projects would be reviewed at each stage of design by the UC Berkeley Design Review Committee, based on project specific design guidelines informed by the provisions of the Berkeley General Plan and other relevant city plans and policies. The university would make informational presentations of all major projects on the Adjacent Blocks to the City of Berkeley Planning Commission and, if relevant, the City of Berkeley Landmarks Commission for comment prior to schematic design review by the UC Berkeley Design Review Committee.

Projects on the Adjacent Blocks within the area of the Southside Plan would as a general rule use the Southside Plan as a guide to project design, as described below.

SOUTHSIDE

The university owns roughly 45% of the land in the Southside, and students comprise over 80% of Southside residents. For both reasons, the Southside has always been the area of Berkeley where a positive, shared city-campus vision is most urgently required, and the lack of such a vision most acutely felt.

In 1997 the City of Berkeley and UC Berkeley signed a Memorandum of Understanding, which states 'the city and the university will jointly participate in the preparation of a Southside Plan ... the campus will acknowledge the Plan as the guide for campus developments in the Southside area'. The city and university have since collaborated on a draft Southside Plan, which as of March 2004 was being finalized for formal city adoption.

Given the mixed-use character of the Southside and the constant influx of new student residents, it is important to remember the Southside is, first and foremost, a place where people live. While the Southside Plan recognizes there are many areas within the Southside suitable for new non-residential projects, it also recognizes such projects must be planned to enhance the quality of life for all Southside residents.

Assuming no further substantive changes are made by the city prior to adoption, the university should as a general rule use the Southside Plan as its guide for the location and design of future projects in the Southside, as envisioned in the Memorandum of Understanding.

As of 2013, the Southside Plan has been adopted by the City of Berkeley and is the university's guide for the location and design of projects in the Southside. A rare exception may be made, however, to continue to support excellence, as in the Cal Aquatics Center example. The Cal Aquatics Center would provide needed training facilities for UC Berkeley's outstanding athletes in a low density single use facility in an area of the Adjacent Blocks subject to the Southside Plan.

Major capital projects would be reviewed at each stage of design by the UC Berkeley Design Review Committee, informed by the provisions of the Southside Plan. The university would make informational presentations of all major projects within the Southside Plan area to the City of Berkeley Planning Commission and, if relevant, the City of Berkeley Landmarks Commission for comment prior to schematic design review by the UC Berkeley Design Review Committee.

APPENDIX B

PROJECT-SPECIFIC DESIGN GUIDELINES

TANG PARKING LOT: MIXED USE DESIGN GUIDE

A series of analyses are being done on the Tang Parking Lot (Tang Lot) to evaluate the feasibility of varying degrees of development on the site. This UC-owned site includes both the surface parking lot west of the Tang Center, and the adjacent property west to Fulton Street, between Bancroft and Durant as depicted in Figure 1, Site Location. Options being considered include (1) an option to develop the site with office, administrative, and housing uses as dictated in the UC Berkeley (UC) 2020 Long Range Development Plan (LRDP), as well as (2) an option to include either a training or competitive aquatics venue at the site.

Figure 1, Site Location

Such a multi-use facility on the site could include a 50 foot event tank, multiple training tanks, a dive platform, increased seating and spectator amenities and related facilities, in addition to appropriate support spaces for other uses on the site. These design guidelines will address massing and circulation required to provide program space for the aquatics facility, administrative/office space and housing. Some of the key issues and program goals for the site include:

Land Use: The LRDP identifies the Adjacent Blocks and Southside, along with the Campus Park and Hill Campus as appropriate locations for fitness, recreation and intercollegiate athletics, but focuses specific attention on administrative and limited housing uses proposed for the site. Uses for the Tang lot as described in the New Century Plan are a “mix of academic and/or service functions facing Bancroft, housing facing Durant, and parking below grade.” Maintaining the integrity and balance of use on the site is critical, especially considering the surrounding mix of uses within the Southside planning area and the historic resources located to the north around Edwards Track. For this reason it is important that the facility be design with sensitivity to the neighborhood as a whole not as a separate discrete object.

Massing: The Tang lot connects the adjacent blocks south and west of the campus as defined in the 2020 LRDP. Both the Southside and Downtown Area Plans inform the scale of development on the site, bordering UC to the north, adjacent neighborhoods to the south and the Downtown Area to the west.

Parking and Access: Based on 2007-2008 parking office data, there are current 302 total parking spaces in the Bancroft/Fulton (270) and the Bancroft West (32) lots. Campus policy requires that any project displacing parking

pay $37,700 per space to Parking & Transportation to replace parking onsite or elsewhere on campus. The site is within a car-free overlay zone within the Southside Plan and within close proximity to transit, thus judgments must be made about how much parking should be required with the respective uses proposed for the site, as well as what the subsequent access and traffic implications. Although a new use of the site might support city and campus efforts to enliven the downtown, the new use might also generate increased traffic, noise and light that would require mitigation.

LOCATION

SOUTHSIDE CONTEXT

The Tang Lot is located within the Southside area in southeastern portion of Berkeley, immediately south of and adjacent to the main Berkeley campus. The Southside area comprises a mixture of land uses, including residential, office, retail, parking, schools, recreational and institutional uses. It is described as "a vibrant, eclectic, and densely populated center of student life, social activism, and commerce admixed with the traditions embodied in the historic homes, churches, clubs and other buildings that dignified the neighborhood for more than a century. It is an area of intellectual energy but also in conflict that tests the durability of town-gown relations." (Helfand)

Because of this location project guidelines draw heavily upon the City of Berkeley Southside Plan. The DEIR for the Plan is currently under review. However UC has generally accepted the document and signed a 1997 Memorandum of Understanding sting that 'the city and the university will jointly participate in the preparation of a Southside Plan… the campus will acknowledge the Plan as the guide for campus developments in the Southside area". The overarching goals of the Southside Plan are to:

- Enhance the Southside neighborhood's unique social, cultural, and architectural character;
- Create safe and appealing Southside neighborhood based on a comfortable and pedestrian-oriented environment, and;
- Create a strong physical connection, one that is mutually supporting and beneficial, between UC Berkeley and the Southside neighborhood.

The University's Underhill Area Streetscape Design Guidelines (2004) are also utilized for recommendations on streetscape character.

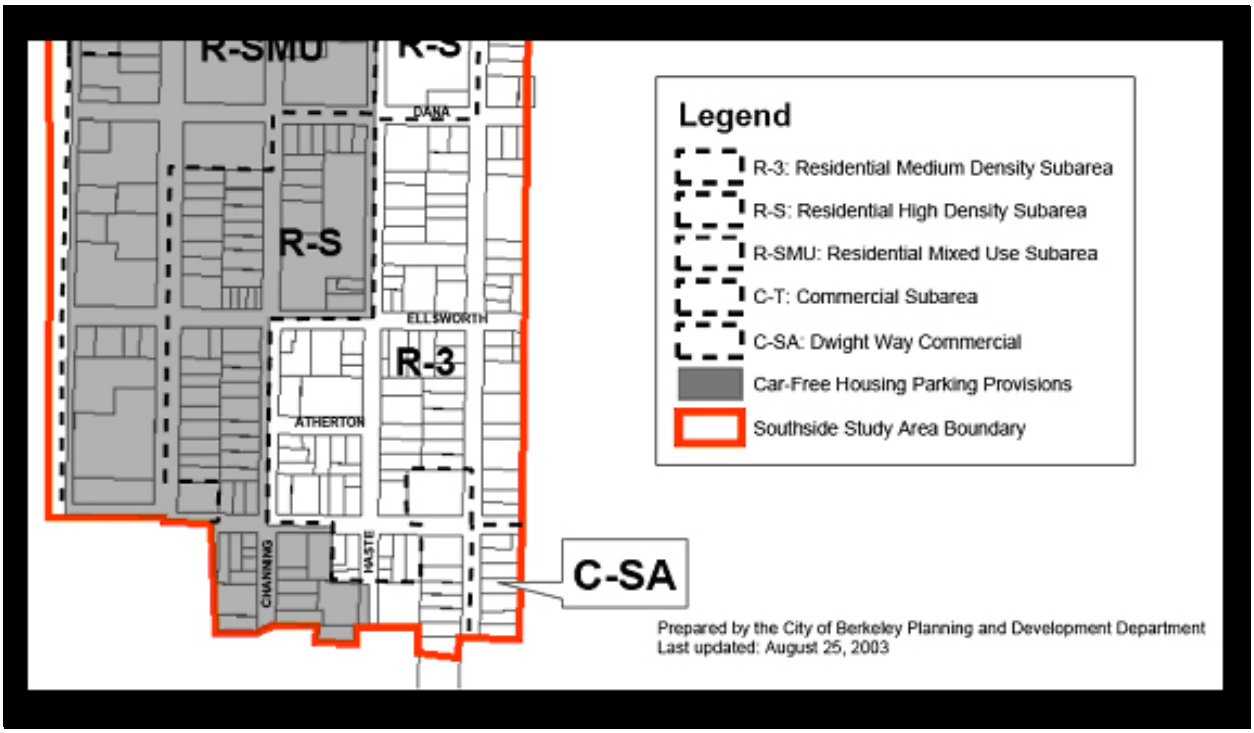


Figure 2

UC GUIDANCE

UC Guidance is provided by the 2020 Long Range Development Plan, the New Century Plan and the Landscape Master Plan. Although these documents establish general design principles for all projects, the 2020 LRDP states "…each major project also requires project-specific guidelines, to ensure the unique features of the site and environs

are respected." The project guidelines also incorporate relevant mitigation measures prescribed in the 2020 LRDP Environmental Impact Report.

Major capital projects would be reviewed at each stage of the design by the Campus Design Review Committee, informed by the provisions of the Southside Plan. The University would make informational presentations of all major projects within the Southside Plan area to the City of Berkeley Planning Commission and, if relevant, the City of Berkeley Landmarks Commission for comment prior to schematic design review by the Campus Design Review Committee.

SUSTAINABLE DESIGN

Per The University of California Policy on Sustainable Practices, new buildings are required to meet a minimum standard equivalent of LEED 2.1 "Certified" rating and strive to achieve a standard equivalent of LEED Silver rating or higher and are required to outperform the provisions of the California Energy Code (Title 24) energy-efficiency standards by at least 20 percent. The project may elect to achieve certification through the USGBC. If not, the project is required to submit documentation of the credits to the campus for submittal to the University's Office of the President.

CONTEXT

The site has historically been used for parking being shown as parking in campus plans as early as the 1962 LRDP for the UC Berkeley campus (Figure 3 1962 LRDP), and serves the Tang Center for University Health Services, as well as the general campus. Since that time various uses have been proposed for the site but none actually developed. It is now being discussed in concert with long-range planning, and the Berkeley Downtown Area Plan (DAP). The property is one of the key development sites in the LRDP with potential for office and housing on the site. It is one of the few large, undeveloped sites remaining in University ownership.

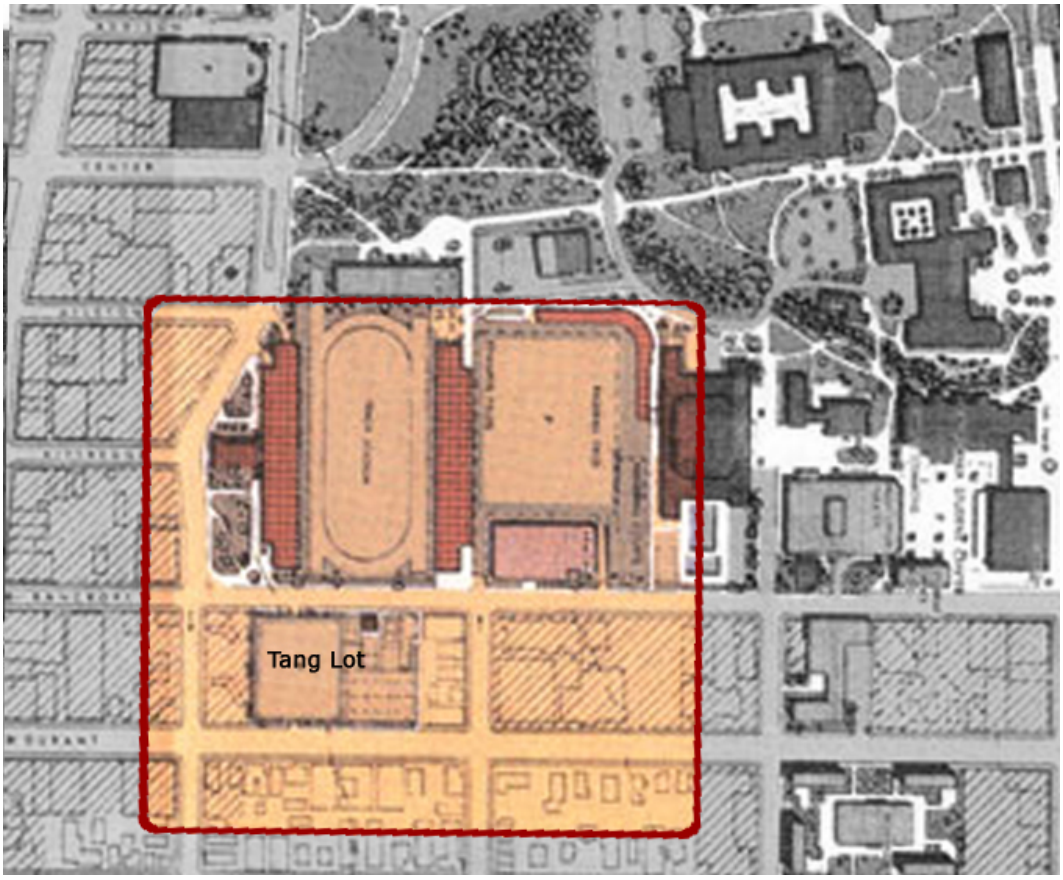


Figure 3 1962 LRDP

The adjacent Tang Center was constructed in 1991 on a site that had previously been used for student recreational courts. Designed by Anshen + Allen, it was recognized for excellence in design by the American Institute of Architects in 1997.[1] It is approximately 80,000 gross square feet and makes an attempt to reflect tradition Bay Area architectural elements, such as those introduced by Maybeck, Esherick, and Wurster, in a modern structure. Elements that reflect these sensibilities include trellises, 'bracket-like rain leaders", balconies, terracotta color stucco, and blue curtain walls (Helfland, 2002).

Figure 4 Tang Center

[1] University Health Services: http://www.uhs.berkeley.edu/home/about/uhshistory.shtml

The 2200 Bancroft building, on the western edge of the lot between Bancroft and Durant, houses UC Public and University Affairs. It was constructed in 1974 as a bank and is approximately 14,500 gross square feet. It was later used as a bike shop. The building's architectural style reflects a simple and non-distinctive box design. Several sycamore trees surround the building, as well as the remainder of the Tang Lot and provide significant shade and cover.

Figure 5

The historic wall at Edwards Track provides another interface with the site immediately to the North. The stadium is named after Col. George C. Edwards, a former math professor who was a member of the Universities' first graduating class in 1873. The stadium seats 22,000 people and is the respective home for Berkeley's intercollegiate soccer and track and field programs. It was placed on the National Register of Historic Places in 1993.

Figure 6, Historic Wall at Edwards

ZONING REQUIREMENTS

DENSITY, HEIGHTS & MASSING

The site is zoned Residential-Southside Mixed Use District (R-SMU) within the City of Berkeley's Southside Plan (see Figure 2). Per the Southside Plan Policy LU-A2,

> *Housing and mixed-use projects with housing should be the University of California's highest priority for the use of University-owned opportunity sites in the Southside except those with frontage on Bancroft." These should:*
> *A. Encourage partnerships between the University and non-profit housing developers, student co-ops and other private developers to build additional housing.*
> *B. Encourage the University to build apartment style housing units for undergraduates, graduate students, junior faculty, and staff.*

The area includes some of "the subarea where the greatest diversity of land uses currently exists, including housing, offices, religious facilities, schools, social institutions, parking lots, cultural facilities, a hotel, and several retail uses. This subarea also contains much University property, including a wide range of academic and student serving uses and administrative offices." (Southside Plan, LU-F7)

R-SMU zoning allows for a height of 5 stories and 75 feet within the portion of the District "located west of Telegraph Avenue and within 130 feet from Bancroft Way," if 50 percent of the total building floor area is designed for residential use, 20 percent of which would be affordable. Generally, the maximum height shall be 4 stories and 60 feet, however the City of Berkeley has indicated support in the EIR for the DAP for a maximum height of 85 feet at the corner at the corner of Bancroft and Fulton.

Based on this, the recommended maximum height for UC development on the Tang Lot would be between 75 and 85 feet along Bancroft. The focus of this bulk will lie at the corner of Bancroft and Fulton. Maximum lot coverage will range between 50 and 100 percent erring on the side of discretion to reflect and reinforce the height, scale, massing, rhythm, and proportion of existing buildings in this subarea. Development should be stepped down mid-block in an east-west direction to a maximum height of 65 feet along Durant.

Floor-to-floor heights should fall into the standard range for mid and high-rise residential construction from 10' to 12.' Floor heights for structures intended to encompass non-residential uses either on the ground floor or elsewhere within the building should consider university standards of at least 15' "to accommodate a wide range of instruction and research functions and the infrastructure they require" (Guideline D.15, New Century Plan, Design Guidelines).

Max Lot Coverage	50-100%
Max Height	85' (65' on Durant)
Max Floors	7 (4 on Durant)

SETBACKS

Building setbacks should conform to the existing urban form and should take into consideration the setbacks of adjacent buildings. In design development, consider elements such as setbacks or stepbacks in building facades adjacent to the Residential Subareas.

The land use policies call for a 0-10 foot front yard setback, depending on the context, and a 10-19 foot rear yard setback in this subarea in place of the previously required 15-foot front setback and rear setback of 15-21 feet.

Proposed building should include a 0'-10' front setback along Bancroft and a 0'-15' setback along Durant in accordance with both the Southside Plan and the University's Underhill Area Streetscape Design Guidelines (2004).

Story	**Front***	**Rear****	**Side**	**Street side**	**Building separation ****
Main buildings with dwelling units or group living accommodations or located north of Durant Avenue.	0-10	0-10	10	~~4~~	8
2nd	0-10	10	~~4~~	0-8	12
3rd	0-10	10	6	0-10	16
4th	0-10	17	8	0-10	20
5th	0-10	19	10	0-10	24

City of Berkeley Southside Yard Location: http://www.ci.berkeley.ca.us/contentdisplay.aspx?id=430

Additionally, the existing urban form should take into consideration the setbacks of adjacent buildings. Setbacks should be used to strengthen the visual lines of the facade and create a greater sense of urban space. All setbacks should be landscaped, preserving existing native vegetation where applicable.

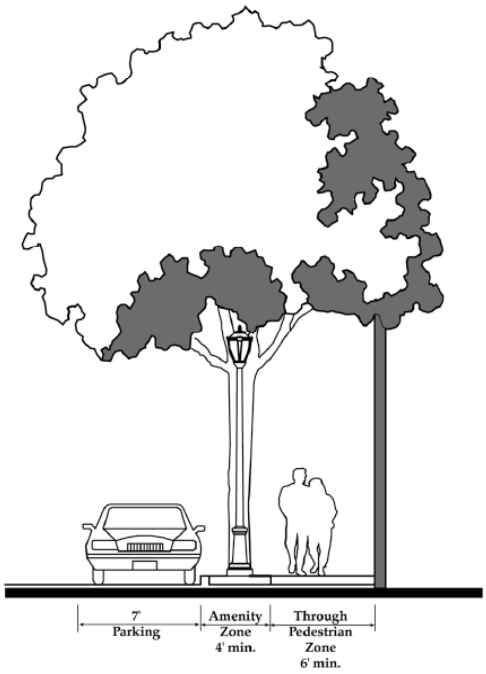


Figure 7 Sidewalk example from the Underhill Area Streetscape Guidelines

ARCHITECTURAL DESIGN

DESIGN APPROACH

Per Policy LU-F12 of the Southside Plan the project shall reference the Southside Plan Design Guidelines and ensure that the design of new buildings is compatible with existing buildings in the Residential Mixed Use Subarea, and detract from the significance of nearby landmark and historically significant buildings and sites. This is specifically critical in that the project relates to the historic wall at the Edwards Track. The following general approach offers a broad-brushed overview of guidelines and objectives for the proposed project:

- *The project should be designed to respect and enhance the character, livability, cultural vitality of the city;*
- *New construction or renovation should respect historic integrity, enhancing and complementing, rather than competing with retained or surrounding buildings;*
- *The new housing should not be designed as a separate and discrete object but should be integrated into the urban fabric of the Southside area.*
- *Buildings shall enhance the aesthetics and utility of the streetscape for pedestrians.*
- *Utilize massing, setbacks, articulation, roof form and materials to create a modulated building mass appropriate in scale to the context of this subarea. (Southside Plan Design Guidelines, 189)*

ORIENTATION

New buildings should be oriented and designed to take advantage of solar angles and wind direction to reduce energy consumption, providing natural light and ventilation as well as taking advantage of opportunities for thermal massing to the south and the west exposures. (Guideline D.4, New Century Plan, Design Guidelines)

FORM & COMPOSITION

- For projects with over 100 feet of street frontage, avoid the appearance of a large building mass in favor of a series of medium-size elements placed next to one another, or incorporate recesses or projections in the facade plane.
- Utilize massing, setbacks, articulation, roof form and materials to create a modulated building mass appropriate in scale to the context of this subarea. (189)
- Locate new buildings parallel to the street to reinforce the dominant existing pattern of building placement.
- As mentioned specific attention should be given to the project's relationship to the historic Edwards track and to the Arts and Crafts references of the Tang Center, and the rhythm of older residential structures along Durant Avenue.
- The structure should be appropriately scaled so as not to conflict with the lower density residential buildings along Durant as illustrated in Figure 8.

Figure 8

FACADES

- Create distinguished contemporary solutions that respect and compliment the historic fabric of the neighboring buildings and sites. This includes some form of relationship (reflection, juxtaposition, etc.) with surrounding built resources including the Tang Center, the RSF, and the Edwards Track.
- Explore varying vocabularies of design to distinguish between the neighborhood character of Durant and that of Bancroft. Forms, details and materials on all facades should be distinctive yet complimentary, articulating as appropriate and avoiding large blank walls on side and rear facades.
- Window and door placement, size, grouping, and shape should be sensitive to the pattern of other buildings in the subarea. Design windows and doors to relate to the design characteristics of the surrounding buildings, especially when adjacent to historic structures.

ROOFS

- Consider varied rooflines to break up the massing and height of new buildings.
- While appropriate balance and compatibility with both fenestration and rooflines along are important (Guideline D.10, UC Berkeley) of equal importance is the need for appropriately enclosed and functioning mechanical equipment.
- It is important that new structures accommodate campus LEED guidelines and give consideration to passive and active solar energy devices as elements integral to the building architecture, such as the possibility of the installation of "green roofs", reduced heat island effect and reduced storm water runoff.

MATERIALS

- Materials shall be selected to convey an image of quality and durability (Guideline D.12, New Century Plan, Design Guidelines), using simple materials that balance with other adjacent residential buildings.
- While room can be made for creative interpretation, generally, visual interest shall be created by the articulation of planes and volumes, not solely by arbitrary changes in materials.

PUBLIC ENTRANCE

- If practicable and as the program permits, the site should accommodate multiple entrances to articulate and enliven the streetscape.
- Front entrances should be oriented to the sidewalk and street. Main entrances should be clearly identifiable, inviting, and well-lit after dark. They should be located to encourage interaction between residents, the adjacent houses, and pedestrians on the sidewalk.

- Campus design guidelines require that new buildings shall incorporate an entry plaza or terrace at the main entrances of the building to serve as a site for casual interactions and socialization (Guideline D.6, New Century Plan, Design Guidelines). It shall be “distinguished as a place by design (such as) paving, lighting, furnishings, and shall incorporate provisions for disabled access.”
- New construction should provide a place of interaction on the ground floors that shall encourage transactional human activity and reinforce pedestrian and bike transportation as a primary mode of transportation (Guideline D.5, New Century Plan, Design Guidelines).

VIEWS

- In determining the massing of the new buildings, sensitivity should be given to the impact of southwestern views along Bancroft as indicted in Figure 9.

Figure 9

- The building massing should be sensitive to views from and if practicable preserve views of the Campanile and glimpses of the East Bay hills from the site as depicted in Figure 10.

Figure 10

SITE DESIGN

SITE & LANDSCAPE DESIGN

- The project shall identify and incorporate ground plane improvements that enhance the experiential quality, accessibility and security of the site.
- In collaboration with the Campus Landscape Architect, prepare a landscape plan, which creates usable open space, utilizing open space to preserve existing street trees as much as practicable.
- Consider the predicted student routes to and from campus from any new student housing project, including possible street crossing improvements.
- Collaborate with the City of Berkeley on the preservation (if practicable) and selection of replacement street trees.
- Setbacks and open spaces should be landscaped appropriately with indigenous and drought-tolerant landscaping. The UC Berkeley Landscape Master Plan provides a detailed palette of site and landscape materials for the campus. In general, plantings shall be designed to optimize both water use and maintenance.

OPEN SPACE

New construction on the site should seek to restore as much of this open space as practicable the University's need for the site. This could be provided in a variety of manners; at the ground level, on upper floors, in courtyards, etc. The Southside plan calls 40 square feet of open space per residential unit.

PARKING

The site currently has 302 parking spaces. The design should seek to minimize this parking and transportation footprint as the site is located within the Southside car-free housing zone overlay. The Berkeley Southside Plan encourages infill buildings on surface parking lots in the R-SMU areas and requires that new or replacement parking

"be placed inside or underneath new buildings, or in consolidated parking garages, and serve multiple users whenever possible." (Policy LU-F10)

Replacement parking is provided on site should be placed according to:

- *Locate and design driveways and entrances to parking or loading to minimize disruption to pedestrian flow and bicycle circulation.*
- *Locate parking behind buildings, underground, or behind ground floor facades that screen the view of the parking.*
- *Locate and design parking and loading areas to minimize their visibility from public streets. Use walls and landscaping to screen views of parking and loading areas.*

If the site includes housing uses, no parking is required; otherwise the City requires parking consistent with City of Berkeley Zoning Code 23D.40.080 as listed below.

Dormitories; Fraternity and Sorority Houses; Rooming and Boarding Houses; and Senior Congregate Housing	One per each five residents, plus one for manager Dwellings, Multiple (fewer than ten)
One per unit (75% less for seniors, see Section C below) Dwellings, Multiple (Ten or more)	One per 1,000 sq. ft. of gross floor area (75% less for seniors, see Section C below)
Dwellings, One and Two Family	One per unit* Employees
Offices, Other	One per 400 sq. ft. of gross floor area; (may be reduced, see Section D below)

Source: http://www.ci.berkeley.ca.us/bmc/Berkeley_Zoning_Code/Sub-Title_23D/40/080.html

Off-street loading spaces will be provided as follows:

- At the ratio of one (1) space for the first ten thousand (10,000) square feet of gross floor area of commercial space;
- At the ratio of one (1) space for each additional forty thousand (40,000) square feet of gross floor area of commercial space above the first ten thousand (10,000) square feet.

BICYCLES

R-SMU zoning requires 3 bicycle parking spaces be provided per two thousand (2,000) square feet of gross floor area of commercial space.
Bicycle storage to be covered by a roof and enclosed by galvanized grate sidewalls.
Where feasible, use permeable surfacing under bicycle parking.

SERVICES

- Consolidate loading and service access for the student housing in order to minimize impacts on streets and the pedestrian environment.
- Driveways should not intrude into the minimum pedestrian corridor of 6'.
- Conceal all bulk trash containers and mechanical equipment within enclosures designed as integral elements of the architecture. Screen loading docks from direct views from pathways and common spaces.
- Consider trash compactors to minimize the size of refuse and recycling areas. Drain trash enclosures to sanitary sewers.
- Certain service operations are not permitted to utilize city streets. Locate and design access points for these services to minimize their visibility.

PAVING

Major plazas and pedestrian routes will be surfaced with alternative media to improve visual quality, while giving them distinction as a route or gathering place. Suitable materials include brick, cast and natural stone, and textured concrete. Permeable surfaces that help prevent stormwater run-off are preferred.

LIGHTING

Lighting will illuminate the public sidewalk, entries, pathways & courtyard. Avoid building mounted lights except architecturally integrated fixtures at entrances and exits. A minimum of 0.2 ft candles of illumination is required at building entrances and exits including night and emergency exits.

Coordinate choice of light standard with the University's Campus Landscape Architect. Fixtures should be designed to include shields and cut-offs to minimize light spillage onto intended surfaces and to minimize atmospheric light pollution.

SIGNAGE

The campus has specific guidelines in regards to building signage and wayfinding systems. Refer to Campus Signage Guidelines for building identity, disabled access and wayfinding signs.

REFERENCES

City of Berkeley Southside Plan: http://www.ci.berkeley.ca.us/contentdisplay.aspx?id=448
UC Berkeley, New Century Plan, Design Guidelines: http://www.cp.berkeley.edu/ncp/guidelines/core.html
UC Berkeley, New Century Plan: http://www.cp.berkeley.edu/ncp/index.html
UC Berkeley, Long Range Development Plan and EIR: http://www.cp.berkeley.edu/LRDP_2020.htm
UC Berkeley, Underhill Area Streetscape Design Guidelines, January 2004
University of California, Policy on Sustainable Practices:
http://www.ucop.edu/facil/sustain/documents/policy_sustain_prac.pdf
Helfand, Harvey. The Campus Guide to the University of California, 2002.

