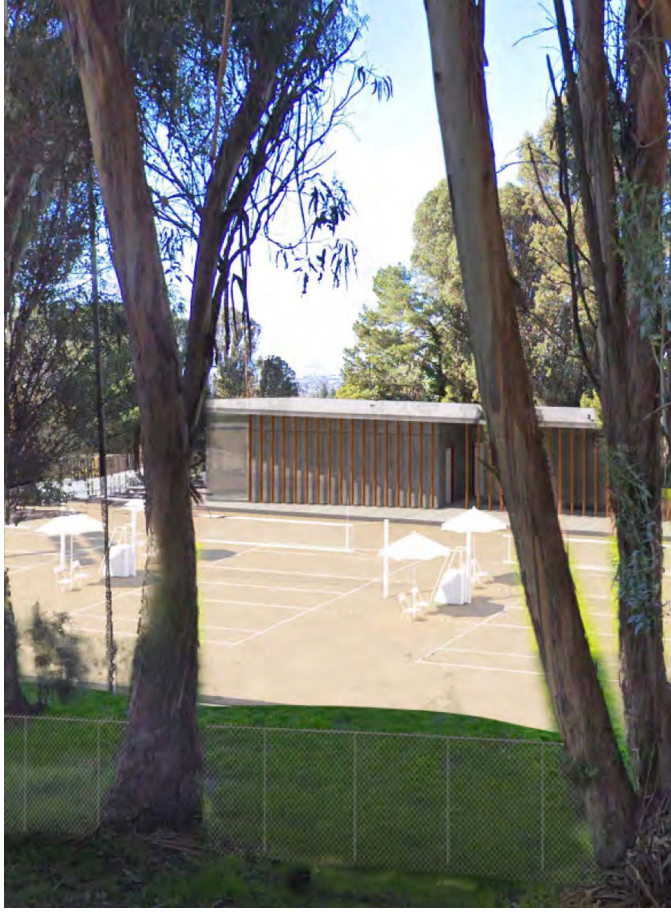


Berkeley
UNIVERSITY OF CALIFORNIA

Clark Kerr Campus Beach Volleyball Courts Project

Draft Environmental Impact Report

January 2022 - State Clearinghouse Number: 2020080052

DRAFT
ENVIRONMENTAL IMPACT REPORT

Clark Kerr Campus Beach Volleyball Courts Project

State Clearinghouse Number 2020080052

Prepared for:

University of California, Berkeley
Physical and Environmental Planning
Architects and Engineering Building
Berkeley, California 94720

Prepared by:

DUDEK
1630 San Pablo Avenue, Suite 300
Oakland, California 94612

JANUARY 2022

Printed on 30% post-consumer recycled material.

Table of Contents

Section **Page No.**

Section **Page No.**

FIGURES

Section — Page No.

TABLES

Section **Page No.**

APPENDICES

This page intentionally left blank.

Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACHP	Advisory Council on Historic Preservation
ADA	American Disability Act
ADT	average daily trips
AES	aesthetics
ALS	Advanced Light Source
AQI	Air Quality Index
AVO	Average Vehicle Occupancy
BART	Bay Area Rapid Transit District
BERD	Built Environment Resources Directory
CBC	California Building Code
CBP	continuing best practice
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CHL	California Historic Landscape
CHRIS	California Historical Resources Information System
CKC	Clark Kerr Campus
CNEL	Community Noise Equivalent Level
CRHR	California Register of Historic Resources
CSC	Capital Strategies Communications
CUL	cultural
EBMUD	East Bay Municipal Utility District
EIR	environmental impact report
EM	Environmental Management
ES-R	Environmental Safety Residential
FAR	Floor Area Ratio
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
FTA	Federal Transit Administration
GHG	greenhouse gas
GSF	gross square foot
IA	Intercollegiate Athletics
INCE	Institute of Noise Control Engineers
LAMP	Linear Asset Replacement Project
LBNL	Lawrence Berkeley National Laboratory
LED	light-emitting diode
LEED	Leadership in Energy and Environmental Design
LOS	level of service
LRDP	Long Range Development Program
LU	Land Use
MLD	most likely descendant
MM	mitigation measures
MOU	Memorandum of Understanding
MPH	miles per hour
MTC	Metropolitan Transportation Commission
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NCAA	National Collegiate Athletic Association
NHPA	National Historic Preservation Act

Acronym/Abbreviation	Definition
NOI	noise
NOP	Notice of Preparation
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
OHP	Office of Historic Preservation
OPR	Office of Planning and Research
OS	open space
PA	Public Address
PDA	Priority Development Area
PPV	Peak Particle Velocity
R-1	Single-family Residential
R-2	Two-family Residential
R-2A	Restricted Multiple-family Residential
R-3	Multiple-family Residential
RH-1	Hillside Residential-1
RMS	root mean square
RSSP	Residential and Student Service Programs
SB	Senate Bill
SCS	Sustainable Communities Strategy
SHPO	State Historic Preservation Officer
SNAC	Advisory Council on Student-Neighbor Relations
SOIS	Standards for the Treatment of Historic Properties
SOV	single-occupant-vehicle
SSM	Seismic Safety and Modernization
TCR	Tribal Cultural Resources
TDM	transportation demand management
TPA	Transit Priority Areas
TRAN	transportation
UC	University of California
UCOP	University of California Office of the President
UD	Urban Design
USEPA	United States Environmental Protection Agency
VDECS	Verified Diesel Emissions Control Strategy
VMT	vehicle miles traveled

1. Executive Summary

1.1 OVERVIEW

The University of California, Berkeley (UC Berkeley or university) Clark Kerr Campus (CKC) Beach Volleyball Courts Project (project or proposed project) is about gender equity. Chancellor Christ has made it clear that gender equity is a crucial, over-arching value for UC Berkeley that demands equitable facilities for its women and men student athletes. Relatedly, the campus must also maintain compliance with Title IX.[1] Another primary objective of the proposed project is compliance with the University of California Seismic Safety Policy. Therefore, the proposed project at the CKC has two interrelated components: (1) conversion of the existing recreational softball field into Title IX compliant, women's beach volleyball courts, for Intercollegiate Athletics (IA) and recreational uses; and (2) partial demolition CKC Building #21 in compliance with the University of California Seismic Safety Policy, while retaining a portion of the building.

When the university acquired the CKC in 1982, the university executed the 1982 Declaration of Covenants and Restrictions (Covenants) with neighboring property owners and a Memorandum of Understanding (MOU) between UC Berkeley and the City of Berkeley, both of which commit the university generally to a site plan and land use program at the CKC for a period of 50 years through 2032. The Covenants limit the ability of the university to construct new buildings on CKC, however, existing buildings destroyed by fire, earthquake or natural disasters, removed due to hazards, or determined to be infeasible to rehabilitate, may be replaced by buildings of similar size.

1.2 INTRODUCTION

1.2.1 PURPOSE OF THE EIR

This environmental impact report (EIR) evaluates the potential for significant environmental impacts from the proposed project. This summary highlights the major areas of importance in the environmental analysis for the proposed project, as required by Section 15123 of the California Environmental Quality Act (CEQA) Guidelines. It provides a brief description of the proposed project, alternatives to the proposed project, areas of controversy known to the university, and conclusions of the environmental impact analysis. For a complete description of the proposed project, see Chapter 3, Project Description, for the environmental impact analysis, see Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, and for a discussion of alternatives to the proposed project, see Chapter 6, Alternatives to the Proposed Project.

This Draft EIR addresses the environmental effects associated with adoption and implementation of the proposed project. CEQA requires that public agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An EIR is a public document designed to provide lead agencies, other local and State governmental agency decision-makers, and the public with an analysis of potential environmental consequences of a proposed project to support informed decision-making.

[1] Title IX is a portion of the United States Education Amendments of 1972 that makes it illegal to discriminate against a person on the basis of sex in any federally funded activity and applies to all aspects of education, including athletics programs. As it relates to athletics, one of the requirements of Title IX is that women and men be provided equitable opportunities to participate in sports.

This Draft EIR has been prepared pursuant to the requirements of CEQA[2] and the State CEQA Guidelines[3] to determine if approval of the identified discretionary action and proposed development could have a significant impact on the environment. The Board of Regents of the University of California (the Regents), or its designee pursuant to the University's delegation policies, as the lead agency, has reviewed and revised as necessary all submitted drafts, technical studies, and reports to reflect its own independent judgment, including reliance on applicable UC Berkeley technical personnel and review of all technical reports. Information for this Draft EIR was obtained from on-site field observations; analysis of adopted plans and policies; review of available studies, reports, data, and similar literature in the public domain; and specialized environmental assessments.

UC Berkeley is part of the University of California (UC), a constitutionally created entity of the State of California with "full powers of organization and government" (California Constitution Article IX, Section 9). As a constitutionally created State entity, the UC is not subject to the regulations of local non-state agencies, such as those that may be found in the City of Berkeley General Plan or land use ordinances, for uses on property owned or controlled by the UC that are in furtherance of the UC's educational purposes. Although there is no formal mechanism for doing so, UC Berkeley may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding the UC Berkeley campus.

1.2.2 SCOPE OF THE EIR

An initial study has been prepared concurrently with this Draft EIR and is provided in Appendix B, Initial Study. The initial study indicates that the proposed project would result in no impacts or less-than-significant impacts in the following environmental resource topics: agriculture and forestry resources, air quality, biological resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfire. Therefore, these environmental resource topics are not further evaluated in this Draft EIR. Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, of this Draft EIR provides a detailed evaluation of the following environmental resource topics: aesthetics; cultural and tribal cultural resources, land use and planning, noise, and transportation. See Section 1.7, Impacts and Mitigation Measures, for a summary of the environmental impacts associated with implementation of the proposed project for these environmental resource topics.

The scope of this Draft EIR also includes the review, evaluation, and in some cases, revision and/or replacement of previously adopted mitigation measures from the 1979 Dwight-Derby Site Plan EIR. The 1979 Dwight-Derby Site Plan EIR evaluated the potential environmental impacts of the plan and prescribed mitigation measures that the university adopted when it acquired the CKC in 1982. The mitigation measures from the 1979 Dwight-Derby Site Plan EIR are provided and reviewed in Appendix C, Review of 1979 Dwight-Derby Site Plan EIR Mitigation Measures, of this Draft EIR. Appendix C contains a list of the 1979 mitigation measures, including their applicability to the proposed project, and where relevant, proposed revisions and/or replacement of several of these mitigation measures are provided to make them feasible[4] to implement through the inclusion of objective performance standards. Some of these 1979 mitigation measures do not provide objective performance standards, do not reflect CEQA best practices for mitigation, and are otherwise outdated and obsolete. For the 1979 mitigation measures that have been revised and/or replaced in this Draft EIR, Appendix C provides substantial evidence demonstrating the infeasibility of these 1979 mitigation measures, and the effectiveness of these revised mitigation measures in

2 The CEQA Statute is found at California Public Resources Code, Division 13, Sections 21000 et seq.

3 The CEQA Guidelines are found at California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387.

4 As indicated in CEQA Guidelines Section 15364, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

eliminating or reducing the applicable potentially significant environmental impact relative to the 1979 mitigation measures being modified or replaced. Additionally, many of the 1979 mitigation measures are implemented as part of the proposed project design or through implementation of university continuing best practices, which are implemented as part of the proposed project (see Chapter 3, Project Description and Appendices C and D).

1.3 OVERVIEW OF PROPOSED PROJECT

1.3.1 PROJECT LOCATION AND SETTING

The CKC of UC Berkeley contains student and faculty housing, conference facility, childcare, maintenance and storage, and recreational facilities. CKC is southeast of the main UC Berkeley campus (Campus Park) and south of the Hill Campus. CKC is primarily within the City of Berkeley, with a portion of the easternmost panhandle of the campus within the City of Oakland. CKC is surrounded by residential neighborhoods to the north, south, and west and by the East Bay Regional Park District's Claremont Canyon Regional Preserve to the east.

The proposed project includes two different project sites on CKC. The project site for the beach volleyball courts is the existing recreational softball field at the intersection of Dwight Way and Sports Lane, along the northern boundary of CKC. The project also includes the partial demolition of Building 21 which is located near the eastern boundary of CKC, east of Eastway Drive and north of Derby Street.

1.3.2 PROJECT COMPONENTS

This EIR assesses the potential environmental effects of the proposed project, if approved by the Regents or its designee, which consists of the following components:

Beach Volleyball Courts

- Conversion of the existing recreational softball field to IA beach volleyball courts with four beach volleyball courts, a 3,710-square-foot support building for team use, and associated site improvements (i.e., new lighting, scoreboard, public address system, spectator lawn, and ADA access improvements), to improve the training and competition facilities provided to female student athletes, support ongoing gender equity, and comply with Title IX.
- Construction of a new driveway at the northwest corner of the beach volleyball courts site off Dwight Way. No new parking spaces would be constructed for the proposed project.
- Landscaping for the proposed project would involve the planting of new trees, shrubs, perennials, and grasses, and the installation of a synthetic turf spectator lawn east of the courts and sod lawn north and southwest of the courts.
- Designing and constructing to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Building Design and Construction (BD+C) Silver Certification, at a minimum. The support building would incorporate passive cooling, high solar reflectance surfaces, natural daylighting, radiant heat, low-flow fixtures, recycled materials, and LED lighting to reduce water and energy consumption. The proposed beach volleyball courts would also include electrical, natural gas, stormwater, water, and sewer connections and improvements.

CKC Building 21 Partial Demolition

- Demolition of an approximately 9,230-square-foot portion of Building 21, the former Wilkinson Lodge, which is a contributor to the National Register of Historic Places (NRHP) District No. 82000962 State Asylum for the Deaf, Dumb, and Blind (also known as the California Schools for the Deaf and Blind Historic District [Historic District]), which is comprised of the CKC (NRHP 1982). The partial demolition addresses the seismic safety risk posed by the building pursuant to University of California Seismic Safety Policy. It also complies with the Covenants that UC Berkeley entered into with neighbors of CKC. In 1985, its original northwest wing was removed for the construction of the adjacent parking lot for Redwood Gardens Apartments.
- Construction of a new paved driveway to Building 21 to allow for loading for the western portion of the building that would be retained for continued use as storage. New landscape trees and shrubs would be planted on either side of the new paved driveway and decorative gravel mulch and rocks would also be installed.

A full description of the proposed project, including a table summarizing existing and proposed operations, is provided in Chapter 3, Project Description.

1.3.3 PROJECT OBJECTIVES

The university's objectives for the proposed project are to:

1. Support UC Berkeley's ongoing compliance with Title IX by improving the training and competition facilities provided to female student athletes who participate in the IA beach volleyball program;
2. Improve recreational facilities to meet the needs of the current student body and the community;
3. Advance seismic safety risk reduction pursuant to the University of California's Seismic Safety Policy; and
4. Meet siting criteria for IA beach volleyball courts:
    - Meet NCAA design criteria for beach volleyball courts, which include number of courts, type and depth of sand, distance between and around courts, referee platform at each court, space and location for team areas, team size, staff/coach numbers. Design criteria include:
        - Two sand play courts (minimum requirements), but at least three sand play courts are recommended. Having five courts allows all participants to compete at the same time thus significantly reducing the length of the competition.
        - If multiple courts are placed side-by side, the team areas shall be placed in the end zone free space unless there is at least 6 meters (approximately 20 feet) of free space between the courts.
    - Avoid displacement of existing uses that are challenging to relocate and serve a large number of students and the broader public (e.g., other IA sports, recreational sports);
    - Avoid siting new IA beach volleyball courts in or near the central campus as this limits the ability of the university to use these sites for other uses, such as housing, academic or research buildings; while ensuring that placement is close enough to provide the student athletes with walkable access to campus academic and athletic resources;
    - Avoid siting new IA beach volleyball courts on a site with topographical or physical constraints, making ADA access and site construction more challenging;
    - Provide adequate site capacity to accommodate new IA beach volleyball courts, including capacity for spectators;

- Provide privacy for student athletes; and
- Consider cost and other feasibility issues in the development of new IA beach volleyball courts.

1.4 ALTERNATIVES TO THE PROPOSED PROJECT

CEQA Guidelines Section 15126.6 requires that an EIR describe and evaluate alternatives to the proposed project that feasibly attain most of the basic objectives of the project and avoid or substantially lessen any of the significant effects of the project. The following alternatives are evaluated in Chapter 6, Alternatives:

- **Alternative 1: No Project Alternative** – The No Project Alternative consists of the circumstances under which the proposed project does not proceed.
- **Alternative 2: Reduced Project with Preservation Alternative** – Alternative 2 consists of the redevelopment of the existing CKC sand courts on the current site, including the use of temporary facilities for team use. A permanent support building for team use would not be included. As no buildings would be constructed in the CKC, no demolition or partial demolition of another CKC building would be required.
- **Alternative 3: Reduced Project with No Spectator Space Alternative** – Alternative 3 consists of the redevelopment of the existing CKC sand courts on the current site. A support building for team use would be provided on the adjacent parking lot; however, no spectator space would be provided. As a support building would be included, Alternative 3 includes partial demolition of CKC Building 23.
- **Alternative 4: Comprehensive Project Alternative** – Alternative 4 consists of the development of the proposed project on the Smyth-Fernwald site, outside of the CKC. A support building for team use, spectator space and all other components would be provided. As the site is outside of the CKC, no demolition or partial demolition of another CKC building would be required.

The CEQA Guidelines (Section 15126.6[a]) requires that an EIR's analysis of alternatives identify the "environmentally superior alternative" among all of those considered. In addition, Section 15126.6(e)(2) states that if the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative among the other alternatives. There is no set methodology for comparing the alternatives or determining the environmentally superior alternative under CEQA. Identification of the environmentally superior alternative involves the Regents, or its designee, as lead agency, weighing and balancing all of the environmental resource areas. Based on the conclusions presented in Chapter 6, Alternatives, the environmentally superior alternative would be Alternative 3.

1.5 ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123(b)(3) requires that an EIR identify issues to be resolved, including the choice among alternatives and whether or how to mitigate significant impacts. Regarding the proposed project, the major issues to be resolved include decisions by the Regents, or its designee pursuant to the university's delegation policies, as lead agency, related to:

- Whether this EIR adequately describes the environmental impacts of the proposed project.
- Whether the benefits of the proposed project override environmental impacts, if any, that cannot be feasibly avoided or mitigated to a level of insignificance.

- Whether there are other mitigation measures that should be applied to the proposed project besides those continuing best practices and/or mitigation measures identified in the EIR.
- Whether there are any alternatives to the proposed project that would substantially lessen any of the significant impacts of the proposed project and achieve most of the basic objectives.

1.6 KNOWN AREAS OF CONTROVERSY

The Notice of Preparation (NOP) for this EIR was circulated for a 33-day comment period from August 5, 2020 to September 7, 2020. The NOP was circulated to the State Clearinghouse and to state, regional, and local agencies in accordance with the CEQA Guidelines. A public scoping meeting regarding the scope of the analysis for the Draft EIR was held on August 24, 2020. A total of 54 comment letters were received from one agency, one organization and numerous individuals. The public comments are included in Appendix A, Notice of Preparation and Scoping Comments.

The following is a discussion of issues that are likely to be of particular concern to agencies and interested members of the public during the environmental review process. Every concern applicable to the CEQA process is addressed in this Draft EIR, but this list is not necessarily exhaustive; rather, it attempts to capture concerns that are likely to generate the greatest interest based on the input received during the scoping process.

- **Aesthetics.** Lighting impacts on nearby residents during beach volleyball matches and practices.
- **Air Quality.** Impacts related to emissions from construction activities, gameday television trucks, and generators.
- **Cultural Resources.** Potential impacts related to the proposed partial demolition of a CKC building on NRHP Historic District.
- **Noise.** Impacts related to project construction and use of the new courts during matches and practices.
- **Transportation.** Traffic impacts related to summer camps, day and night matches, and construction; emergency access to and from the site during construction; pedestrian and bicyclist safety; loss of neighborhood parking.

All substantive environmental issues raised in the comment letters received in response to the NOP have been addressed or otherwise considered during preparation of this Draft EIR, including in Appendix B, Initial Study.

1.7 IMPACTS AND MITIGATION MEASURES

This subsection provides a summary of the environmental impacts associated with implementation of the proposed project. This section includes a summary of the impacts and mitigation measures. Table 1-1 provides a complete list of the proposed project's environmental impacts, including the level of significance before and after mitigation, based on the analysis and conclusions presented in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. Significant and unavoidable project and cumulative impacts have been identified in this EIR related to historical built environment resources and related to vehicle miles traveled (VMT) for maximum beach volleyball events (see Impacts CUL-1 and CUL-5 and Impacts TRA-2 and TRA-5). For a complete description of all potential impacts, please refer to the specific discussions in Sections 4.2 through 4.6 of this Draft EIR.

TABLE 1-1. SUMMARY OF PROJECT IMPACTS

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Aesthetics			
Impact AES-1: Scenic Vistas. The proposed project would not result in a substantial adverse effect on a scenic vista.	Less than Significant	None	Less than Significant
Impact AES-2: Scenic Quality. The proposed project is in an urbanized area and would not conflict with applicable zoning and other regulations governing scenic quality.	Less than Significant	None	Less than Significant
Impact AES-3: Light and Glare. The proposed project would not create a new source of substantial light and glare which would adversely affect day or nighttime views in the area.	Less than Significant	None	Less than Significant
Impact AES-4: Cumulative Impacts Related to Aesthetics. The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in a cumulative impact related to aesthetics.	Less than Significant	None	Less than Significant
Cultural Resources			
Impact CUL-1: Historic Built Environment Resources. The proposed project would cause a substantial adverse change in the significance of a historical built environment resource.	Significant	**MM CUL-1a:** UC Berkeley shall have Historic American Building Survey Level II documentation completed for the Wilkinson Lodge (NRHP B-11/ UC Berkeley Building 21) and its immediate surrounding setting. To ensure public access, UC Berkeley shall submit digital copies of the documentation to an appropriate historical repository, including the UC Berkeley Bancroft Library, the UC Berkeley Environmental Design Archives, and/or the California Historical Resources Information System Northwest Information Center. This documentation shall include drawings, photographs, and a historical narrative: ▪ Drawings: Existing historic drawings of the historical resource, if available, will be photographed with large-format negatives or photographically reproduced on Mylar. In the absence of existing drawings, full-measured drawings of the building's plan and exterior elevations shall be prepared prior to demolition.	Significant and Unavoidable