APPENDIX C

AIR QUALITY MODELING RESULTS

Cal Aquatics Center

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Recreational Swimming Pool	10	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Pacific Gas & Electric Company
Climate Zone	4	**Precipitation Freq (Days)**	63		

1.3 User Entered Comments

Project Characteristics -

Land Use - Lot size approximately 1 acre

Construction Phase - Assumed construction program based on conservative 10 months

Off-road Equipment - Assumed equipment mix

Off-road Equipment -

Off-road Equipment - Assumed equipment mix

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Based on depth of pool

Trips and VMT - Used model assumptions except for Architectural Coating

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation - based on project description

Waste Mitigation -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013	0.35	2.36	1.53	0.00	0.57	0.13	0.70	0.10	0.13	0.23	0.00	243.78	243.78	0.03	0.00	244.37
2014	0.21	0.53	0.39	0.00	0.00	0.04	0.04	0.00	0.04	0.04	0.00	56.10	56.10	0.01	0.00	56.27
Total	**0.56**	**2.89**	**1.92**	**0.00**	**0.57**	**0.17**	**0.74**	**0.10**	**0.17**	**0.27**	**0.00**	**299.88**	**299.88**	**0.04**	**0.00**	**300.64**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2013	0.35	2.36	1.53	0.00	0.47	0.13	0.60	0.04	0.13	0.18	0.00	243.78	243.78	0.03	0.00	244.37
2014	0.21	0.53	0.39	0.00	0.00	0.04	0.04	0.00	0.04	0.04	0.00	56.10	56.10	0.01	0.00	56.27
Total	**0.56**	**2.89**	**1.92**	**0.00**	**0.47**	**0.17**	**0.64**	**0.04**	**0.17**	**0.22**	**0.00**	**299.88**	**299.88**	**0.04**	**0.00**	**300.64**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.05	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.23	0.60	2.09	0.00	0.26	0.02	0.28	0.01	0.02	0.03	0.00	270.02	270.02	0.01	0.00	270.27
Waste						0.00	0.00		0.00	0.00	11.57	0.00	11.57	0.68	0.00	25.93
Water						0.00	0.00		0.00	0.00	0.00	1.31	1.31	0.02	0.00	1.83
Total	**0.28**	**0.60**	**2.09**	**0.00**	**0.26**	**0.02**	**0.28**	**0.01**	**0.02**	**0.03**	**11.57**	**271.33**	**282.90**	**0.71**	**0.00**	**298.03**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.05	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.21	0.51	1.81	0.00	0.21	0.02	0.23	0.01	0.02	0.03	0.00	218.69	218.69	0.01	0.00	218.89
Waste						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water						0.00	0.00		0.00	0.00	0.00	0.93	0.93	0.01	0.00	1.25
Total	**0.26**	**0.51**	**1.81**	**0.00**	**0.21**	**0.02**	**0.23**	**0.01**	**0.02**	**0.03**	**0.00**	**219.62**	**219.62**	**0.02**	**0.00**	**220.14**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.02	0.13	0.07	0.00		0.01	0.01		0.01	0.01	0.00	11.74	11.74	0.00	0.00	11.77
Total	**0.02**	**0.13**	**0.07**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**11.74**	**11.74**	**0.00**	**0.00**	**11.77**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.00	0.00	0.40
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.40**	**0.00**	**0.00**	**0.40**

3.2 Demolition - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.02	0.13	0.07	0.00		0.01	0.01		0.01	0.01	0.00	11.74	11.74	0.00	0.00	11.77
Total	**0.02**	**0.13**	**0.07**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**11.74**	**11.74**	**0.00**	**0.00**	**11.77**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.00	0.00	0.40
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.40**	**0.00**	**0.00**	**0.40**

3.3 Site Preparation - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.03	0.00	0.03	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.16	0.09	0.00		0.01	0.01		0.01	0.01	0.00	14.75	14.75	0.00	0.00	14.79
Total	**0.02**	**0.16**	**0.09**	**0.00**	**0.03**	**0.01**	**0.04**	**0.01**	**0.01**	**0.02**	**0.00**	**14.75**	**14.75**	**0.00**	**0.00**	**14.79**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.00	0.00	0.40
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.40**	**0.00**	**0.00**	**0.40**

3.3 Site Preparation - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.16	0.09	0.00		0.01	0.01		0.01	0.01	0.00	14.75	14.75	0.00	0.00	14.79
Total	**0.02**	**0.16**	**0.09**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**	**0.00**	**14.75**	**14.75**	**0.00**	**0.00**	**14.79**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.00	0.00	0.40
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.40**	**0.00**	**0.00**	**0.40**

3.4 Grading - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.15	0.00	0.15	0.08	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.14	1.12	0.69	0.00		0.06	0.06		0.06	0.06	0.00	109.15	109.15	0.01	0.00	109.39
Total	**0.14**	**1.12**	**0.69**	**0.00**	**0.15**	**0.06**	**0.21**	**0.08**	**0.06**	**0.14**	**0.00**	**109.15**	**109.15**	**0.01**	**0.00**	**109.39**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.17	0.08	0.00	0.38	0.01	0.39	0.00	0.01	0.01	0.00	23.44	23.44	0.00	0.00	23.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.28	4.28	0.00	0.00	4.29
Total	**0.01**	**0.17**	**0.11**	**0.00**	**0.39**	**0.01**	**0.40**	**0.00**	**0.01**	**0.01**	**0.00**	**27.72**	**27.72**	**0.00**	**0.00**	**27.74**

3.4 Grading - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.07	0.00	0.07	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.14	1.12	0.69	0.00		0.06	0.06		0.06	0.06	0.00	109.15	109.15	0.01	0.00	109.39
Total	**0.14**	**1.12**	**0.69**	**0.00**	**0.07**	**0.06**	**0.13**	**0.04**	**0.06**	**0.10**	**0.00**	**109.15**	**109.15**	**0.01**	**0.00**	**109.39**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.17	0.08	0.00	0.38	0.01	0.39	0.00	0.01	0.01	0.00	23.44	23.44	0.00	0.00	23.45
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.28	4.28	0.00	0.00	4.29
Total	**0.01**	**0.17**	**0.11**	**0.00**	**0.39**	**0.01**	**0.40**	**0.00**	**0.01**	**0.01**	**0.00**	**27.72**	**27.72**	**0.00**	**0.00**	**27.74**

3.5 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.15	0.77	0.54	0.00		0.05	0.05		0.05	0.05	0.00	76.67	76.67	0.01	0.00	76.92
Total	**0.15**	**0.77**	**0.54**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**76.67**	**76.67**	**0.01**	**0.00**	**76.92**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63	1.63	0.00	0.00	1.63
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32	1.32	0.00	0.00	1.32
Total	**0.00**	**0.01**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.95**	**2.95**	**0.00**	**0.00**	**2.95**

3.5 Building Construction - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.15	0.77	0.54	0.00		0.05	0.05		0.05	0.05	0.00	76.67	76.67	0.01	0.00	76.92
Total	**0.15**	**0.77**	**0.54**	**0.00**		**0.05**	**0.05**		**0.05**	**0.05**	**0.00**	**76.67**	**76.67**	**0.01**	**0.00**	**76.92**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63	1.63	0.00	0.00	1.63
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32	1.32	0.00	0.00	1.32
Total	**0.00**	**0.01**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.95**	**2.95**	**0.00**	**0.00**	**2.95**

3.5 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.07	0.37	0.27	0.00		0.02	0.02		0.02	0.02	0.00	39.49	39.49	0.01	0.00	39.61
Total	**0.07**	**0.37**	**0.27**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**39.49**	**39.49**	**0.01**	**0.00**	**39.61**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.84	0.00	0.00	0.84
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.66	0.00	0.00	0.67
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.50**	**1.50**	**0.00**	**0.00**	**1.51**

3.5 Building Construction - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.07	0.37	0.27	0.00		0.02	0.02		0.02	0.02	0.00	39.49	39.49	0.01	0.00	39.61
Total	**0.07**	**0.37**	**0.27**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**39.49**	**39.49**	**0.01**	**0.00**	**39.61**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.84	0.00	0.00	0.84
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.66	0.00	0.00	0.67
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.50**	**1.50**	**0.00**	**0.00**	**1.51**

3.6 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.02	0.13	0.09	0.00		0.01	0.01		0.01	0.01	0.00	11.65	11.65	0.00	0.00	11.69
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.02**	**0.13**	**0.09**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**11.65**	**11.65**	**0.00**	**0.00**	**11.69**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.95	0.00	0.00	0.95
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.95**	**0.95**	**0.00**	**0.00**	**0.95**

3.6 Paving - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.02	0.13	0.09	0.00		0.01	0.01		0.01	0.01	0.00	11.65	11.65	0.00	0.00	11.69
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.02**	**0.13**	**0.09**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**11.65**	**11.65**	**0.00**	**0.00**	**11.69**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.95	0.00	0.00	0.95
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.95**	**0.95**	**0.00**	**0.00**	**0.95**

3.7 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.12					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	1.91	1.91	0.00	0.00	1.92
Total	**0.12**	**0.02**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.91**	**1.91**	**0.00**	**0.00**	**1.92**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.00	0.00	0.59
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.59**	**0.59**	**0.00**	**0.00**	**0.59**

3.7 Architectural Coating - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.12					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	1.91	1.91	0.00	0.00	1.92
Total	**0.12**	**0.02**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.91**	**1.91**	**0.00**	**0.00**	**1.92**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.59	0.00	0.00	0.59
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.59**	**0.59**	**0.00**	**0.00**	**0.59**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Limit Parking Supply

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.21	0.51	1.81	0.00	0.21	0.02	0.23	0.01	0.02	0.03	0.00	218.69	218.69	0.01	0.00	218.89
Unmitigated	0.23	0.60	2.09	0.00	0.26	0.02	0.28	0.01	0.02	0.03	0.00	270.02	270.02	0.01	0.00	270.27
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Recreational Swimming Pool	329.30	208.70	267.30	547,993	438,394
Total	329.30	208.70	267.30	547,993	438,394

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NaturalGas Mitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NaturalGas Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Recreational Swimming Pool	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
Recreational Swimming Pool	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Recreational Swimming Pool	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Recreational Swimming Pool	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.05	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	0.05	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.01					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.04					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.05**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.01					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.04					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.05**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					0.93	0.01	0.00	1.25
Unmitigated					1.31	0.02	0.00	1.83
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Recreational Swimming Pool	0.591431 / 0.36249					1.31	0.02	0.00	1.83
Total						**1.31**	**0.02**	**0.00**	**1.83**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Recreational Swimming Pool	0.354859 / 0.36249					0.93	0.01	0.00	1.25
Total						**0.93**	**0.01**	**0.00**	**1.25**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					0.00	0.00	0.00	0.00
Unmitigated					11.57	0.68	0.00	25.93
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Recreational Swimming Pool	57					11.57	0.68	0.00	25.93
Total						**11.57**	**0.68**	**0.00**	**25.93**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Recreational Swimming Pool						0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

9.0 Vegetation

Cal Aquatics Center

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Recreational Swimming Pool	10	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Pacific Gas & Electric Company
Climate Zone	4	**Precipitation Freq (Days)**	63		

1.3 User Entered Comments

Project Characteristics -

Land Use - Lot size approximately 1 acre

Construction Phase - Assumed construction program based on conservative 10 months

Off-road Equipment - Assumed equipment mix

Off-road Equipment -

Off-road Equipment - Assumed equipment mix

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Based on depth of pool

Trips and VMT - Used model assumptions except for Architectural Coating

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation - based on project description

Waste Mitigation -

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	4.85	39.13	24.19	0.04	19.30	1.93	21.23	2.90	1.93	4.50	0.00	4,590.64	0.00	0.42	0.00	4,599.43
2014	15.94	22.08	16.38	0.03	0.19	1.47	1.66	0.01	1.47	1.48	0.00	2,664.16	0.00	0.38	0.00	2,672.06
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	4.85	39.13	24.19	0.04	16.80	1.93	18.74	1.31	1.93	3.08	0.00	4,590.64	0.00	0.42	0.00	4,599.43
2014	15.94	22.08	16.38	0.03	0.19	1.47	1.66	0.01	1.47	1.48	0.00	2,664.16	0.00	0.38	0.00	2,672.06
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.28	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	1.51	3.61	12.11	0.02	1.97	0.11	2.08	0.07	0.11	0.18		1,921.36		0.09		1,923.31
Total	**1.79**	**3.61**	**12.11**	**0.02**	**1.97**	**0.11**	**2.08**	**0.07**	**0.11**	**0.18**		**1,921.36**		**0.09**	**0.00**	**1,923.31**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.28	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	1.35	3.08	10.25	0.02	1.58	0.09	1.67	0.05	0.09	0.15		1,555.14		0.08		1,556.75
Total	**1.63**	**3.08**	**10.25**	**0.02**	**1.58**	**0.09**	**1.67**	**0.05**	**0.09**	**0.15**		**1,555.14**		**0.08**	**0.00**	**1,556.75**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.19	25.93	14.43	0.02		1.23	1.23		1.23	1.23		2,589.09		0.29		2,595.12
Total	**3.19**	**25.93**	**14.43**	**0.02**		**1.23**	**1.23**		**1.23**	**1.23**		**2,589.09**		**0.29**		**2,595.12**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.06	0.06	0.66	0.00	0.12	0.00	0.12	0.00	0.00	0.01		97.55		0.01		97.68
Total	**0.06**	**0.06**	**0.66**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**97.55**		**0.01**		**97.68**

3.2 Demolition - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.19	25.93	14.43	0.02		1.23	1.23		1.23	1.23	0.00	2,589.09		0.29		2,595.12
Total	**3.19**	**25.93**	**14.43**	**0.02**		**1.23**	**1.23**		**1.23**	**1.23**	**0.00**	**2,589.09**		**0.29**		**2,595.12**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.06	0.06	0.66	0.00	0.12	0.00	0.12	0.00	0.00	0.01		97.55		0.01		97.68
Total	**0.06**	**0.06**	**0.66**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**97.55**		**0.01**		**97.68**

3.3 Site Preparation - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.38	0.00	5.38	2.90	0.00	2.90						0.00
Off-Road	3.96	31.66	18.62	0.03		1.60	1.60		1.60	1.60		3,253.39		0.36		3,260.86
Total	**3.96**	**31.66**	**18.62**	**0.03**	**5.38**	**1.60**	**6.98**	**2.90**	**1.60**	**4.50**		**3,253.39**		**0.36**		**3,260.86**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.06	0.06	0.66	0.00	0.12	0.00	0.12	0.00	0.00	0.01		97.55		0.01		97.68
Total	**0.06**	**0.06**	**0.66**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**97.55**		**0.01**		**97.68**

3.3 Site Preparation - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.42	0.00	2.42	1.30	0.00	1.30						0.00
Off-Road	3.96	31.66	18.62	0.03		1.60	1.60		1.60	1.60	0.00	3,253.39		0.36		3,260.86
Total	**3.96**	**31.66**	**18.62**	**0.03**	**2.42**	**1.60**	**4.02**	**1.30**	**1.60**	**2.90**	**0.00**	**3,253.39**		**0.36**		**3,260.86**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.06	0.06	0.66	0.00	0.12	0.00	0.12	0.00	0.00	0.01		97.55		0.01		97.68
Total	**0.06**	**0.06**	**0.66**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**97.55**		**0.01**		**97.68**

3.4 Grading - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.53	0.00	4.53	2.48	0.00	2.48						0.00
Off-Road	4.32	33.86	20.96	0.04		1.75	1.75		1.75	1.75		3,646.99		0.39		3,655.15
Total	**4.32**	**33.86**	**20.96**	**0.04**	**4.53**	**1.75**	**6.28**	**2.48**	**1.75**	**4.23**		**3,646.99**		**0.39**		**3,655.15**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.42	5.17	2.16	0.01	14.57	0.17	14.74	0.03	0.17	0.20		785.12		0.02		785.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.10	1.07	0.00	0.19	0.01	0.20	0.01	0.01	0.01		158.52		0.01		158.73
Total	**0.52**	**5.27**	**3.23**	**0.01**	**14.76**	**0.18**	**14.94**	**0.04**	**0.18**	**0.21**		**943.64**		**0.03**		**944.28**

3.4 Grading - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.04	0.00	2.04	1.12	0.00	1.12						0.00
Off-Road	4.32	33.86	20.96	0.04		1.75	1.75		1.75	1.75	0.00	3,646.99		0.39		3,655.15
Total	**4.32**	**33.86**	**20.96**	**0.04**	**2.04**	**1.75**	**3.79**	**1.12**	**1.75**	**2.87**	**0.00**	**3,646.99**		**0.39**		**3,655.15**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.42	5.17	2.16	0.01	14.57	0.17	14.74	0.03	0.17	0.20		785.12		0.02		785.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.10	1.07	0.00	0.19	0.01	0.20	0.01	0.01	0.01		158.52		0.01		158.73
Total	**0.52**	**5.27**	**3.23**	**0.01**	**14.76**	**0.18**	**14.94**	**0.04**	**0.18**	**0.21**		**943.64**		**0.03**		**944.28**

3.5 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.54	23.27	16.29	0.03		1.61	1.61		1.61	1.61		2,561.58		0.41		2,570.13
Total	**4.54**	**23.27**	**16.29**	**0.03**		**1.61**	**1.61**		**1.61**	**1.61**		**2,561.58**		**0.41**		**2,570.13**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.33	0.17	0.00	0.02	0.01	0.03	0.00	0.01	0.01		54.77		0.00		54.80
Worker	0.03	0.03	0.33	0.00	0.06	0.00	0.06	0.00	0.00	0.00		48.77		0.00		48.84
Total	**0.06**	**0.36**	**0.50**	**0.00**	**0.08**	**0.01**	**0.09**	**0.00**	**0.01**	**0.01**		**103.54**		**0.00**		**103.64**

3.5 Building Construction - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.54	23.27	16.29	0.03		1.61	1.61		1.61	1.61	0.00	2,561.58		0.41		2,570.13
Total	**4.54**	**23.27**	**16.29**	**0.03**		**1.61**	**1.61**		**1.61**	**1.61**	**0.00**	**2,561.58**		**0.41**		**2,570.13**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.33	0.17	0.00	0.02	0.01	0.03	0.00	0.01	0.01		54.77		0.00		54.80
Worker	0.03	0.03	0.33	0.00	0.06	0.00	0.06	0.00	0.00	0.00		48.77		0.00		48.84
Total	**0.06**	**0.36**	**0.50**	**0.00**	**0.08**	**0.01**	**0.09**	**0.00**	**0.01**	**0.01**		**103.54**		**0.00**		**103.64**

3.5 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.15	21.74	15.92	0.03		1.46	1.46		1.46	1.46		2,561.58		0.37		2,569.39
Total	**4.15**	**21.74**	**15.92**	**0.03**		**1.46**	**1.46**		**1.46**	**1.46**		**2,561.58**		**0.37**		**2,569.39**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.31	0.15	0.00	0.02	0.01	0.03	0.00	0.01	0.01		54.82		0.00		54.84
Worker	0.03	0.03	0.30	0.00	0.06	0.00	0.06	0.00	0.00	0.00		47.77		0.00		47.83
Total	**0.06**	**0.34**	**0.45**	**0.00**	**0.08**	**0.01**	**0.09**	**0.00**	**0.01**	**0.01**		**102.59**		**0.00**		**102.67**

3.5 Building Construction - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.15	21.74	15.92	0.03		1.46	1.46		1.46	1.46	0.00	2,561.58		0.37		2,569.39
Total	**4.15**	**21.74**	**15.92**	**0.03**		**1.46**	**1.46**		**1.46**	**1.46**	**0.00**	**2,561.58**		**0.37**		**2,569.39**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.31	0.15	0.00	0.02	0.01	0.03	0.00	0.01	0.01		54.82		0.00		54.84
Worker	0.03	0.03	0.30	0.00	0.06	0.00	0.06	0.00	0.00	0.00		47.77		0.00		47.83
Total	**0.06**	**0.34**	**0.45**	**0.00**	**0.08**	**0.01**	**0.09**	**0.00**	**0.01**	**0.01**		**102.59**		**0.00**		**102.67**

3.6 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.80	17.55	11.98	0.02		1.46	1.46		1.46	1.46		1,712.73		0.25		1,718.00
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**2.80**	**17.55**	**11.98**	**0.02**		**1.46**	**1.46**		**1.46**	**1.46**		**1,712.73**		**0.25**		**1,718.00**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.09	0.97	0.00	0.19	0.01	0.20	0.01	0.01	0.01		155.26		0.01		155.45
Total	**0.09**	**0.09**	**0.97**	**0.00**	**0.19**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**155.26**		**0.01**		**155.45**

3.6 Paving - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.80	17.55	11.98	0.02		1.46	1.46		1.46	1.46	0.00	1,712.73		0.25		1,718.00
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**2.80**	**17.55**	**11.98**	**0.02**		**1.46**	**1.46**		**1.46**	**1.46**	**0.00**	**1,712.73**		**0.25**		**1,718.00**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.09	0.09	0.97	0.00	0.19	0.01	0.20	0.01	0.01	0.01		155.26		0.01		155.45
Total	**0.09**	**0.09**	**0.97**	**0.00**	**0.19**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**155.26**		**0.01**		**155.45**

3.7 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.44					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24		281.19		0.04		282.03
Total	**15.89**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**		**281.19**		**0.04**		**282.03**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.06	0.05	0.59	0.00	0.12	0.00	0.12	0.00	0.00	0.01		95.54		0.01		95.66
Total	**0.06**	**0.05**	**0.59**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**95.54**		**0.01**		**95.66**

3.7 Architectural Coating - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.44					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24	0.00	281.19		0.04		282.03
Total	**15.89**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**	**0.00**	**281.19**		**0.04**		**282.03**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.06	0.05	0.59	0.00	0.12	0.00	0.12	0.00	0.00	0.01		95.54		0.01		95.66
Total	**0.06**	**0.05**	**0.59**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**95.54**		**0.01**		**95.66**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Limit Parking Supply

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.35	3.08	10.25	0.02	1.58	0.09	1.67	0.05	0.09	0.15		1,555.14		0.08		1,556.75
Unmitigated	1.51	3.61	12.11	0.02	1.97	0.11	2.08	0.07	0.11	0.18		1,921.36		0.09		1,923.31
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Recreational Swimming Pool	329.30	208.70	267.30	547,993	438,394
Total	329.30	208.70	267.30	547,993	438,394

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Recreational Swimming Pool	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Recreational Swimming Pool	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

6.0 Area Detail

6.1 Mitigation Measures Area

Error: Subreport could not be shown.

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7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Vegetation

Cal Aquatics Center

Alameda County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Recreational Swimming Pool	10	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Pacific Gas & Electric Company
Climate Zone	4	**Precipitation Freq (Days)**	63		

1.3 User Entered Comments

Project Characteristics -

Land Use - Lot size approximately 1 acre

Construction Phase - Assumed construction program based on conservative 10 months

Off-road Equipment - Assumed equipment mix

Off-road Equipment -

Off-road Equipment - Assumed equipment mix

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Based on depth of pool

Trips and VMT - Used model assumptions except for Architectural Coating

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation -

Water Mitigation - based on project description

Waste Mitigation -

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	4.87	39.14	24.41	0.04	19.30	1.94	21.23	2.90	1.94	4.50	0.00	4,569.05	0.00	0.42	0.00	4,577.84
2014	15.94	22.08	16.39	0.03	0.19	1.47	1.66	0.01	1.47	1.48	0.00	2,658.48	0.00	0.38	0.00	2,666.37
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2013	4.87	39.14	24.41	0.04	16.80	1.94	18.74	1.31	1.94	3.09	0.00	4,569.05	0.00	0.42	0.00	4,577.84
2014	15.94	22.08	16.39	0.03	0.19	1.47	1.66	0.01	1.47	1.48	0.00	2,658.48	0.00	0.38	0.00	2,666.37
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.28	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	1.51	3.69	12.82	0.02	1.97	0.12	2.09	0.07	0.12	0.19		1,757.56		0.08		1,759.18
Total	**1.79**	**3.69**	**12.82**	**0.02**	**1.97**	**0.12**	**2.09**	**0.07**	**0.12**	**0.19**		**1,757.56**		**0.08**	**0.00**	**1,759.18**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.28	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	1.33	3.14	11.18	0.01	1.58	0.10	1.67	0.05	0.10	0.15		1,423.11		0.06		1,424.47
Total	**1.61**	**3.14**	**11.18**	**0.01**	**1.58**	**0.10**	**1.67**	**0.05**	**0.10**	**0.15**		**1,423.11**		**0.06**	**0.00**	**1,424.47**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Demolition - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.19	25.93	14.43	0.02		1.23	1.23		1.23	1.23		2,589.09		0.29		2,595.12
Total	**3.19**	**25.93**	**14.43**	**0.02**		**1.23**	**1.23**		**1.23**	**1.23**		**2,589.09**		**0.29**		**2,595.12**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.61	0.00	0.12	0.00	0.12	0.00	0.00	0.01		86.92		0.01		87.04
Total	**0.07**	**0.07**	**0.61**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**86.92**		**0.01**		**87.04**

3.2 Demolition - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.19	25.93	14.43	0.02		1.23	1.23		1.23	1.23	0.00	2,589.09		0.29		2,595.12
Total	**3.19**	**25.93**	**14.43**	**0.02**		**1.23**	**1.23**		**1.23**	**1.23**	**0.00**	**2,589.09**		**0.29**		**2,595.12**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.61	0.00	0.12	0.00	0.12	0.00	0.00	0.01		86.92		0.01		87.04
Total	**0.07**	**0.07**	**0.61**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**86.92**		**0.01**		**87.04**

3.3 Site Preparation - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.38	0.00	5.38	2.90	0.00	2.90						0.00
Off-Road	3.96	31.66	18.62	0.03		1.60	1.60		1.60	1.60		3,253.39		0.36		3,260.86
Total	**3.96**	**31.66**	**18.62**	**0.03**	**5.38**	**1.60**	**6.98**	**2.90**	**1.60**	**4.50**		**3,253.39**		**0.36**		**3,260.86**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.61	0.00	0.12	0.00	0.12	0.00	0.00	0.01		86.92		0.01		87.04
Total	**0.07**	**0.07**	**0.61**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**86.92**		**0.01**		**87.04**

3.3 Site Preparation - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.42	0.00	2.42	1.30	0.00	1.30						0.00
Off-Road	3.96	31.66	18.62	0.03		1.60	1.60		1.60	1.60	0.00	3,253.39		0.36		3,260.86
Total	**3.96**	**31.66**	**18.62**	**0.03**	**2.42**	**1.60**	**4.02**	**1.30**	**1.60**	**2.90**	**0.00**	**3,253.39**		**0.36**		**3,260.86**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.07	0.07	0.61	0.00	0.12	0.00	0.12	0.00	0.00	0.01		86.92		0.01		87.04
Total	**0.07**	**0.07**	**0.61**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**86.92**		**0.01**		**87.04**

3.4 Grading - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.53	0.00	4.53	2.48	0.00	2.48						0.00
Off-Road	4.32	33.86	20.96	0.04		1.75	1.75		1.75	1.75		3,646.99		0.39		3,655.15
Total	**4.32**	**33.86**	**20.96**	**0.04**	**4.53**	**1.75**	**6.28**	**2.48**	**1.75**	**4.23**		**3,646.99**		**0.39**		**3,655.15**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.44	5.17	2.45	0.01	14.57	0.18	14.74	0.03	0.18	0.20		780.81		0.02		781.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.11	0.11	1.00	0.00	0.19	0.01	0.20	0.01	0.01	0.01		141.24		0.01		141.44
Total	**0.55**	**5.28**	**3.45**	**0.01**	**14.76**	**0.19**	**14.94**	**0.04**	**0.19**	**0.21**		**922.05**		**0.03**		**922.70**

3.4 Grading - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.04	0.00	2.04	1.12	0.00	1.12						0.00
Off-Road	4.32	33.86	20.96	0.04		1.75	1.75		1.75	1.75	0.00	3,646.99		0.39		3,655.15
Total	**4.32**	**33.86**	**20.96**	**0.04**	**2.04**	**1.75**	**3.79**	**1.12**	**1.75**	**2.87**	**0.00**	**3,646.99**		**0.39**		**3,655.15**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.44	5.17	2.45	0.01	14.57	0.18	14.74	0.03	0.18	0.20		780.81		0.02		781.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.11	0.11	1.00	0.00	0.19	0.01	0.20	0.01	0.01	0.01		141.24		0.01		141.44
Total	**0.55**	**5.28**	**3.45**	**0.01**	**14.76**	**0.19**	**14.94**	**0.04**	**0.19**	**0.21**		**922.05**		**0.03**		**922.70**

3.5 Building Construction - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.54	23.27	16.29	0.03		1.61	1.61		1.61	1.61		2,561.58		0.41		2,570.13
Total	**4.54**	**23.27**	**16.29**	**0.03**		**1.61**	**1.61**		**1.61**	**1.61**		**2,561.58**		**0.41**		**2,570.13**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.33	0.20	0.00	0.02	0.01	0.03	0.00	0.01	0.01		54.31		0.00		54.34
Worker	0.03	0.03	0.31	0.00	0.06	0.00	0.06	0.00	0.00	0.00		43.46		0.00		43.52
Total	**0.06**	**0.36**	**0.51**	**0.00**	**0.08**	**0.01**	**0.09**	**0.00**	**0.01**	**0.01**		**97.77**		**0.00**		**97.86**

3.5 Building Construction - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.54	23.27	16.29	0.03		1.61	1.61		1.61	1.61	0.00	2,561.58		0.41		2,570.13
Total	**4.54**	**23.27**	**16.29**	**0.03**		**1.61**	**1.61**		**1.61**	**1.61**	**0.00**	**2,561.58**		**0.41**		**2,570.13**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.33	0.20	0.00	0.02	0.01	0.03	0.00	0.01	0.01		54.31		0.00		54.34
Worker	0.03	0.03	0.31	0.00	0.06	0.00	0.06	0.00	0.00	0.00		43.46		0.00		43.52
Total	**0.06**	**0.36**	**0.51**	**0.00**	**0.08**	**0.01**	**0.09**	**0.00**	**0.01**	**0.01**		**97.77**		**0.00**		**97.86**

3.5 Building Construction - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.15	21.74	15.92	0.03		1.46	1.46		1.46	1.46		2,561.58		0.37		2,569.39
Total	**4.15**	**21.74**	**15.92**	**0.03**		**1.46**	**1.46**		**1.46**	**1.46**		**2,561.58**		**0.37**		**2,569.39**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.30	0.19	0.00	0.02	0.01	0.03	0.00	0.01	0.01		54.35		0.00		54.38
Worker	0.03	0.03	0.28	0.00	0.06	0.00	0.06	0.00	0.00	0.00		42.55		0.00		42.60
Total	**0.06**	**0.33**	**0.47**	**0.00**	**0.08**	**0.01**	**0.09**	**0.00**	**0.01**	**0.01**		**96.90**		**0.00**		**96.98**

3.5 Building Construction - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.15	21.74	15.92	0.03		1.46	1.46		1.46	1.46	0.00	2,561.58		0.37		2,569.39
Total	**4.15**	**21.74**	**15.92**	**0.03**		**1.46**	**1.46**		**1.46**	**1.46**	**0.00**	**2,561.58**		**0.37**		**2,569.39**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.03	0.30	0.19	0.00	0.02	0.01	0.03	0.00	0.01	0.01		54.35		0.00		54.38
Worker	0.03	0.03	0.28	0.00	0.06	0.00	0.06	0.00	0.00	0.00		42.55		0.00		42.60
Total	**0.06**	**0.33**	**0.47**	**0.00**	**0.08**	**0.01**	**0.09**	**0.00**	**0.01**	**0.01**		**96.90**		**0.00**		**96.98**

3.6 Paving - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.80	17.55	11.98	0.02		1.46	1.46		1.46	1.46		1,712.73		0.25		1,718.00
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**2.80**	**17.55**	**11.98**	**0.02**		**1.46**	**1.46**		**1.46**	**1.46**		**1,712.73**		**0.25**		**1,718.00**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.10	0.90	0.00	0.19	0.01	0.20	0.01	0.01	0.01		138.28		0.01		138.46
Total	**0.10**	**0.10**	**0.90**	**0.00**	**0.19**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**138.28**		**0.01**		**138.46**

3.6 Paving - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.80	17.55	11.98	0.02		1.46	1.46		1.46	1.46	0.00	1,712.73		0.25		1,718.00
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**2.80**	**17.55**	**11.98**	**0.02**		**1.46**	**1.46**		**1.46**	**1.46**	**0.00**	**1,712.73**		**0.25**		**1,718.00**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.10	0.10	0.90	0.00	0.19	0.01	0.20	0.01	0.01	0.01		138.28		0.01		138.46
Total	**0.10**	**0.10**	**0.90**	**0.00**	**0.19**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**138.28**		**0.01**		**138.46**

3.7 Architectural Coating - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.44					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24		281.19		0.04		282.03
Total	**15.89**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**		**281.19**		**0.04**		**282.03**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.06	0.06	0.55	0.00	0.12	0.00	0.12	0.00	0.00	0.01		85.10		0.01		85.21
Total	**0.06**	**0.06**	**0.55**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**85.10**		**0.01**		**85.21**

3.7 Architectural Coating - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	15.44					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24	0.00	281.19		0.04		282.03
Total	**15.89**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**	**0.00**	**281.19**		**0.04**		**282.03**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Worker	0.06	0.06	0.55	0.00	0.12	0.00	0.12	0.00	0.00	0.01		85.10		0.01		85.21
Total	**0.06**	**0.06**	**0.55**	**0.00**	**0.12**	**0.00**	**0.12**	**0.00**	**0.00**	**0.01**		**85.10**		**0.01**		**85.21**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

Limit Parking Supply

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.33	3.14	11.18	0.01	1.58	0.10	1.67	0.05	0.10	0.15		1,423.11		0.06		1,424.47
Unmitigated	1.51	3.69	12.82	0.02	1.97	0.12	2.09	0.07	0.12	0.19		1,757.56		0.08		1,759.18
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Recreational Swimming Pool	329.30	208.70	267.30	547,993	438,394
Total	329.30	208.70	267.30	547,993	438,394

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Recreational Swimming Pool	9.50	7.30	7.30	33.00	48.00	19.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Recreational Swimming Pool	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Recreational Swimming Pool	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.28	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	0.28	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.06					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.21					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.27**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.06					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.21					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**0.27**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Vegetation

APPENDIX D

PROJECT NOISE STUDY

CAL AQUATICS FACILITY
BERKELEY, CA

NOISE AND VIBRATION ASSESSMENT

February 21, 2013

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NOISE AND VIBRATION ASSESSMENT

This report assesses the effects of the Aquatic Center Project on the noise environment in the vicinity of the project. The analysis addresses the potential increases in noise levels that would result from the implementation of the Aquatic Center Project and the potential for the project to expose people to excessive noise, and also evaluates ground-borne vibration during the construction of the project.

The discussion and analyses in this section rely on the framework set up in the UC Berkeley 2020 Long Range Development Plan (2020 LRDP) EIR. The 2020 LRDP EIR described, in general, what potential environmental effects may be expected from projects planned within the 15-year period covered by the 2020 LRDP EIR, and how these impacts are to be addressed and/or mitigated. The 2020 LRDP EIR identified significant and unavoidable noise impacts resulting from demolition and constructions activities necessary for implementation of the 2020 LRDP. This section expands on the noise impacts discussion of the 2020 LRDP EIR as it relates specifically to the Aquatic Center Project, and provides mitigation measures and performance standards specifically for this project area, while drawing from the mitigations outlined in the 2020 LRDP EIR.

Substantial permanent increases in ambient noise levels from mechanical equipment and building design, and increased vehicular traffic in the project vicinity, were adequately reviewed and addressed within the 2020 LRDP EIR and for this reason are not included in the analysis in this chapter. The focus of the noise analysis is on potential noise effects of use of the new Aquatic Center upon residents located in the project's vicinity.

SETTING

Technical Information on Noise and Vibration

Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Decibels and other technical terms are defined in Table 1.

Most of the sounds that we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a filter that reflects the fact that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range.

TABLE 1
DEFINITIONS OF ACOUSTICAL TERMS

Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
L01, L10, L50, L90	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Equivalent Noise Level, Leq	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, DNL, Ldn	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 p.m. and 7:00 a.m.
Lmax, Lmin	The maximum and minimum A-weighted noise level during the measurement period.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

TABLE 2

TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

Noise Generators (at a Given Distance from Source)	A-Weighted Sound Level in Decibel	*Indoor Noise Environments*	Subjective Impression
	140		
Civil defense siren (100 feet)	130		
Jet take-off (200 feet)	120		Pain threshold
	110	Rock music concert	
Pile driver (100 feet)	100		Very loud
Ambulance siren (100 feet)			
	90	Boiler room	
Freight cars (50 feet)		Printing press plant	
Pneumatic drill (50 feet)	80	In kitchen with garbage disposal running	
Freeway (100 feet)			
Vacuum cleaner (10 feet)	70		Moderately loud
	60	Data processing center	
		Department store	
Light traffic (100 feet)	50	Private business office	
Large transformer (200 feet)			
	40		Quiet
Soft whisper (5 feet)	30	Quiet bedroom	
	20	Recording studio	
	10		
	0		Threshold of hearing

Source: Illingworth & Rodkin, Inc., Handbook of Acoustical Measurements and Noise Control, 1998.

This is called "A" weighting, and the decibel level measured is called the A-weighted sound level (dBA). The level of a sound source can be measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. Typical A-weighted levels measured in the environment and in industry are shown in Table 2.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources that create a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors, L01, L10, L50, and L90, are commonly used. They are the A-weighted noise levels equaled or exceeded during one percent, 10 percent, 50 percent, and 90 percent of a stated time period. A single number descriptor called the Leq is also widely used. The Leq is the average A-weighted noise level during a stated period of time that generates equivalent acoustical energy to the time varying ambient levels.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels. However, most household noise also decreases at night and exterior noise becomes very noticeable. Further, most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor, Ldn or DNL (day/night average sound level), was developed. The Ldn divides the 24-hour day into the daytime of 7:00 a.m. to 10:00 p.m. and the nighttime of 10:00 p.m. to 7:00 a.m. The nighttime noise level is weighted 10 dB higher than the daytime noise level.

Noise levels from a source diminish as distance to the receptor increases. Other factors such as reflecting surfaces or shielding from barriers also help intensify or reduce noise levels at any given location. A commonly used rule of thumb for traffic noise is that for every doubling of distance from the road, the noise level is reduced by 3 to 4.5 dBA, and for a single source of noise, such as a piece of stationary equipment, the noise is reduced by 6 dBA, for each doubling of distance away from the source. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA.

Community reaction to an increase in noise levels varies, depending upon the magnitude of the change. In general, a difference of 3 dBA is considered a minimally perceptible change, while a 5 dBA difference is the typical threshold that would cause a change in community reaction. An increase of 10 dBA would be perceived by people as a doubling of loudness. A doubling of traffic flow on any given roadway would cause a noise increase of approximately 3 dBA. Similarly, twice the amount of railroad activity would be required to increase the rail contribution to community noise level by 3 dBA.

For typical residential construction (i.e., light frame construction with ordinary sash windows), the amount of exterior to interior noise reduction is at least 20 dBA with exterior doors and windows closed. With windows partially open for ventilation, the typical amount of exterior to interior noise reduction that can be expected is approximately 15 dBA. Buildings constructed of

stucco or masonry with dual-glazed windows and solid core exterior doors can be expected to achieve an exterior to interior noise reduction of approximately 25-30 dBA.

Noise impacts resulting from development and operation of the Aquatic Center Project were assessed using several methods. First, baseline noise levels were quantified using noise measurements conducted in February 2013. Data gathered during swimming and diving practice and a swim meet at Spieker Pool were used to assess effects from activities that could occur at the new Aquatic Center. Increases in traffic noise levels in the area were calculated for the 2020 LRDP EIR. Noise and vibration impacts resulting from construction activities were assessed based on the construction noise and vibration levels, limits proposed in the Berkeley Noise ordinance, continuing best practices and measures to mitigate noise, and other thresholds to protect against vibration effects discussed in the 2020 LRDP EIR.

Existing Noise Environment

The Aquatic Center Project is located in the southwestern portion of the UC Berkeley campus. The Cal Aquatics Center is an intercollegiate aquatic facility to be located on what is currently a University owned parking lot, west of the University Health Service Tang Center at 2222 Bancroft Way, and flanked by Bancroft Way to the north and Durant Avenue to the south. It will consist of three single level buildings surrounding a 50 meter swimming pool with a dive tower. The main entry would be located on Bancroft Way.

The noise environment on the UC Berkeley campus and the surrounding city environs results primarily from vehicular traffic on the street network. Intermittent noise resulting from jet aircraft overflights contributes to the noise environment to a lesser extent. In the Campus Park, sounds generated by people including conversations, musical instruments, and personal transportation devices such as skateboards and bicycles, are heard where people congregate and circulate. Away from these areas, the natural sounds of water moving in the streams, wind in the trees, birds, and Sather Tower (The Campanile) chimes are heard.

Existing ambient noise levels were measured in the vicinity of the project site in February 2013. A measurement over a 48-hour period was made along Durant Avenue at the project site in order to characterize the noise environment at residences located across the street from the site. Short-term noise levels were measured at the site's north, east, and west boundaries to complete the survey. The measurement locations are shown on Figure 1.

Noise levels at residences located along Durant Avenue result from vehicular traffic on the roadway. Results of the measurement survey at this location are summarized on Figures 2 and 3. The data depict the range of noise levels from the minimum level to the maximum level measured during each 10-minute interval and the Leq calculated for each hour. The day/night average sound level (Ldn) was 68 dBA Ldn on each of the two days of measurements. Hourly average noise levels during the daytime typically ranged from about 63 dBA Leq to 71 dBA Leq. Hourly average noise levels at night typically ranged from about 51 dBA Leq during the middle of the night to about 63 dBA Leq during the hour between 6:00 AM and 7:00 AM. Maximum noise levels resulting from louder vehicles on the roadway typically range between 80 and 90 dBA with occasional excursions above 90 dBA. Maximum noise levels in this range occurred regularly between about 4:00 AM and 11:00 PM.

Figure 1: Ambient Noise Measurement Locations

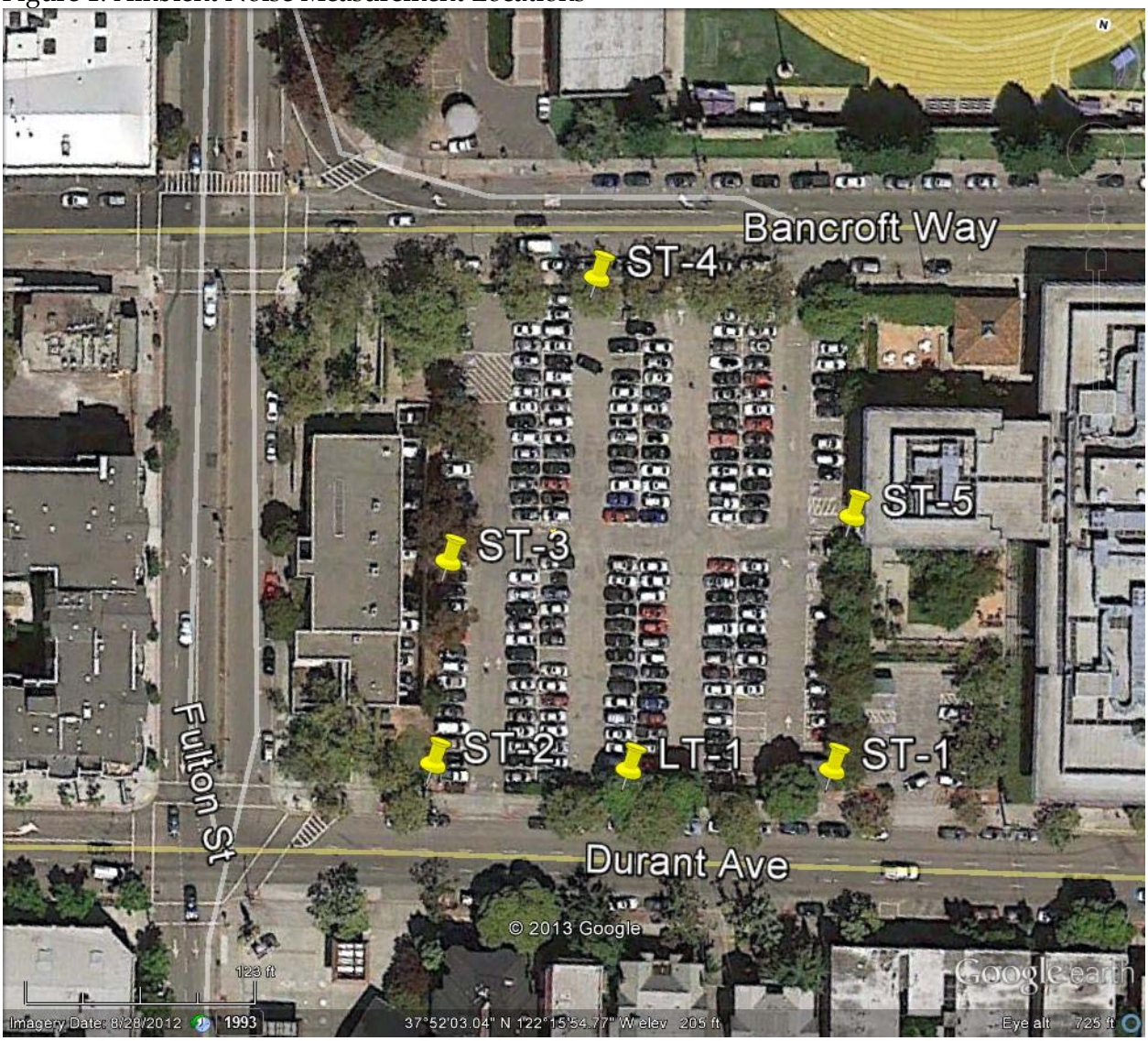


Figure 2: Ambient Noise Levels along Durant Avenue at Project Site
Measured 35 feet from the Roadway Center
February 4 - 5, 2013 (Monday - Tuesday)

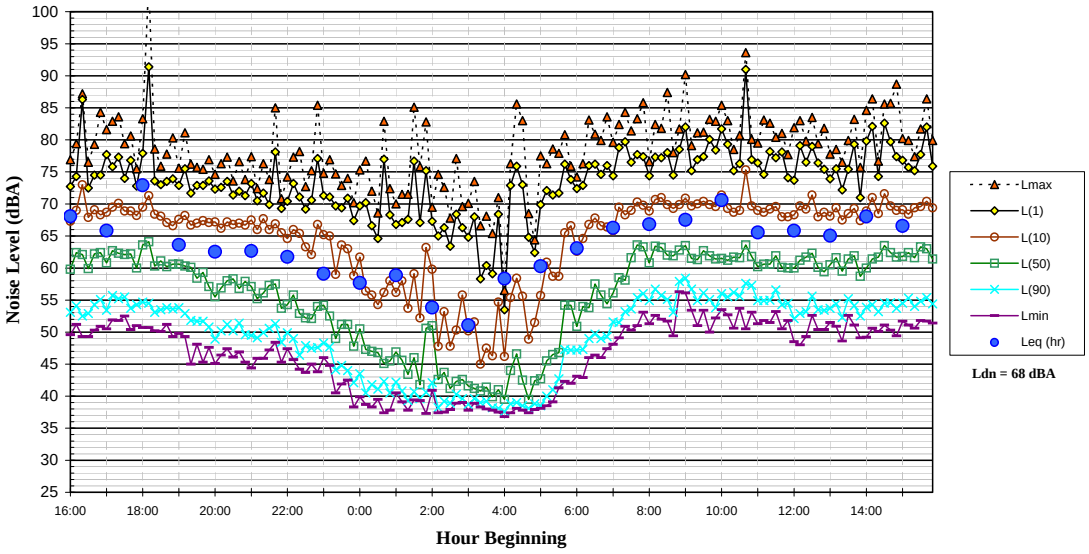
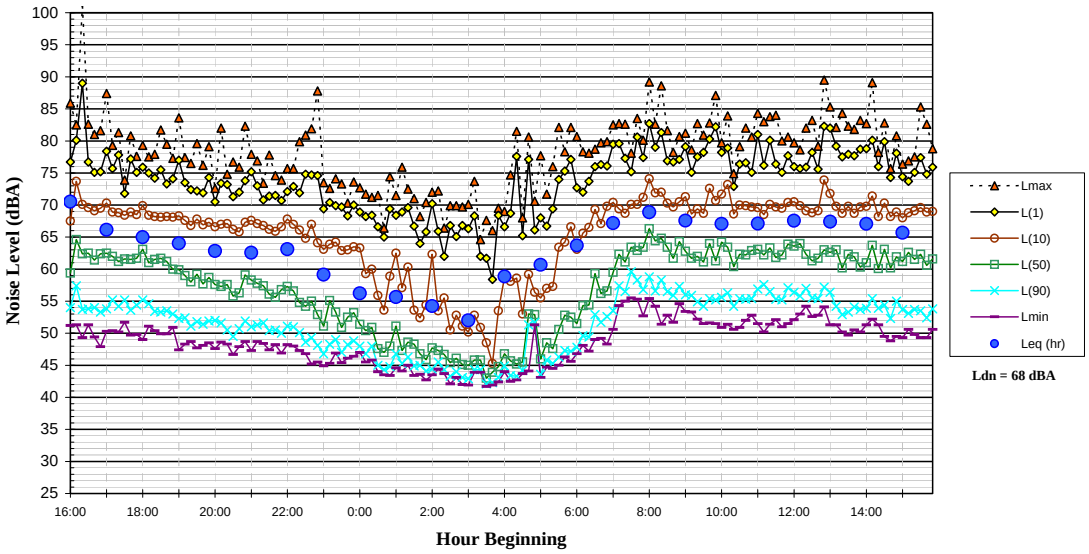


Figure 3: Ambient Noise Levels along Durant Avenue at Project Site
Measured About 35 feet from the Roadway Center
February 5 - 6, 2013 (Tuesday - Wednesday)



Short-term spot measurements were made on Monday, February 4, 2013 and Thursday, February 7, 2013 at five locations around the project perimeter to characterize variations in the noise environment and complete quantification of noise levels in the area. There are no residential receptors adjoining the north, east, or west project boundaries. The site is bordered by Edwards Field and Bancroft Way on the north, the Tang Medical Center on the east, and an

office building on the west. Vehicular traffic is the only significant source of noise affecting the project site and surrounding areas. The results of the noise measurements are summarized in Table 3.

TABLE 3
SHORT-TERM (10-MINUTE) NOISE MEASUREMENT RESULTS (DBA)

Location	Day/Time	Lmax	L1	L10	L50	L90	Lmin	Leq
ST-1) SE corner of site ~ 35′ from Durant centerline	2-4-13/3:30pm	79	75	68	60	51	47	64
	2-7-13/8:00am	75	73	69	63	58	55	65
ST-2) SW corner of site ~ 35′ from Durant centerline	2-4-13/4:01pm	76	68	60	59	58	58	60
	2-7-13/8:10am	74	72	66	61	56	53	63
ST-3) Western site boundary between Bancroft and Durant	2-4-13/4:12pm	74	61	56	52	48	45	54
	2-7-13/8:21am	72	68	61	57	54	53	59
ST-4) Site frontage along Bancroft ~ 40′ from centerline	2-4-13/4:23pm	75	77	67	61	56	52	64
	2-7-13/12:10pm	72	69	64	60	55	49	61
ST-5) Eastern site boundary between Bancroft and Broadway	2-4-13/4:35pm	65	62	58	54	52	49	55
	2-7-13/12:21pm	71	67	59	55	52	50	57

Measurement Locations ST-1 and ST-2 adjoin Durant Avenue Maximum sound levels resulted from louder vehicles on the roadway, including trucks, buses, and motorcycles. During the morning measurements, there was a heavy volume of traffic that elevated background noise levels and average noise levels as compared to the afternoon measurement. Noise levels were similar to the Durant Avenue exposure along the Bancroft Way exposure of the site characterized by location ST-4. Noise levels were lower at the interior measurements along the western and eastern site boundaries (ST-3 and ST-5) given that they are located further from the roadways and the adjacent land uses are not significant noise generators.

Regulatory, Plan, and Policy Setting

Federal and/or State Regulations

The Noise Control Act of 1972 directed the U.S. Environmental Protection Agency (EPA) to develop noise level guidelines that would protect the population from the adverse effects of environmental noise. The EPA published guidelines (EPA Levels Document, 1974) containing recommendations of 55 dBA Ldn outdoors and 45 dBA Ldn indoors as a goal for residential land uses. The EPA is careful to stress that the recommendations contain a factor of safety and do not consider technical or economic feasibility issues and, therefore, should not be construed as standards or regulations. The Department of Housing and Urban Development (HUD) standards define Ldn levels below 65 dBA outdoors as acceptable for residential use. Outdoor levels up to 75 dBA Ldn may be made acceptable through the use of insulation in buildings. The goal of the HUD standards is to achieve a maximum interior level of 45 dBA Ldn.

The State of California has developed noise and land use compatibility guidelines. The guidelines are based on exterior noise exposure in terms of the Ldn or CNEL. Residential multi-family land uses are normally acceptable where the Ldn is up to 65 dBA and conditionally acceptable where the Ldn is 60 dBA to 70 dBA. The overlap reflects the reality that projects within this category have differing sensitivities to noise. Other land uses such as schools, libraries and office buildings are considered normally acceptable where the Ldn is up to 70 dBA and conditionally acceptable where the Ldn is 60 to 70 dBA. Conditionally acceptable noise environments may require additional noise attenuation to achieve acceptable exterior or interior noise environments. Where land uses are exposed to noise levels above those considered normally acceptable, additional mitigations are normally needed to abate noise.

The State of California additionally regulates the noise emission levels of licensed motor vehicles traveling on public thoroughfares, sets noise emission limits for certain off-road vehicles and watercraft, and sets required sound levels for light-rail transit vehicle warning signals. The extensive State regulations pertaining to worker noise exposure are for the most part applicable only to the construction phase of any project (for example California Occupational Safety and Health Administration Occupational Noise Exposure Regulations [8CCR, General Industrial Safety Orders, Article 105, Control of Noise Exposure section 5095, et. seq.]) or for workers in a "central plant' and/or a maintenance facility, or involved in the use of landscape maintenance equipment or heavy machinery.

City of Berkeley

Although the University is constitutionally exempt from local regulations when using University property in furtherance of the University's educational purposes, it is University policy to evaluate proposed projects for consistency with local plans and policies. Therefore, this section outlines the plans and policy goals of the City of Berkeley related to noise.

Berkeley General Plan. The City of Berkeley General Plan does not contain a Noise Element, but instead incorporates noise policies and actions into the Environmental Management Element. Policy EM-47 seeks to eliminate existing noise problems and prevent significant future degradation of the acoustic environment. Policy EM-48 seeks to reduce local and regional traffic, "which is the single largest source of unacceptable noise in the City."[i] Policy EM-49 states that the City will "require operational limitations and all feasible noise buffering for new commercial, industrial, institutional or recreational uses that generates significant noise impacts near residential uses."

The General Plan EIR utilized a noise exposure map to illustrate the noise levels along each roadway taking into account shielding from buildings; General Plan policies, including Land Use Compatibility Standards, are intended to ensure that new development under the General Plan will be compatible with the existing and future noise environment.

The EIR found that implementation of the General Plan would increase traffic noise levels along some roadway segments, potentially exposing residences to excessive noise levels. Traffic noise modeling found a potential 3 dBA increase, an effect found not to be significant. Cumulative noise effects were found to be less than significant with the adoption of land use compatibility

guidelines, and other noise effects were considered localized in nature, so that no significant cumulative noise effects would occur with implementation of the General Plan.

City of Berkeley Noise Ordinance. The City of Berkeley Municipal Code, Chapter 13.40, Community Noise, establishes land use to land use noise level limits for developed lands within the City of Berkeley subject to its jurisdiction. Residential exterior noise limits are established in terms of the median hourly (L50) sound level. The limits are adjusted upward in 5 dB increments for sounds of shorter duration. In residential areas, the L50 limits range from 55 dBA to 60 dBA during the daytime (7:00 a.m. to 10:00 p.m.) and 45 dBA to 55 dBA during the nighttime (10:00 p.m. to 7:00 a.m.). The commercial daytime limit is 65 dBA and the commercial nighttime limit is 60 dBA.

The noise ordinance also regulates construction and demolition noise. Section 13.40.070, Prohibited Acts, states: "The following acts and the causing or permitting thereof are declared to be in violation of this chapter.

7. Construction/Demolition:
Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7 p.m. and 7 a.m., or 8 p.m. and 9 a.m. on weekends or holidays such that the sound there from creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the NCO. (This section shall not apply to the use of domestic power tools as specified in Section 13.40.070(B)(11).)

Noise Restrictions at Affected Properties: Where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum sound levels at affected properties will not exceed those listed in the following schedule:

Mobile Equipment
Maximum sound levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment:

	R-1, R-2 Residential (dBA)	R-3 and Above Multi-Family Residential (dBA)	Commercial/ Industrial (dBA)
Daily, 7 a.m. to 7 p.m.	75	80	85
Weekends, 9 a.m. to 8 p.m. and legal holidays	60	65	70

Stationary Equipment
Maximum sound levels for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:

Cal Aquatics Center

	R-1, R-2 Residential (dBA)	R-3 and Above Multi-Family Residential (dBA)	Commercial/ Industrial (dBA)
Daily, 7 a.m. to 7 p.m.	60	65	70
Weekends, 9 a.m. to 8 p.m. and legal holidays	50	55	60

IMPACTS AND MITIGATION MEASURES

This section describes the potential noise impacts of the Cal Aquatics Project. In this section impacts are categorized according to their severity as significant, less than significant, or not significant; where possible, mitigation measures are proposed to reduce the severity of significant impacts.

Standards of Significance

The significance of the potential impacts of the Cal Aquatics Project on noise was determined based on the following standards:

Standard: Expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, without mitigation?

Standard: Result in a substantial permanent increase in ambient noise levels in the project vicinity, without appropriate mitigation?

Standard: Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity, without appropriate mitigation?

Standard: Expose people to or generate excessive ground-borne vibration or ground-borne noise levels, without mitigation?

LRDP Mitigation Measures and Best Practices

2020 LRDP EIR Mitigation measures and continuing best practices would be performed in conformance with the 2020 LRDP. The 2020 LRDP EIR concluded that noise resulting from demolition and construction activities necessary for implementation of the 2020 LRDP would, in some instances and at affected residential or commercial property lines, cause a substantial temporary or periodic increase in noise levels in excess of local standards prescribed by the City

of Berkeley. This impact was determined to be significant and unavoidable. The 2020 LRDP EIR includes mitigation measures and continuing best practices developed to reduce the effects of implementation of the 2020 LRDP upon noise and vibration. Where applicable, the Cal Aquatics Project would incorporate the following 2020 LRDP EIR mitigation measures and continuing best practices:

Continuing Best Practice NOI-2: Mechanical equipment selection and building design shielding would be used, as appropriate, so that noise levels from future building operations would not exceed the City of Berkeley Noise Ordinance limits for commercial areas or residential zones as measured on any commercial or any residential property in the area surrounding the project proposed to implement the 2020 LRDP. Controls that would typically be incorporated to attain this outcome includes selection of quiet equipment, sound attenuators or fans, sound attenuator packages for cooling towers or emergency generators, acoustical screen walls, and equipment enclosures.[ii]

Continuing Best Practice NOI-4-a: The following measures would be included in all construction projects:
Construction activities will be limited to a schedule that minimizes disruption to uses surrounding the project site as much as possible. Construction outside the Campus Park area will be scheduled within the allowable construction hours designated in the noise ordinance of the local jurisdiction to the full feasible extent, and exceptions will be avoided except where necessary.
As feasible, construction equipment will be required to be muffled or controlled.
The intensity of potential noise sources will be reduced where feasible by selection of quieter equipment (e.g., gas or electric equipment instead of diesel powered, low noise air compressors).
Functions such as concrete mixing and equipment repair will be performed off-site whenever possible.

For projects requiring pile driving:
With approval of the project structural engineer, pile holes will be pre-drilled to minimize the number of impacts necessary to seat the pile.
Pile driving will be scheduled to have the least impact on nearby sensitive receptors.
Pile drivers with the best available noise control technology will be used. For example, pile driving noise control may be achieved by shrouding the pile hammer point of impact, by placing resilient padding directly on top of the pile cap, and/or by reducing exhaust noise with a sound-absorbing muffler.
Alternatives to impact hammers, such as oscillating or rotating pile installation systems, will be used where possible.[iii]

Continuing Best Practice NOI-4-b: UC Berkeley will continue to precede all new construction projects with community outreach and notification, with the purpose of ensuring that the mutual needs of the particular construction project and of those impacted by construction noise are met, to the extent feasible.[iv]

LRDP Mitigation Measure NOI-4: UC Berkeley will develop a comprehensive construction noise control specification to implement additional noise controls, such as noise attenuation

barriers, siting of construction laydown and vehicle staging areas, and the measures outlined in Continuing Best Practice NOI-4-a as appropriate to specific projects. The specification will include such information as general provisions, definitions, submittal requirements, construction limitations, requirements for noise and vibration monitoring and control plans, noise control materials and methods. This document will be modified as appropriate for a particular construction project and included within the construction specification.[v]

LRDP Mitigation Measure NOI-5: The following measures will be implemented to mitigate construction vibration:[iv]
UC Berkeley will conduct a pre-construction survey prior to the start of pile driving. The survey will address susceptibility ratings of structures, proximity of sensitive receivers and equipment/operations, and surrounding soil conditions. This survey will document existing conditions as a baseline for determining changes subsequent to pile driving.
UC Berkeley will establish a vibration checklist for determining whether or not vibration is an issue for a particular project.
Prior to conducting vibration-causing construction, UC Berkeley will evaluate whether alternative methods are available, such as:
Using an alternative to impact pile driving such as vibratory pile drivers or oscillating or rotating pile installation methods.
Jetting or partial jetting of piles into place using a water injection at the tip of the pile.
If vibration monitoring is deemed necessary, the number, type, and location of vibration sensors would be determined by UC Berkeley.

EFFECTS FOUND NOT TO BE SIGNIFICANT
There were no thresholds for which the Initial Study found no significant impact.

EFFECTS FOUND TO BE LESS THAN SIGNIFICANT WITH MITIGATION

Impact NOI-1: Implementation of the Cal Aquatics Project could increase vehicular traffic in the area, but would not result in a substantial permanent increase in ambient levels due to increased vehicular traffic on local roadways.

The significance of noise impacts resulting from increased vehicular traffic was analyzed in the 2020 LRDP EIR.[v] A substantial permanent increase in noise would occur if traffic noise levels are projected to increase by greater than 3 dBA Ldn along roadway segments with adjoining noise sensitive land uses. The increase in vehicular traffic noise was calculated by comparing traffic resulting from the implementation of the 2020 LRDP to existing traffic volumes along the roadway segments at the 74 intersections analyzed in the 2020 LRDP EIR. The predicted increase in vehicular traffic noise is 0 to 1 dB Ldn throughout the street network. Such an increase is imperceptible and would result in a less than significant impact.

Impact NOI-2: Heating, ventilating, and air conditioning equipment associated with the Cal Aquatics Project would not result in operational noise levels in excess of local standards because of mitigation measures incorporated into the project.

Heating, ventilating, and air-conditioning equipment associated with new buildings may generate noise heard near the buildings. The noise could affect sensitive areas on the Campus Park, or other University properties, or on adjacent non-university properties. Pursuant to the 2020 LRDP EIR, Continuing Best Practice NOI-2 would mitigate this to a less than significant impact.

Impact NOI-3: Construction of the Project's facilities could expose nearby receptors to excessive ground-borne vibration but the mitigation measures described below would ensure this impact is less than significant.

Construction activities can cause vibration that varies in intensity, depending on several factors. Of all construction activities, use of pile driving equipment typically generates the highest ground-borne vibration level, followed by vibratory compaction equipment.[vi] The current plan for construction of the new Aquatics facility does not envision the use of pile drivers. Small impact equipment such as pavement breakers or jackhammers to remove the existing paving, and vibratory soil compactors could be required. This equipment would not generate excessive vibration that could damage structures. Vibration could be perceptible inside adjacent and nearby buildings. Applicable portions of LRDP Mitigation Measure NOI – 5 would reduce this to a less than significant impact.

Impact NOI-4: Noise resulting from activities at the pool would not cause a substantial permanent increase in noise levels in the vicinity of the project, or noise in excess of local standards prescribed in the City of Berkeley Noise Ordinance. This is a less-than-significant impact.

The Cal Aquatic Center would consist of three single-level buildings surrounding a 50-meter swimming pool with a dive tower. The dive tower would include platform diving and board diving. The buildings would be located along Bancroft Way and the west edge of the project site. The facility will be enclosed with a minimum 8-foot high metal fence. Planted vines will be used to grow up the fence to create a visual barrier. The facility will be used primarily for training Monday through Saturday between 7 AM and 6:30 PM, but may be used for lap swimming as early as 6 AM. In the rare instances where event seating is required, the deck areas will accommodate temporary bleachers for up to 500 spectators. Events may extend into the evening, so the project includes event lighting.

A noise survey was conducted at Spieker Pool on Bancroft Way on February 7, 2013 to establish noise levels resulting from activities anticipated at the new Aquatic Center. During the morning, activities included lap swimming, water polo practice, diving practice, and a dual swim meet. Noise levels were monitored on the elevated deck overlooking the pool at various locations necessary to characterize noise from the individual activities. Reference noise levels were measured at Spieker Pool at shown in Table 4. These data were used to model noise levels that would occur at the new Cal Aquatics facility. Modeling was completed using the SoundPlan acoustic model. SoundPlan is a three-dimensional ray tracing program used for analyzing noise from both stationary and mobile sources. The model utilizes noise source characteristics including sound level and frequency content to calculate the effects of distance, atmospheric conditions, attenuation from barriers and topography, and reflections from

building surfaces. The results of the modeling at the most affected receptors along Durant avenue are shown in Table 5.

Table 4: Noise Levels Measured at Spieker Pool

Noise Sources	Noise levels (approximately 100 feet from source)	
	L_{eq}	L_{max}
Women's Water Polo Practice (splash, voice, whistle)	68	74 – 80
Swim Practice (splash)	63	67 – 68
Diving Practice (board bounce, splash, voice)	65	75 – 78
Swim Meet (PA, splash, voice)	77	84 – 87

Table 5: Noise Levels from Typical Activities in the New Aquatics Facility Calculated at Residences Across Durant Avenue

Noise Sources	Noise levels (dBA) at Durant Avenue Residences	
	L_{eq}	L_{max}
Women's Water Polo Practice (splash, voice, whistle)	63	69-75
Swim Practice (splash)	56	60-61
Diving Practice (board bounce, splash, voice)	65	75 – 78

The project would cause a significant impact if typical daily activities exceed the noise limits established in the Berkeley Noise Ordinance or cause a substantial increase in noise at sensitive receptors. The Berkeley Noise Ordinance establishes exterior noise limits, but in locations where the measured ambient noise level is greater than the limits established in the ordinance, the exterior noise limit is raised to the ambient noise level. The ambient noise level along Durant Avenue in the vicinity of the project site exceeds the referenced noise limits, so the ambient level becomes the significance threshold. Two noise metrics, the hourly average noise level (Leq) and the instantaneous maximum level (Lmax), are used to establish the ambient and assess the impacts from the project. The ambient daytime average noise level is 67 dBA Leq and maximum noise levels throughout the daytime when the pool may be used typically range from

75 to 85 dBA Lmax. Noise levels from typical daily activities at the pool, shown in Table 5, would not exceed the significance thresholds. During the rare time when the pool would include a special event noise levels would be up to 72 dBA Leq, exceeding the ambient noise levels by up to 5 dBA, and be somewhat intrusive at the nearest residences located directly across Durant Avenue from the site. However, these special events at this pool would be rare, occurring no more than four times per year. The special events would be limited to the daytime and evening. Given that there would be no more than four events per year, and the activity would not occur during the nighttime, the impacts from operations of the pool, including the infrequent special events, would be less than significant.

The primary noise source associated with a special event would be the PA system. The PA system measured at Spieker Pool resulted in maximum noise levels at 84 to 87 dBA measured 100 feet from the loudspeakers during the swim meet. The second most significant noise source during a swim meet with 500 spectators would be the cheering. Although these activities would occur no more than four times per year, there are measures that could be incorporated into the project to reduce the intrusiveness of the noise during these events. The PA system could be designed to reduce unintended spillage of sound to areas outside the pool area by orienting the speakers in the northerly direction away from the residences and carefully controlling the amplitude of the PA system so as to provide adequate acoustical coverage of the seating area, but not at unnecessarily elevated levels. A second measure would be to construct the 8-foot fence proposed along the south side of the facility out of a solid material so it could serve as a noise barrier fence. To be effective as a noise barrier, the fence would need to be solid over its face and sealed at the base, and have a minimum surface weight of 2- to 3 lbs./ft.^{2}. Materials could be visually opaque or transparent. The incorporation of these measures into the project design would minimize the intrusiveness of the sound on those rare occurrences when the facility is used for special events.

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[i] *Guidelines for the Preparation and Content of the Noise Element of the General Plan,* prepared by California Department of Health Services, 1988.
[ii] UC Berkeley, *2020 LRDP EIR,* Vol. 1, April 15, 2004, page 4.9-17.
[iii] UC Berkeley, *2020 LRDP EIR*, Vol. 1, April 15, 2004, page 4.9-20.
[iv] UC Berkeley, *2020 LRDP EIR,* Vol. 1, April 15, 2004, page 4.9-16.
[v] UC Berkeley, *2020 LRDP EIR,* Vol. 1, April 15, 2004, page 4.9-16.
[vi] UC Berkeley, *2020 LRDP EIR,* Vol. 1, April 15, 2004, page 4.9-21.

The siting of staging and laydown areas would consider minimizing noise as stipulated in Continuing Best Practice NOI-4-b. Even after implementation of these continuing best practices and mitigation measures, the noise impact from construction would be significant and unavoidable.

EFFECTS FOUND TO BE SIGNIFICANT AND UNAVOIDABLE

Impact NOI-5: Noise resulting from demolition and construction activities would, in some instances, cause a substantial temporary or periodic increase in noise levels, in excess of local standards prescribed in Section 13.40.070 of the City of Berkeley Noise Ordinance at affected residential or commercial property lines. This is a significant and unavoidable impact.

The 2020 LRDP Draft EIR recognized that construction and demolition activities would occur within the 2020 LRDP in proximity to residential and commercial land uses. Construction planned at Cal Aquatics Facility, because of their location at the edge of the campus area, would intermittently result in noise levels exceeding limits set forth in the Berkeley Noise Ordinance. Noise levels would intermittently and periodically substantially exceed existing ambient noise levels at the receiving properties. Implementation of Continuing Best Practices NOI-4-a, NOI-4-b, and LRDP Mitigation Measure NOI-4 would control construction-related noise to the extent that is reasonable and feasible. The schedule for construction and demolition activities generating noise in the community would, to the extent possible, reflect the Berkeley Noise Ordinance provisions. Truck traffic is assumed to use major roadways. The siting of staging and laydown areas would consider minimizing noise as stipulated in Continuing Best Practice NOI-4-b. Even after implementation of these continuing best practices and mitigation measures, the noise impact from construction would be significant and unavoidable.