TABLE 1-1. SUMMARY OF PROJECT IMPACTS

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		▪ Photographs: Photo-documentation of the historical resource will be prepared to Historic American Building Survey standards for archival photography, prior to demolition. Historic American Building Survey standards require large-format black-and-white photography, with the original negatives having a minimum size of four inches by five inches. Digital photography, roll film, film packs, and electronic manipulation of images are not acceptable. All film prints, a minimum of four inches by five inches, must be hand-processed according to the manufacturer's specifications and printed on fiber-base, single-weight paper and dried to a full gloss finish. A minimum of 12 photographs shall be taken, detailing the site, building exterior, building interior, and character-defining features. Photographs must be identified and labeled using Historic American Building Survey standards. ▪ Historical Overview: A professional meeting the Secretary of the Interior's Professional. Qualification Standards in Architectural History or History shall assemble historical background information relevant to the historical resource. All photographic documentation must be complete and fully processed prior to any project related construction or demolition. The Campus Architect shall verify compliance with this mitigation measure prior to the initiation of any site or building demolition or construction activities. **MM CUL-1b:** Prior to demolition of the Wilkinson Lodge (NRHP B-11/ UC Berkeley Building 21), the UC Berkeley Campus Architect shall oversee planning, preparation, fabrication, and construction of an interpretive display providing an overview of the historical development of the California Schools for the deaf and the Blind, and Wilkinson Lodge. Much of the research and text for the display can be derived from information prepared under MM-CUL-1a. The interpretive display or kiosk mush be installed it in a prominent location on the Clark Kerr Campus, within the Historic District boundary, preferably along a pedestrian walking path near Wilkinson Lodge. The interpretive display text must be compiled by a qualified historic preservation professional who meets the SOIS Professional Qualifications Standards for history or architectural history. The display shall include historical photographs, maps, and plans, and include a written narrative that includes both the history and high-level overview of the architectural description of the CKC and Wilkinson Lodge that highlights why the Historic District is listed on the NRHP. The planning, site designation, text, imagery, and display design must be included as part of the project construction planning. The display must be fabricated and placed in its designated location within 3 months following completion of the partial demolition of Wilkinson Lodge.	
Impact CUL-2: Archaeological Resources. The proposed project may cause a substantial adverse	Potentially Significant	**MM CUL-2:** For construction projects that include substantial ground-disturbing activities (including, but not limited to, soil removal, parcel grading, new utility trenching, and	Less than Significant

TABLE 1-1. SUMMARY OF PROJECT IMPACTS

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
change in the significance of unique archaeological resources or historical resources of an archaeological nature.		foundation-related excavation), UC Berkeley shall implement the following steps to ensure impacts to archaeological resources will be less than significant: ▪ Prior to soil disturbance, UC Berkeley shall confirm that contractors have been notified of the procedures for the identification of federal- or State-eligible cultural resources, and that the construction crews are aware of the potential for previously undiscovered archaeological resources or tribal cultural resources on site, of the laws protecting these resources and associated penalties, and of the procedures to follow should they discover cultural resources during project-related work. ▪ If a resource is discovered during construction (whether or not an archaeologist is present), the following measures shall be implemented: ▪ 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. ▪ Any previously undiscovered resources found during construction activities shall be recorded on appropriate California Department of Parks and Recreation forms and evaluated for significance in terms of the California Environmental Quality Act (CEQA) criteria by a qualified archaeologist. ▪ If the resource is a tribal cultural resource, the consulting archaeologist shall consult with the appropriate tribe to evaluate the significance of the resource and to recommend appropriate and feasible avoidance, testing, preservation or mitigation measures, in light of factors such as the significance of the find, proposed project design, costs, and other considerations. ▪ If avoidance is infeasible, other appropriate measures (e.g., data recovery) may be implemented. ▪ If the resource is a non-tribal resource determined significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant. ▪ The archaeologist shall also perform appropriate technical analyses; prepare a comprehensive report complete with methods, results, and recommendations; and provide for the permanent curation of the recovered resources if appropriate.	

TABLE 1-1. SUMMARY OF PROJECT IMPACTS

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		▪ The report shall be submitted to the lead agency for regulatory compliance, California Historic Resources Information System Northwest Information Center, and the State Historic Preservation Office, if required.	
Impact CUL-3: Human Remains. The proposed project may disturb human remains interred outside of dedicated cemeteries.	Less than Significant	None	Less than Significant
Impact CUL-4: Tribal Cultural Resources. The proposed project may result in a substantial adverse change to a tribal cultural resource.	Potentially Significant	Implement MM CUL-2 (see Impact CUL-2 above for a description of this measure).	Less than Significant
Impact CUL-5: Cumulative Cultural Resource and Tribal Cultural Resource Impacts. The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in a cumulative impact related to cultural resources and tribal cultural resources.	Significant	Implement MM CUL-1a and MM CUL-1b, and MM CUL-2 (see Impact CUL-1 and Impact CUL-2 above for descriptions of these measures).	Significant and Unavoidable (built environment resources) Less than Significant (archaeological and tribal cultural resources)
Land Use and Planning			
Impact LU-1: Conflict with Land Use Plan, Policy or Regulation. The proposed project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less than Significant	None	Less than Significant
Impact LU-2: Cumulative Impacts Related to Land Use. The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in a cumulative impact related to land use and planning.	Less than Significant	None	Less than Significant

TABLE 1-1. SUMMARY OF PROJECT IMPACTS

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Noise			
Impact NOI-1: Temporary or Permanent Increase in Ambient Noise. The proposed project could generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Potentially Significant	**MM NOI 1**: Construction Noise. The proposed project shall implement the following measures related to construction noise: ▪ Restrict demolition/construction activities and use of equipment that have the potential to generate significant noise levels (e.g., use of concrete saw, mounted impact hammer, jackhammer, rock drill, etc.) to between the hours of 8:00 a.m. and 5:00 p.m. ▪ Construction equipment and vehicles shall be fitted with efficient, well-maintained mufflers that reduce equipment noise emission levels at the project site. Internal-combustion-powered equipment shall be equipped with properly operating noise suppression devices (e.g., mufflers, silencers, wraps) that meet or exceed the manufacturer's specifications. Mufflers and noise suppressors shall be properly maintained and tuned to ensure proper fit, function, and minimization of noise. ▪ Pumps that are not submerged and aboveground conveyor systems shall be located within acoustically treated enclosures, shrouded, or shielded to prevent the propagation of sound into the surrounding areas. ▪ Portable and stationary site support equipment (e.g., generators, compressors, rock crushers, and cement mixers) shall be located as far as possible from nearby noise-sensitive receptors. ▪ Impact tools shall have the working area/impact area shrouded or shielded whenever possible, with intake and exhaust ports on power equipment muffled or suppressed. This may necessitate the use of temporary or portable, application-specific noise shields or barriers. ▪ Construction equipment shall not be idled for extended periods (i.e., 5 minutes or longer) of time in the immediate vicinity of noise-sensitive receptors. ▪ A temporary noise barrier shall be erected along the construction site perimeter, of a minimum height as determined to be effective via the preliminary construction noise analysis in achieving compliance with construction noise limits contained in Section 13.40.070 of the City of Berkeley Municipal Code and Section 17.120.050 of the City of Oakland Municipal Code. **MM NOI-2:** Public Address (PA) Speaker Orientation. In order to prevent elevated noise levels that could exceed applicable noise standards of the City of Berkeley at residences along the north side of Dwight Way in the vicinity of Hillside Avenue and Fernwald Road, the PA system at the women's beach volleyball courts shall be designed such that speakers on the northern speaker pole shall be oriented with speaker cone only in the range of 170 to	Less than Significant

TABLE 1-1. SUMMARY OF PROJECT IMPACTS

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		260 degrees (basis of cardinal north compass direction); speakers on the southern speaker pole shall be oriented with speaker cone oriented only in the range of 260 to 320 degrees. Final speaker design and installation shall include varying quantities of attenuation (amplitude shading[5]), as needed, to ensure sound exposure at nearby residences in Berkeley complies with applicable standards, based on the relative proximity of the speaker to the receptors (i.e., speakers on northern speaker pole should have more attenuation applied in comparison to speakers on the southern pole). **MM NOI-3:** Nighttime Activities. No recreation or volleyball activities shall be scheduled to take place within the outdoor facilities after 10 p.m. on any day; recreation and volleyball activities shall be scheduled in the indoor facilities in the large gymnasium after 10 p.m. *(Revised 1979 Mitigation Measure 25.d.; see Section 4.5, Noise [Table 4.5-12] and Appendix C).* **MM NOI-4:** Compliance with Exterior Noise Standards. No University activities, including beach volleyball, involving spectators shall be scheduled in the outdoor recreational facilities unless the activities meet exterior noise standards specified in Section 13.40.050 of the City of Berkeley Municipal Code and Section 17.120.050 of the City of Oakland Municipal Code, as applied at off-campus receivers located within these respective jurisdictions. *(Revised 1979 Mitigation Measure 25.e.; see Section 4.5, Noise [Table 4.5-12] and Appendix C).*	
Impact NOI-2: Excessive Vibration. The proposed project would not result in excessive groundborne vibration or groundborne noise levels.	Less than Significant	None	Less than Significant
Impact NOI-3: Cumulative Noise Impacts. The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in a significant cumulative impact related to noise.	Less than Significant	None	Less than Significant

[5] In the audio-visual world, "amplitude shading" is a configuration technique where when you have a series of speakers setup together, the volume (amplitude) setting for each speaker is gradually reduced (attenuated) across the speakers.

TABLE 1-1. SUMMARY OF PROJECT IMPACTS

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Transportation			
Impact TRA-1: Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System (Significance Standard A). The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Less than Significant	None	Less than Significant
Impact TRA-2: Vehicle Miles Traveled. The proposed project could conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b).	Potentially Significant (maximum event only)	**MM TRA-1:** UC Berkeley shall monitor spectator attendance during representative maximum event beach volleyball matches (e.g., one night match and one day match per season) at the new beach volleyball courts to estimate average and maximum participants and spectators to determine whether the maximum event described above with up to 400 participants and spectators occurs on the project site and to determine travel mode used by participants and spectators. Such monitoring shall take place on the beach volleyball courts site, at the entrance(s) as spectators arrive, and shall take place over a two-year period after the courts are in operation. UC Berkeley shall also monitor the implementation of the gameday TDM measures over the same two-year period and will refine such measures where warranted and feasible to improve gameday access, minimize vehicle congestion on surrounding roadways, and maximize use of alternative modes of transportation to the project site on game days.	Significant and Unavoidable (maximum event only)
Impact TRA-3: Geometric Design Hazards. The proposed project would not substantially increase hazards due to a geometric design feature or incompatible use.	Less than Significant	None	Less than Significant
Impact TRA-4: Emergency Access. The proposed project would not result in inadequate emergency access.	Less than Significant	None	Less than Significant

TABLE 1-1. SUMMARY OF PROJECT IMPACTS

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
Impact TRA-5: Cumulative Transportation Impacts. The proposed project, in combination with past, present, and reasonably foreseeable projects, could not result in a significant cumulative impact related to transportation.	Potentially Significant (VMT for maximum event only)	Implement MM TRA-1 (see Impact TRA-2 above for a description of this measure).	Significant and Unavoidable (VMT for maximum event only)

2. Introduction

This environmental impact report (EIR) has been prepared for the University of California, Berkeley (UC Berkeley or university) Clark Kerr Campus (CKC) Beach Volleyball Courts Project (project or proposed project). This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA), which is found in the California Public Resources Code, Division 13, and with the CEQA Guidelines, which are found in Title 14 of the California Code of Regulations, commencing with Section 15000. According to CEQA Guidelines Section 15378, the proposed project is considered a "project" subject to environmental review. The implementation of the proposed project is "an action [undertaken by a public agency] which has the potential for resulting in either a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment." The Board of Regents of the University of California (the Regents) is the lead agency for the proposed project and capital projects are approved by the Regents, or by their delegate depending on the characteristics of the project. This project will be approved by the Chancellor. Under CEQA, the lead agency for a project is the public agency with primary responsibility for carrying out or approving the project, and for implementing the requirements of CEQA. As stated in CEQA Guidelines Section 15002, the basic purposes of CEQA are to:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Pursuant to CEQA Guidelines Section 15121, an EIR is an informational document that is required to (1) identify the potentially significant environmental effects of a project on the environment, (2) indicate the manner in which those significant effects can be avoided or significantly lessened via the implementation of potentially feasible mitigation measures, (3) identify a reasonable range of potentially feasible alternatives to a project that would eliminate or substantially lessen any significant environmental effects, and (4) identify any significant and unavoidable adverse impacts that cannot be mitigated or otherwise reduced. When considering whether to approve a proposed project, the lead agency's decision-making body must consider the information in the EIR along with other information which may be presented to that body. While the information in the EIR does not control the ultimate decision about a project, the decision-making body must consider the information in the EIR and respond to each significant effect identified in the EIR by making findings pursuant to Public Resources Code Section 21081.