APPENDIX E

TECHNICAL APPENDIX TO THE TRANSPORTATION ANALYSIS

TECHNICAL APPENDIX

TRAFFIC COUNT DATA

Volumes for: Tuesday, February 05, 2013 City: Berkeley Project #: 13-7076-002
Location: Bancroft Way Inibound Driveway (SB= Inbound)

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	0			1	2				
12:15	0	0			0	4				
12:30	0	0			0	4				
12:45	0	0	0	0	0	1	1	11	1	11
1:00	0	0			0	3				
1:15	0	0			0	3				
1:30	0	0			0	2				
1:45	0	0	0	0	0	2	0	10	0	10
2:00	0	0			2	1				
2:15	0	0			0	1				
2:30	0	0			0	0				
2:45	0	0	0	0	0	0	2	2	2	2
3:00	0	0			0	1				
3:15	0	0			1	2				
3:30	0	0			0	1				
3:45	0	0	0	0	0	3	1	7	1	7
4:00	0	0			0	2				
4:15	0	0			0	0				
4:30	0	0			0	4				
4:45	0	0	0	0	0	2	0	8	0	8
5:00	0	0			0	2				
5:15	0	0			0	1				
5:30	0	0			0	2				
5:45	0	0	0	0	0	7	0	12	0	12
6:00	0	0			1	4				
6:15	0	0			3	1				
6:30	0	0			0	1				
6:45	0	0	0	0	2	5	6	11	6	11
7:00	0	0			0	1				
7:15	0	0			4	4				
7:30	0	0			4	2				
7:45	0	0	0	0	18	1	26	8	26	8
8:00	0	0			11	1				
8:15	0	0			6	0				
8:30	0	0			7	2				
8:45	0	0	0	0	6	1	30	4	30	4
9:00	0	0			6	1				
9:15	0	0			5	0				
9:30	0	0			6	0	0			
9:45	0	0	0	0	5	1	22	2	22	2
10:00	0	0			4	0				
10:15	0	0			4	0				
10:30	0	0			6	1				
10:45	0	0	0	0	4	1	18	2	18	2
11:00	0	0			2	0				
11:15	0	0			3	1				
11:30	0	0			5	0				
11:45	0	0	0	0	1	0	11	1	11	1
Total	0	0	0	0	117	78	117	78	117	78
Combined Total	0		0		195		195		195	
AM Peak					7:45 AM					
Vol.					42					
P.H.F.					0.583					
PM Peak						5:15 PM				
Vol.						14				
P.H.F.						0.500				
Percentage					60.0%	40.0%				

Volumes for: Wednesday, February 06, 2013 City: Berkeley Project #: 13-7076-002
Location: Bancroft Way Inibound Driveway (SB= Inbound)

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	0			0	2				
12:15	0	0			0	0				
12:30	0	0			0	5				
12:45	0	0	0	0	0	2	0	9	0	9
1:00	0	0			0	1				
1:15	0	0			0	3				
1:30	0	0			0	4				
1:45	0	0	0	0	0	0	0	8	0	8
2:00	0	0			0	2				
2:15	0	0			1	0				
2:30	0	0			0	1				
2:45	0	0	0	0	0	2	1	5	1	5
3:00	0	0			0	0				
3:15	0	0			0	1				
3:30	0	0			0	5				
3:45	0	0	0	0	0	4	0	10	0	10
4:00	0	0			0	1				
4:15	0	0			0	2				
4:30	0	0			0	0				
4:45	0	0	0	0	0	2	0	5	0	5
5:00	0	0			0	1				
5:15	0	0			0	2				
5:30	0	0			0	2				
5:45	0	0	0	0	0	3	0	8	0	8
6:00	0	0			1	5				
6:15	0	0			4	2				
6:30	0	0			4	2				
6:45	0	0	0	0	1	4	10	13	10	13
7:00	0	0			2	9				
7:15	0	0			9	4				
7:30	0	0			5	3				
7:45	0	0	0	0	16	3	32	19	32	19
8:00	0	0			13	2				
8:15	0	0			12	4				
8:30	0	0			6	4				
8:45	0	0	0	0	5	0	36	10	36	10
9:00	0	0			8	0				
9:15	0	0			4	0				
9:30	0	0			6	2	0			
9:45	0	0	0	0	3	2	21	4	21	4
10:00	0	0			1	0				
10:15	0	0			5	1				
10:30	0	0			1	0				
10:45	0	0	0	0	2	0	9	1	9	1
11:00	0	0			1	0				
11:15	0	0			0	0				
11:30	0	0			3	0				
11:45	0	0	0	0	2	0	6	0	6	0
Total	0	0	0	0	115	92	115	92	115	92
Combined Total	0		0		207		207		207	
AM Peak					7:45 AM					
Vol.					47					
P.H.F.					0.734					
PM Peak						6:45 PM				
Vol.						20				
P.H.F.						0.556				
Percentage					55.6%	44.4%				

Volumes for: Tuesday, February 05, 2013 City: Berkeley Project #: 13-7076-003
Location: Bancroft Way Outbound Driveway (NB= Outbound)

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	3			0	0				
12:15	0	4			0	0				
12:30	1	5			0	0				
12:45	0	2	1	14	0	0	0	0	1	14
1:00	0	2			0	0				
1:15	0	0			0	0				
1:30	0	1			0	0				
1:45	0	0	0	3	0	0	0	0	0	3
2:00	1	4			0	0				
2:15	0	2			0	0				
2:30	0	4			0	0				
2:45	0	2	1	12	0	0	0	0	1	12
3:00	0	7			0	0				
3:15	0	4			0	0				
3:30	0	3			0	0				
3:45	0	6	0	20	0	0	0	0	0	20
4:00	0	5			0	0				
4:15	0	6			0	0				
4:30	0	10			0	0				
4:45	0	26	0	47	0	0	0	0	0	47
5:00	0	19			0	0				
5:15	0	14			0	0				
5:30	0	9			0	0				
5:45	0	11	0	53	0	0	0	0	0	53
6:00	0	8			0	0				
6:15	0	7			0	0				
6:30	2	8			0	0				
6:45	0	8	2	31	0	0	0	0	2	31
7:00	1	2			0	0				
7:15	0	4			0	0				
7:30	0	4			0	0				
7:45	1	5	2	15	0	0	0	0	2	15
8:00	0	3			0	0				
8:15	0	1			0	0				
8:30	2	1			0	0				
8:45	0	3	2	8	0	0	0	0	2	8
9:00	0	1			0	0				
9:15	0	2			0	0				
9:30	6	0			0	0	0			
9:45	4	0	10	3	0	0	0	0	10	3
10:00	2	0			0	0				
10:15	4	2			0	0				
10:30	6	0			0	0				
10:45	3	1	15	3	0	0	0	0	15	3
11:00	1	0			0	0				
11:15	2	2			0	0				
11:30	3	0			0	0				
11:45	4	2	10	4	0	0	0	0	10	4
Total	43	213	43	213	0	0	0	0	43	213
Combined Total	256		256		0		0		256	
AM Peak	9:30 AM									
Vol.	16									
P.H.F.	0.667									
PM Peak		4:30 PM								
Vol.		69								
P.H.F.		0.712								
Percentage	16.8%	83.2%								

Volumes for: Wednesday, February 06, 2013 City: Berkeley Project #: 13-7076-003
Location: Bancroft Way Outbound Driveway (NB= Outbound)

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	2			0	0				
12:15	1	3			0	0				
12:30	1	2			0	0				
12:45	0	5	2	12	0	0	0	0	2	12
1:00	0	3			0	0				
1:15	0	5			0	0				
1:30	0	1			0	0				
1:45	0	1	0	10	0	0	0	0	0	10
2:00	0	3			0	0				
2:15	0	1			0	0				
2:30	0	2			0	0				
2:45	0	3	0	9	0	0	0	0	0	9
3:00	0	6			0	0				
3:15	0	3			0	0				
3:30	0	5			0	0				
3:45	0	5	0	19	0	0	0	0	0	19
4:00	0	6			0	0				
4:15	0	8			0	0				
4:30	0	6			0	0				
4:45	0	12	0	32	0	0	0	0	0	32
5:00	0	25			0	0				
5:15	0	10			0	0				
5:30	0	12			0	0				
5:45	0	8	0	55	0	0	0	0	0	55
6:00	0	14			0	0				
6:15	1	4			0	0				
6:30	0	6			0	0				
6:45	0	4	1	28	0	0	0	0	1	28
7:00	0	2			0	0				
7:15	1	5			0	0				
7:30	2	5			0	0				
7:45	2	2	5	14	0	0	0	0	5	14
8:00	0	2			0	0				
8:15	0	2			0	0				
8:30	3	0			0	0				
8:45	2	2	5	6	0	0	0	0	5	6
9:00	0	4			0	0				
9:15	0	1			0	0				
9:30	3	3			0	0	0			
9:45	1	0	4	8	0	0	0	0	4	8
10:00	1	3			0	0				
10:15	9	0			0	0				
10:30	3	2			0	0				
10:45	5	0	18	5	0	0	0	0	18	5
11:00	1	0			0	0				
11:15	2	1			0	0				
11:30	4	0			0	0				
11:45	3	0	10	1	0	0	0	0	10	1
Total	45	199	45	199	0	0	0	0	45	199
Combined Total	244		244		0		0		244	
AM Peak	10:00 AM									
Vol.	18									
P.H.F.	0.500									
PM Peak		4:45 PM								
Vol.		59								
P.H.F.		0.570								
Percentage	18.4%	81.6%								

Volumes for: Tuesday, February 05, 2013 City: Berkeley Project #: 13-7076-001
Location: Durant Avenue Driveway (NB= In ; SB= Out)

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	3			3	2				
12:15	0	2			0	4				
12:30	0	2			0	3				
12:45	0	5	0	12	0	2	3	11	3	23
1:00	0	5			0	3				
1:15	0	2			0	2				
1:30	0	2			0	4				
1:45	0	2	0	11	0	2	0	11	0	22
2:00	1	4			0	5				
2:15	0	0			0	1				
2:30	0	2			0	4				
2:45	0	3	1	9	0	1	0	11	1	20
3:00	0	3			0	2				
3:15	0	0			1	3				
3:30	0	1			0	2				
3:45	0	4	0	8	0	5	1	12	1	20
4:00	0	3			0	5				
4:15	1	4			0	5				
4:30	0	1			0	11				
4:45	0	3	1	11	0	17	0	38	1	49
5:00	0	0			0	10				
5:15	0	2			0	2				
5:30	0	1			0	2				
5:45	1	1	1	4	0	13	0	27	1	31
6:00	0	4			1	6				
6:15	3	1			0	7				
6:30	2	2			0	6				
6:45	2	2	7	9	0	5	1	24	8	33
7:00	7	1			0	2				
7:15	10	0			0	3				
7:30	11	1			3	2				
7:45	22	1	50	3	0	4	3	11	53	14
8:00	18	0			1	4				
8:15	16	1			0	1				
8:30	12	0			0	2				
8:45	13	1	59	2	2	0	3	7	62	9
9:00	13	0			2	1				
9:15	12	0			2	4				
9:30	18	2			2	2	0			
9:45	4	1	47	3	3	1	9	8	56	11
10:00	5	0			3	1				
10:15	6	1			4	0				
10:30	5	0			8	1				
10:45	4	0	20	1	6	1	21	3	41	4
11:00	3	0			2	0				
11:15	2	0			1	1				
11:30	1	0			3	0				
11:45	3	0	9	0	1	2	7	3	16	3
Total	195	73	195	73	48	166	48	166	243	239
Combined Total	268		268		214		214		482	
AM Peak	7:45 AM				10:00 AM					
Vol.	68				21					
P.H.F.	0.773				0.656					
PM Peak		12:15 PM				4:15 PM				
Vol.		14				43				
P.H.F.		0.700				0.632				
Percentage	72.8%	27.2%			22.4%	77.6%				

Volumes for: Wednesday, February 06, 2013 City: Berkeley Project #: 13-7076-001
Location: Durant Avenue Driveway (NB= In ; SB= Out)

Start	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	4			0	1				
12:15	0	5			0	3				
12:30	0	3			0	3				
12:45	0	1	0	13	0	2	0	9	0	22
1:00	0	4			0	6				
1:15	0	3			0	1				
1:30	0	6			0	5				
1:45	0	3	0	16	0	2	0	14	0	30
2:00	0	3			0	6				
2:15	0	2			1	2				
2:30	0	3			0	1				
2:45	0	3	0	11	0	4	1	13	1	24
3:00	0	4			0	5				
3:15	0	2			0	3				
3:30	0	2			0	4				
3:45	0	1	0	9	0	2	0	14	0	23
4:00	1	2			0	1				
4:15	0	2			0	4				
4:30	0	3			0	8				
4:45	0	1	1	8	0	15	0	28	1	36
5:00	0	3			0	14				
5:15	0	2			0	15				
5:30	0	1			0	5				
5:45	0	0	0	6	0	11	0	45	0	51
6:00	2	1			1	6				
6:15	1	0			0	5				
6:30	2	2			1	5				
6:45	1	1	6	4	0	3	2	19	8	23
7:00	4	3			0	6				
7:15	4	1			1	5				
7:30	15	1			0	5				
7:45	16	0	39	5	1	4	2	20	41	25
8:00	14	1			2	3				
8:15	16	0			2	2				
8:30	16	2			0	1				
8:45	19	2	65	5	1	1	5	7	70	12
9:00	11	0			3	0				
9:15	8	0			3	3				
9:30	9	1			2	2	0			
9:45	5	0	33	1	1	3	9	8	42	9
10:00	6	1			0	1				
10:15	6	0			2	1				
10:30	5	1			4	1				
10:45	4	1	21	3	2	0	8	3	29	6
11:00	3	0			2	0				
11:15	3	0			4	0				
11:30	4	0			5	0				
11:45	4	1	14	1	2	0	13	0	27	1
Total	179	82	179	82	40	180	40	180	219	262
Combined Total	261		261		220		220		481	
AM Peak	8:00 AM				10:45 AM					
Vol.	65				13					
P.H.F.	0.855				0.650					
PM Peak		1:00 PM				4:30 PM				
Vol.		16				52				
P.H.F.		0.792				0.867				
Percentage	68.6%	31.4%			18.2%	81.8%				

All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

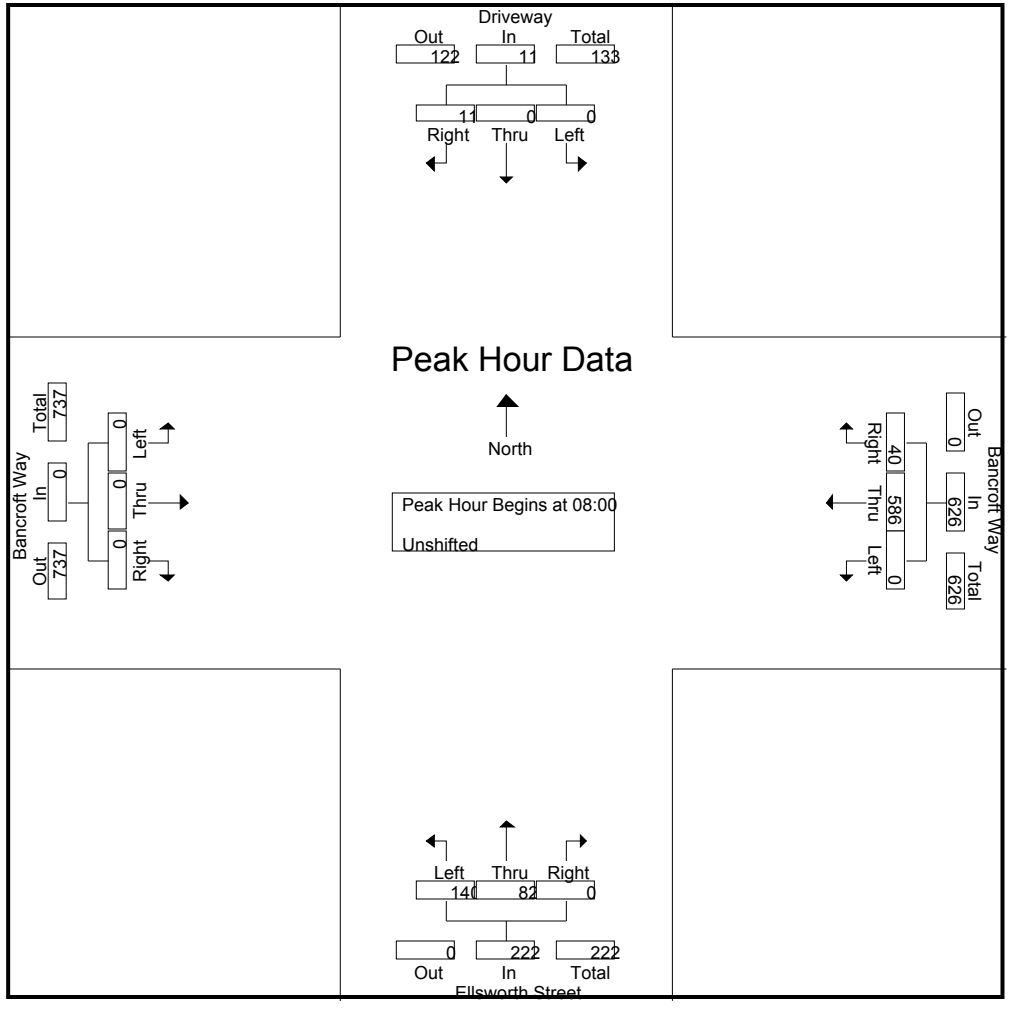
File Name : 13-7078-001 Ellsworth-Bancroft
Site Code : 00000000
Start Date : 2/5/2013
Page No : 1

Groups Printed- Unshifted

	Driveway Southbound					Bancroft Way Westbound					Ellsworth Street Northbound					Bancroft Way Eastbound							
Start Time	Left	Thr	Rig	Ped	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00	0	0	0	12	0	0	62	2	26	64	12	5	0	34	17	0	0	0	0	0	72	81	153
07:15	0	0	0	37	0	0	87	4	23	91	24	10	0	32	34	0	0	0	0	0	92	125	217
07:30	0	0	4	43	4	0	65	2	28	67	17	12	0	50	29	0	0	0	0	0	121	100	221
07:45	0	0	0	73	0	0	134	8	83	142	40	19	0	101	59	0	0	0	0	0	257	201	458
Total	0	0	4	165	4	0	348	16	160	364	93	46	0	217	139	0	0	0	0	0	542	507	1049
08:00	0	0	2	46	2	0	160	5	52	165	28	17	0	64	45	0	0	0	0	0	162	212	374
08:15	0	0	3	42	3	0	137	12	18	149	38	24	0	55	62	0	0	0	0	0	115	214	329
08:30	0	0	1	55	1	0	145	12	31	157	29	18	0	50	47	0	0	0	0	0	136	205	341
08:45	0	0	5	57	5	0	144	11	65	155	45	23	0	88	68	0	0	0	0	0	210	228	438
Total	0	0	11	200	11	0	586	40	166	626	140	82	0	257	222	0	0	0	0	0	623	859	1482
16:00	0	0	17	64	17	0	205	2	61	207	38	3	0	132	41	0	0	0	0	0	257	265	522
16:15	0	0	9	75	9	0	131	0	43	131	31	5	0	95	36	0	0	0	0	0	213	176	389
16:30	0	0	22	76	22	0	157	2	38	159	31	5	0	84	36	0	0	0	0	0	198	217	415
16:45	0	0	22	65	22	0	160	2	57	162	46	1	0	129	47	0	0	0	0	0	251	231	482
Total	0	0	70	280	70	0	653	6	199	659	146	14	0	440	160	0	0	0	0	0	919	889	1808
17:00	0	0	18	108	18	0	179	1	78	180	44	5	0	117	49	0	0	0	0	0	303	247	550
17:15	0	0	23	76	23	0	208	1	63	209	67	4	0	92	71	0	0	0	0	0	231	303	534
17:30	0	0	13	65	13	0	192	0	42	192	61	5	0	71	66	0	0	0	0	0	178	271	449
17:45	0	0	20	44	20	0	178	1	53	179	50	6	0	82	56	0	0	0	0	0	179	255	434
Total	0	0	74	293	74	0	757	3	236	760	222	20	0	362	242	0	0	0	0	0	891	1076	1967
Grand Total	0	0	159	938	159	0	2344	65	761	2409	601	162	0	1276	763	0	0	0	0	0	2975	3331	6306
Apprch %	0	0	100			0	97.3	2.7			78.8	21.2	0			0	0	0					
Total %	0	0	4.8		4.8	0	70.4	2		72.3	18	4.9	0		22.9	0	0	0		0	47.2	52.8	

	Driveway Southbound				Bancroft Way Westbound				Ellsworth Street Northbound				Bancroft Way Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	0	0	2	2	0	**160**	5	**165**	28	17	0	45	0	0	0	0	212
08:15	0	0	3	3	0	137	**12**	149	38	**24**	0	62	0	0	0	0	214
08:30	0	0	1	1	0	145	12	157	29	18	0	47	0	0	0	0	205
08:45	0	0	**5**	**5**	0	144	11	155	**45**	23	0	**68**	0	0	0	0	**228**
Total Volume	0	0	11	11	0	586	40	626	140	82	0	222	0	0	0	0	859

% App. Total	0	0	100		0	93.6	6.4		63.1	36.9	0		0	0	0			
PHF	.000	.000	.550	.550	.000	.916	.833	.948	.778	.854	.000	.816	.000	.000	.000	.000	.942	



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

17:00	0	0	18	18	0	179	**1**	180	44	5	0	49	0	0	0	0	247	
17:15	0	0	**23**	**23**	0	**208**	1	**209**	**67**	4	0	**71**	0	0	0	0	**303**	
17:30	0	0	13	13	0	192	0	192	61	5	0	66	0	0	0	0	271	
17:45	0	0	20	20	0	178	1	179	50	**6**	0	56	0	0	0	0	255	
Total Volume	0	0	74	74	0	757	3	760	222	20	0	242	0	0	0	0	1076	
% App. Total	0	0	100		0	99.6	0.4		91.7	8.3	0		0	0	0			
PHF	.000	.000	.804	.804	.000	.910	.750	.909	.828	.833	.000	.852	.000	.000	.000	.000	.888	

All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-001 Ellsworth-Bancroft
Site Code : 00000000
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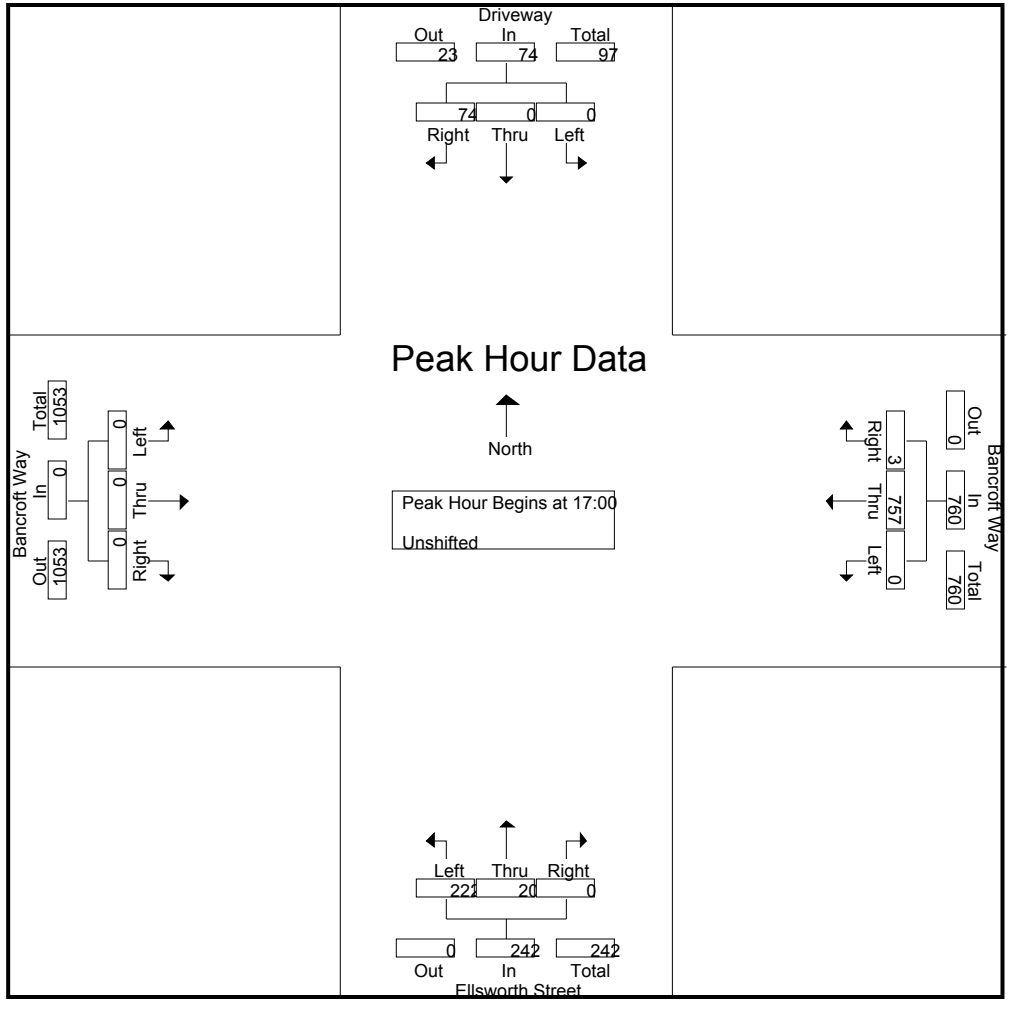


All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-001 Ellsworth-Bancroft
Site Code : 00000000
Start Date : 2/5/2013
Page No : 1

Groups Printed- Bank 1

	Driveway Southbound				Bancroft Way Westbound				Ellsworth Street Northbound				Bancroft Way Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	0	0	0	0	0	4	0	4	1	1	1	3	0	0	1	1	8
07:15	0	0	0	0	0	4	0	4	1	1	2	4	0	1	0	1	9
07:30	0	0	0	0	0	2	1	3	0	0	2	2	0	1	0	1	6
07:45	0	0	0	0	0	6	0	6	1	3	0	4	0	2	0	2	12
Total	0	0	0	0	0	16	1	17	3	5	5	13	0	4	1	5	35
08:00	0	0	0	0	1	6	0	7	2	0	0	2	0	1	0	1	10
08:15	0	0	0	0	0	9	0	9	7	0	1	8	0	2	0	2	19
08:30	0	0	0	0	0	6	0	6	2	0	1	3	0	0	0	0	9
08:45	0	0	0	0	1	11	0	12	10	2	2	14	0	0	0	0	26
Total	0	0	0	0	2	32	0	34	21	2	4	27	0	3	0	3	64
16:00	0	0	0	0	0	6	0	6	1	0	0	1	0	0	0	0	7
16:15	0	0	0	0	0	10	0	10	2	0	1	3	0	0	0	0	13
16:30	0	0	0	0	0	14	0	14	1	0	1	2	0	0	0	0	16
16:45	0	0	0	0	0	14	1	15	3	0	0	3	0	0	0	0	18
Total	0	0	0	0	0	44	1	45	7	0	2	9	0	0	0	0	54
17:00	0	1	1	2	1	17	0	18	4	1	1	6	0	1	0	1	27
17:15	0	0	0	0	1	17	0	18	1	0	1	2	0	3	0	3	23
17:30	0	0	1	1	1	11	0	12	0	0	1	1	0	1	0	1	15
17:45	0	0	1	1	0	16	0	16	3	0	1	4	0	3	0	3	24
Total	0	1	3	4	3	61	0	64	8	1	4	13	0	8	0	8	89
Grand Total	0	1	3	4	5	153	2	160	39	8	15	62	0	15	1	16	242
Apprch %	0	25	75		3.1	95.6	1.2		62.9	12.9	24.2		0	93.8	6.2		
Total %	0	0.4	1.2	1.7	2.1	63.2	0.8	66.1	16.1	3.3	6.2	25.6	0	6.2	0.4	6.6	

All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-001 Ellsworth-Bancroft
Site Code : 00000000
Start Date : 2/5/2013
Page No : 2

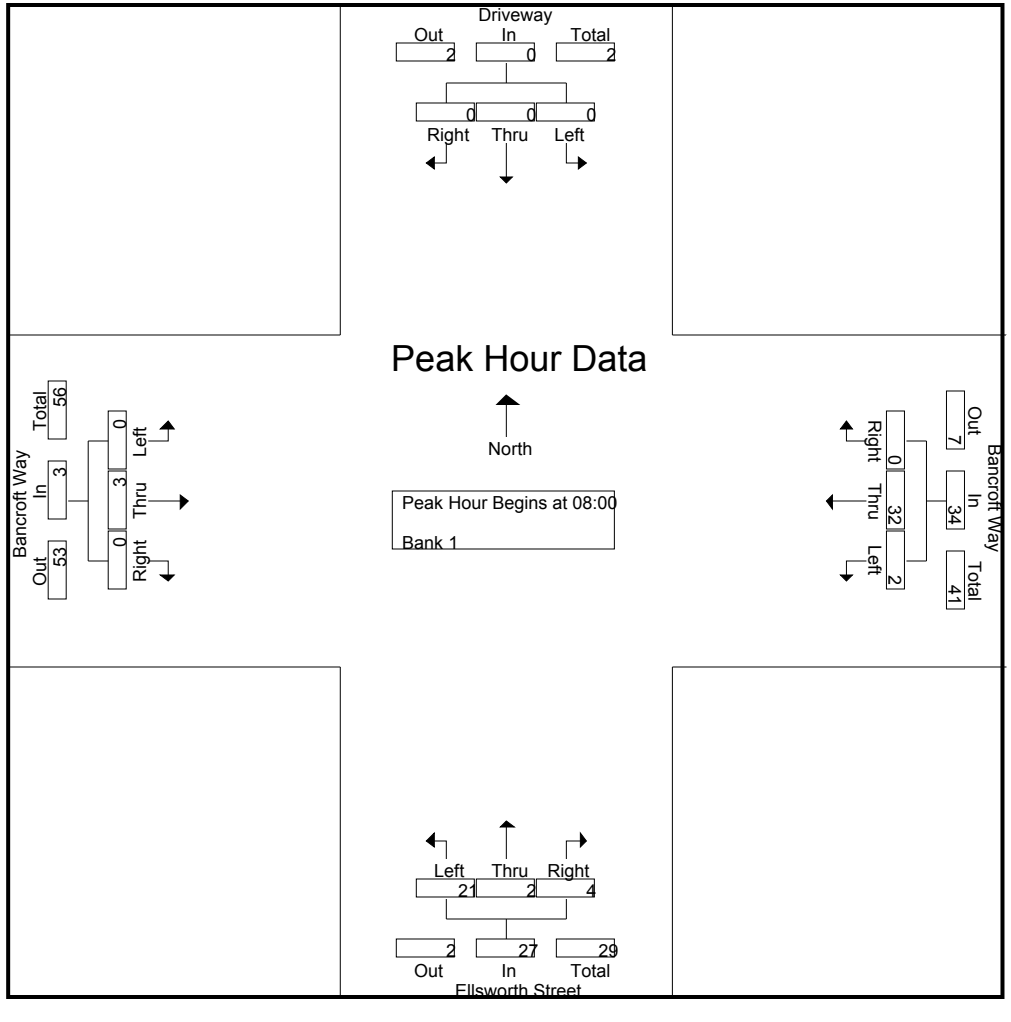
	Driveway Southbound				Bancroft Way Westbound				Ellsworth Street Northbound				Bancroft Way Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	0	0	0	0	**1**	6	0	7	2	0	0	2	0	1	0	1	10
08:15	0	0	0	0	0	9	0	9	7	0	1	8	0	**2**	0	**2**	19
08:30	0	0	0	0	0	6	0	6	2	0	1	3	0	0	0	0	9
08:45	0	0	0	0	1	**11**	0	**12**	**10**	**2**	**2**	**14**	0	0	0	0	**26**
Total Volume	0	0	0	0	2	32	0	34	21	2	4	27	0	3	0	3	64
% App. Total	0	0	0		5.9	94.1	0		77.8	7.4	14.8		0	100	0		
PHF	.000	.000	.000	.000	.500	.727	.000	.708	.525	.250	.500	.482	.000	.375	.000	.375	.615

All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-001 Ellsworth-Bancroft
Site Code : 00000000
Start Date : 2/5/2013
Page No : 3



All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-001 Ellsworth-Bancroft
Site Code : 00000000
Start Date : 2/5/2013
Page No : 4

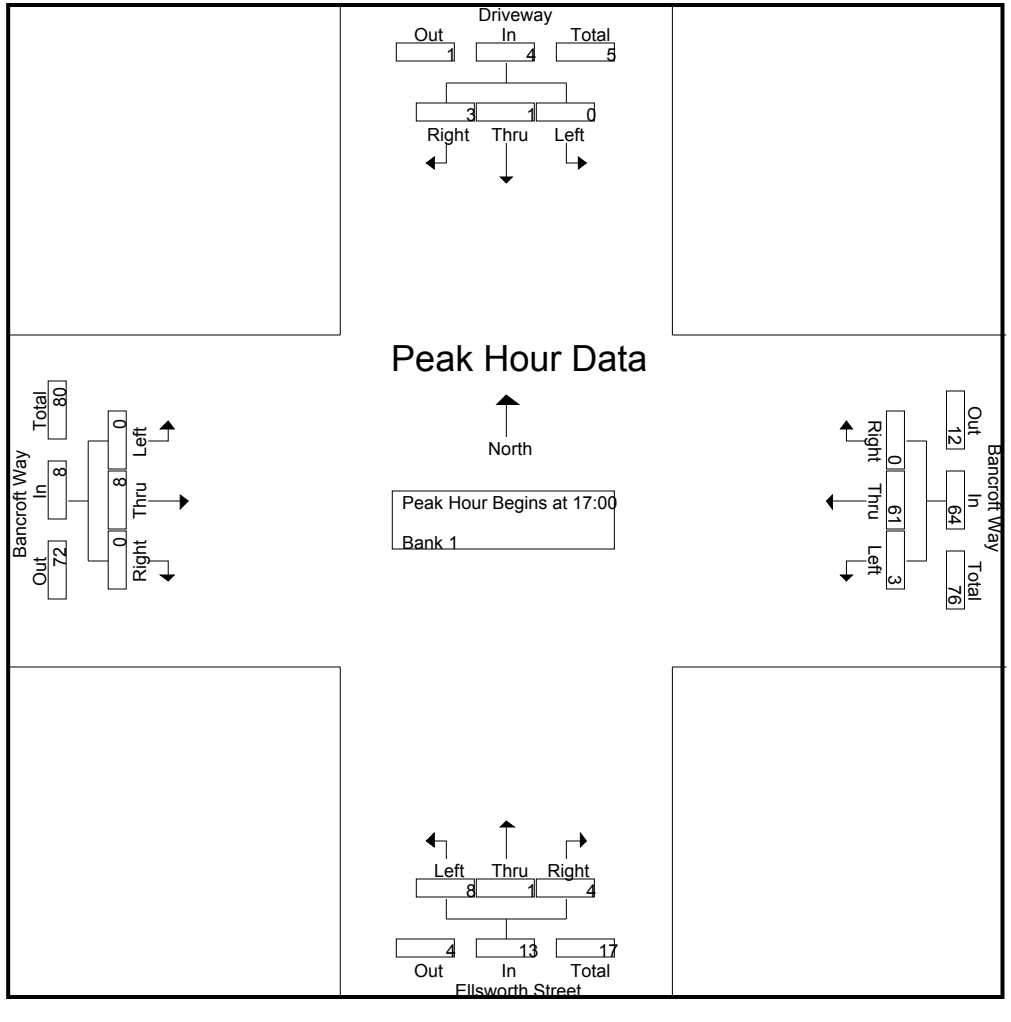
	Driveway Southbound				Bancroft Way Westbound				Ellsworth Street Northbound				Bancroft Way Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	0	**1**	**1**	**2**	**1**	**17**	0	**18**	**4**	**1**	**1**	**6**	0	1	0	1	**27**
17:15	0	0	0	0	1	17	0	18	1	0	1	2	0	**3**	0	**3**	23
17:30	0	0	1	1	1	11	0	12	0	0	1	1	0	1	0	1	15
17:45	0	0	1	1	0	16	0	16	3	0	1	4	0	3	0	3	24
Total Volume	0	1	3	4	3	61	0	64	8	1	4	13	0	8	0	8	89
% App. Total	0	25	75		4.7	95.3	0		61.5	7.7	30.8		0	100	0		
PHF	.000	.250	.750	.500	.750	.897	.000	.889	.500	.250	1.000	.542	.000	.667	.000	.667	.824