Pursuant to Public Resources Code Section 21002, public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which would substantially lessen the significant environmental effects of such projects. Furthermore, pursuant to CEQA Guidelines Section 15021, CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible. In deciding whether changes in a project, such as mitigation measures or alternatives, are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors. As defined in Section 15364 of the CEQA Guidelines, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

CEQA Guidelines Section 15021 further indicates that, under CEQA, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors, in determining whether and how a project should be approved. CEQA Guidelines Section 15093 provides that, if an agency decides to approve a project that will cause one or more significant effects on the environment, the agency must prepare a "statement of overriding considerations" to reflect the ultimate balancing of competing public objectives. The environmental review process is further explained below in Section 2.3, Environmental Review and Approval Process.

UC Berkeley is part of the University of California (UC), a constitutionally created entity of the State of California with "full powers of organization and government" (California Constitution Article IX, Section 9). As a constitutionally created State entity, the UC is not subject to local land use policies, such as those that may be found in the City of Berkeley General Plan or land use ordinances, whenever using property under its control in furtherance of its educational purposes. Although there is no formal mechanism for doing so, UC Berkeley may consider, for coordination purposes, aspects of local plans and policies for the communities surrounding its campus.

2.1 PROJECT OVERVIEW

This EIR assesses the potential environmental effects of the proposed project, if approved by the Regents, which consists of the following components:

- Conversion of the existing recreational softball field to an Intercollegiate Athletic (IA) beach volleyball facility with four beach volleyball courts, a 3,710-square-foot support building, and associated site improvements, to improve the training and competition facilities provided to female student athletes, support ongoing gender equity, and comply with Title IX.[1]
- Demolition of an approximately 9,230-square-foot portion of Building 21, the former Wilkinson Lodge, which is a contributor to the National Register of Historic Places (NRHP) District No. 82000962 State Asylum for the Deaf, Dumb, and Blind (also known as the California Schools for the Deaf and Blind Historic District [Historic District]), which is comprised of the CKC (NRHP 1982). The partial demolition of Building 21 addresses the seismic safety risk posed by the building pursuant to University of California Seismic Safety Policy. It also complies with the 1982 Declaration of Covenants and Restrictions (Covenants) that UC Berkeley entered into with neighbors of CKC.
- Construction of a new driveway at the northwest corner of the beach volleyball facility site off of Dwight Way and construction of a new paved driveway to Building 21 to allow for loading. No new parking spaces would be constructed for the proposed project.
- Landscaping for the proposed project would involve the planting of new trees, shrubs, perennials, and grasses, and the installation of a synthetic turf spectator lawn east of the courts and sod lawn north and southwest of the courts.
- The proposed project would be designed and constructed to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Building Design and Construction (BD+C) Silver Certification, at a minimum. The support building would incorporate passive cooling, high solar reflectance surfaces, natural daylighting, radiant heat, low-flow fixtures, recycled materials, and LED lighting to reduce water and

[1] Title IX is a portion of the United States Education Amendments of 1972 that makes it illegal to discriminate against a person on the basis of sex in any federally funded activity and applies to all aspects of education, including athletics programs. As it relates to athletics, one of the requirements of Title IX is that women and men be provided equitable opportunities to participate in sports.

energy consumption. The proposed beach volleyball courts would also include electrical, natural gas, stormwater, water, and sewer connections and improvements.

A full description of the proposed project, including a table summarizing existing and proposed operations, is provided in Chapter 3, Project Description.

2.2 EIR SCOPE

2.2.1 TYPE AND SCOPE OF EIR

As described in CEQA Guidelines Section 15161, this EIR is a "project" EIR. A project EIR examines the environmental impacts of a specific project, focusing primarily on the changes in the environment that would result from the project components identified in Section 2.1, Project Overview. This EIR examines the physical environmental effects that would result from all phases of the project, including planning, construction, and operation, pursuant to CEQA Guidelines Section 15161.

Regarding the scope of the EIR analysis, CEQA Guidelines Section 15060(d) states, "if the lead agency can determine that an EIR will be clearly required for a project, the agency may skip further initial review of the project and begin work directly on the EIR process… In the absence of an initial study, the lead agency shall still focus the EIR on significant effects of the project and indicate briefly its reasons for determining that other effects would not be significant or potentially significant." An initial study has been prepared concurrently with this EIR and is provided in Appendix B, Initial Study. Environmental resource topics analyzed in the initial study and not further studied in this EIR are: agriculture and forestry resources, air quality, biological resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfire. In the sections of Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, this EIR provides a detailed evaluation of the following environmental resource topics:

- Aesthetics
- Cultural and Tribal Cultural Resources
- Land Use and Planning
- Noise
- Transportation

As indicated above, the environmental review focuses on the potentially significant environmental effects of the proposed project. As defined in CEQA Guidelines Section 15382, a "significant effect on the environment" is "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether a physical change is significant."

In evaluating the significance of the environmental effect of a project, the CEQA Guidelines require the lead agency to consider direct physical changes in the environment and reasonably foreseeable indirect physical changes in the environment which may be caused by the project (CEQA Guidelines Section 15064[d]). A direct physical change in

the environment is a physical change in the environment which is caused by and immediately related to the project. An indirect physical change in the environment is a physical change in the environment that is not immediately related to the project, but which is caused indirectly by the project. An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project.

CEQA Guidelines Section 15064(e) further indicates that economic and social changes resulting from a project shall not be treated as significant effects on the environment, although they may be used to determine that a physical change shall be regarded as a significant effect on the environment. In addition, where a reasonably foreseeable physical change is caused by economic or social effects of a project, the physical change may be regarded as a significant effect in the same manner as any other physical change resulting from the project.

As indicated in Section 2.2.2.2, 1979 Dwight-Derby Site Plan EIR, the scope of this Draft EIR also includes the review, evaluation, and in some cases, revision and/or replacement of previously adopted mitigation measures from the 1979 Dwight-Derby Site Plan EIR.

2.2.2 RELATIONSHIP TO OTHER CAMPUS EIRS

2.2.2.1 LONG RANGE DEVELOPMENT PLAN EIR

The 2020 LRDP EIR provided a comprehensive program-level analysis of the 2020 LRDP, including potential effects on the environment that would result from implementation of the 2020 LRDP in accordance with Section 15168 of the CEQA Guidelines. The 2020 LRDP EIR prescribed continuing best practices (CBPs) and mitigation measures for all projects implemented under the 2020 LRDP. The 2020 LRDP was adopted in January 2005 and projected development needs through the academic year 2020-2021. UC Berkeley recently updated the 2020 LRDP in its 2021 LRDP, and completed the 2021 LRDP EIR, which has a planning horizon through the 2036-37 academic year and was certified by the Regents in July 2021. Similar to the 2020 LRDP EIR, the 2021 LRDP EIR updated the University's CBPs and mitigation measures.

2.2.2.2 1979 DWIGHT-DERBY SITE PLAN EIR

In 1979, a plan was developed and adopted in conjunction with UC Berkeley's proposed acquisition of the Schools for the Deaf and the Blind site; now referred to as the CKC. The 1979 Dwight-Derby Site Plan EIR evaluates the Dwight-Derby Site Plan dated May 1979, as revised by the University Plan-Dwight Derby Site dated March 1982 (which are collectively referred to as the Dwight-Derby Site Plan) (UC Berkeley 1979). The Dwight-Derby Site Plan generally provides for the retention and maintenance of the existing buildings and recreational facilities on the CKC. One of the primary intents of the Dwight-Derby Site Plan is to maintain and expand recreational uses on CKC.

The 1979 Dwight-Derby Site Plan EIR evaluated the potential environmental impacts of the plan and prescribes mitigation measures ("1979 mitigation measures") that the university adopted when it acquired the CKC in 1982. The mitigation measures from the 1979 Dwight-Derby Site Plan EIR are provided and reviewed in Appendix C, Review of 1979 Dwight-Derby Site Plan EIR Mitigation Measures. Appendix C contains a list of the 1979 mitigation measures, including their applicability to the proposed project, and where relevant, proposed revisions and/or replacement of several of these mitigation measures are provided to make them feasible[2] to implement through the inclusion of objective performance standards. Some of these measures do not provide objective performance

[2] As indicated in CEQA Guidelines Section 15364, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

standards, do not reflect CEQA best practices for mitigation, and are otherwise outdated and obsolete. For the 1979 mitigation measures that have been revised and/or replaced in this Draft EIR, Appendix C provides substantial evidence demonstrating the infeasibility of these 1979 mitigation measures, and the effectiveness of these revised mitigation measures in eliminating or reducing the applicable potentially significant environmental impact relative to the 1979 mitigation measures being modified or replaced. This approach to reviewing and revising and/or replacing previously adopted mitigation measures is based on CEQA case law, as described below.

While CEQA and the CEQA Guidelines do not specify whether an adopted mitigation measure or measures can be replaced or deleted, several CEQA legal cases have addressed the deletion or replacement of previously adopted mitigation measures. The first case to address the modification or deletion of approved mitigation measures adopted as part of an EIR was *Napa Citizens for Honest Government v. Napa County Bd. Of Supervisors* (2001) 91 Cal.App.4th 342 [110 Cal.Rptr. 2d 579] ("*Napa*"). The court in *Napa* recognized that CEQA requires an agency to take steps to ensure that mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or discarded. However, the court in *Napa* went on to conclude that nothing in the law required that a mitigation measure, once adopted, is binding for all time. Rather, when an earlier adopted mitigation measure has been deleted, the deference provided to governing bodies with respect to land use planning decisions must be tempered by the presumption that the governing body adopted the mitigation measure in the first place only after due investigation and consideration. The court therefore held that a governing body must state a legitimate reason for deleting an earlier adopted mitigation measure and must support that statement of reason with substantial evidence.

The basic principle set forth in *Napa* was further analyzed in *Lincoln Place Tenants Association v. City of Los Angeles* (2005) 130 Cal.App.4th 1491 [Cal.Rptr.3d 353] ("*Lincoln*"). In *Lincoln* the court stated that, while a city cannot ignore the mitigation measures it imposes on a project, it can modify or delete them. The *Lincoln* court noted that a governing body must state a legitimate reason for deleting an earlier adopted mitigation measure and must support the statement with substantial evidence. The court in *Lincoln* went on to hold that a previously adopted mitigation measure can only be deleted if it is found infeasible. Also, since the determination that a mitigation measure is infeasible must be included in an EIR and supported by substantial evidence, any determination that a previously adopted mitigation measure has become infeasible must be included in a supplemental EIR and supported by substantial evidence. Consistent with *Napa* and *Lincoln*, in *Paul Katzeff v. Department of Forestry and Fire Protection* (2010)181 Cal.App.4th 601 [Cal.Rptr.3d 89] ("*Katzeff*") the court also concluded that where a public agency has adopted a mitigation measure for a project, it may not authorize destruction or cancellation of the mitigation without reviewing the continuing need for the mitigation, stating a reason for its actions, and supporting it with substantial evidence.

2.3 ENVIRONMENTAL REVIEW AND APPROVAL PROCESS

2.3.1 SCOPING

CEQA Guidelines Section 15083 authorizes and encourages an early consultation or scoping process to help identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed and considered in an EIR, and to help resolve the concerns of affected regulatory agencies, organizations, and the public. Scoping is designed to explore issues for environmental evaluation, ensuring that important considerations are not overlooked and uncovering concerns that might otherwise go unrecognized.