All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-001 Ellsworth-Bancroft
Site Code : 00000000
Start Date : 2/5/2013
Page No : 5



All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

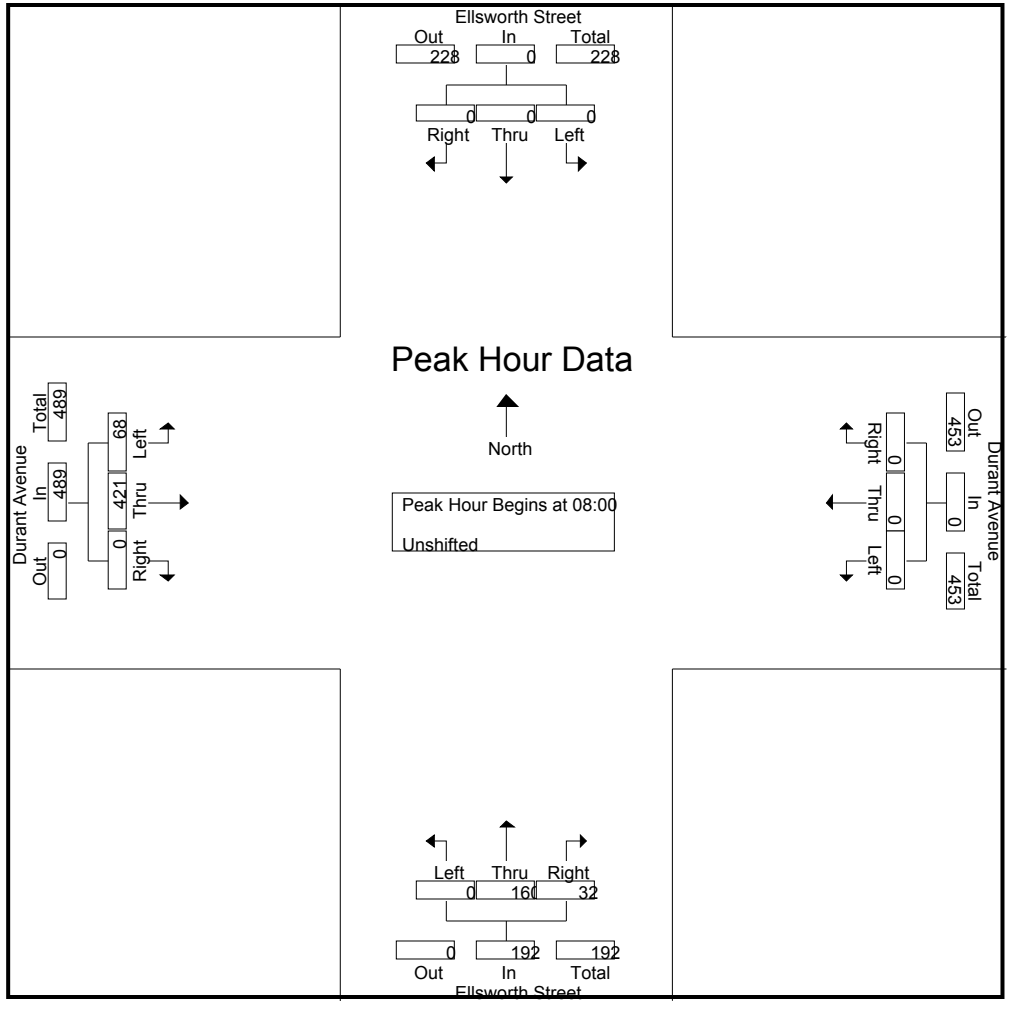
File Name : 13-7078-002 Ellsworth-Durant
Site Code : 00000000
Start Date : 2/5/2013
Page No : 1

Groups Printed- Unshifted

	Ellsworth Street Southbound					Durant Avenue Westbound					Ellsworth Street Northbound					Durant Avenue Eastbound							
Start Time	Left	Thr	Rig	Ped	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00	0	0	0	2	0	0	0	0	3	0	0	4	7	6	11	10	49	0	23	59	34	70	104
07:15	0	0	0	6	0	0	0	0	1	0	0	22	3	8	25	9	52	0	23	61	38	86	124
07:30	0	0	0	7	0	0	0	0	5	0	0	22	4	14	26	15	98	0	35	113	61	139	200
07:45	0	0	0	1	0	0	0	0	1	0	0	35	7	58	42	20	99	0	58	119	118	161	279
Total	0	0	0	16	0	0	0	0	10	0	0	83	21	86	104	54	298	0	139	352	251	456	707
08:00	0	0	0	2	0	0	0	0	1	0	0	33	3	23	36	18	120	0	27	138	53	174	227
08:15	0	0	0	2	0	0	0	0	2	0	0	40	13	13	53	21	108	0	20	129	37	182	219
08:30	0	0	0	2	0	0	0	0	0	0	0	33	9	19	42	13	95	0	25	108	46	150	196
08:45	0	0	0	4	0	0	0	0	6	0	0	54	7	29	61	16	98	0	53	114	92	175	267
Total	0	0	0	10	0	0	0	0	9	0	0	160	32	84	192	68	421	0	125	489	228	681	909
16:00	0	0	0	10	0	0	0	0	7	0	0	33	12	47	45	8	106	0	33	114	97	159	256
16:15	0	0	0	2	0	0	0	0	3	0	0	27	8	42	35	8	106	0	34	114	81	149	230
16:30	0	0	0	8	0	0	0	0	1	0	0	26	11	33	37	11	113	0	36	124	78	161	239
16:45	0	0	0	15	0	0	0	0	3	0	0	35	11	27	46	13	123	0	44	136	89	182	271
Total	0	0	0	35	0	0	0	0	14	0	0	121	42	149	163	40	448	0	147	488	345	651	996
17:00	0	0	0	6	0	0	0	0	1	0	0	36	10	37	46	11	127	0	70	138	114	184	298
17:15	0	0	0	7	0	0	0	0	2	0	0	65	14	44	79	10	120	0	68	130	121	209	330
17:30	0	0	0	8	0	0	0	0	2	0	0	51	9	47	60	5	109	0	48	114	105	174	279
17:45	0	0	0	8	0	0	0	0	5	0	0	48	18	39	66	5	113	0	58	118	110	184	294
Total	0	0	0	29	0	0	0	0	10	0	0	200	51	167	251	31	469	0	244	500	450	751	1201
Grand Total	0	0	0	90	0	0	0	0	43	0	0	564	146	486	710	193	1636	0	655	1829	1274	2539	3813
Apprch %	0	0	0			0	0	0			0	79.4	20.6			10.6	89.4	0					
Total %	0	0	0		0	0	0	0		0	0	22.2	5.8		28	7.6	64.4	0		72	33.4	66.6	

	Ellsworth Street Southbound				Durant Avenue Westbound				Ellsworth Street Northbound				Durant Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	0	0	0	0	0	0	0	0	0	33	3	36	18	**120**	0	**138**	174
08:15	0	0	0	0	0	0	0	0	0	40	**13**	53	**21**	108	0	129	**182**
08:30	0	0	0	0	0	0	0	0	0	33	9	42	13	95	0	108	150
08:45	0	0	0	0	0	0	0	0	0	**54**	7	**61**	16	98	0	114	175
Total Volume	0	0	0	0	0	0	0	0	0	160	32	192	68	421	0	489	681

% App. Total	0	0	0		0	0	0		0	83.3	16.7		13.9	86.1	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.741	.615	.787	.810	.877	.000	.886	.935	



Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 17:00

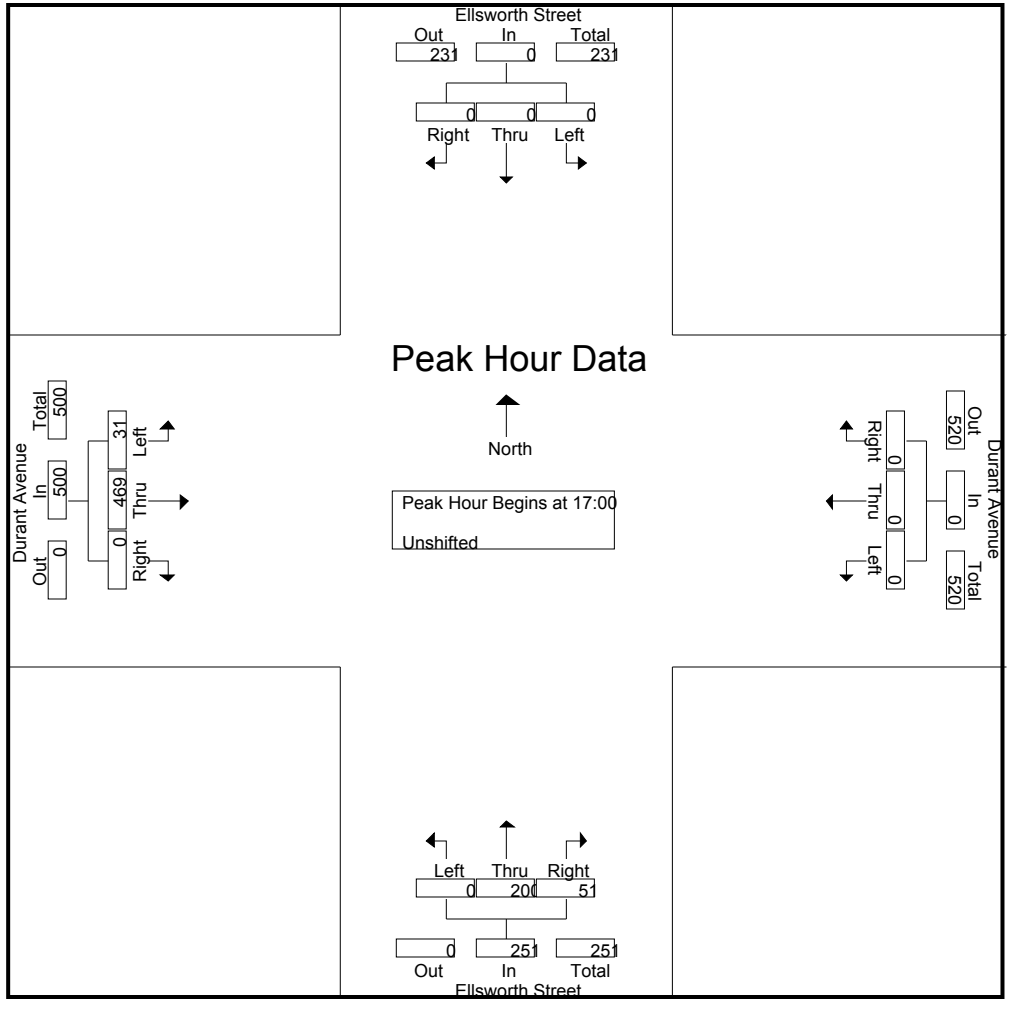
17:00	0	0	0	0	0	0	0	0	0	36	10	46	**11**	**127**	0	**138**	184	
17:15	0	0	0	0	0	0	0	0	0	**65**	14	**79**	10	120	0	130	**209**	
17:30	0	0	0	0	0	0	0	0	0	51	9	60	5	109	0	114	174	
17:45	0	0	0	0	0	0	0	0	0	48	**18**	66	5	113	0	118	184	
Total Volume	0	0	0	0	0	0	0	0	0	200	51	251	31	469	0	500	751	
% App. Total	0	0	0		0	0	0		0	79.7	20.3		6.2	93.8	0			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.769	.708	.794	.705	.923	.000	.906	.898	

All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-002 Ellsworth-Durant
Site Code : 00000000
Start Date : 2/5/2013
Page No : 3



All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-002 Ellsworth-Durant
Site Code : 00000000
Start Date : 2/5/2013
Page No : 1

Groups Printed- Bank 1

	Ellsworth Street Southbound				Durant Avenue Westbound				Ellsworth Street Northbound				Durant Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00	1	0	0	1	0	0	0	0	0	3	0	3	1	1	0	2	6
07:15	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	5
07:30	0	0	0	0	0	0	0	0	1	4	3	8	0	2	0	2	10
07:45	0	0	0	0	0	0	0	0	2	3	7	12	0	2	0	2	14
Total	1	0	0	1	0	0	0	0	3	14	11	28	1	5	0	6	35
08:00	0	1	0	1	0	0	0	0	1	3	2	6	0	6	0	6	13
08:15	0	0	0	0	0	1	0	1	0	8	2	10	0	3	0	3	14
08:30	0	0	0	0	0	0	0	0	0	4	0	4	0	1	0	1	5
08:45	0	1	0	1	0	0	0	0	1	3	2	6	0	6	0	6	13
Total	0	2	0	2	0	1	0	1	2	18	6	26	0	16	0	16	45
16:00	0	1	0	1	0	1	0	1	0	1	3	4	1	2	0	3	9
16:15	0	0	0	0	0	3	0	3	0	3	1	4	0	2	0	2	9
16:30	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	4	6
16:45	1	1	0	2	0	1	0	1	0	4	2	6	0	6	1	7	16
Total	1	2	0	3	0	5	0	5	0	10	6	16	1	14	1	16	40
17:00	1	1	0	2	0	4	0	4	0	3	1	4	0	7	0	7	17
17:15	0	0	0	0	0	1	1	2	0	4	0	4	1	9	1	11	17
17:30	0	1	0	1	0	0	0	0	1	1	1	3	0	3	0	3	7
17:45	0	0	0	0	0	0	0	0	0	3	0	3	0	11	0	11	14
Total	1	2	0	3	0	5	1	6	1	11	2	14	1	30	1	32	55
Grand Total	3	6	0	9	0	11	1	12	6	53	25	84	3	65	2	70	175
Apprch %	33.3	66.7	0		0	91.7	8.3		7.1	63.1	29.8		4.3	92.9	2.9		
Total %	1.7	3.4	0	5.1	0	6.3	0.6	6.9	3.4	30.3	14.3	48	1.7	37.1	1.1	40	

All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-002 Ellsworth-Durant
Site Code : 00000000
Start Date : 2/5/2013

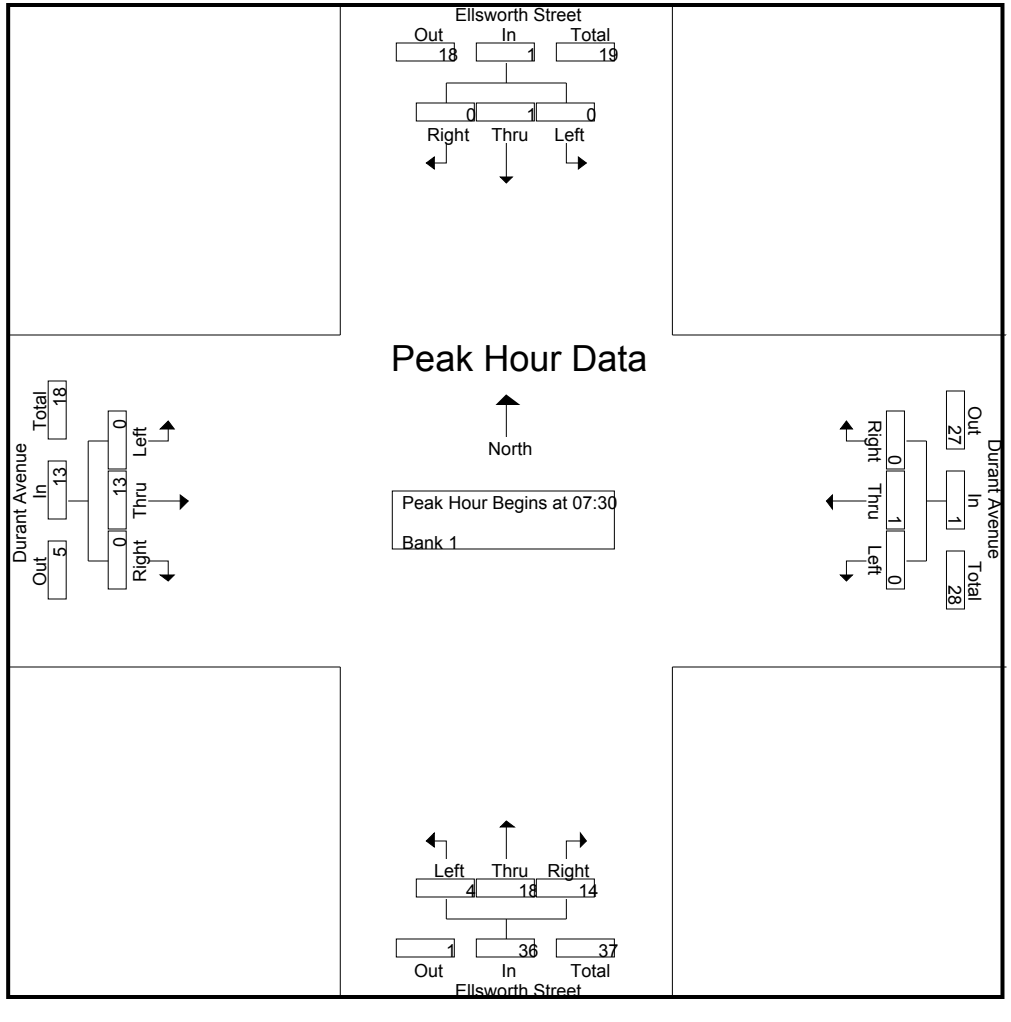
	Ellsworth Street Southbound				Durant Avenue Westbound				Ellsworth Street Northbound				Durant Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	0	0	0	0	0	0	0	1	4	3	8	0	2	0	2	10
07:45	0	0	0	0	0	0	0	0	**2**	3	**7**	**12**	0	2	0	2	**14**
08:00	0	**1**	0	**1**	0	0	0	0	1	3	2	6	0	**6**	0	**6**	13
08:15	0	0	0	0	0	**1**	0	**1**	0	**8**	2	10	0	3	0	3	14
Total Volume	0	1	0	1	0	1	0	1	4	18	14	36	0	13	0	13	51
% App. Total	0	100	0		0	100	0		11.1	50	38.9		0	100	0		
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.500	.563	.500	.750	.000	.542	.000	.542	.911

All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-002 Ellsworth-Durant
Site Code : 00000000
Start Date : 2/5/2013
Page No : 3



All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-002 Ellsworth-Durant
Site Code : 00000000
Start Date : 2/5/2013
Page No : 4

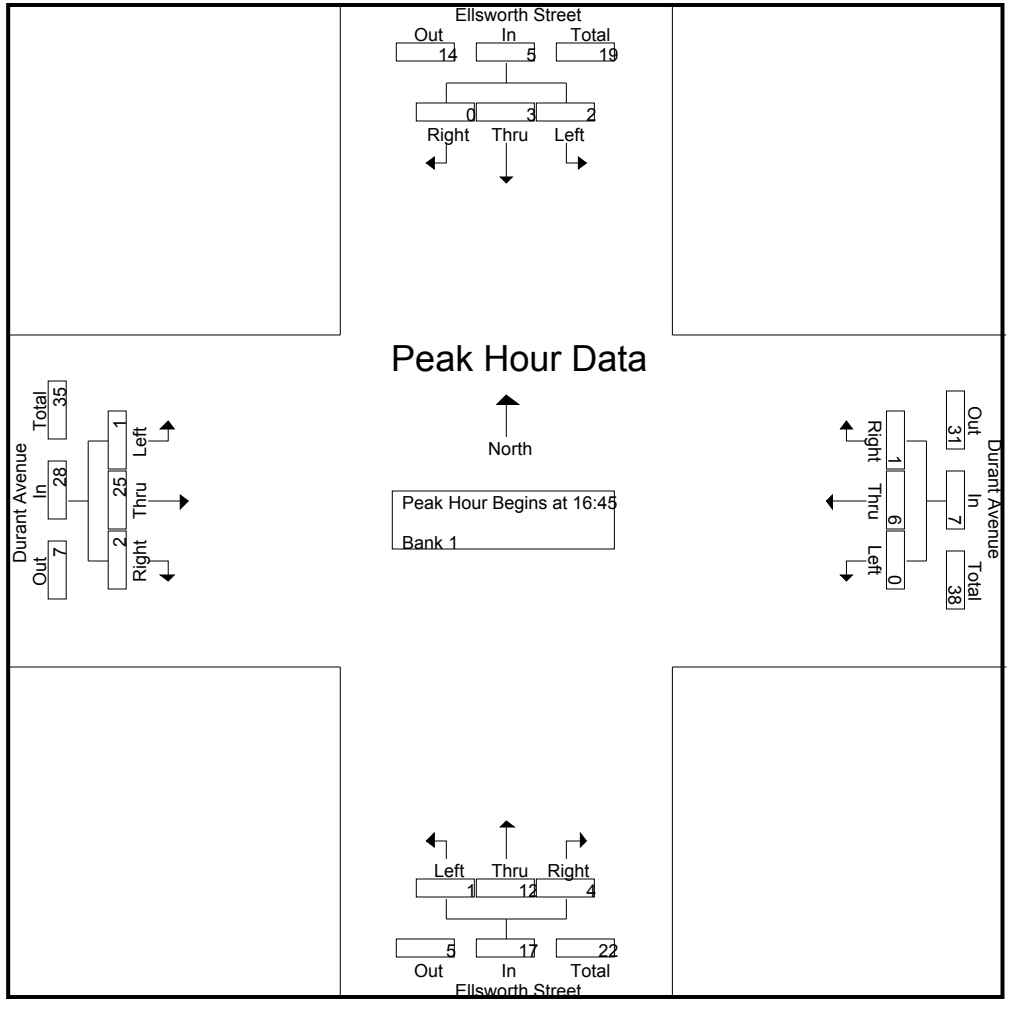
	Ellsworth Street Southbound				Durant Avenue Westbound				Ellsworth Street Northbound				Durant Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	**1**	**1**	0	**2**	0	1	0	1	0	**4**	**2**	**6**	0	6	**1**	7	16
17:00	1	1	0	2	0	**4**	0	**4**	0	3	1	4	0	7	0	7	**17**
17:15	0	0	0	0	0	1	**1**	2	0	4	0	4	**1**	**9**	1	**11**	17
17:30	0	1	0	1	0	0	0	0	**1**	1	1	3	0	3	0	3	7
Total Volume	2	3	0	5	0	6	1	7	1	12	4	17	1	25	2	28	57
% App. Total	40	60	0		0	85.7	14.3		5.9	70.6	23.5		3.6	89.3	7.1		
PHF	.500	.750	.000	.625	.000	.375	.250	.438	.250	.750	.500	.708	.250	.694	.500	.636	.838

All Traffic Data

(916) 771-8700

City of Berkeley
Bicycles on Bank 1

File Name : 13-7078-002 Ellsworth-Durant
Site Code : 00000000
Start Date : 2/5/2013
Page No : 5



Volumes for: Tuesday, February 05, 2013 City: Berkeley Project #: 13-7077-001
Location: Barcroft Way west of Ellsworth Street.

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	0			45	149				
12:15	0	0			35	209				
12:30	0	0			25	190				
12:45	0	0	0	0	27	193	132	741	132	741
1:00	0	0			20	189				
1:15	0	0			20	204				
1:30	0	0			22	166				
1:45	0	0	0	0	19	151	81	710	81	710
2:00	0	0			14	180				
2:15	0	0			8	176				
2:30	0	0			7	172				
2:45	0	0	0	0	11	182	40	710	40	710
3:00	0	0			6	215				
3:15	0	0			1	211				
3:30	0	0			6	241				
3:45	0	0	0	0	0	214	13	881	13	881
4:00	0	0			8	265				
4:15	0	0			11	177				
4:30	0	0			9	205				
4:45	0	0	0	0	4	221	32	868	32	868
5:00	0	0			12	235				
5:15	0	0			8	315				
5:30	0	0			21	282				
5:45	0	0	0	0	26	242	67	1074	67	1074
6:00	0	0			32	233				
6:15	0	0			41	201				
6:30	0	0			53	216				
6:45	0	0	0	0	71	199	197	849	197	849
7:00	0	0			76	175				
7:15	0	0			111	168				
7:30	0	0			93	175				
7:45	0	0	0	0	155	171	435	689	435	689
8:00	0	0			190	175				
8:15	0	0			195	147				
8:30	0	0			183	138				
8:45	0	0	0	0	198	157	766	617	766	617
9:00	0	0			193	159				
9:15	0	0			196	171				
9:30	0	0			169	161				
9:45	0	0	0	0	201	145	759	636	759	636
10:00	0	0			163	161				
10:15	0	0			208	116				
10:30	0	0			153	75				
10:45	0	0	0	0	182	68	706	420	706	420
11:00	0	0			194	70				
11:15	0	0			181	63				
11:30	0	0			168	63				
11:45	0	0	0	0	188	34	731	230	731	230
Total	0	0	0	0	3959	8425	3959	8425	3959	8425
Combined Total	0		0		12384		12384		12384	
AM Peak					8:30 AM					
Vol.					770					
P.H.F.					0.972					
PM Peak						5:00 PM				
Vol.						1074				
P.H.F.						0.852				
Percentage					32.0%	68.0%				

Volumes for: Wednesday, February 06, 2013 City: Berkeley Project #: 13-7077-001
Location: Barcroft Way west of Ellsworth Street.

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	0	0			37	173				
12:15	0	0			21	168				
12:30	0	0			25	161				
12:45	0	0	0	0	34	182	117	684	117	684
1:00	0	0			38	175				
1:15	0	0			17	211				
1:30	0	0			20	158				
1:45	0	0	0	0	13	211	88	755	88	755
2:00	0	0			10	188				
2:15	0	0			13	164				
2:30	0	0			12	180				
2:45	0	0	0	0	8	192	43	724	43	724
3:00	0	0			5	191				
3:15	0	0			3	202				
3:30	0	0			9	204				
3:45	0	0	0	0	6	214	23	811	23	811
4:00	0	0			5	182				
4:15	0	0			7	224				
4:30	0	0			7	186				
4:45	0	0	0	0	11	264	30	856	30	856
5:00	0	0			10	230				
5:15	0	0			9	266				
5:30	0	0			21	271				
5:45	0	0	0	0	22	247	62	1014	62	1014
6:00	0	0			30	238				
6:15	0	0			48	236				
6:30	0	0			48	161				
6:45	0	0	0	0	75	226	201	861	201	861
7:00	0	0			87	159				
7:15	0	0			108	148				
7:30	0	0			139	149				
7:45	0	0	0	0	172	158	506	614	506	614
8:00	0	0			190	142				
8:15	0	0			162	136				
8:30	0	0			188	122				
8:45	0	0	0	0	189	141	729	541	729	541
9:00	0	0			169	159				
9:15	0	0			154	167				
9:30	0	0			168	113				
9:45	0	0	0	0	162	120	653	559	653	559
10:00	0	0			135	78				
10:15	0	0			142	101				
10:30	0	0			153	86				
10:45	0	0	0	0	188	64	618	329	618	329
11:00	0	0			183	63				
11:15	0	0			195	61				
11:30	0	0			164	59				
11:45	0	0	0	0	185	45	727	228	727	228
Total	0	0	0	0	3797	7976	3797	7976	3797	7976
Combined Total	0		0		11773		11773		11773	
AM Peak					10:45 AM					
Vol.					730					
P.H.F.					0.936					
PM Peak						4:45 PM				
Vol.						1031				
P.H.F.						0.951				
Percentage					32.3%	67.7%				

Volumes for: Tuesday, February 05, 2013 City: Berkeley Project #: 13-7077-002
Location: Durant Avenue east of Fulton Street.

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	21	108			0	0				
12:15	13	103			0	0				
12:30	12	110			0	0				
12:45	6	109	52	430	0	0	0	0	52	430
1:00	13	97			0	0				
1:15	12	112			0	0				
1:30	8	96			0	0				
1:45	10	129	43	434	0	0	0	0	43	434
2:00	8	96			0	0				
2:15	9	80			0	0				
2:30	5	94			0	0				
2:45	4	108	26	378	0	0	0	0	26	378
3:00	5	118			0	0				
3:15	2	126			0	0				
3:30	3	97			0	0				
3:45	2	109	12	450	0	0	0	0	12	450
4:00	7	123			0	0				
4:15	2	116			0	0				
4:30	10	119			0	0				
4:45	4	115	23	473	0	0	0	0	23	473
5:00	4	121			0	0				
5:15	9	131			0	0				
5:30	11	133			0	0				
5:45	23	113	47	498	0	0	0	0	47	498
6:00	41	111			0	0				
6:15	29	134			0	0				
6:30	41	120			0	0				
6:45	46	122	157	487	0	0	0	0	157	487
7:00	57	123			0	0				
7:15	79	106			0	0				
7:30	99	86			0	0				
7:45	113	90	348	405	0	0	0	0	348	405
8:00	142	70			0	0				
8:15	137	83			0	0				
8:30	121	64			0	0				
8:45	107	74	507	291	0	0	0	0	507	291
9:00	105	75			0	0				
9:15	117	73			0	0				
9:30	102	73			0	0				
9:45	108	55	432	276	0	0	0	0	432	276
10:00	94	67			0	0				
10:15	86	59			0	0				
10:30	91	46			0	0				
10:45	97	37	368	209	0	0	0	0	368	209
11:00	94	31			0	0				
11:15	91	25			0	0				
11:30	89	33			0	0				
11:45	76	26	350	115	0	0	0	0	350	115
Total	2365	4446	2365	4446	0	0	0	0	2365	4446
Combined Total	6811		6811		0		0		6811	
AM Peak	7:45 AM									
Vol.	513									
P.H.F.	0.903									
PM Peak		4:45 PM								
Vol.		500								
P.H.F.		0.940								
Percentage	34.7%	65.3%								

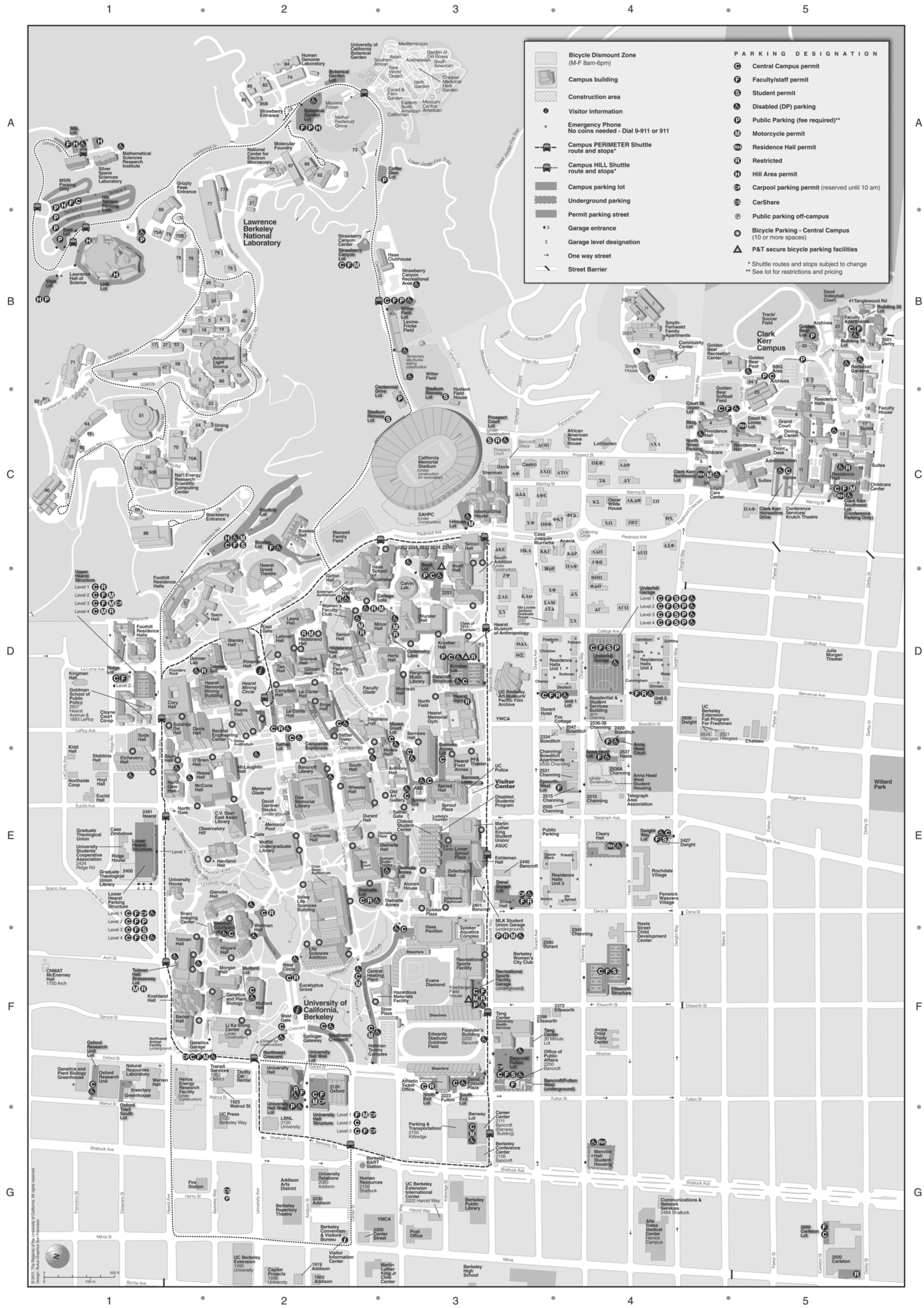
Volumes for: Wednesday, February 06, 2013 City: Berkeley Project #: 13-7077-002
Location: Durant Avenue east of Fulton Street.

Start	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	27	104			0	0				
12:15	22	91			0	0				
12:30	14	109			0	0				
12:45	11	92	74	396	0	0	0	0	74	396
1:00	14	128			0	0				
1:15	20	111			0	0				
1:30	13	109			0	0				
1:45	5	127	52	475	0	0	0	0	52	475
2:00	7	99			0	0				
2:15	7	128			0	0				
2:30	4	110			0	0				
2:45	4	114	22	451	0	0	0	0	22	451
3:00	5	124			0	0				
3:15	4	142			0	0				
3:30	4	124			0	0				
3:45	1	132	14	522	0	0	0	0	14	522
4:00	4	125			0	0				
4:15	14	128			0	0				
4:30	7	106			0	0				
4:45	8	119	33	478	0	0	0	0	33	478
5:00	8	144			0	0				
5:15	7	138			0	0				
5:30	6	129			0	0				
5:45	26	119	47	530	0	0	0	0	47	530
6:00	36	144			0	0				
6:15	31	126			0	0				
6:30	38	125			0	0				
6:45	49	105	154	500	0	0	0	0	154	500
7:00	59	139			0	0				
7:15	69	109			0	0				
7:30	75	97			0	0				
7:45	113	97	316	442	0	0	0	0	316	442
8:00	152	87			0	0				
8:15	149	77			0	0				
8:30	132	79			0	0				
8:45	111	69	544	312	0	0	0	0	544	312
9:00	123	80			0	0				
9:15	109	81			0	0				
9:30	114	80			0	0				
9:45	104	65	450	306	0	0	0	0	450	306
10:00	96	65			0	0				
10:15	100	41			0	0				
10:30	88	61			0	0				
10:45	90	43	374	210	0	0	0	0	374	210
11:00	85	53			0	0				
11:15	92	38			0	0				
11:30	107	31			0	0				
11:45	96	29	380	151	0	0	0	0	380	151
Total	2460	4773	2460	4773	0	0	0	0	2460	4773
Combined Total	7233		7233		0		0		7233	
AM Peak	7:45 AM									
Vol.	546									
P.H.F.	0.898									
PM Peak		4:45 PM								
Vol.		530								
P.H.F.		0.920								
Percentage	34.0%	66.0%								

PARKING DATA

University of California
Berkeley

Campus Parking Map



Campus Building Locations

Building Name	Grid
Alumni House	E:3
Anderson Auditorium	C:2
Anthony Hall	D:2
Architects & Engineers (A&E)	D/E:3
Art Museum	D:3
Athletic Ticket Office	F/G:3
Bancroft Library (Doe Annex)	E:2
Banway Building	F/G:3
Barker Hall	F:1
Barrow Lane	E:3
Barrows Hall	D/E:3
Berkeley Art Museum	D:3
Bechtel Engineering Center	D:1/2
Birge Hall	D:2
Blum Hall	D/E:1
Boalt Hall	C/D:3
Botanical Garden	A:2
Brain Imaging Center	E:1/2
C.V. Starr East Asian Library	D/E:1/2
California Hall	E:2
California Memorial Stadium	C:3
Calvin Laboratory	C/D:3
Campanile (Sather Tower)	D/E:2
Campbell Hall	D:2
Career Center	G:3
Cesar Chávez Student Center	D/E:3
Chan Shun Auditorium	E:2
Cheit Hall	C:2/3
Clark Kerr Campus	C:5
Class of 1914 Fountain	D:3
CNMAT	F:1
Cory Hall	D:1
Cyclotron Road	C:1/2
Davis Hall	D/E:1
Disabled Students' Office (Chávez Student Center)	E:3
Doe (Main) Library & David Gardner Stacks	E:2
Donner Lab	D:1
Durant Hall	E:2
Durham Studio Theater (Dwinelle Hall)	E:3
Dwinelle Annex	E:3
Dwinelle Hall	E:3
East Gate	D:2
Edwards Stadium (Goldman Field)	F:3
Environment, Health & Safety Facility	F:3
Eshleman Hall	E:3
Etcheverry Hall	E:1
Evans Diamond (Baseball Field)	F:3
Evans Hall	D:2
Eye Center	D:3
Faculty Club	D:2
Faculty Glade	D:2/3
Founders Rock	D:1
Fox Cottage	D:4
Frank Schlessinger Way	F:3
Gayley Road	D:2
Genetics and Plant Biology Building	F:2
Giannini Hall	E:2
Giauque Hall	D:2
Gilman Hall	D:2
Girton Hall	D:2
Golden Bear Recreation Center	B:4/5
Goldman Field (Edwards Stadium)	F:3
Graduate Theological Union Library	E:1
Greek Theatre (Hearst)	C/D:2
Greenhouse	F:1
Grinnell Natural Area	F:2
Haas Pavilion	E/F:3

Building Name (Continued)	Grid
Haas School of Business	C/D:3
Hargrove Music Library	D:3
Haste Street Child Development Center	E/F:4
Haviland Hall	E:2
Hazardous Materials Facility	F:2/3
Hearst Field Annex	E:3
Hearst Memorial Gym	D:3
Hearst Memorial Mining Building	D:2
Hearst Mining Circle	D:2
Hearst Museum of Anthropology (Kroeber Hall)	D:3
Heating Plant	F:2
Hellman Tennis Center	F:3
Hertz (Concert) Hall	D:3
Hesse Hall	E:1/2
Hewlett-Packard Auditorium (Soda Hall)	D/E:1
Hildebrand Hall	D:2
Hilgard Hall	F:2
Human Resource Development	G:3
Insectary	F:1
International House	C:3
Ishi Court	E:2/3
Jones Child Study Center	F:4
Kleeberger Field House	F:3
Koshland Hall	F:1
Kroeber Hall	D:3
Krutch Theater	C:5
Latimer Hall	D:2
Lawrence Berkeley National Laboratory	B:2
Lawrence Hall of Science	B:1
LeConte Hall	D:2
Levine-Fricke Field	B:3
Lewis Hall	D:2
Library	E:2
Life Sciences Addition	F:2
Li Ka Shing	F:2
Mail Services (2000 Carleton Street)	G:5
Martin Luther King Jr. Student Union	E:3
Mathematical Sciences Research Institute	A:1
Maxwell Family Field	C:2
McCone Hall	E:1/2
McEnerney Hall	F:1
McLaughlin Hall	E:2
Mining Circle (Hearst)	D:2
Memorial Glade	E:2
Minor Hall & Addition	D:2/3
Moffitt Undergraduate Library	E:2
Morgan Hall	F:2
Morrison Hall	D:3
Moses Hall	E:2/3
Mulford Hall	F:2
Natural Resources Laboratory	F:1
North Field	D:3
North Gate	E:1
North Gate Hall	E:1
Northwest Animal Facility	F:1
O'Brien Hall	E:2
Observatory Hill	E:1/2
Old Art Gallery	E:3
Optometry Clinic (Minor Hall)	D:2
Optometry Clinic (Tang Center)	F:3
Oxford Research Unit	F:1
Pacific Film Archive	D:3
Pacific Film Archive Theatre	D/E:3
Parking & Transportation	G:3
Physical Plant Campus Services (2000 Carleton Street)	G:5
Pimentel Hall	D:2
Pitzer Auditorium (Latimer Hall)	D:2

Building Name (Continued)	Grid
Police, UC	E:3
Recreational Sports Facility	F:3
Sather Gate	E:3
Sather Tower (The Campanile)	D/E:2
Senior Hall	D:2/3
Shun Auditorium (Valley Life Sciences Building)	E:2
Sibley Auditorium (Bechtel Engineering Center)	D:2
Silver Space Sciences Labs	A:1
Simon Hall	C:3
Soda Hall	D/E:1
South Hall	E:2
Spieker Aquatics Complex	F/E:3
Springer Gateway	F:2
Sproul Hall	E:3
Sproul Plaza	E:3
Stephens Hall	D:2/3
Strawberry Canyon Center	B:2
Strawberry Canyon Recreational Area	B:3
Student Union (Martin Luther King, Jr.)	E:3
Sutardja Dai Hall	D:1/2
Tan Hall	D:2
Tang Center (University Health Service)	F:3
Tolman Hall	F:1/2
UC Berkeley Extension	G:2
UC Press (2120 Berkeley Way)	G:2
UC Berkeley Art Museum	D:3
Underhill Playing Field	D:4
University Dr.	E:2
University Hall	F:2
University House	E:1/2
University Relations (2080 Addison)	G:2
University Students Cooperative Association	E:1
Valley Life Sciences Building	E:2
Visitor Center (University Hall)	F:2
Wellman Hall	E/F:2
West Circle	F:2
West Gate	F:2
Wheeler Hall	E:2/3
Witter Rugby Field	B:3
Women's Faculty Club	D:2
Women's Resource Center (Chávez Student Center)	E:3
Wurster Hall	D:3
Zellerbach Hall	E:3
Zellerbach Playhouse	E:3

Residence Halls

Bowles Hall	C:2
Clark Kerr Campus	B/C:4/5
Cleary Hall	E:4
Foothill Student Housing	D:1
Residence Halls Unit I	D:3/4
Residence Halls Unit II	D:4
Residence Halls Unit III	E:3/4
Stern Hall	D:1/2
Residential and Student Services Building	D:4

Parking Lots/Garages

Lot/Garage Name	Grid	Permit Types*
Anna Head Court	D:4	F
Anna Head Lot	E:4	F ♿
Bancroft Structure	D:3	♿ C
Bancroft/Fulton Lot	F:3	♿ C F S CP
Bancroft/Fulton West	F:3	F C
Banway Lot	G:3	♿ C MC
Barrows Lane	E:3	C ♿
Barrows Annex Lot	E:3	C ♿
Boalt Lot	C/D:3	♿ P C M
Botanical Garden Lot	A:2	♿ F P H
Bowles Lot	C:2	F ♿
Clark Kerr Building 4	C:4	F RH
Clark Kerr Building 19	B:4	F C ♿
Clark Kerr Building 20	B:4	F RH ♿
Clark Kerr Golden Bear Lot	B:5	P
Clark Kerr Horseshoe Drive	C:5	C ♿
Clark Kerr Lower Court Street	B:4	RH
Clark Kerr North Street	C:4	♿ P C F RH MC
Clark Kerr Northwest Lot	C:4	♿ MC RH
Clark Kerr Southwest Lot	C:5	♿ C F RH MC
Clark Kerr Sports Lane	B:5	P C M
Clark Kerr Upper Court Street	B:4	F C ♿
Cleary Hall (Haste/Channing Housing)	E:4	RH ♿
Coffer Dam Lot	A/B:3	P
College Lot	D:2/3	♿ R MC
Dana/Durant Lot	E:3	F CP ♿ R
Donner Lot	D:2	R ♿
Dwight Way Lot	E:4	♿ F S C
Dwinelle Annex	E:2/3	♿ C R
Dwinelle Lot	E:2	♿ C
Ellsworth Structure	D:4	S F C
Epworth West Lot	E:4	F C
Eshleman Road	E:3	C ♿
Extension Lot North	F:3	C R
Extension Lot South	F:3	C ♿ R
Foothill Lot	C:2	C F S ♿ H MC
Genetics Garage	F:2	♿ C F MC CP
Haas Pavilion Lot	E/F:3	C
Hearst Gym	D:3	R
I-House Lot	C:3	♿ MC
Kroeber Lot	D:3	♿ C R
Lower Hearst Structure	E:1	
Level 1		♿ C F CP
Level 2		F C P
Level 3		C F S
Level 4		C F S ♿
Manville Lot	G:4	♿ RH
MLK Student Union Garage	E:3	♿ P MC R
Moses Court Lot	D:3	♿ C
Mulford Lot	F:2	♿ C
Northwest Crescent	F:2	C
Oxford Research Unit Lot	F:1	♿ C
Oxford Tract South Lot	F:1	♿ C R
Prospect Court Lot	C:3	♿ S R M
Recreational Sports Facility Garage	F:3	♿ P C F MC R
Ridge Lot	D:1	C F
Sather Lot	D/E:2	C ♿
Schlessinger Way	F:2/3	♿ C MC
South Drive	D:2	♿ C
Sproul Lot	E:3	♿ C
Strawberry Canyon Lot	C:3	C F MC
Stadium Rimway Lot	C:3	S
Tang Center 30min Lot	F:3	♿ (Patient Parking Only)
Tolman Hall Breezeway	F:1	MC R
Underhill Garage	D:4	
Level 1		C F S P ♿
Level 2		C F S P ♿
Level 3		C F S P ♿
Level 4		C F S P ♿
Unit I Lot	D:3/4	♿ C F R
Unit II Lot	D:4	♿ F R
University Drive	D:2	C R ♿
University Hall Structure	F/G:2	
Level 1		F MC CP
Level 2		C
Level 3		F C CP
University Hall Well Lot	F:2	♿ F R
University Hall West Lot	F/G:2	P ♿
Upper Hearst Structure	D:1	
Level 1		C R
Level 2		F MC C
Level 3		F C MC CP
Level 4		C MC R
Wellman Courtyard	E/F:2	♿ C
West Circle	F:2	♿ C R
West Crescent	F:2	♿ C
Wickson Road	E/F:2	♿ C
Witter Field Lot	B:3	♿ C F P

Hill Area Parking

East Lot	B:1	P
Lawrence Hall of Science Lot	B:1	H
Hill Terrace Lots	B:1	
Terrace 1		P
Terrace 2		P
Terrace 3		H C F P
Space Sciences Lab Lot	A:1	♿ H F
Vista Lot	B:1	H P

Other Parking Areas

2000 Carleton	G:5	C F R
Bechtel Drive	D:1/2	♿ C
Campanile Esplanade, North of	D/E:2	♿ C
Centennial Drive	B/C:3	P
Donner Meters	D:2	M
Hildebrand Hall, East of	D:2	MC R
Faculty Club Lane	D:2	♿ R
Frank Schlessinger Way	F:2/3	♿ C MC
Le Conte Hall, North of	D:2	R
Optometry Lane	D:3	R

* For information regarding Parking Permits,Parking Lots/Garages please visit the Parking & Transportation website: *pt.berkeley.edu/park*

Parking Information

Campus parking lots are located around and near campus and in the hill areas east of campus. Parking lot signs show permit designations for that particular lot using the following symbols:

- C Central Campus
- F Faculty/Staff
- S Student
- ♿ Disabled
- R Restricted
- M Metered spaces
- MC Motorcycle
- RH Residence Hall
- H Hill Area
- P Public ticket
- R Carpool*

Night/Weekend parking permits are valid weekdays after 5pm and on weekends in C, F, S and H designated lots. Parking on campus lots is not allowed from 2am to 5am.

Public Parking on Campus

During weekday daytime hours (7am – 5pm) and evenings, visitors to campus may park on the southside of campus at the MLK Student Union Garage located on Bancroft Way near Telegraph Avenue or at the Lower Hearst Structure (on level 2) located at Hearst and Scenic streets on the north side of campus. Get a ticket at the dispensing machine upon entering garage and pay attendant or at paystation upon exiting. Cost is based on length of stay.

After 5pm on weekdays and all day on weekends, most campus parking lots are open to the public for a fee (except in marked restricted lots and spaces) with a dispensing machine ticket displayed on the dashboard. Be sure to read parking lot signs carefully for hours, fees, and important notices. Persons planning or attending an event on the UC Berkeley campus should call the Special Events Coordinator at (510) 642-5401 during business hours to arrange parking for guests or to receive updates on parking availability.

Bicycle Parking

Hundreds of bike parking spaces are located throughout the campus; areas are indicated on the map on reverse. Bicycles are required to park in these designated spaces.

Getting Around Campus

BearTransit and Night Safety campus shuttles

BearTransit campus shuttles are an easy way for campus affiliates and visitors to get around campus. BearTransit offers daytime and Night Safety shuttle routes.** On weekdays, shuttle routes service the campus and downtown Berkeley BART on frequencies of 20 minutes or less, and routes run from BART through campus and up Strawberry Canyon to Lawrence Hall of Science. Night Safety routes operate from dusk until 3 am to help get you safely from campus to BART or to your home or car within service boundaries.

For prices, routes and schedules please refer to our website at: *pt.berkeley.edu/around/transit*

Campus Contacts

General campus information
(510) 642-6000

All Emergencies 9-1-1

From a cell phone on campus
(510) 642-3333

UC Police Department

24-hour business line (510) 642-6760

Parking & Transportation Department (P&T)

pt.berkeley.edu

P&T Customer Services/Vehicles Rescue
(510) 643-7701
2150 Kittredge Steet, 1st Floor
Berkeley, CA 94720-5742
Mon - Fri: 7:30am–4:00pm

E-Mail: *prktrans@berkeley.edu*

Citation Services
ucappeal@berkeley.edu

Event Services
eventprk@berkeley.edu

Cal Parking & Transportation

This map is produced by the Parking & Transportation Marketing Unit. Refer corrections to *prktrans@berkeley.edu*

APPENDIX F

APPLICABLE 2020 LRDP EIR MITIGATION MEASURES AND CONTINUING BEST PRACTICES

AESTHETICS

Continuing Best Practice AES-1-b: Major new campus projects would continue to be reviewed at each stage of design by the UC Berkeley Design Review Committee. The provisions of the 2020 LRDP, as well as project specific design guidelines prepared for each such project, would guide these reviews.

Continuing Best Practice AES-1-e: UC Berkeley would make informational presentations of all major projects in the City Environs in Berkeley to the Berkeley Planning Commission and, if relevant, the Berkeley Landmarks Preservation Commission for comment prior to schematic design review by the UC Berkeley Design Review Committee. Major projects in the City Environs in Oakland would similarly be presented to the Oakland Planning Commission and, if relevant, to the Oakland Landmarks Preservation Advisory Board. Whenever a project in the City Environs is under consideration by the UC Berkeley DRC, a staff representative designated by the city in which it is located would be invited to attend and comment on the project.

Continuing Best Practice AES-1-f: Each individual project built in the City Environs under the 2020 LRDP would be assessed to determine whether it could pose potential significant aesthetic impacts not anticipated in the 2020 LRDP, and if so, the project would be subject to further evaluation under CEQA.

Continuing Best Practice AES-1-h: Assuming the City adopts the Southside Plan without substantive changes, the University would as a general rule use, as its guide for the location and design of University projects implemented under the 2020 LRDP within the area of the Southside Plan, the design guidelines and standards prescribed in the Southside Plan, which would supersede provisions of the City's prior zoning policy.

LRDP Mitigation Measure AES-3-a: Lighting for new development projects would be designed to include shields and cut-offs that minimize light spillage onto unintended surfaces, and to minimize atmospheric light pollution. The only exception to this principle would be in those areas within the Campus Park where such features would be incompatible with the visual and/or historic character of the area.

LRDP Mitigation Measure AES-3-b: As part of the design review procedures described in the above Continuing Best Practices, light and glare would be given specific consideration, and measures incorporated into the project design to minimize both. In general, exterior surfaces would not be reflective: architectural screens and shading devices are preferable to reflective glass.

AIR QUALITY

Continuing Best Practice AIR-1: UC Berkeley shall continue to implement the same or equivalent alternative transit programs, striving to improve the campus mode split and reduce the use of single occupant vehicles among students, staff, faculty and visitors to campus.

Continuing Best Practice AIR-4-a: UC Berkeley shall continue to include in all construction contracts the measures specified below to reduce fugitive dust impacts:

- All disturbed areas, including quarry product piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using tarps, water, (non-toxic) chemical stabilizer/suppressant, or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water or (nontoxic) chemical stabilizer/suppressant.

When quarry product or trash materials are transported off-site, all material shall be covered, or at least two feet of freeboard space from the top of the container shall be maintained.

LRDP Mitigation Measure AIR-4-a: In addition, UC Berkeley shall include in all construction contracts the measures specified below to reduce fugitive dust impacts, including but not limited to the following:

- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- When demolishing buildings, water shall be applied to all exterior surfaces of the building for dust suppression.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from paved areas of construction sites and from adjacent public streets as necessary. See also CBP HYD 1-b.
- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions by utilizing sufficient water or by covering.
- Limit traffic speeds on unpaved roads to 15 mph.
- Water blasting shall be used in lieu of dry sand blasting wherever feasible.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with slopes over one percent.
- To the extent feasible, limit area subject to excavation, grading, and other construction activity at any one time.
- Replant vegetation in disturbed areas as quickly as possible.

Continuing Best Practice AIR-4-b: UC Berkeley shall continue to implement the following control measure to reduce emissions of diesel particulate matter and ozone precursors from construction equipment exhaust:

- Minimize idling time when construction equipment is not in use.

LRDP Mitigation Measure AIR-4-b: UC Berkeley shall implement the following control measures to reduce emissions of diesel particulate matter and ozone precursors from construction equipment exhaust:

- To the extent that equipment is available and cost effective, UC Berkeley shall require contractors to use alternatives to diesel fuel, retrofit existing engines in construction equipment and employ diesel particulate matter exhaust filtration devices.
- To the extent practicable, manage operation of heavy-duty equipment to reduce emissions, including the use of particulate traps.

Continuing Best Practice AIR-5: UC Berkeley will continue to implement transportation control measures such as supporting voluntary trip-reduction programs, ridesharing, and implementing improvements to bicycle facilities.

BIOLOGICAL RESOURCES

LRDP Mitigation Measure BIO-1-a: UC Berkeley will, to the full feasible extent, avoid the disturbance or removal of nests of raptors and other special-status bird species when in active use. A pre-construction nesting survey for loggerhead shrike or raptors, covering a 100 yard perimeter of the project site, would be conducted during the months of March through July prior to commencement of any project that may impact suitable nesting habitat on the Campus Park and Hill Campus. The survey would be conducted by a qualified biologist no more than 30 days prior to initiation of disturbance to potential nesting habitat. In the Hill Campus, surveys would be conducted for new construction projects involving removal of trees and other natural vegetation. In the Campus Park, surveys would be conducted for construction projects involving removal of mature trees within 100 feet of a Natural Area, Strawberry Creek, and the Hill Campus. If any of these species are found within the survey area, grading and construction in the area would not commence, or would continue only after the nests are protected by an adequate setback approved by a qualified biologist. To the full feasible extent, the nest location would be preserved, and alteration would only be allowed if a qualified biologist verifies that birds have either not begun egg-laying and incubation, or that the juveniles from those nests are foraging independently and capable of survival. A pre-construction survey is not required if construction activities commence during the non-nesting season (August through February).

LRDP Mitigation Measure BIO-1-b: UC Berkeley will, to the full feasible extent, avoid the remote potential for direct mortality of special-status bats and destruction of maternal roosts. A pre-construction roosting survey for special-status bat species, covering the project site and any affected buildings, would be conducted during the months of March through August prior to commencement of any project that may impact suitable maternal roosting habitat on the Campus Park and Hill Campus. The survey would be conducted by a qualified biologist no more than 30 days prior to initiation of disturbance to potential roosting habitat. In the Hill Campus, surveys would be conducted for new construction projects prior to grading, vegetation removal, and remodel or demolition of buildings with isolated attics and other suitable roosting habitat. In the Campus Park, surveys would be conducted for construction projects prior to remodel or demolition of buildings with isolated attics. If any maternal roosts are detected during the months of March through August, construction activities would not commence, or would continue only after the roost is protected by an adequate setback approved by a qualified biologist. To the full feasible extent, the maternal roost location would be preserved, and alteration would only be allowed if a qualified biologist verifies that bats have completed rearing young, that the juveniles are foraging independently and capable of survival, and bats have been subsequently passively excluded from the roost location. A pre-construction survey is not required if construction activities commence outside the maternal roosting season (September through February).

Continuing Best Practice BIO-1-a: UC Berkeley will continue to implement the Campus Specimen Tree Program to reduce adverse effects to specimen trees and flora. Replacement landscaping will be provided where specimen resources are adversely affected, either through salvage and relocation of existing trees and shrubs or through new plantings of the same genetic strain, as directed by the Campus Landscape Architect.

CLIMATE CHANGE

Continuing Best Practice CLI-1 : UC Berkeley would continue to implement provisions of the UC Policy on Sustainable Practices including, but not limited to: Green Building Design; Clean Energy Standards; Climate Protection Practices; Sustainable Transportation Practices; Sustainable Operations; Recycling and Waste Management; and Environmentally Preferable Purchasing Practices.

Continuing Best Practice CLI-2 : UC Berkeley would 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.

Continuing Best Practice CLI-3: UC Berkeley would continue to annually monitor and report upon its progress toward its greenhouse gas emission targets. UC Berkeley would continue to report actions undertaken in the past year, and update its climate action plan annually to specify actions that UC Berkeley is planning to undertake in the current year and future years to achieve emission targets.

CULTURAL RESOURCES

Continuing Best Practice CUL-1: In the event that paleontological resource evidence or a unique geological feature is identified during project planning or construction, the work would stop immediately and the find would be protected until its significance can be determined by a qualified paleontologist or geologist. If the resource is determined to be a "unique resource," a mitigation plan would be formulated and implemented to appropriately protect the significance of the resource by preservation, documentation, and/or removal, prior to recommencing activities.

LRDP Mitigation Measure CUL-4-b: If a resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 35 feet of the find shall cease. UC Berkeley shall contact a qualified archaeologist to provide and implement a plan for survey, subsurface investigation as needed to define the deposit, and assessment of the remainder of the site within the project area to determine whether the resource is significant and would be affected by the project, as outlined in Continuing Best Practice CUL-3-a. UC Berkeley would implement the recommendations of the archaeologist.

Continuing Best Practice CUL-4-b: In the event human or suspected human remains are discovered, UC Berkeley would notify the County Coroner who would determine whether the remains are subject to his or her authority. The Coroner would notify the Native American Heritage Commission if the remains are Native American. UC Berkeley would comply with the provisions of Public Resources Code Section 5097.98 and CEQA Guidelines Section 15064.5(d) regarding identification and involvement of the Native American Most Likely Descendant and with the provisions of the California Native American Graves Protection and Repatriation Act to ensure that the remains and any associated artifacts recovered are repatriated to the appropriate group, if requested.

Continuing Best Practice CUL-4-c: Prior to disturbing the soil, contractors shall be notified that they are required to watch for potential archaeological sites and artifacts and to notify UC Berkeley if any are found. In the event of a find, UC Berkeley shall implement LRDP Mitigation Measure CUL-4-b.

LRDP Mitigation Measure CUL-5: If, in furtherance of the educational mission of the University, a project would require damage to or demolition of a significant archaeological resource, a qualified archaeologist shall, in consultation with UC Berkeley:

- Prepare a research design and archaeological data recovery plan that would attempt to capture those categories of data for which the site is significant, and implement the data recovery plan prior to or during development of the site.
- Perform appropriate technical analyses, prepare a full written report and file it with the appropriate information center and provide for the permanent curation of recovered materials.

GEOLOGY, SEISMICITY AND SOILS

Continuing Best Practice GEO-1-a: UC Berkeley will continue to comply with the CBC and the *University Policy on Seismic Safety*.

Continuing Best Practice GEO-1-b: Site-specific geotechnical studies will be conducted under the supervision of a California Registered Engineering Geologist or licensed geotechnical engineer and UC Berkeley will incorporate recommendations for geotechnical hazard prevention and abatement into project design.

Continuing Best Practice GEO-1-c: The Seismic Review Committee (SRC) shall continue to review all seismic and structural engineering design for new and renovated existing buildings on campus and ensure that it conforms to the California Building Code and the *University Policy on Seismic Safety*.

Continuing Best Practice GEO-1-d: UC Berkeley shall continue to use site-specific seismic ground motion specifications developed for analysis and design of campus projects. The information provides much greater detail than conventional codes and is used for performance-based analyses.

Continuing Best Practice GEO-1-g: As stipulated in the *University Policy on Seismic Safety*, the design parameters for specific site peak acceleration and structural reinforcement will be determined by the geotechnical and structural engineer for each new or rehabilitation project proposed under the 2020 LRDP. The acceptable level of actual damage that could be sustained by specific structures would be calculated based on geotechnical information obtained at the specific building site.

Continuing Best Practice GEO-1-i: The site-specific geotechnical studies conducted under GEO-1-b will include an assessment of landslide hazard, including seismic vibration and other factors contributing to slope stability.

Continuing Best Practice GEO-2: Campus construction projects with potential to cause erosion or sediment loss, or discharge of other pollutants, would include the campus Stormwater Pollution Prevention Specification. This specification includes by reference the "Manual of Standards for Erosion and Sediment Control" of the Association of Bay Area Governments and requires that each large and exterior project develop an Erosion Control Plan.

HAZARDOUS MATERIALS

Continuing Best Practice HAZ-1: UC Berkeley 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 and wastes (including chemical, radioactive, and biohazardous materials and waste) during the 2020 LRDP planning horizon. These include, but are not necessarily limited to, requirements for safe transportation of hazardous materials, EH&S training programs, the Hazard Communication Program, publication and promulgation of drain disposal guidelines, the requirement that laboratories have Chemical Hygiene Plans, the Chemical Inventory Database, the Toxic Use Reduction Program, the Aboveground Storage Tank Spill Prevention Control and Countermeasure Plan, monitoring of underground storage tanks, hazardous waste disposal policies, the Chemical Exchange Program, the Hazardous Waste Minimization Program, the Biosafety Program, the Medical Waste Management Program, and the Radiation Safety Program. 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.

Continuing Best Practice HAZ-4: UC Berkeley shall continue to perform site histories and due diligence assessments of all sites where ground-disturbing construction is proposed, to assess the potential for soil and groundwater contamination resulting from past or current site land uses at the site or in the vicinity. The investigation will include review of regulatory records, historical maps and other historical documents, and inspection of current site conditions. UC Berkeley would act to protect the health and safety of workers or others potentially exposed should hazardous site conditions be found.

Continuing Best Practice HAZ-5: UC Berkeley shall continue to perform hazardous materials surveys prior to capital projects in existing campus buildings. The campus shall continue to comply with federal, state, and local regulations governing the abatement and handling of hazardous building materials and each project shall address this requirement in all construction.

HYDROLOGY AND WATER QUALITY

Continuing Best Practice HYD-1-a: During the plan check review process and construction phase monitoring, UC Berkeley (EH&S) will verify that the proposed project complies with all applicable requirements and BMPs.

Continuing Best Practice HYD-1-b: UC Berkeley shall continue implementing an urban runoff management program containing BMPs as published in the Strawberry Creek Management Plan, and as developed through the campus municipal Stormwater Management Plan completed for its pending Phase II MS4 NPDES permit. UC Berkeley will continue to comply with the NPDES stormwater permitting requirements by implementing construction and post construction control measures and BMPs required by project-specific SWPPPs and, upon its approval, by the Phase II SWMP to control pollution. Stormwater Pollution Prevention Plans would be prepared as required by the appropriate regulatory agencies including the Regional Water Quality Control Board and where applicable, according to the UC Berkeley Stormwater Pollution Prevention Specification to prevent discharge of pollutants and to minimize sedimentation resulting from construction and the transport of soils by construction vehicles.

Continuing Best Practice HYD-2-a: In addition to Hydrology Continuing Best Practices 1-a and 1-b above, UC Berkeley will continue to review each development project, to determine whether project runoff would increase pollutant loading. If it is determined that pollutant loading could lead to a violation of the Basin Plan, UC Berkeley would design and implement the necessary improvements to treat stormwater. Such improvements could include grassy swales, detention ponds, continuous centrifugal system units, catch basin oil filters, disconnected downspouts and stormwater planter boxes.

Continuing Best Practice HYD-2-b: Where feasible, parking would be built in covered parking structures and not exposed to rain to address potential stormwater runoff pollutant loads. See also HYD-2-a.

Continuing Best Practice HYD-2-c: Landscaped areas of development sites shall be designed to absorb runoff from rooftops and walkways. The Campus Landscape Architect shall ensure that open or porous paving systems be included in project designs wherever feasible, to minimize impervious surfaces and absorb runoff.

Continuing Best Practice HYD-3: In addition to Hydrology Continuing Best Practices 1-a, 1-b, 2-a and 2-c above, UC Berkeley will continue to review each development project, to determine whether rainwater infiltration to groundwater is affected. If it is determined that existing infiltration rates would be adversely affected, UC Berkeley would design and implement the necessary improvements to retain and infiltrate stormwater. Such improvements could include retention basins to collect and retain runoff, grassy swales, infiltration galleries, planter boxes, permeable pavement, or other retention methods. The goal of the improvement should be to ensure that there is no net decrease in the amount of water recharged to groundwater that serves as freshwater replenishment to Strawberry Creek. The improvement should maintain the volume of flows and times of concentration from any given site at pre-development conditions.

Continuing Best Practice HYD-4-a: In addition to Hydrology Continuing Best Practices 1-a, 1-b and 2-c, the campus storm drain system would be maintained and cleaned to accommodate existing runoff.

Continuing Best Practice HYD-4-b: For 2020 LRDP projects in the City Environs (excluding the Campus Park or Hill Campus) improvements would be coordinated with the City Public Works Department.

Continuing Best Practice HYD-4-e: UC Berkeley shall continue to manage runoff into storm drain systems such that the aggregate effect of projects implementing the 2020 LRDP is no net increase in runoff over existing conditions.