The Notice of Preparation (NOP) for this EIR was circulated for a 33-day comment period from August 5, 2020 to September 7, 2020. The NOP was circulated to the State Clearinghouse and to state, regional, and local agencies in accordance with the CEQA Guidelines. A public scoping meeting regarding the scope of the analysis for the EIR was held on August 24, 2020, conducted online via a live video feed rather than in person due to the COVID-19 pandemic and restrictions on in-person gatherings throughout California.

A total of 54 comment letters were received from 1 agency, 1 organization and numerous individuals. The public comments are included in Appendix A, Notice of Preparation and Scoping Comments.

2.3.2 PUBLIC REVIEW OF THE DRAFT EIR

This Draft EIR has been published and circulated for review and comment by the public and other interested parties, agencies, and organizations for a 45-day public review period starting Thursday, January 6, 2022 and ending Monday, February 21, 2022. The Draft EIR is available for public review as follows:

- The Draft EIR is available online at: https://capitalstrategies.berkeley.edu/environmental-review
- In addition to the digital copy of the Draft EIR available online at the above website, a printed copy of the Draft EIR is available for public review during the comment period at the following locations:
  - 1 A&E, Berkeley, CA-94720 (By appointment only; please call 510-495-5786 for appointment)
  - College of Environmental Design Library, 210 Bauer Wurster Hall, Berkeley, CA 94720. Access to printed copy will be available from January 10, 2022.

During the comment period, an online public hearing will be held to receive public comments on the Draft EIR on February 10, 2022 at 5:00pm. The public is invited to provide written comments via mail or email on the Draft EIR to UC Berkeley by 5:00 p.m. on February 21, 2022 to the contact shown below.

UC Berkeley, Physical & Environmental Planning
Attention: Shraddha Navalli Patil, Senior Planner
Clark Kerr Campus Beach Volleyball Courts Project Draft EIR
300 A&E Building
Berkeley, California 94720-1382

Email: planning@berkeley.edu (please include "Draft EIR Comments: Clark Kerr Campus Beach Volleyball Courts Project" as the subject line. Public agencies providing comments are asked to include a contact person for the agency.)

CEQA Guidelines Section 15204(a) provides guidance on the focus of review of EIRs, indicating that in reviewing draft EIRs, persons and public agencies "should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated," and that comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. This section further states that "reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project. CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR."

2.3.3 FINAL EIR AND CONSIDERATION OF PROJECT APPROVAL

Following the close of the public comment period for this Draft EIR, UC Berkeley will review all written comments and prepare written responses to comment raising significant environmental issues regarding the proposed project. The Final EIR will then be prepared, and will include all of the comments received, written responses to those comment in accordance with CEQA Guidelines Section 15088, and any text changes to the Draft EIR that become necessary after consideration of public comments. Those who submitted comments on the Draft EIR will be notified of the availability of the Final EIR and the date and location of the public hearing to consider the certification of the EIR and approval of the proposed project.

All responses to comments submitted on the Draft EIR by public agencies will be provided to those agencies at least 10 days prior to certification of the EIR. The Final EIR (consisting of this Draft EIR and the response to comments document) will be presented for a final decision on the proposed project. The design approval is delegated to either the President or Chancellor, who is then responsible for reviewing and considering the CEQA documents at the time of his or her decision. This project is delegated to the Chancellor. Prior to making a decision to approve the project, the UC Berkeley Chancellor, acting on behalf of the Regents pursuant to the University's delegation policies, must certify that she has reviewed and considered the information in the EIR, that the EIR has been completed in conformity with the requirements of CEQA, and that the document reflects the UC's independent judgment. If the Chancellor finds that the Final EIR is "adequate and complete," she may certify the EIR in accordance with CEQA and then consider project approval. When a public agency approves a project covered by an EIR, CEQA requires that the public agency must adopt a program to monitor and report on mitigation measures pursuant to that EIR. CEQA requires that such a program be adopted at the time the agency approves a project or determines to carry out a project for which an EIR has been prepared. This requirement ensures that mitigation measures identified in the EIR are implemented. The Mitigation Monitoring and Reporting Program for the proposed project will be prepared and considered by the Chancellor in conjunction with the Final EIR.

The Chancellor may find that certain mitigation measures are outside the jurisdiction of UC Berkeley to implement, or that no feasible mitigation measures have been identified for a given significant impact, or that the efficacy of a mitigation measure may be uncertain or not sufficient to reduce the significant impact to less than significant. To approve the project in those cases, the Chancellor would have to adopt a statement of overriding considerations if she determines that economic, legal, social, technological, or other benefits of the proposed project outweigh the unavoidable, significant effects on the environment.

2.4 ORGANIZATION OF EIR

The content and format of this EIR are designed to meet the requirements of CEQA and the CEQA Guidelines (Sections 15122 through 15132). This EIR is organized into the following chapters:

- Chapter 1, Executive Summary, presents an overview of the proposed project, provides a summary of the impacts of the proposed project and mitigation measures, provides a summary of the alternatives being considered, includes a discussion of known areas of controversy, and any issues to be resolved.
- Chapter 2, Introduction, explains the CEQA process, describes the scope and purpose of this EIR, provides information on the review and approval process, lists the likely approvals for the proposed project, and outlines the organization of this EIR.

- **Chapter 3, Project Description**, provides information about the location, setting, and background of the proposed project, identifies project-specific objectives, provides a detailed description of the proposed project components and operational and construction details, and provides the planning context for the proposed project.
- **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**, provides the environmental analysis for the proposed project. Section 4.1, Introduction to Analyses, includes a description of the scope of the analysis and cumulative conditions. For the subsequent sections pertaining to the environmental resource topics for which a detailed analysis is provided, each section presents information in three parts, including environmental setting, regulatory framework, and impacts, including cumulative impacts, if any, and mitigation measures. References cited are provided at the end of each section. See Section 4.1 for additional information about the organization and content of this chapter.
- **Chapter 5, Other CEQA Considerations,** evaluates the other topics required to be included in an EIR, including impacts not found to be significant, significant and unavoidable impacts, significant irreversible environmental changes, and growth inducing impacts.
- **Chapter 6, Alternatives,** evaluates alternatives to the proposed project that would eliminate or substantially reduce any significant impacts identified in the EIR while feasibly attaining most of the project objectives. Alternatives that were reviewed but eliminated from further consideration in the EIR are also discussed.
- **Chapter 7, List of Preparers**, identifies individuals who were involved in preparing this EIR.
- **Appendices** contain additional information used in preparing this EIR, including:
  - Appendix A contains the NOP and the public comments that were submitted in response to the NOP.
  - Appendix B contains the Initial Study for the proposed project.
  - Appendix C provides a review of the 1979 Dwight-Derby Site Plan EIR mitigation measures.
  - Appendix D provides the UC Berkeley continuing best practices that are applicable to the proposed project.
  - Appendix E contains the Cultural Resources Inventory, Evaluation, and Finding of Effect Report
  - Appendix F contains the noise modeling outputs.

3. Project Description

This chapter describes the proposed Clark Kerr Campus (CKC) Beach Volleyball Courts Project (project or proposed project) evaluated in this environmental impact report (EIR). Topics addressed in this chapter include an overview of the project; a description of the project location and existing conditions; the project objectives; a description of the project components; demolition and construction plans; and the planning context for this EIR.

3.1 PROJECT OVERVIEW

The University of California, Berkeley (UC Berkeley or the university) proposes the conversion of the existing recreational softball field to recreational and Intercollegiate Athletic (IA) beach volleyball courts to improve the training and competition facilities provided to female student athletes, support ongoing gender equity, and comply with Title IX.[1] The proposed project would include four beach volleyball courts and a 3,710-square-foot support building with team rooms, locker rooms, restrooms, and coaches' offices and storage. Improvements to the site would include new lighting, a scoreboard, a public address (PA) system, and a refurbished lawn area for spectators to watch matches.

In addition, the project would demolish an approximately 9,230-square-foot portion of Building 21, the former Wilkinson Lodge, which is a contributor to the National Register of Historic Places (NRHP) District No. 82000962 State Asylum for the Deaf, Dumb, and Blind (also known as the California Schools for the Deaf and Blind Historic District [referred to herein as Historic District]), which is comprised of the CKC (NRHP 1982). The partial demolition of Building 21 addresses the seismic safety risk posed by the building in order to comply with the University of California Seismic Safety Policy. It also complies with the 1982 Declaration of Covenants and Restrictions (Covenants) that UC Berkeley entered into with neighbors of CKC. The Covenants also incorporate portions of a Memorandum of Understanding (MOU) between UC Berkeley and the City of Berkeley which was entered into at the same time as the Covenants that generally specify a program through 2032.[2] After demolition, the area would be landscaped and a new driveway to Building 21 would be paved to allow for loading. The existing western portion of the building would remain and continue to be used for storage.

The existing recreational softball uses would be accommodated off site at the softball field on UC Berkeley's Hill Campus and the existing archery uses would be accommodated on site at the proposed beach volleyball courts or at other CKC recreational facilities. Usage of facilities would be scheduled through IA consistent with their guidelines. After project implementation, the two existing CKC sand courts on the CKC would remain available for community use during daylight hours and would be managed by the UC Berkeley Recreational Sports Department.

---

1 Title IX is a portion of the United States Education Amendments of 1972 that makes it illegal to discriminate against a person on the basis of sex in any federally funded activity and applies to all aspects of education, including athletics programs. As it relates to athletics, one of the requirements of Title IX is that women and men be provided equitable opportunities to participate in sports.

2 In 1982, the university executed and recorded the Covenants with neighboring property owners within a defined area surrounding the CKC, and a Memorandum of Understanding with the City of Berkeley, both of which commit the university generally to a site plan and land use program on the CKC for a period of 50 years through 2032. The Covenants limit the ability of the university to construct new buildings on the CKC, however, existing buildings destroyed by fire, earthquake, or other disasters, removed due to hazards, or determined to be infeasible to rehabilitate may be replaced by buildings of similar size and scope.

3.2 PROJECT LOCATION

The 50-acre CKC of UC Berkeley contains student and faculty housing, conference facility, childcare, maintenance and storage, and recreational facilities. As shown in Figure 3-1, CKC is southeast of the main UC Berkeley campus (Campus Park) and south of the Hill Campus. CKC is primarily within the City of Berkeley, with a portion of the easternmost panhandle of the CKC within the City of Oakland. CKC is surrounded by residential neighborhoods to the north, south, and west and by the East Bay Regional Park District's Claremont Canyon Regional Preserve to the east.

As shown in Figure 3-2, the proposed project includes two different project sites on CKC. The project site for the beach volleyball courts is the existing recreational softball field at the intersection of Dwight Way and Sports Lane, along the northern boundary of CKC. The project also includes the partial demolition of Building 21. Building 21 is located near the eastern boundary of CKC, east of Eastway Drive and north of Derby Street.

The CKC is located approximately 10 miles east of San Francisco, as shown in Figure 3-1. Interstate 80, State Route 13, State Route 24, and Interstate 580 provide regional vehicular access to CKC. Regional transit access is provided by San Francisco Bay Area Rapid Transit District (BART) and Alameda-Contra Costa Transit (AC Transit).