LAND USE

Continuing Best Practice LU-2-b: UC Berkeley would make informational presentations of all major projects in the City Environs in Berkeley to the Berkeley Planning Commission and, if relevant, the Berkeley Landmarks Preservation Commission for comment prior to schematic design review by the UC Berkeley Design Review Committee. Major projects in the City Environs in Oakland would similarly be presented to the Oakland Planning Commission and, if relevant, to the Oakland Landmarks Preservation Advisory Board. Whenever a project in the City Environs is under consideration by the UC Berkeley DRC, a staff representative designated by the city in which it is located would be invited to attend and comment on the project.

Continuing Best Practice LU-2-c: Each individual project built in the Hill Campus or the City Environs under the 2020 LRDP would be assessed to determine whether it could pose potential significant land use impacts not anticipated in the 2020 LRDP, and if so, the project would be subject to further evaluation under CEQA. In general, a project in the Hill Campus or the City Environs would be assumed to have the potential for significant land use impacts if it:

- Includes a use that is not permitted within the city general plan designation for the project site, or
- Has a greater number of stories and/or lesser setback dimensions than could be permitted for a project under the relevant city zoning ordinance as of July 2003.

Continuing Best Practice LU-2-d: Assuming the City adopts the Southside Plan without substantive changes, the University would as a general rule use, as its guide for the location and design of University projects implemented under the 2020 LRDP within the area of the Southside Plan, the design guidelines and standards prescribed in the Southside Plan, which would supersede provisions of the City's prior zoning policy.

NOISE

Continuing Best Practice NOI-2: Mechanical equipment selection and building design shielding would be used, as appropriate, so that noise levels from future building operations would not exceed the City of Berkeley Noise Ordinance limits for commercial areas or residential zones as measured on any commercial or residential property in the area surrounding a project proposed to implement the 2020 LRDP. Controls that would typically be incorporated to attain this outcome include selection of quiet equipment, sound attenuators on fans, sound attenuator packages for cooling towers and emergency generators, acoustical screen walls, and equipment enclosures.

Continuing Best Practice NOI-4-a: The following measures would be included in all construction projects:

- Construction activities will be limited to a schedule that minimizes disruption to uses surrounding the project site as much as possible. Construction outside the Campus Park area will be scheduled within the allowable construction hours designated in the noise ordinance of the local jurisdiction to the full feasible extent, and exceptions will be avoided except where necessary.
- As feasible, construction equipment will be required to be muffled or controlled.
- The intensity of potential noise sources will be reduced where feasible by selection of quieter equipment (e.g. gas or electric equipment instead of diesel powered, low noise air compressors).
- Functions such as concrete mixing and equipment repair will be performed off-site whenever possible.

For projects requiring pile driving:

- With approval of the project structural engineer, pile holes will be pre-drilled to minimize the number of impacts necessary to seat the pile.
- Pile driving will be scheduled to have the least impact on nearby sensitive receptors.
- Pile drivers with the best available noise control technology will be used. For example, pile driving noise control may be achieved by shrouding the pile hammer point of impact, by placing resilient padding directly on top of the pile cap, and/or by reducing exhaust noise with a sound-absorbing muffler.
- Alternatives to impact hammers, such as oscillating or rotating pile installation systems, will be used where possible.

Continuing Best Practice NOI-4-b: UC Berkeley will continue to precede all new construction projects with community outreach and notification, with the purpose of ensuring that the mutual needs of the particular construction project and of those impacted by construction noise are met, to the extent feasible.

LRDP Mitigation Measure NOI-5: The following measures will be implemented to mitigate construction vibration:

- UC Berkeley will conduct a pre-construction survey prior to the start of pile driving. The survey will address susceptibility ratings of structures, proximity of sensitive receivers and equipment/operations, and surrounding soil conditions. This survey will document existing conditions as a baseline for determining changes subsequent to pile driving.
- UC Berkeley will establish a vibration checklist for determining whether or not vibration is an issue for a particular project.
- Prior to conducting vibration-causing construction, UC Berkeley will evaluate whether alternative methods are available, such as:
    - Using an alternative to impact pile driving such as vibratory pile drivers or oscillating or rotating pile installation methods.
    - Jetting or partial jetting of piles into place using a water injection at the tip of the pile.
- If vibration monitoring is deemed necessary, the number, type, and location of vibration sensors would be determined by UC Berkeley.

PUBLIC SERVICES

Continuing Best Practice PUB-1.1: UCPD would continue its partnership with the City of Berkeley police department to review service levels in the City Environs.

Continuing Best Practice PUB-2.1-b: UC Berkeley would continue on-going implementation of the Hill Area Fire Fuel Management Program.

Continuing Best Practice PUB-2.3: UC Berkeley would continue its partnership with LBNL, ACFD, and the City of Berkeley to ensure adequate fire and emergency service levels to the campus and UC facilities. This partnership shall include consultation on the adequacy of emergency access routes to all new University buildings.

LRDP Mitigation Measure PUB-2.4-a: In order to ensure adequate access for emergency vehicles when construction projects would result in temporary lane or roadway closures, campus project management staff would consult with the UCPD, campus EH&S, the BFD and ACFD to evaluate alternative travel routes and temporary lane or roadway closures prior to the start of construction activity. UC Berkeley will ensure the selected alternative travel routes are not impeded by UC Berkeley activities.

LRDP Mitigation Measure PUB-2.4-b: To the extent feasible, the University would maintain at least one unobstructed lane in both directions on campus roadways at all times, including during construction. At any time only a single lane is available due to construction-related road closures, the University 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 the complete closure of a roadway, UC Berkeley would provide signage indicating alternative routes. In the case of Centennial Drive, any complete road closure would be limited to brief interruptions of traffic required by construction operations.

Continuing Best Practice PUB-2.4: To the extent feasible, for all projects in the City Environs, the University would include the undergrounding of surface utilities along project street frontages, in support of Berkeley General Plan Policy S-22.

Continuing Best Practice PUB-4.3: Any new UC Berkeley recreation facilities would be developed in accordance with design principles and guidelines established in the 2020 LRDP. All relevant 2020 LRDP mitigation measures and continuing best practices would be incorporated into the design and construction of new facilities. For each individual project, the University would evaluate potential environmental impacts and prepare all required documents in full accordance with CEQA.

LRDP Mitigation Measure PUB-4.4: Before implementing any change to the use of any existing recreational facility, UC Berkeley would conduct a study to ensure that the loss of recreational use would not result in increased use at other facilities to the extent it would result in the physical deterioration of those facilities. If such deterioration is found to have the potential to occur, then the University would build replacement recreation facilities or take other measures to minimize overuse and deterioration of existing facilities in connection with removal of or reduction in use at the recreation facility in question. Any such facilities and/or measures would be reviewed in accordance with CEQA.

TRANSPORTATION AND TRAFFIC

Continuing Best Practice TRA-1-a: UC Berkeley will continue in partnership with the City of Berkeley to develop a City program to: (a) maintain the Southside area between College, Dana, Dwight and Bancroft in a clean and safe condition; and (b) provide needed public improvements to the area (e.g. traffic improvements, lighting, bicycle facilities, pedestrian amenities and landscaping).

Continuing Best Practice TRA-1-b: UC Berkeley will continue to do strategic bicycle access planning. Issues addressed include bicycle access, circulation and amenities with the goal of increasing bicycle commuting and safety. Planning considers issues such as bicycle access to the campus from adjacent streets and public transit; bicycle, vehicle, and pedestrian interaction; bicycle parking; bicycle safety; incentive programs; education and enforcement; campus bicycle routes; and amenities such as showers. **The scoping and budgeting of individual projects will include consideration of improvements to bicycle access.**

Continuing Best Practice TRA-3-a: Early in construction period planning UC Berkeley shall meet with the contractor for each construction project to describe and establish best practices for reducing construction-period impacts on circulation and parking in the vicinity of the project site.

Continuing Best Practice TRA-3-b: For each construction project, UC Berkeley will require the prime contractor to prepare a Construction Traffic Management Plan which will include the following elements:

- Proposed truck routes to be used, consistent with the City truck route map.
- Construction hours, including limits on the number of truck trips during the a.m. and p.m. peak traffic periods (7:00 – 9:00 a.m. and 4:00 – 6:00 p.m.), if conditions demonstrate the need.

- Proposed employee parking plan (number of spaces and planned locations).
- Proposed construction equipment and materials staging areas, demonstrating minimal conflicts with circulation patterns.
- Expected traffic detours needed, planned duration of each, and traffic control plans for each.

Continuing Best Practice TRA-3-c: UC Berkeley will manage project schedules to minimize the overlap of excavation or other heavy truck activity periods that have the potential to combine impacts on traffic loads and street system capacity, to the extent feasible.

Continuing Best Practice TRA-3-d: UC Berkeley will reimburse the City of Berkeley for its fair share of costs associated with damage to City streets from University construction activities, provided that the City adopts a policy for such reimbursements applicable to all development projects within Berkeley.

Continuing Best Practice TRA-5: The University shall continue to work to coordinate local transit services as new academic buildings, parking facilities, and campus housing are completed, in order to accommodate changing demand locations or added demand.

LRDP Mitigation Measure TRA-6-g: The University will work with the City of Berkeley to design and, on a fair share basis, install a signal at the Bancroft Way/ Ellsworth Street intersection, and provide the necessary provisions for coordination with adjacent signals along Bancroft Way. The University will contribute fair share funding for a periodic (annual or biennial) signal warrant check at this and other impact intersections, to allow the City to determine when a signal and the associated coordination improvements are warranted. With the implementation of this mitigation measure, the intersection will operate at LOS B during both AM and PM peak hours.

UTILITIES AND SERVICE SYSTEMS

Continuing Best Practice USS-1.1: For campus development that increases water demand, UC Berkeley would continue to evaluate the size of existing distribution lines as well as pressure of the specific feed affected by development on a project-by-project basis, and necessary improvements would be incorporated into the scope of work for each project to maintain current service and performance levels. The design of the water distribution system, including fire flow, for new buildings would be coordinated among UC Berkeley staff, EBMUD, and the Berkeley Fire Department.

Continuing Best Practice USS-2.1-a: UC Berkeley will promote and expand the central energy management system (EMS), to tie building water meters into the system for flow monitoring.

Continuing Best Practice USS-2.1-b: UC Berkeley will analyze water and sewer systems on a project-by-project basis to determine specific capacity considerations in the planning of any project proposed under the 2020 LRDP.

Continuing Best Practice USS-2.1-d: UC Berkeley will continue to incorporate specific water conservation measures into project design to reduce water consumption and wastewater generation. This could include the use of special air-flow aerators, water-saving shower heads, flush cycle reducers, low-volume toilets, weather based or evapotranspiration irrigation controllers, drip irrigation systems, the use of drought resistant plantings in landscaped areas, and collaboration with EBMUD to explore suitable uses of recycled water.

Continuing Best Practice USS-3.1: UC Berkeley shall continue to manage runoff into storm drain systems such that the aggregate effect of projects implementing the 2020 LRDP is no net increase in runoff over existing conditions.

Continuing Best Practice USS-5.1: UC Berkeley would continue to implement a solid waste reduction and recycling program designed to reduce the total quantity of campus solid waste that is disposed of in landfills during implementation of the 2020 LRDP.

Continuing Best Practice USS-5.2: In accordance with the Regents-adopted green building policy and the policies of the 2020 LRDP, the University would develop a method to quantify solid waste diversion. Contractors working for the

University would be required under their contracts to report their solid waste diversion according to the University's waste management reporting requirements.

LRDP Mitigation Measure USS-5.2: Contractors on future UC Berkeley projects implemented under the 2020 LRDP will be required to recycle or salvage at least 50% of construction, demolition, or land clearing waste. Calculations may be done by weight or volume, but must be consistent throughout.

APPENDIX G

CUMULATIVE PROJECTS LIST

Section 15130 of the CEQA Guidelines suggest that the following elements are necessary to an adequate discussion of significant cumulative impacts: Either

> (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or
>
> (B) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency.

Adopted plans proximate to the Project site are listed and summarized in part I below. A list of present and probable future projects appears in part II below.

I. SUMMARY OF PROJECTIONS IN LOCAL PLANS AT LBNL, CITY OF BERKELEY, UC BERKELEY:

UC Berkeley 2020 LRDP EIR

The campus 2020 LRDP EIR, certified by The Regents of the University in January 2005, assumed no more than one million gross square feet of construction would be underway at any one time within the Campus Park, Adjacent Blocks, Southside and Hill Campus land use zones. The 2020 LRDP EIR assumed UC Berkeley would grow by up to 18%, or 2,200,000 gross square feet of academic and support space (which excludes, for example, new housing), over 2005 levels by 2020; up to 700,000 GSF of the space demands would be research laboratory space. Of these overall numbers, 1 million gross square feet of new space would be constructed on the Campus Park, 800,000 GSF would be constructed on the West Adjacent Blocks, 400,000 GSF would be constructed on the South Adjacent Blocks, 50,000 would be constructed on the North Adjacent Blocks, 50,000 would be constructed in the Southside and another 50,000 would be constructed upon other Berkeley properties owned by the University. The LRDP assumed up to 100,000 GSF would be constructed in the Hill Campus. See the 2020 LRDP for a description of these land use areas. Documents available at lrdp.berkeley.edu

LBNL Long Range Development Plan

The Lawrence Berkeley National Laboratory's population in all of the facilities it occupies is projected to grow from 4,515 in 2006 to 5,375 by 2025. The 2006 LRDP describes an entire development program of approximately 980,000 gross square feet of new research and support space construction and 320,000 gross square feet of demolition of existing facilities, for a total of approximately 660,000 gross square feet of net new occupiable space for the site through 2025. The projected net increase in occupied building area on the main site is 612,000 gross square feet (gsf), from 1,808,000 gsf in 2006 to 2,420,000 gsf. See http://www.lbl.gov/LRDP/.

Richmond Bay Campus

In January 2013 LBNL and UCB published a Notice of Preparation for an environmental impact report examining a Long Range Development Plan for the Richmond Bay Campus, a new research campus to be established on existing University-owned property in Richmond, California.

City of Berkeley General Plan

The Berkeley City Council gave final approval to the City's General Plan in Spring 2002. The General Plan includes goals to increase the supply of affordable housing in Berkeley, promote living-wage jobs, and encourage infill

development. The EIR for the General Plan found that population of Berkeley would remain below 120,000. The City's General Plan can be viewed at http://www.ci.berkeley.ca.us/contentdisplay.aspx?id=488 and the General Plan EIR can be found here: http://www.ci.berkeley.ca.us/contentdisplay.aspx?id=492

The City of Berkeley also updated plans for the Downtown and the Southside areas in the vicinity of UC Berkeley; the Southside Plan was approved in 2012.

II. LIST OF FORESEEABLE PROJECTS AS OF JANUARY 2013:

PROJECTS CURRENTLY UNDER CONSTRUCTION - UCB

Health and Wellness Center

The Associated Students of the University are considering a referendum in elections in April for a possible Health and Wellness Center that would be up to 35,000 gross square feet to house innovative health and wellness programs and fitness equipment; be designed to LEED Gold or better; and welcome all students. One potential site for this new center, if the referendum is successful, could be the remainder of the Tang parking lot, directly west of the proposed Cal Aquatics Center site.

BAM/PFA project – 83,000 GSF renovation and new construction

The University proposes to repurpose the existing Print Plant building at Oxford and Center Street in downtown Berkeley to house the Berkeley Art Museum and Pacific Film Archive. The Streamline Moderne-style former printing plant—unoccupied since 2004—will be repurposed to serve as gallery, education, and office space, including some areas created by excavating a basement level. This building will be integrated with an approximately new structure that will include the PFA Theater, Library and Film Study Center, collection study area, special-event space, café, and back-of-house operations. The existing printing plant building is approximately 45,000 gross square feet, and in total the new BAM/PFA will be approximately 82,000 square feet. The project removes a 258 car parking garage and approximately 42 striped spaces would be replaced at the end of construction.

Campbell Hall Replacement – 81,600 GSF

Campbell Hall on the central UC Berkeley campus is being replaced with a new facility that will house the departments of Astronomy and Physics, including the Center for Integrated Precision and Quantum Measurement, a high stability, low noise research facility. The new Campbell will also include a roof top observatory; a radio observatory; research facilities; faculty and staff offices; and other support spaces. Construction is expected to continue through 2014.

Dwight Childcare – 6,000 GSF

The project will construct a 6,000 GSF childcare facility serving around 40 children on the site of 2427 Dwight Way and the adjacent parking lot. The current building on the site will be demolished because of mold and lead issues making it unsuitable for childcare uses. The new building will incorporate off-site, prefabricated building units that will minimize both the amount of time for and the impacts of construction. Approximately 3,500 GSF of play space will be located at the front and rear of the site with the classrooms concentrated at the center. Pick up and drop off will be done safely off-street in a reconfigured parking lot to the east. The parking will be made more compact to reduce the number of spaces lost. Additionally, the City may gain additional on-street parking as the result of the removal of two curb-cuts on the property.

Lower Sproul Student Center Project – 80,000 GSF new construction

The Lower Sproul Student Center project will revitalize the mid century modernist complex comprised of Eshleman Hall, ML King, Jr. Student Union, and the Cesar Chavez Center, in order to provide undergraduate and graduate

students with a center for student life commensurate with the needs of 21st century students. The project will also renovate Anthony Hall and relocate the Career Center to leased space near Lower Sproul. The scope includes 44,300 gsf demolition, 60-65,000 gsf of renovations, and 75-80,000 gsf of new construction. Construction is expected to be implemented in two phases between 2012 and 2017.

Switch Station 6

The University proposes a new electrical switch station to serve the campus. A two story building, approximately 35 feet by 57 feet would be notched into the hillside north of the Hearst Greek Theatre. Installation of subsurface electrical lines will connect the switch station to the UCB grid, from Hearst Mining Circle, east to the new switch station, and then south to near Bowles Hall. The lines will be installed by trenching and will be less than 10 feet deep.

PROJECTS CURRENTLY UNDER CONSTRUCTION - LBNL

LBNL - Computational Research & Theory (CRT) Facility

The Computational Research and Theory (CRT) Facility will be on the forefront of high-performance supercomputing research and will be DOE's most efficient facility of its kind. Designed to take advantage of the cool Berkeley climate, the CRT is anticipated to set a new standard in energy efficiency for high-performance computing. The location of the new facility will be on the hillside of Chu road near the Blackberry Gate entrance to Lawrence Berkeley National Laboratory. Currently, the main construction activities are earthwork and foundation work. These activities include drilling, installation of tie backs and soil nails, lagging and shotcrete work. Foundation work will continue through the Summer of 2013. Project completion is scheduled for early 2015. This project includes an approximately 140,000 gross square-foot computer facility and office structure, associated infrastructure and access improvements.

LBNL – Solar Energy Research Center

The SERC building will be a 39,000 gsf building designed to house research laboratories and offices devoted to nanoscale photovoltaic and electro-chemical solar energy systems. The location of the building is in the area known as Old Town and will be immediately east of Building 26 (Medical) off McMillan Road. Currently the project is under Phase 1 Construction with Phase 2 slated for this winter. Completion is expected in the summer of 2014.

City of Berkeley Public Works Improvements

The City has on-going public works improvement programs, including storm drain and paving. See City scheduled construction activities, regularly updated, here:

BERKELEY CAMPUS PROJECTS, IN PLANNING, DESIGN APPROVAL PENDING

Vegetation Management Projects

The University has applied, through the State of California Governor's Office of Emergency Services, to the Federal Emergency Management Agency (FEMA) for funding under the Pre Disaster Mitigation (PDM) Program to conduct vegetation management activities in Strawberry Canyon, Claremont Canyon, and Frowning Ridge. The vegetation management activities would involve removal of non-native trees, including approximately 10,000 stems of eucalyptus trees from Strawberry Canyon, approximately 12,000 stems of eucalyptus trees from the Claremont Canyon area, and approximately 24,000 stems of eucalyptus and pine trees from the Frowning Ridge location. Each project would take place over a three-year period. Environmental review of the projects has not been completed.

CITY OF BERKELEY

Project address	Status	Use	Dwelling units	Commercial area (sq. Ft.)	Building/ height
2323 Shattuck Avenue	under construction	residential/ commercial	16	2,600	5 stories (60 ft.)
2301 Durant Avenue	under construction	dormitory/ church hall/ parking garage	164 (existing)	2,600	5 stories (52 ft.)
2526 Durant Avenue	approved	residential/commercial (relocate city landmark off-site)	44	2,500	5 stories
2598-2600 Shattuck Avenue	approved	residential/ commercial	155	23,000	two buildings, 5 stories (65 ft.)
2107 Dwight Way	proposed	residential/ commercial	99	5,600	6 stories (65 ft.)
2024 Durant Avenue	proposed	residential	96	–	4 to 8 stories
2701 Shattuck Avenue	proposed	residential/ commercial	69	7,000	4 stories (55 ft.)

Source: City of Berkeley, February 2013

Vegetation Management Projects

The University has applied, through the State of California Governor's Office of Emergency Services, to the Federal

APPENDIX H

PUBLIC COMMENTS IN RESPONSE TO THE NOTICE OF PREPARATION

UNIVERSITY OF CALIFORNIA, BERKELEY

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO

SANTA BARBARA • SANTA CRUZ

CAPITAL PROJECTS
PHYSICAL AND ENVIRONMENTAL PLANNING
300 A & E BUILDING, # 1382
BERKELEY, CALIFORNIA 94720-1382

January 31, 2013

State of California
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

NOTICE OF PREPARATION SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

Project Title:	Cal Aquatics Center
Project Location:	University of California, Berkeley
County:	Alameda County, California
Program EIR:	UC Berkeley 2020 Long Range Development Plan EIR, certified by The Regents January 2005, SCH #2003082131; as updated by Amendment #1 to address Climate Change and accompanying Addendum #5 to the 2020 LRDP EIR.

Project Description:

The Cal Aquatics Center is an intercollegiate aquatic facility to be located on what is currently a University owned parking lot, west of the University Health Service Tang Center at 2222 Bancroft Way, and flanked by Bancroft Way to the north and Durant Avenue to the south. It will consist of three single level buildings surrounding a 50 meter swimming pool with a dive tower. The main entry, located on Bancroft Way, will be centered between the Edwards Field concrete pylons across the street as a way of visually connecting back to the University and the athletics precinct. A mid-block passageway will be provided between the aquatic facility and the UHS Tang Center building. The dive tower will have a 10M, 7.5M, 5M, 3M and 1M diving platform

The project would displace approximately 200 surface parking spaces now on the Bancroft/Fulton site; approximately 54 angled surface parking spaces would remain.

The project does not include any permanent seating for spectators, as the Center will be used primarily for training. However, in the rare instance when event seating is required, the deck areas will accommodate temporary bleachers for up to 500 spectators. For the rare evening competitive event, the project includes event lighting to meet the Pac 12 Network footcandle requirements of 70fc average maintained over the main deck and pool. The project proposes to mount LED fixtures on 30'-0" high poles, evenly spaced along the east and west sides of the pool.

In addition to design approval, the proposed Project would amend the Long Range Development Plan to accommodate this land use on this site.

UC Berkeley is one of only three NCAA aquatics programs in the country that provides participation opportunities to athletes in men's swimming and diving, women's swimming and diving, men's water polo, and women's water polo. Nearly 150 student-athletes currently compete in these programs at Cal.

Despite the overwhelming success of these programs (with numerous NCAA team championships, individual NCAA championships, and Olympic medals), they are constrained by a lack of capacity for both training and competition, both in terms of times available for practice and amount of water space. The aquatics programs are further hampered by inadequate and obsolete land-side training facilities. The shortage of water space is a significant issue campus-wide for Intercollegiate Athletics and other users, including recreational swimmers, physical education students, and community partners; realization of this project would free up water space for these other users.

Environmental Review and Comment: The University of California will be the Lead Agency and will prepare a Subsequent Environmental Impact Report (EIR), tiered from the UC Berkeley 2020 LRDP EIR (SCH #2003082131) to evaluate the environmental effects of the Cal Aquatics Center.

Based upon preliminary analysis, the University believes that the Project is largely consistent with the UC Berkeley 2020 LRDP and LRDP EIR, certified by The Regents in January 2005. However, the University has determined that a Subsequent EIR is required to update and augment the 2020 LRDP EIR to reflect the Project as proposed and to support a minor amendment to the LRDP to address the land use designation at the proposed project site..

The Subsequent EIR will examine the consistency of the project with the analysis contained in the 2020 LRDP EIR in the following resource areas: Aesthetics; Air Quality; Biological Resources; Climate Change; Geology, Seismicity and Soils; Hazardous Materials; Hydrology and Water Quality; Noise; Population and Housing; Public Services; Traffic and Transportation; Utilities and Service Systems—Stormwater, Wastewater, Water, Solid Waste, Steam and Energy.

We appreciate your prompt acknowledgement and review of this Notice of Preparation. Due to the time limits mandated by state law, the document's 30-day review period will extend from February 1,

2013 to March 4, 2013. Comments must be received before 5:00 pm on Monday, March 4, 2013. They may be e-mailed to or mailed to:

Jennifer McDougall
Principal Planner
PEP/Capital Projects
Facilities Services
Room 1 A&E Building
University of California
Berkeley, CA 94720-1380

jmcdougall@berkeley.edu

Please include a subject line indicating Scoping Comments: Cal Aquatics Center Subsequent EIR.

If you have any questions about the environmental review for the Cal Aquatics Center, please contact Jennifer McDougall, Principal Planner, Physical and Environmental Planning, at (510) 642-7720 on or after February 11, 2013.

Sincerely,

Emily Marthinsen
Assistant Vice Chancellor
Physical and Environmental Planning
Capital Projects

Enclosures: 1 Notice of Completion and Environmental Document Transmittal Form

cc: Notice of Preparation, Notice of Completion and Environmental Document Transmittal Form, sent to addressees on attached list

Addressees:

Local Jurisdictions (via electronic and U.S. mail)
Ezra Rapport, Executive Director
ABAG
PO Box 2050
Oakland CA 94604

Christine Daniel
City Manager
City of Berkeley
2180 Milvia Street
Berkeley CA 94704

Members of the Berkeley City Council
c/o City Clerk
2180 Milvia Street
Berkeley CA 94704

Laura Chen, Chief Facilities Planner
Lawrence Berkeley National Laboratory
One Cyclotron Road MS 90K
Berkeley CA 94720

Superintendent
Berkeley Unified School District
2134 Martin Luther King Jr Way
Berkeley CA 94704-1180

Transportation Planning Agencies (via electronic and U.S. mail)
Steve Heminger, Executive Director
Metropolitan Transit Commission
101 8th Street
Oakland CA 94607

Jean Hart, Deputy Director
Alameda County Congestion Management Agency
1333 Broadway Suite 220
Oakland CA 94612

Farid Javandel
Assistant City Manager for Transportation
1900 Addison St, 3rd Floor
Berkeley CA 94704

David Armijo
General Manager
AC Transit
1600 Franklin Street
Oakland, CA 94612-2800

Grace Crunican
General Manager
BART
PO Box 12688
Oakland, CA 94604-2688

Air Quality Planning Agencies (via electronic and U.S. mail)
Henry D. Hilken, Senior Environmental Planner
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, California 94109

California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

Environmental Safety, Materials & Waste Handling Agencies (via electronic and U.S. mail)
Barbara J. Cook, Chief
Northern California Branch
Department of Toxic Substances Control
700 Heinz Avenue, Suite 200
Berkeley CA 94710

Public repositories (via hand delivery):
Environmental Design Library
Reference Desk
210 Wurster Hall
Berkeley Campus

Moffitt Library
Reference Desk
UC Berkeley Campus

Berkeley Public Library
Reference Desk – Main Branch
2090 Kittredge St
Berkeley CA 94704

Student Organizations (via hand delivery and electronic mail):
Graduate Student Assembly
Hearst Gym, Room 102
Berkeley CA 94720-4500

External Affairs VP
ASUC
Hearst Gym, Room 102
Berkeley CA 94720-4500

Residence Hall Assembly
2650 Durant Ave
Unit 1, Christian Hall, L-03
Berkeley CA 94720-2272

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex

Notice of Preparation

February 1, 2013

To: Reviewing Agencies

Re: Cal Aquatics Center
SCH# 2003082131

Attached for your review and comment is the Notice of Preparation (NOP) for the Cal Aquatics Center draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Jennifer McDougall
University of California
300 A&E Building, UC Berkeley
Berkeley, CA 94720

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2003082131
Project Title Cal Aquatics Center
Lead Agency University of California, Berkeley

Type NOP Notice of Preparation

Description The Cal Aquatics Center is an intercollegiate aquatic facility to be located on a University-owned parking lot. Three single level buildings will surround a 50 meter swimming pool with a dive tower with platforms at 10 M, 7.5 M, 5 M, 3 M and 1M.

Lead Agency Contact

Name Jennifer McDougall
Agency University of California
Phone 510-642-7720 **Fax**
email
Address 300 A&E Building, UC Berkeley
City Berkeley **State** CA **Zip** 94720

Project Location

County Alameda
City Berkeley
Region
Cross Streets Bancroft
Lat / Long 37° 52' 3.19" N / 122° 15' 53.04" W
Parcel No. 055 188602501055
Township **Range** **Section** **Base**

Proximity to:

Highways SR 24, 13, I-880
Airports
Railways
Waterways San Francisco Bay
Schools Multiple
Land Use R-SMU

Project Issues Landuse

Reviewing Agencies Resources Agency; California Coastal Commission; Office of Historic Preservation; Department of Parks and Recreation; San Francisco Bay Conservation and Development Commission; Department of Water Resources; Department of Fish and Wildlife, Region 3; Native American Heritage Commission; State Lands Commission; California Highway Patrol; Caltrans, District 4; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 2

Date Received 02/01/2013 **Start of Review** 02/01/2013 **End of Review** 03/04/2013

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2003082131

Project Title: Cal Aquatics Center
Lead Agency: University of California, Berkeley
Contact Person: Jennifer McDougall
Mailing Address: 300 A&E Building, UC Berkeley
Phone: (510)642-7720
City: Berkeley Zip: 94720
County: Alameda

Project Location: County: Alameda City/Nearest Community: Berkeley
Zip Code: 94720
Cross Streets: Bancroft
Longitude/Latitude (degrees, minutes and seconds): -122 ° 15 ′ 53.04″ N / 37 ° 52 ′ 3.19″ W Total Acres:
Assessor's Parcel No.: 055 188602501055 Section: Twp.: Range: Base:
Within 2 Miles: State Hwy #: SR 24, SR 13, I-880 Waterways: San Francisco Bay
Airports: n/a Railways: n/a Schools: multiple

RECEIVED
FEB 01 2013
STATE CLEARING HOUSE

Document Type:

CEQA: ■ NOP ☐ Draft EIR
☐ Early Cons ☐ Supplement/Subsequent EIR
☐ Neg Dec (Prior SCH No.)
☐ Mit Neg Dec Other:

NEPA: ☐ NOI ☐ EA ☐ Draft EIS ☐ FONSI

Other: ☐ Joint Document ☐ Final Document ☐ Other:

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ☐ Other:

Development Type:

☐ Residential: Units Acres
☐ Office: Sq.ft. Acres Employees
☐ Commercial: Sq.ft. Acres Employees
☐ Industrial: Sq.ft. Acres Employees
☐ Educational:
■ Recreational: Athletics competitive diving and swimming
■ Water Facilities: Type swimming pool MGD

☐ Transportation: Type
☐ Mining: Mineral
☐ Power: Type MW
☐ Waste Treatment: Type MGD
☐ Hazardous Waste: Type
☐ Other:

Project Issues Discussed in Document:

☐ Aesthetic/Visual ☐ Fiscal ☐ Recreation/Parks ☐ Vegetation
☐ Agricultural Land ☐ Flood Plain/Flooding ☐ Schools/Universities ☐ Water Quality
☐ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
☐ Archeological/Historical ☐ Geologic/Seismic ☐ Sewer Capacity ☐ Wetland/Riparian
☐ Biological Resources ☐ Minerals ☐ Soil Erosion/Compaction/Grading ☐ Growth Inducement
☐ Coastal Zone ☐ Noise ☐ Solid Waste ■ Land Use
☐ Drainage/Absorption ☐ Population/Housing Balance ☐ Toxic/Hazardous ☐ Cumulative Effects
☐ Economic/Jobs ☐ Public Services/Facilities ☐ Traffic/Circulation ☐ Other:

Present Land Use/Zoning/General Plan Designation:

R-SMU

Project Description: *(please use a separate page if necessary)*

The Cal Aquatics Center is an intercollegiate aquatic facility to be located on a University-owned parking lot. Three single level buildings will surround a 50 meter swimming pool with a dive tower with platforms at 10 M, 7.5 M, 5 M, 3 M and 1M.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

NOP Distribution List

County: Alameda

SCH# 2003062151

Resources Agency

- [x] **Resources Agency**
  Nadell Gayou
- [ ] **Dept. of Boating & Waterways**
  Nicole Wong
- [x] **California Coastal Commission**
  Elizabeth A. Fuchs
- [ ] **Colorado River Board**
  Gerald R. Zimmerman
- [ ] **Dept. of Conservation**
  Elizabeth Carpenter
- [ ] **California Energy Commission**
  Eric Knight
- [ ] **Cal Fire**
  Dan Foster
- [ ] **Central Valley Flood Protection Board**
  James Herota
- [x] **Office of Historic Preservation**
  Ron Parsons
- [x] **Dept of Parks & Recreation**
  Environmental Stewardship Section
- [ ] **California Department of Resources, Recycling & Recovery**
  Sue O'Leary
- [x] **S.F. Bay Conservation & Dev't. Comm.**
  Steve McAdam
- [x] **Dept. of Water Resources Resources Agency**
  Nadell Gayou

Fish and Game

- [ ] **Dept. of Fish & Wildlife**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Wildlife Region 1**
  Donald Koch
- [ ] **Fish & Wildlife Region 1E**
  Laurie Harnsberger
- [ ] **Fish & Wildlife Region 2**
  Jeff Drongesen
- [x] **Fish & Wildlife Region 3**
  Charles Armor
- [ ] **Fish & Wildlife Region 4**
  Julie Vance
- [ ] **Fish & Wildlife Region 5**
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] **Fish & Wildlife Region 6 I/M**
  Brad Henderson
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Wildlife M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Anna Garbeff
  Environmental Services Section
- [ ] **Dept. of Public Health**
  Jeffery Worth
  Dept. of Health/Drinking Water
- [ ] **Delta Stewardship Council**
  Kevan Samsam

Independent Commissions,Boards

- [ ] **Delta Protection Commission**
  Michael Machado
- [ ] **Cal EMA (Emergency Management Agency)**
  Dennis Castrillo
- [x] **Native American Heritage Comm.**
  Debbie Treadway
- [ ] **Public Utilities Commission**
  Leo Wong
- [ ] **Santa Monica Bay Restoration**
  Guangyu Wang
- [x] **State Lands Commission**
  Jennifer Deleong
- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics**
  Philip Crimmins
- [ ] **Caltrans - Planning**
  Terri Pencovic
- [x] **California Highway Patrol**
  Suzann Ikeuchi
  Office of Special Projects
- [ ] **Housing & Community Development**
  CEQA Coordinator
  Housing Policy Division

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Gary Arnold
- [x] **Caltrans, District 4**
  Erik Alm
- [ ] **Caltrans, District 5**
  David Murray
- [ ] **Caltrans, District 6**
  Michael Navarro
- [ ] **Caltrans, District 7**
  Dianna Watson
- [ ] **Caltrans, District 8**
  Dan Kopulsky
- [ ] **Caltrans, District 9**
  Gayle Rosander
- [ ] **Caltrans, District 10**
  Tom Dumas
- [ ] **Caltrans, District 11**
  Jacob Armstrong
- [ ] **Caltrans, District 12**
  Marlon Regisford

Cal EPA

Air Resources Board

- [ ] Airport/Energy Projects
  Jim Lerner
- [ ] Transportation Projects
  Douglas Ito
- [ ] Industrial Projects
  Mike Tollstrup
- [ ] **State Water Resources Control Board**
  Regional Programs Unit
  Division of Financial Assistance
- [ ] **State Water Resources Control Board**
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] **State Water Resouces Control Board**
  Phil Crader
  Division of Water Rights
- [x] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
- [ ] **Department of Pesticide Regulation**
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
  Cathleen Hudson
  North Coast Region (1)
- [x] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
- [ ] **RWQCB 5F**
  Central Valley Region (5)
  Fresno Branch Office
- [ ] **RWQCB 5R**
  Central Valley Region (5)
  Redding Branch Office
- [ ] **RWQCB 6**
  Lahontan Region (6)
- [ ] **RWQCB 6V**
  Lahontan Region (6)
  Victorville Branch Office
- [ ] **RWQCB 7**
  Colorado River Basin Region (7)
- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____

_____

_____

- [ ] _____
  Conservancy

Last Updated 8/14/2012

ALAMEDA County Transportation Commission
1333 Broadway, Suites 220 & 300 ▪ Oakland, CA 94612 ▪ PH: (510) 208-7400
www.AlamedaCTC.org

February 12, 2013

Jennifer McDougall
Principal planner
PEP/Capital Projects
Facilities Services
Room 1 A&E Building
University of California
Berkeley, CA 94720-1380

SUBJECT: Review of Notice of Preparation for a Subsequent Environmental Impact Report for the Cal Aquatics Center

Dear Ms. McDougall:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for a Subsequent Environmental Impact Report for the Cal Aquatics Center. The project is located on what is currently a University owned parking lot, west of the University Health Service Tang Center at 2222 Bancroft Way and flanked by Bancroft Way to the north and Durant Avenue to the south. The project will consist of three single level buildings surrounding a 50 meter swimming pool with a dive tower.