3.3 EXISTING CONDITIONS

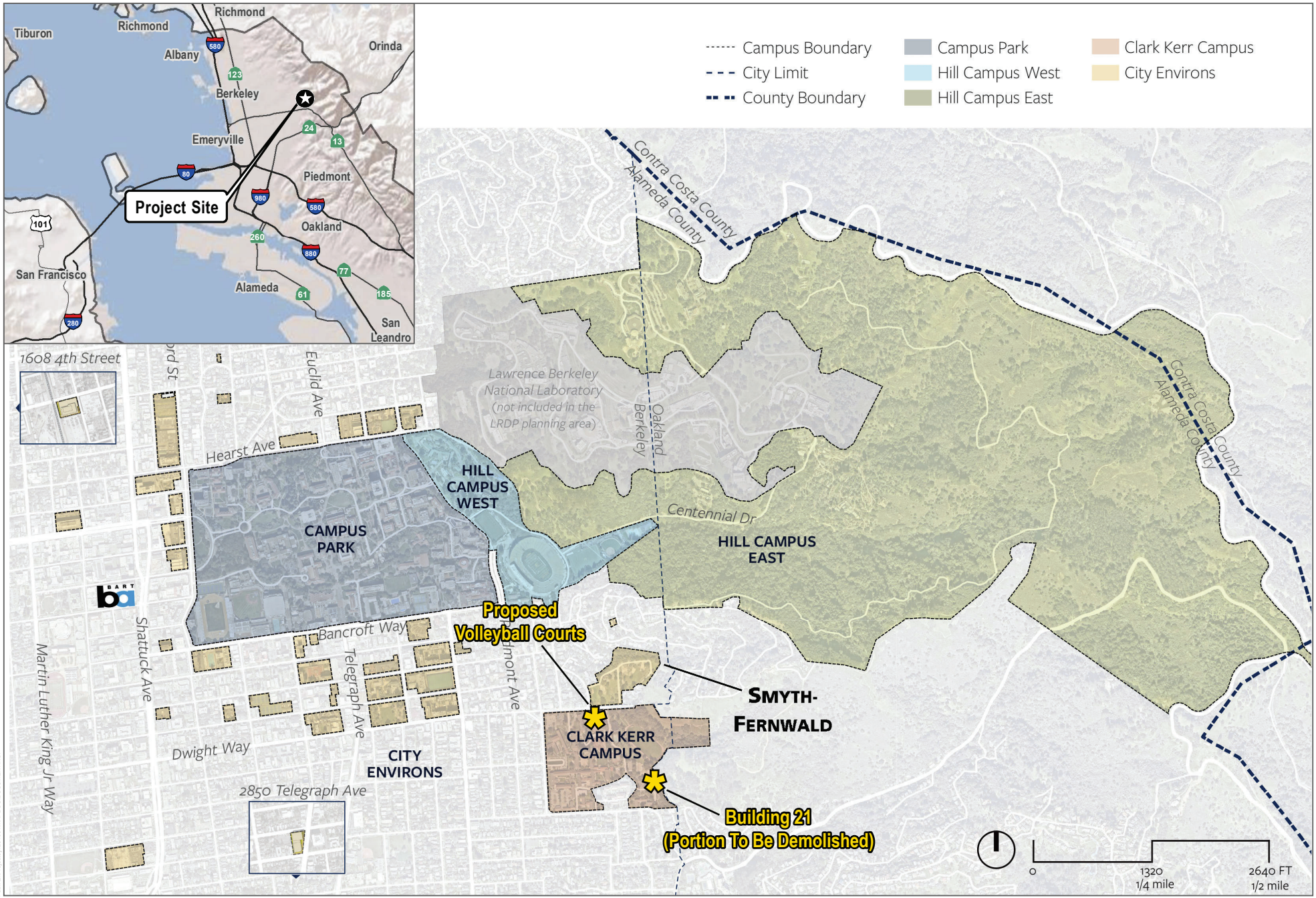
The CKC was acquired by the university in 1982 from the State of California. Its 26 low-rise Mission Revival buildings, dating from the 1920s through the 1950s, are organized around formal landscaped courtyards. The entirety of the CKC is located in the Historic District. The CKC is also listed as a City of Berkeley landmark.

The existing CKC sand courts, the existing recreational softball field (site for the proposed beach volleyball courts) and Building 21 are described in greater detail below.[3]

3.3.1 EXISTING CKC SAND COURTS

The CKC sand courts are the existing recreational beach volleyball courts, located off of Eastway Drive, in the southeast area of the CKC. The two sand courts are primarily used by students during daylight hours. However, the hours of operation are from 7:00 a.m. to 10:00 p.m., 7 days a week, with nighttime use being facilitated by portable lights that are used on some occasions. Limited parking at the adjacent lot just north of the sand courts is available to participants and spectators. Originally built in the late 1990s, the courts were home to local groups who helped maintain the courts. The Bears Women's Beach Volleyball team began training and playing their home matches at the CKC sand courts when the program formed in 2014. The dimensions of the lower sand court and upper sand court are 83 feet by 42 feet and 87 feet by 42 feet, respectively. The available space on the sides of the court are not sufficient in both locations to provide for safe "runoff" space for players beyond the court itself.

[3] Existing conditions are described for pre-2019 novel coronavirus disease (COVID-19) pandemic uses of the facilities.



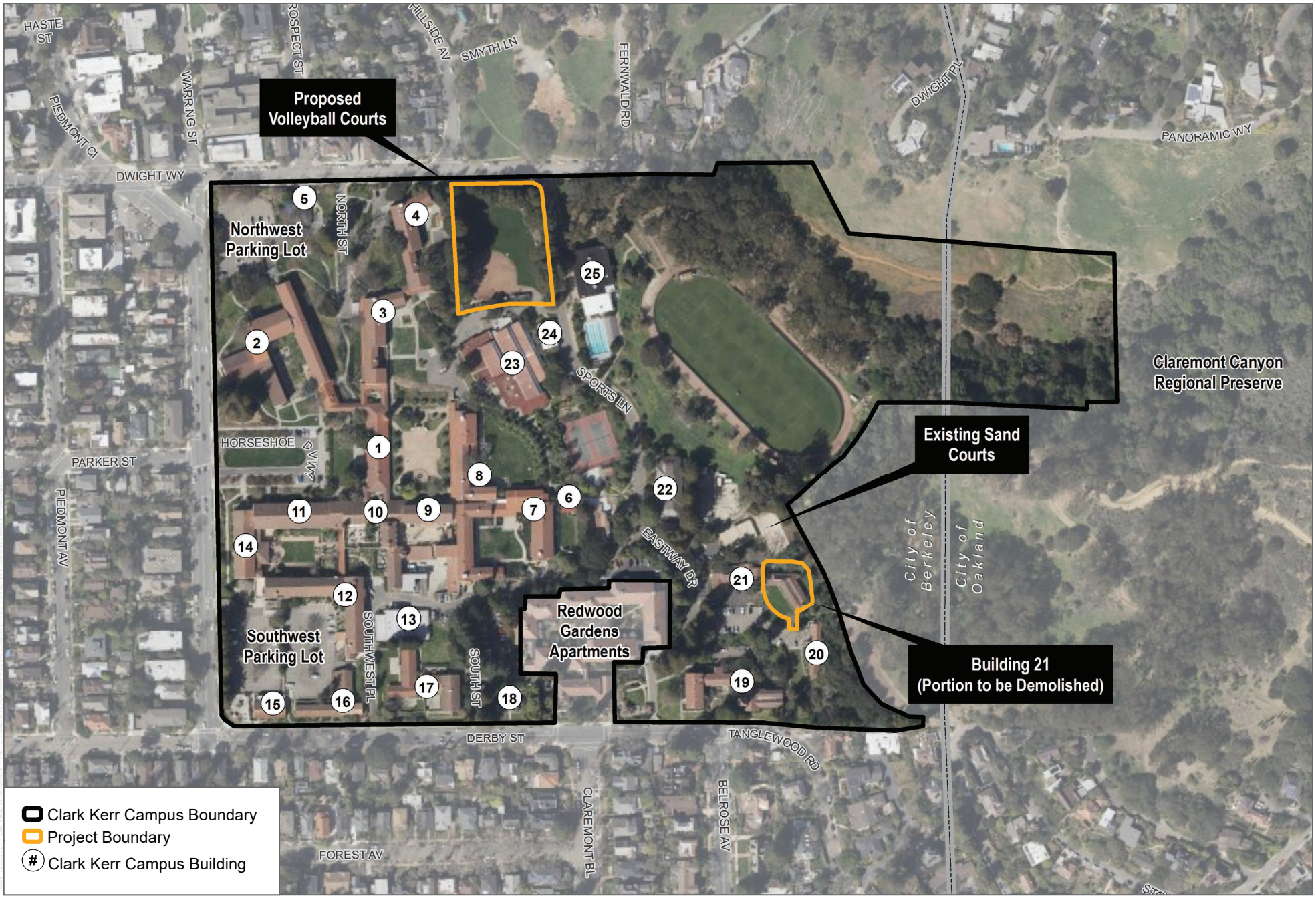
SOURCE: UC Berekeley 2018

FIGURE 3-1

Regional Location and UC Berkeley Campus

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.



SOURCE: Bing Maps 2020, Alameda County 2018

FIGURE 3-2

Clark Kerr Campus and Project Sites

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

The existing sand courts are currently used for beach volleyball practices five to six days per week during the school year from September through May. The beach volleyball competition season is during the spring semester, although practices are held in the fall. UC Berkeley currently hosts up to seven non-ticketed regular-season competitive matches.

The sand courts operate with an average of approximately 50 to 75 participants and spectators at matches or practices, but attendance fluctuates by season and team success with portable seats brought in for major matches, which allows for up to a maximum of 200 participants and spectators. Table 3-1 in Section 3.5.1.2, Project Operations/Sports Programs, provides details regarding existing operations of the sand courts.

Recreational sports activities use the courts outside of IA-scheduled activities, including various intramural activities. The courts are also available to the public to use when they are not scheduled for university activities.

3.3.2 EXISTING SOFTBALL FIELD (PROPOSED BEACH VOLLEYBALL COURTS SITE)

The proposed beach volleyball courts would be constructed on the existing recreational softball field at the southwest corner of Dwight Way and Sports Lane, along the northern edge of the CKC. The existing approximately 1.1-acre (50,000-square-foot) softball field is a generally flat grass and dirt field, sloping from approximately 410 feet in elevation at the southeast corner of the field to approximately 400 feet in elevation at the northwest corner of the field. The recreational softball field is not a contributor to the Historic District.

The hours of operation for the softball field are from 7:00 a.m. to 10:00 p.m., 7 days a week. Spectators sit on the lawn surrounding the field; fixed seating is not provided. The field operates with an average of approximately 50 to 100 participants and spectators but can be up to a maximum of 200 such participants and spectators for some events. The field is also used for archery club sports, Junior Olympic Archery Program and summer youth camps. Existing field lighting is in disrepair and is not currently in use, as of approximately three years ago.[4] Prior to that time, the existing field lighting was operable and used. Two PA speakers are mounted to the poles behind home plate. A semi-permanent storage structure is also on the field.

Approximately 63 mature trees line the perimeter of the field. Tree species include compact blue gum eucalyptus, blue gum eucalyptus, silver dollar gum, blackwood acacia, coast live oak, valley oak, coast redwood, Monterey pine, Siberian elm, and Victorian box trees. Nineteen of these trees are considered specimen trees per UC Berkeley's Specimen Tree Program (Hort Science 2018).

Surrounding uses include a residential hall (Building 4) to the west, UC Berkeley maintenance and archives (Buildings 23 and 24) to the south, the Golden Bear Recreation Center (Building 25) to the southeast, and UC Berkeley's vacant Smyth-Fernwald complex, which previously contained student family apartments, to the north and east across Dwight Way as well as private and university-affiliated residential buildings to the northwest.

3.3.3 EXISTING BUILDING 21

The proposed project involves the partial demolition of Building 21 on the CKC, which is surrounded by the existing recreational beach volleyball courts to the north, a surface parking lot to the northwest and south, the East Bay

[4] The existing field lighting that is in disrepair and not currently in use consists of 6 lighting poles (approximately 50 feet high). When the lighting was previously in use, it provided between 2 foot-candles and 93 foot-candles of illumination across the existing softball field.

Regional Park District's Claremont Canyon Regional Preserve to the east, and other CKC-Historic-District-contributing buildings farther to the south.

Building 21 is a one- to two-story building located in the southeast area of the CKC, adjacent to Eastway Drive and north of Derby Street. The building was constructed as a boys' dormitory and dining hall in 1928 as part of the California School for the Blind and is a contributor to the Historic District. The building has been referred to as Wilkinson Lodge since the 1960s. Since 1979, Building 21 has been vacant except for storage use. In 1985, the northwest wing of the building was demolished for the construction of a parking lot designated for exclusive use by the residents of the adjacent Redwood Gardens Apartments.

Building 21 has significant deferred maintenance and is rated "poor" (V) pursuant to the University of California's Seismic Safety Policy with deficiencies found in the wood roof diaphragm (Degenkolb 2020). The building has been a target for vandalism and homeless occupancy. Since 2017, the western portion of the building has been repaired; activities included abatement of hazardous materials, demolition of obsolete electrical and plumbing systems, re-roofing, painting and some site work. Seismic retrofit of the roof was also planned, and a portion of the retrofitting is anticipated to be complete by January 2022. This will seismically improve the existing western portion of the building. The roofing that is damaged and degraded is being removed and replaced, along with installation of new gutters, and painting of a portion of the exterior. The western portion of Building 21 now serves as storage for the Residential and Student Service Programs (RSSP) and fencing has been added to the south to create a secure storage yard for the RSSP grounds maintenance staff.

3.4 PROJECT OBJECTIVES

The university's objectives for the proposed project are to:

1. Support UC Berkeley's ongoing compliance with Title IX by improving the training and competition facilities provided to female student athletes who participate in the IA beach volleyball program;
2. Improve recreational facilities to meet the needs of the current student body and the community;
3. Advance seismic safety risk reduction pursuant to the University of California's Seismic Safety Policy; and
4. Meet siting criteria for IA beach volleyball courts:
    - Meet NCAA design criteria for beach volleyball courts, which include number of courts, type and depth of sand, distance between and around courts, referee platform at each court, space and location for team areas, team size, staff/coach numbers. Design criteria include:
        - Two sand play courts (minimum requirements), but at least three sand play courts are recommended. Having five courts allows all participants to compete at the same time thus significantly reducing the length of the competition.
        - If multiple courts are placed side-by side, the team areas shall be placed in the end zone free space unless there is at least 6 meters (approximately 20 feet) of free space between the courts.
    - Avoid displacement of existing uses that are challenging to relocate and serve a large number of students and the broader public (e.g., other IA sports, Recreational Sports);
    - Avoid siting new IA beach volleyball courts in or near the central campus as this limits the ability of the university to use these sites for other uses, such as housing, academic or research buildings; while

ensuring that placement is close enough to provide the student athletes with walkable access to campus academic and athletic resources;

- Avoid siting new IA beach volleyball courts on a site with topographical or physical constraints, making ADA access and site construction more challenging;
- Provide adequate site capacity to accommodate new IA beach volleyball courts, including capacity for spectators;
- Provide privacy for student athletes; and
- Consider cost and other feasibility issues in the development of new IA beach volleyball courts.

3.5 PROJECT COMPONENTS

As described above, the proposed project includes construction of the beach volleyball courts and the partial demolition of Building 21. These two components of the project are described in detail below.

3.5.1 BEACH VOLLEYBALL COURTS

UC Berkeley proposes the conversion of the existing recreational softball field to recreational and IA beach volleyball courts to improve the training and competition facilities provided to female student athletes, support ongoing gender equity, and comply with Title IX. The proposed project would include four beach volleyball courts and a 3,710-square-foot support building, a scoreboard, a PA system, and a refurbished lawn area for spectators to watch matches.

3.5.1.1 VOLLEYBALL COURTS

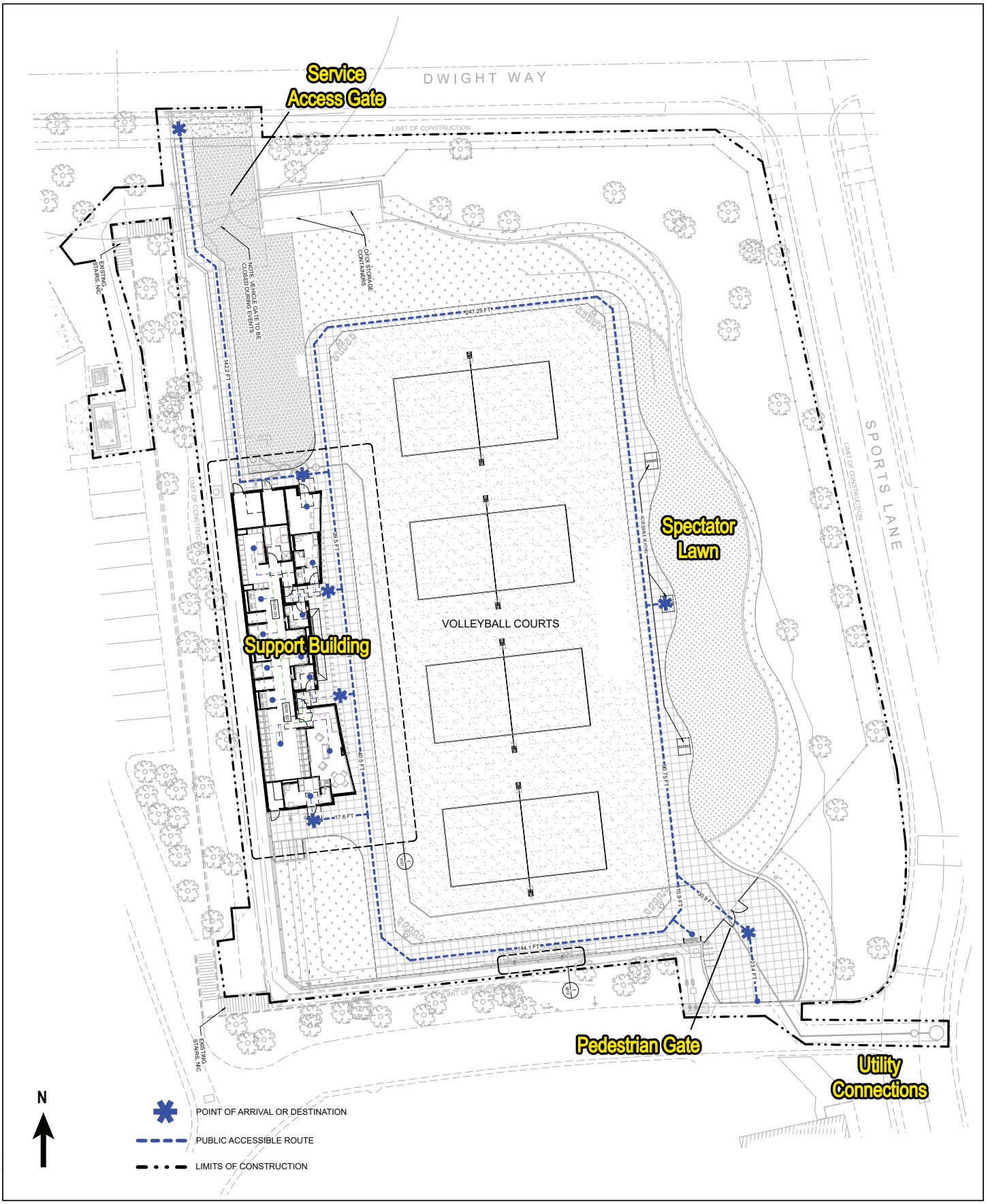
The proposed beach volleyball portion of the project would involve the conversion of the existing softball field into beach volleyball courts with four sand courts. The approximately 3,710-square-foot, single-story support building would include team rooms, locker rooms, restrooms, coaches' offices, and storage. The support building would include clerestory windows to increase natural daylight and articulation along the façade. The building would be steel-frame construction with exterior plaster and tile finishes and would be equipped with fire alarm and sprinklers. Synthetic turf would be installed along the east side of the courts for spectator seating; no fixed seats would be installed.

The site would be secured by an 8-foot chain-link fence and the main pedestrian access would be from a new gated entrance at the corner of Sports Lane and Court Street. An Americans-with-Disabilities-Act-compliant paved pathway would provide access within the project site. A curb cut for vehicular access to the site from Dwight Way would be constructed at the northwest corner of the site. This driveway would provide access for support and maintenance to the site. Improvements to the site would include new lighting, a PA system, and a scoreboard as follows:

- The existing field lights would be removed and replaced with new lighting. Four 50-foot-high light poles with light-emitting diode (LED) light arrays would be installed at each of the corners of the site. The new lights would provide between 50 and 115 foot-candles of illumination across the courts, and approximately 0.5 foot-candles at the property edge. Each light pole would have a power load of approximately 10.2 kilowatts (kW). Lighting would be used during night matches and for evening community use. Limited exterior lighting would also be provided near the exterior doors to the support structure. Consistent with University continuing best practice (CBP) AES-6 and AES-7 (see Section 3.11.4, University Continuing Best Practices), lighting would be designed and calibrated to direct light at the courts and minimize spillage to adjacent areas. The brightest light would be focused on the court area and dissipate towards the edge of the courts.

A lighting control system would be installed that would facilitate quick and computer-controlled fixture adjustments to ensure proper field illumination. The hours of operation for lighting would be the same as existing conditions (7:00 p.m. to 10:00 p.m.), prior to the softball field lighting becoming inoperable.

- A PA sound system would be installed with two speaker arrays approximately 30-feet high on the light poles along the east side of the courts; the speakers would be oriented toward the courts. The sound system would be used during IA competitions and practices but would not be used for public events, recreational sports usage, or archery practice.
- An LED scoreboard approximately 16 feet high by 20 feet wide supported 8 feet off the ground on 25-foot-tall support columns would be installed at the southern edge of the courts. The maximum height of the scoreboard would be approximately 28 feet above grade.



SOURCE: HOK 2020

FIGURE 3-3

Proposed Beach Volleyball Courts Site Plan

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

3.5.1.2 PROJECT OPERATIONS/SPORTS PROGRAMS

The proposed programming and schedule for the beach volleyball courts project is provided in Table 3-1. The proposed program would be substantially similar to the existing program at both the CKC sand courts and the recreational softball field.

TABLE 3-1. SUMMARY OF EXISTING AND PROPOSED OPERATIONS

Key Elements	Existing Conditions		Proposed Project
	CKC Softball Field	CKC Sand Courts	New Beach Volleyball Courts
Types of Uses	Club/intramural play, recreational sports, archery, youth camps, training camps, recreational rentals	Intercollegiate Athletics (IA) training and competitions, club/intramural play, recreational sports, youth camps, training camps, recreational rentals	IA training and competitions, club/intramural play, recreational sports, archery, youth camps, training camps, recreational rentals
Competitive Season	Not applicable	January to May	January to May
Number of Regular-Season Competitive Matches	Not applicable	Up to 7 event days for matches	Up to 10 event days for matches
Post-Season Play	Not applicable	None	Up to 2-4-day additional event days per season that will support regional and final NCAA championships rounds
Number of Televised Matches	None	None	Up to 14 matches per regular- and post-season play (based on conference and TV scheduling)
Typical Competitive Match Days	Not applicable	Friday, Saturday, Sunday series; occasional mid-week match	Friday, Saturday, Sunday series; occasional mid-week match
Daily Average Number of Participants and Spectators	Approximately 50 to 100[1]	Approximately 50 to 75[2]	Approximately 100
Daily Maximum Number of Participants and Spectators	200	200	400
Hours of Operation	7:00 a.m. until dusk., 7 days a week due to inoperable lighting 7:00 a.m. to 10:00 p.m. prior to lighting becoming inoperable	7:00 a.m. to 10:00 p.m., 7 days a week	7:00 a.m. to 10:00 p.m., 7 days a week
Lighting	Existing lighting is in disrepair and is not used	No existing permanent lighting; portable lights are used on some occasions	New lighting used for night matches; night lighting only used when night matches or community uses are scheduled
Public Address (PA) System	Two PA speakers are mounted to the poles behind home plate	No fixed equipment; a portable PA system is used if needed	New PA system

Notes:

1 The daily average number of existing participants and spectators of the CKC softball field reflects the fluctuation in the use of the field by the various sports/recreation groups.