Per an email received on February 11, 2013, we understand that the facility will typically be used as a practice facility for student athletes and will not generate 100 p.m. peak hour vehicle trips in excess of the existing land uses at the project site. This project is therefore exempt from conformance with the Tier I Land Use Analysis Program of the Congestion Management Program.

Please do not hesitate to contact me at 510.208.7405 or Matthew Bomberg my staff at 510.208.7444 if you require additional information.

Sincerely,

Beth Walukas
Deputy Director of Planning

Cc: Matthew Bomberg, Assistant Transportation Planner

File: CMP – Environmental Review Opinions – Responses - 2013

From: Vecchio, Michael [mailto:MVecchio@ci.berkeley.ca.us]
Sent: Thursday, February 28, 2013 9:56 AM
To: Jennifer McDougall
Cc: Javandel, Farid; Mostowfi, Hamid
Subject: Scoping Comments: Cal Aquatics Center Subsequent EIR

Hello Jennifer,
Thank you for the NOP and the opportunity to comment on the proposed Aquatics Center. Our comments are provided below. Should you have any questions or need clarification on them, please contact me directly. Thank you for your time.

From the NOP for the project, it appears that there are about 254 existing parking spaces on-site. This estimate is based on the statement that 200 spaces would be displaced and that 54 would remain. Please confirm this information in the subsequent EIR document.

Provide an estimate of the parking demand for the proposed project. We understand that there are 150 student-athletes who currently compete in the Cal programs and would work out and compete here. Provide a plan describing how the estimated 500 spectators (also staff, athletes, and others) are expected to arrive to the event and, of those who drive autos, where they would park.

How much parking is proposed – not only for cars (estimated at 54 spaces on-site) but also for trucks and delivery vehicles.

Describe characteristics of existing parkers and prepare an evaluation as to where they would park once the lot is removed.

Describe the Project's impact on on-street parking of spaces lost due to driveways, truck loading, etc.

Combined with the loss of parking at the UC's BAM/pfa project on Oxford Street, there is a substantial loss of UC Permit Parking in the vicinity of the campus. Describe how UC's TDM program would be expanded to accommodate the loss of the approximate combined total of 400 parking spaces.

Describe the weekday trip generation during a typical day and during a special event. What is the impact on intersections affected?

Driveway locations, if any, on Bancroft must be far enough east so that motorists destined for northbound Oxford Street can weave across Bancroft Way to make the right turn onto Oxford Way. Provide details on the locations of driveways so that motorist and pedestrian safety can be maintained.

Michael Vecchio
Public Works, Traffic Engineering
510 981-6445

From:	Gallagher, Daniel
To:	"jmcdougall@berkeley.edu"
Subject:	RE: Scoping Comments: Subsequent EIR, Cal Aquatics Center
Date:	Friday, February 01, 2013 7:43:56 AM

Jennifer:

The London Plane street trees on the Durant Avenue side of this project are to be protected during this project and preserved as part of the right of way streetscape.

Thank you.

Dan Gallagher, ISA Certified Arborist/Municipal Specialist WE-0942AM
City of Berkeley, Senior Forestry Supervisor
1325 Bancroft Way, Berkeley CA 94702
(510) 981-6687 dgallagher@cityofberkeley.info

-----Original Message-----
From: ucb_ceqa_notices-bounces@lists.berkeley.edu [mailto:ucb_ceqa_notices-bounces@lists.berkeley.edu] On Behalf Of planning@berkeley.edu
Sent: Thursday, January 31, 2013 4:25 PM
To: planning@berkeley.edu
Subject: Notice of Preparation, Subsequent EIR, Cal Aquatics Center

The Cal Aquatics Center is an intercollegiate aquatic facility to be located on what is currently a University owned parking lot, west of the University Health Service Tang Center at 2222 Bancroft Way, and flanked by Bancroft Way to the north and Durant Avenue to the south. It will consist of three single level buildings surrounding a 50 meter swimming pool with a dive tower. The primary use of the Center is as a training facility, providing opportunities to athletes in men's and women's sports.

Based upon preliminary analysis, the University believes that the Project is largely consistent with the UC Berkeley 2020 LRDP and LRDP EIR, certified by The Regents in January 2005. However, the University has determined that a Subsequent EIR is required to update and augment the 2020 LRDP EIR to reflect the Project as proposed and to support a minor amendment to the LRDP to address the land use designation at the proposed project site.

Please see the attached Notice of Preparation for more information. To stay updated on this project, please consult the UCB website:

www.cp.berkeley.edu/Projects_Info_Notices.htm

February 25, 2013

Ms. Jennifer McDougall
Principal Planner, PEP / Capital Projects
Facilities Services, Room 1 A&E Building
University of California
Berkeley, CA 94720-1380

Re: Cal Aquatics Center Subsequent EIR

Dear Jennifer:

While the Downtown Berkeley Association (DBA) and Telegraph Business Improvement District (TBID) applaud the plans for a new Cal Aquatics Center at 2222 Bancroft, we are concerned about: 1) Insuring a positive pedestrian experience on Bancroft Avenue, and 2) Mitigating the loss of 200 parking places with the construction of this project. We recognize the Aquatics Center as an important addition to the University to remain competitive as a world class university, but we ask that it be done in a manner that enhances the public realm and addresses adverse impacts from the project.

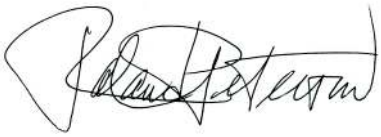
Specifically, we request that the Bancroft Way facing part of the project be designed and built in a manner that creates a welcoming and vibrant pedestrian experience, with retail, service, cultural, or other interactive pedestrian opportunities facing the Bancroft sidewalk. While this stretch of Bancroft is not within either of our districts, it is the key pedestrian link between the Downtown and Telegraph. We worry that a blank or harsh façade could create an unwelcoming cold canyon effect, particularly with walls of Edwards Field and RSF across the street. It is in the University's, City's and our business districts' interests that Bancroft Way be a welcoming and safe pedestrian experience for students, staff, faculty, neighbors and visitors alike, whether they are visiting Zellerbach, Haas Pavilion, Telegraph and/or Downtown areas. Moreover, with the University relying more on BART and public transit, safe and welcoming pedestrian corridors are particularly important.

Additionally, we request that the University investigate ways to mitigate the loss of 200 parking spaces with the development of the new Aquatics Center. The current lot is part of the parking ecosystem serving the University, Downtown and Telegraph. This loss of parking is particularly disconcerting when coupled with the loss of 234 parking spaces at the University Hall garage

with the building of the museum. Where are these University parkers going to go? What is the impact on parking for night time events at Zellerbach, Haas and other venues? To say that most parkers will migrate to public transit is wishful thinking. Displaced parkers will put additional demands on University and City parking resources. The University needs to work with the City, business districts, and the community at large to mitigate the loss of these 439 spaces, and to put together a long term parking plan that meets the needs of the University as it continues to expand in the core, Downtown, and Southside over the next several decades.

Thank you for your timely consideration of these recommendations. We are sending a copy of this letter to the City Manager, Mayor and Council so they are aware of our concerns regarding these issues.

Sincerely,



John Caner
Executive Director
Downtown Berkeley Association

Roland Peterson
Executive Director
Telegraph Business Improvement District

Cc:
Berkeley Mayor and City Council
Berkeley City Manager

Subject: FW: NOP comment FW: Cal Aquatics Center Subsequent EIR

From: Ann Slaby [mailto:annslaby@att.net]
Sent: Thursday, February 21, 2013 2:10 PM
To: jmcdougall@cp.berkeley.edu
Subject: Cal Aquatics Center Subsequent EIR

Dear Ms. Mcdougall,

Please accept these comments re: Subsequent EIR for Cal Aquatics Center

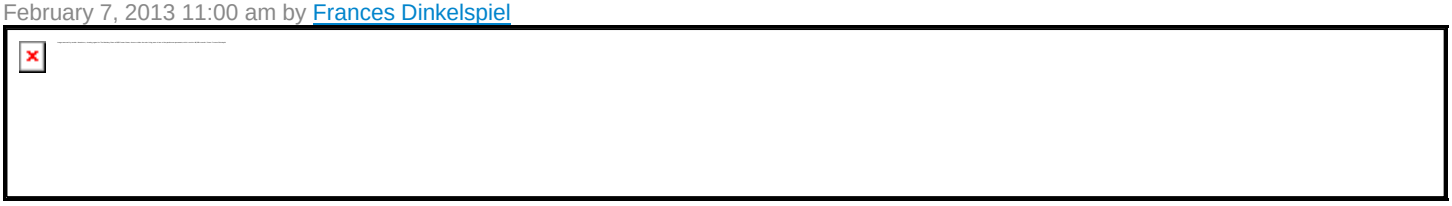
1. Which views will be blocked by lights when events are held at the Cal Aquatics Center.
Light disrupts panoramic views and there is a hill with many residences directly east of the site. There are also tall buildings, such as the International House, that have rooms with
panoramic views.

2. The article about the upcoming 1000 downtown residential units I referenced in my earlier comments, Feb 18, 2013, is reproduced in full below:

Real estate

1,000 new apartments planned for downtown Berkeley

February 7, 2013 11:00 am by Frances Dinkelspiel



Natasha Moses, a property manager for Berkeley Central at 2055 Center Street, shows a visitor the main living area of one of the penthouse apartments, which rent for $6,300 a month. Photo: Frances Dinkelspiel

The view from the L-shaped deck off the penthouse apartment at 2055 Center St. is spectacular. One side looks west toward San Francisco Bay and the Golden Gate Bridge. Another side offers a sweeping vista of Berkeley's downtown and hills.

For $6,300 a month, the amenities ought to be top-of-the-line, and at the recently opened Berkeley Central — formerly known as the Arpeggio Building — they are. From Bosch appliances and stainless steel designer lights to the wood floor (dark or light, depending on the unit), the six penthouse units on the ninth floor promise an urbane, urban lifestyle.
The building, which the developer CityView acquired in a fire sale in July 2012 for $60 million, has been open for about seven weeks, and about 35% of its 143 units have been leased, according to Natasha Moses, a property manager for Riverstone Residential Group, the leasing agent.

Berkeley Central is emphasizing its proximity to BART and downtown cultural amenities in its marketing materials. Photo: Frances Dinkelspiel

With the rent for a one-bedroom starting at $2,500 and a two-bedroom at $3,900, the apartments at Berkeley Central are being marketed mostly to empty-nesters and well-paid professionals. Advertising materials for the complex highlight the building's walkability score (a perfect 100), its proximity to trendy restaurants such as Comal and Gather, performance spaces like Berkeley Rep, Aurora and Freight & Salvage, and the fact it is 226 steps to BART.

"All of that is desirable," said Moses.

Five years after Lehman Brothers collapsed, triggering a global economic meltdown that made banks wary to lend and developers wary to build, the apartment market is heating up. Nowhere is that easier to see than in Berkeley, where developers are proposing to build more than 1,000 units over the next few years in the downtown core and surrounding neighborhoods. If the city allows the projects to go forward, it could bring thousands of new residents and dozens of new retail spaces downtown, potentially transforming the area.

"It's transformational for a number of reasons," said John Caner, the director of the Downtown Berkeley Association, a business group that represents 187 property owners and 850 merchant and business tenants. "One is the sheer number of residents it will bring downtown, but also for the mix of residents it will bring. For the first time, we are seeing projects that are not just serving the student market. I think that's really important."

City Councilman Jesse Arreguín, whose district includes downtown, said the influx of new housing is a positive step, although he thinks the developments need to be closely monitored to make sure they fit into the scale of surrounding neighborhoods.

"I think it's very exciting there is so much development happening in the downtown," he said. "It's been so many years in which the real estate market has been in decline, and there really haven't been a lot of new projects happening."

Spillover from San Francisco

One reason for the explosion in building permit applications is the spillover effect from San Francisco's surging tech economy. Companies like Twitter, Yammer, Salesforce.com, Autodesk and others are growing rapidly and their workforces need places to live. Competition for apartments in San Francisco is intense, so many workers are looking across the bay for a place to live.

"The number one investment region of the country… is the San Francisco Bay Area because of the incredibly robust job market fueled by the tech sector on the Peninsula," said Mark Rhoades, whose Rhoades Planning Group is advocating for two of the biggest projects proposed for Berkeley: Acheson Commons and The Residences at

Berkeley Plaza. “And when the tech sector pushes into San Francisco and starts creating an enormous amount of demand, the bleed-off effect of that is a push into Oakland and Berkeley, which are just a few BART stops away. That changes the economics with regard to apartment financing. With the commensurate increase in rents, the lending institutions and equity investors have more confidence in the market and are willing to spend their money on new development.”

Another factor contributing to the increased interest in building new housing is Berkeley’s Downtown Plan, which was adopted by the City Council in March 2012. It sets out guidelines for areas that can take increased density, specifically along a stretch of Shattuck Avenue, and it will allow for the construction of up to three 180-foot buildings and four 120-foot buildings. (Two of those are reserved for the University of California.)

“Things are improving a little bit in the economy and the new Downtown Plan has sent a signal to people that the city is really interested in providing more housing downtown,” said Arreguín.

Officials from Hill Street Realty, the Los Angeles-based developer that purchased the former Hinks Department store building for $20 million in November and plans to build a 17-story, 180-foot tall residential tower called The Residences at Berkeley Plaza, cited the Downtown Plan as one reason the group made an investment in Berkeley. The plan provides some certainty in a town long known for its difficult development climate.

Mike Towber and his wife Natalie Richardson are typical of the types of professionals who are moving into downtown Berkeley apartments. When the couple moved from London in late 2012, they stayed with friends in North Berkeley. Both of them have jobs in San Francisco — Towber is in high tech and Richardson is a fashion designer — so they considered moving there. But they eventually decided against it.

“For someone who is not familiar with San Francisco, it is such an intimidating prospect to look in the city and try to find something that feels affordable,” said Towber. “It is hard to stomach the amount of rent people are asking for. Berkeley was a lot more palatable and we felt we would get a lot more and be a lot more comfortable.”

Berkeley Central has a sign in its rental office pointing out nearby restaurants and other attractions.

The couple, who are in their early 30s, also wanted an easy commute and ended up renting a two-bedroom apartment on the eighth floor of the existing Berkeley Plaza, just a block from BART. The view of the Golden Gate Bridge, Oakland harbor and downtown Oakland, is “gorgeous,” said Towber. A number of other couples on their floor are just like them — transplants from London, New York and other cities, he said.

“We have certainly been enjoying all the culture downtown, including Berkeley Rep,” said Towber. ”That has been very appealing.”

Housing needs, rising rents

But the bubbling tech economy and its spillover effects have meant that rents are going up, making it more difficult for students to afford an education at UC Berkeley. One Cal student complained at a recent Chamber of Commerce

meeting that she had been priced out of downtown because her rent at Library Gardens on Kittredge Street had increased by $500 a month.

Rents on one-bedroom apartments in Berkeley have been steadily rising since the end of 2010, going from an average of $1,789 in the fourth quarter of 2010 to $2,111 in the fourth quarter of 2012 — a 11.2% increase, according to RealFacts, a real estate data analysis group based in Mill Valley. Rents for two-bedroom, two-bath apartments went up 17.7% in that period, from an average of $2,591 to $2,917.

The construction of 1,000 new units should help with rents since it will put more units on the market and relieve some of the pressure, said Rhoades. Most of the proposed rentals are designed for students, although about at least 370 units will be relatively large and more suitable for professionals. RealFacts reported that Berkeley's rental occupancy rate was around 97% until late 2012 when Berkeley Central came on the market with 143 available units. That skewed the numbers and dropped the city's occupancy rate to 86%.

The Association of of Bay Area Governments (ABAG) determined in the late 2000s that Berkeley should set a goal of constructing 2,431 housing units to deliver its fair share of the region's housing. Since 2007, Berkeley has issued permits for 860 building units, according to Jordan Harrison, an associate planner for the city. (The proposed projects are not included in this count.)

Many of the new developments will contain some affordable housing. Berkeley law mandates that 10% of all units be affordable, and some of the developers are asking to add an extra story to their structures in exchange for building more below-market rate units. As an alternative, developers can pay an in-lieu fee of $28,000 per affordable unit to Berkeley's Housing Trust Fund. Developers have not been rushing to do that, and the City Council will consider in a few weeks whether to offer a discount for developers who contribute to the Housing Trust Fund over the next two years. That way, Berkeley could build up a reservoir of money to finance more affordable housing.

As the new projects move forward, city officials need to be aware of their impact on existing neighborhoods, said Arreguín. While high density is appropriate for Shattuck Avenue, for instance, it might not work everywhere, he said. He mentioned a proposed apartment complex, The Durant, which started out as a six-story structure on Durant connected to a four-story structure on Channing Way. Now the developers want to make it eight stories on Durant and neighbors fear that is too big, he said.

"We need to be more sensitive to the existing scale and character of the neighborhoods," said Arreguín. "That is going to be a challenge, I think. How do we balance housing with the need to build projects that really fit into the urban environment?"

"Local folks have first and last names, not LLCs and Incs"

Very few new apartment buildings had been constructed in Berkeley for decades until the early 1990s when developers like Patrick Kennedy's Panoramic Interests started construction on a number of projects. Kennedy eventually built or renovated around 400 units in the downtown area, including the Gaia building on Allston Way and the Fine Arts Building on Shattuck. In 2004, Kennedy sold seven apartment buildings to Equity Residential, a real estate investment trust controlled by Chicago developer Sam Zell. Since then, REITs have played an increasingly large role in Berkeley.

Equity's presence in Berkeley is about to get larger: its 205-unit Acheson Commons project on University Avenue is scheduled to come before the City Council in March for final approval. And Equity is in the middle of acquiring

Archstone, another REIT, for $6.5 billion. When that merger is finalized, Equity will likely gain possession of a 99-unit project currently under construction at 651 Addison Street in West Berkeley.

A regional REIT, Essex Properties, built the 171-unit 4th and U apartment complex on Fourth Street. Hill Street Properties, which hopes to build the tower on Shattuck, is not a REIT but has hundreds of millions in capital to spend.

REITs have the advantage of being able to better weather the ups and downs of the economy than small investors. When the market dropped in 2008, a number of small builders had to sell their entitled Berkeley projects for pennies on the dollar to so-called "vulture funds," said Rhoades. In contrast, Equity, which is backed by many retirement funds, provides its own financing and can forge ahead with projects when banks are not lending, he said. They also can pay more for land than smaller developers, he said.

Chris Hudson, whose Hudson McDonald built the New Californian apartments on University and Martin Luther King (commonly known as the Trader Joe's apartments), lamented the rise of REITS because they are less involved with local communities, he said. REITs often use national architects and don't necessarily hire local contractors. Hudson said 50% of the money spent on the New Californian apartments was spent on Berkeley architects and contractors and 75% was spent in the Bay Area. In addition, many local developers sit on the boards of non-profits like Berkeley Rep and the Berkeley Public Education Fund.

"I think when you have local folks you get a little bit better local involvement," said Hudson. "The people I actually work with have first names and last names, not LLCs and Incs."

One clue to the intense competition between REITS and local developers came at a Dec. 20 meeting of the Zoning Adjustments Board when it considered the application of Equity Residential's Acheson Commons project. Rhoades, who is handling the entitlement process for the REIT, had been working with city staff for months on refining the design and application. Five hours before the ZAB meeting, Hudson sent a letter to planning officials bringing up some additional concerns. It was an attempt to "stall the project," said Rhoades. While neighborhood groups opposed to a project often use that tactic, that was the first time Rhoades saw one developer use it against another developer. ZAB approved Acheson Commons project that night.

Avi Nevo, who has developed numerous projects in Berkeley the last 17 years, is amused that REITS are setting their sights on Berkeley. "I was working here before it became so fashionable," he said. "Now everybody from all over the country is coming here."

Nevo thinks there is still plenty of opportunity for the smaller developer. He is getting ready to rent out apartments at Telegraph Gardens, a complex across the street from Whole Foods at the intersection with Ashby, and has a project on Addison under review. The more that is built in Berkeley, the more demand there will be, he said,

"The 1,000 units are not going to saturate the market," said Nevo. "There is a lot of demand," from UC Berkeley students, professionals, and high tech workers.

"I think it will change the whole landscape of downtown Berkeley," said Nevo. "Restaurants now close at 9:30. With all these new tenants, a lot of places will come along. The restaurants and pubs will stay open longer. A lot of good things will be happening."

Here are summaries of various projects recently completed, planned, or under construction in the downtown core

and nearby. Collectively, they will create 1,220 units of housing, although about 220 of them are outside the downtown core. (The number does not include the 143 units already on the market at Berkeley Central.) The projects will also create 60,000 square feet of retail space.

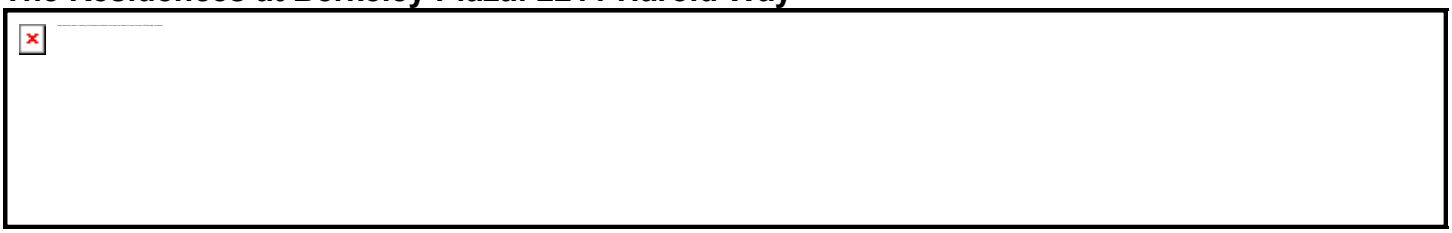
Please note that some of these projects are in the preliminary phases and will change as the architects get new ideas and Berkeley's planning bodies — the Planning Department, Design Review Board, Zoning Adjustments Board, neighborhood groups, etc. give input into the design.

Acheson Commons: 1979-1987 Shattuck Ave.

A rendering of the Acheson Commons project at University Avenue and Shattuck Avenue.

After three years of planning, meeting, and community discussion, Equity Residential's Acheson Commons is expected to be brought before the City Council for final approval sometime in March. This enormous project incorporates four historic structures and is loosely bordered by University Avenue, Shattuck Avenue, Berkeley Way, and Walnut Avenue. The developer will retain the historic facades of the 1921 McFarlane Building, the 1911 Krishna Copy Center, the 1908 Acheson's Physician's Building, and the 1915 S.J. Sills & Co. Grocery and Hardware building (now housing Ace Hardware). Equity will build 205 residential units designed for students in the block. There will be 21 affordable housing units. Kirk Peterson is the architect.

The Residences at Berkeley Plaza: 2211 Harold Way



A rendering of the Residences at Berkeley Plaza as seen from Shattuck Avenue. Courtesy of HSR Berkeley Investments

A Los Angeles-based real estate group has applied to build a 17-story, 355-unit tower that would be linked to the historic Hinks Department Store building on Shattuck Avenue. HSR Berkeley Investments, a spin off of Hill Street Realty, paid $20 million in November for the structure that now holds The Shattuck Cinemas, Habitot Children's Museum, and a number of small retailers like Starbucks. The developer plans to market the apartments, called The Residences at Berkeley Way, to professional high tech workers, although 10% of the units will be set aside as affordable housing. The developer promises to transform the east side of Harold Way, which is now mostly a blank wall, into a thriving retail scene. Guests staying at the Hotel Shattuck Plaza, with a different owner, would be able to use the new structure's parking garage and athletic facilities. Preservationists and movie lovers have already expressed concern that the developer does not plan to keep the movie theaters. MVEI Architecture is doing the design.

Lion's Hall: 2300 Bancroft Ave.

Construction is under way next to Berkeley City Club for Lion's Hall, a private dormitory for 164 students. Photo: Tracey Taylor

St. Mark's Episcopal Church is building a 2,800 square foot Lion's Hall building and a four-story 44-unit building over a 59-space parking garage on an L-shaped parcel that fronts Bancroft, Dana Street and Durant Avenue. The building will be a private dormitory for 164 students. They would each rent a small bedroom built around a common area. The rooms will rent for around $1,100 a month, according to Chris Hudson, whose firm Hudson McDonald is developing the project with the church.

2107 Dwight Way

A rendering of the proposed apartment complex at 2107 Dwight Way

Menlo Management Company wants to build a six-story building with 99 rental units, ground floor retail, and 73 parking spaces at the intersection of Dwight Way and Shattuck Avenue. The developer has asked for a density bonus to add the sixth story in exchange for providing affordable housing. The would allow the structure to be 65 feet high rather than 60 feet high.

The Garden Village Project: 2201 Dwight Way

A rendering for the 18 buildings proposed for 2201 Dwight Way

Anthony Levandowski, one of the leaders in Google's driverless car program, has hired architect Stanley Saitowiz to design a multi-building complex called The Garden Village Project. The plan is to spread 84 units over 18 separate three- and five-story buildings linked by paths, outdoor walkways, and stairs. There would be 21 two-bedroom units of about 660 square feet and 39 four-bedroom units of 960 square feet. If the developer gets a density bonus, he would bump that number to 84 units. The structures would sit over an underground parking garage.

The Durant: 2024 Durant Ave. and 2025 Channing Way

A rendering of The Durant, which will straddle from Durant to Channing Way

The Austin Group wants to build a 96-unit building that has an eight-story section on Durant and a four-story structure connected to it with an entrance on Channing Way. The new building would be next door to the Stuart Pratt Manor senior center and the Berkeley High Neighborhood Association has expressed concern that the structure is too tall and out of character for the neighborhood. Residents (presumably students) would be able to look into into the seniors' apartments from the proposed roof top garden and balconies, affecting their privacy, according to some neighbors. The group is asking the developer to change the design to make it more compatible with the neighborhood. The architects are Johnson Lyman.

The Fidelity: 2321 Shattuck Ave.

A rendering of The Fidelity

Prasad Lakireddy is building a five-story, 15 unit building with ground retail in between his Namaste Restaurant (housed in the historic Fidelity Bank building) and Mechanics Bank on Shattuck. The apartments will mostly be large two-bedroom units from 850 to 1,300 square feet, according to Jim Novosel, the architect. They will be "bigger than the typical student apartment in the downtown" he said. Construction has already started and the building should be completed by the spring of 2014,

1931-1935 Addison St.

Preliminary rendering for 1931-1935 Addision.

Developer Avi Nevo wants to build a 69-unit building with ground floor retail and 15 parking spaces at Addison near Milvia. Since it is a half block from the Arts District, he wants to include some sort of art space on the ground floor, he said.

Other projects in progress outside the downtown core:

2701 Shattuck Ave. (at Derby)

A rendering of 2701 Shattuck Avenue by Todd Jersey Architects

The Urban Core Development Corporation wants to construct a 69-unit building with 42 parking spaces and 7,000 square feet of retail space at Shattuck Avenue between Derby and Ward. There would be 63 studio apartments of 275 square feet and six one-bedroom apartments of 440 square feet. Todd Jersey is the architect.

Parker Place – 2658 and 2660 Shattuck Avenue

A rendering of the proposed 155-unit Parker Place development

CityCentric won approval in Jan. 2012 to construct a 155-unit building at the intersection of Shattuck and Parker, the current home of Berkeley Honda. The project calls for two five-story mixed-use buildings at 2658 and 2660 Shattuck (both sides of Parker on Shattuck) and a three-story residential building at 2037 Parker. In addition to the 155 dwelling units, there is nearly 23,000 sq ft of commercial space on the ground floor. Patti Dacey, a Berkeley planning commissioner, and other neighbors, have filed a lawsuit challenging the project.

Telegraph Gardens

A rendering of Telegraph Gardens at the intersection of Telegraph and Ashby,

This five-story, 38-unit building on the corner of Telegraph and Ashby is nearly complete and was opened up for rentals on Feb. 1. All the units are two-bedroom, two-bath apartments ranging from 800 to 1,100 square feet.

Thank you.

Ann Reid Slaby, Ph.D.,J.D., MSc., MSc., MS
Attorney at Law CA #188148
Patent Attorney USPTO #54880

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From: Ann Slaby [mailto:annslaby@att.net]
Sent: Monday, February 18, 2013 11:59 AM
To: jmcdougall@cp.berkeley.edu
Subject: Cal Aquatics Center Subsequent EIR

February 17, 2013

Jennifer McDougall
Principal Planner
PEP/Capital Projects
Facilities Services
Room 1 A&E Building
University of California
Berkeley, CA 94720-1380

Dear Ms. McDougall,

Please accept the following comments regarding the plans for the new aquatic center.

1. UC must build more parking structures, not build on parking lots.

On February 16, 2013, I had a ticket to attend a Philharmonia Baroque concert at the First Congregational Church at Dana and Durant. There is no public transportation from where I reside, making it necessary for me to drive. There was no parking available so I stopped illegally in the street and turned my ticked over to the Philharmonia staff in the church. Without being able to park my car, I could not attend the concert.

There was absolutely no street parking from Prospect Ave to Shattuck. The reason: a CAL basketball game. The lot behind the church was asking for $20 to park. UC lots were asking for $26 to park. Even the drop off space in front of the church, in which no one is supposed to park, had a car parked in it. I circled the area extensively but could find no parking. How are people supposed to attend events at UC Berkeley and the immediate area when UC does not provide sufficient parking? Not everyone can use public transportation. And not all people reside where there is any public transportation.
UCB needs to construct more parking, not build on parking lots.

2. One thousand new apartments are planned for downtownBerkeley.
http://www.berkeleyside.com/2013/02/07/1000-apartments-planned-for-downtown-berkeley/ I am sure "they" will say the residents will not have cars or require vastly insufficient parking. People will park their cars wherever they can, including the few spaces available in the south campus area. UCB needs to construct more parking.

3. UCLA has parking facilities with 22,000 spaces. If UCB cannot provide sufficient parking, it must reduce the number of FTE's, faculty and staff that use the campus.

4. UCB, a public university, wants to build a huge swimming complex for approximately 150 athletes? The existing facilities, including the once beautiful Haas complex in Strawberry Canyon, available for a fee to all students, faculty, alumni and community members are terribly run down. The east pool in Strawberry Canyon was never reconstructed after a mud slide. The brand new facilities go to the student athletes? What kind of public university is UCB? Yes, I know, this is not an environmental issue. But it needs to be said over and over and over again.

Thank you.

Ann Reid Slaby, Ph.D.,J.D., MSc., MSc., MS
Attorney at Law CA #188148
Patent Attorney USPTO #54880

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