2 The daily average number of existing beach volleyball participants and spectators using the CKC sand courts fluctuates by season and team success. The daily average number of existing participants and spectators of the CKC sand courts also reflects the fluctuation in the use of the courts by the various sports/recreation groups.

The proposed program would operate from 7:00 a.m. to 10:00 p.m., 7 days a week. During the academic school year, the courts would be used for IA beach volleyball practice, training, and youth camps (managed by IA), recreational sports programming (managed by the UC Berkeley Recreational Sports Department), archery, occasional youth programs, and reservation-based community recreation. In addition, IA beach volleyball competitions would be held in the spring semester. The design of the proposed project includes adequate space for use by archery and other recreational uses. During the summer (June to August), the new beach volleyball courts would also be used for IA training and recreational summer youth camps operated by Recreational Sports and/or IA, archery, and other recreational sports programming. All of these programs, aside from the special beach volleyball match events, currently operate at the project site or other sites within the CKC and such programs and participants would not change with the proposed project. In addition, the new beach volleyball courts would also be open to the broader community on a reservation basis, consistent with IA's current reservation practices.

Existing average and maximum participants and spectators associated with existing programs identified in Table 3-1 (i.e., club/intramural play, recreational sports, archery, youth camps, training camps, recreational rentals) will continue with the implementation of the proposed project but will shift to other sites in CKC with the development of the new beach volleyball courts on the existing softball field. Such programs could also use the new beach volleyball courts when not in use by IA beach volleyball for training or competitive matches.

Table 3-1 above provides a detailed comparison of the existing and proposed IA beach volleyball competitive program, which occurs during the spring semester from January through May. As indicated previously, UC Berkeley currently hosts up to seven competitive matches per season. With implementation of the proposed project, up to three additional regular-season matches may be hosted depending on the program schedule, for a total of up to ten regular-season matches per season. Additionally, two to four additional post-season matches may be hosted that will support regional and final NCAA championships rounds.

Existing matches typically occur on Friday and Saturday afternoons and currently attract an average of approximately 50 to 75 participants and spectators. The time and participant and spectator attendance are anticipated to be similar to existing conditions at the existing softball field and existing sand courts after implementation of the proposed project with an average of approximately 100 participants and spectators. Up to a maximum of 400 participants and spectators during some matches could be physically accommodated by the beach volleyball courts project site, including spectators who would use the lawn area. While it is unclear whether the new courts would experience such attendance given past match attendance levels, this EIR considers this level of attendance to provide for a conservative analysis.

Up to 14 televised matches are possible per IA beach volleyball season, although it is unlikely that there would be that many. Each televised match is anticipated to require a satellite truck, a production truck, approximately eight camera operators, and five additional employees. A portable generator would likely be required for the televised matches. Television trucks would likely be staged west of the proposed beach volleyball courts site, immediately east of Building 4.

After project implementation, the existing CKC sand courts would be available for daytime use by recreational student participants and the community and would be maintained by Recreational Sports and softball games would be accommodated at the softball field on UC Berkeley's Hill Campus.[5] As indicated previously, existing average and

[5] Relocating the existing CKC softball users to the existing softball field at the Hill Campus would not cause any new environmental impacts because this relocation involves a limited number of users being relocated to an existing softball field.

maximum usership associated with existing programing will continue with the implementation of the proposed project. The proposed project would not result in new enrollment growth or the hiring of new faculty or staff.

3.5.1.3 TRANSPORTATION, ACCESS AND PARKING

As described above, pedestrian access would be from Dwight Way and Sports Lane, with access through the main pedestrian gate at the corner of Sports Lane and Court Street. Vehicular access for maintenance and support would be from a new driveway at the northwest corner of the site off of Dwight Way. No new parking spaces would be constructed for the proposed project.

Similar to existing conditions for the existing CKC sand courts, it is anticipated that the majority of the participants and spectators associated with the new beach volleyball courts (students and the local community) would travel to the site primarily by foot, bicycle, or transit. The proposed project includes the installation of eight bike racks and eight bicycle lockers at the beach volleyball courts site. In addition, for beach volleyball competitions, one team bus or up to three vans would transport the visiting team, including coaching and support staff, to the courts and would park at the Underhill Parking Garage. For televised matches, a TV truck would park west of the courts, adjacent to Building 4.

Vehicle parking would also be available in the CKC northwest and southwest visitor parking lots for those who drive. The CKC has approximately 330 marked parking spaces.[6] Existing parking spaces throughout the CKC would be available for visitor use on a pay-per-spot basis (existing metered parking). Additionally, parking is also available at the Underhill Parking Garage (2645-2695 Haste Street), located approximately 0.3 miles northwest of the proposed beach volleyball courts.

In coordination with the UC Berkeley Parking and Transportation Department, IA has developed gameday parking and transportation demand management (TDM) measures for the proposed project. The TDM measures include the following:

- Visiting team's athletes and associated staff will arrive via bus or vans to the courts, where they will be dropped off. The bus or van will then be routed to the Underhill parking lot. Each school is responsible for its own travel.
- Publicize and continue communication on game day transportation related information:
  - IA will advertise transit and parking information for game day events on their website.
  - UC Berkeley Parking and Transportation lists all parking and transit options on their website, pt.berkeley.edu. Visitors will find details on getting to and from the BART station through this website.

3.5.1.4 LANDSCAPING

The existing trees around the periphery of the beach volleyball courts project site would be trimmed or removed for safety and approximately 11 new trees would be planted. As shown in Figure 3-4, approximately six trees would be removed, four of which are specimen trees. The specimen trees to be removed are compact blue gum and the non-specimen trees to be removed are Victorian box and coast live oak (Hort Science 2018). The specimen trees to be removed would be replaced by transplanting elsewhere on the CKC or would be replaced by new planting in kind on the CKC at a ratio of 3 to 1 in the closest available sizes to trees that have been removed, as required by the UC Berkeley Specimen Tree Program and CBP BIO-9. Tree removal and tree trimming would be conducted outside of

[6] Parking occupancy data collected in September 2019 show that the CKC parking lots are approximately 30 percent full at the peak times of the week and day. Therefore, approximately 231 parking spaces are open during a typical weekday. Additionally, peak parking demand for the beach volleyball courts would likely occur during off-peak times (competitive matches take place on Friday, Saturday, and Sunday when campus parking is generally more available) (UC Berkeley 2019a).

nesting season (February 1 through August 31), consistent with CBP BIO-1 (see Section 3.11.4, University Continuing Best Practices).

Landscaping would be planted along the edge of the spectator lawn and main entrance gate consisting of shrubs, perennials, and grasses. The spectator lawn area east of the courts would be synthetic turf and the area north and southwest of the courts would be a sod lawn. The maintenance vehicular entrance would consist of geogrid porous grass pavers with sod.

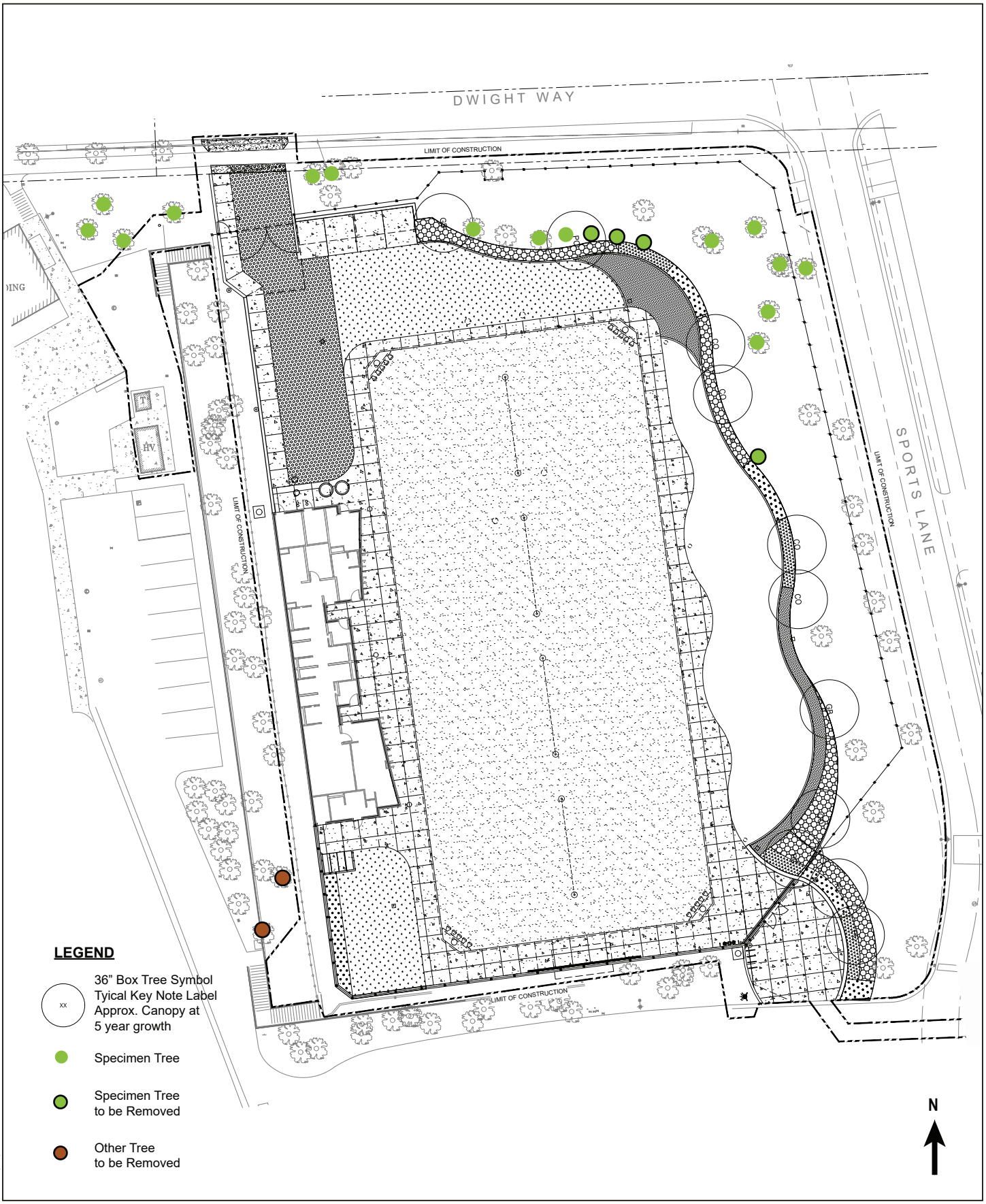
3.5.1.5 SUSTAINABLE DESIGN

The proposed project would be required to meet the energy efficiency and green facility standards of the University of California Sustainable Practices Policy, the UC Berkeley Energy Use Policy, and the UC Berkeley Campus Design Standards. At a minimum, the proposed project would be designed and constructed to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Building Design and Construction (BD+C) Silver Certification. Consistent with university carbon-free sustainability practices, the support building would incorporate passive cooling, high solar reflectance surfaces, natural daylighting, radiant heat, low-flow fixtures, recycled materials, and LED lighting to reduce water and energy consumption.

3.5.1.6 UTILITIES

The proposed beach volleyball courts project would include electrical, natural gas, stormwater, water, and sewer connections and improvements as described below.

- **Electrical.** A new electrical line and meter would connect to an existing switchboard located west of the proposed support building. This new electrical line would be installed underground at the northwest corner of the site and would connect to the support building.
- **Natural Gas.** An existing 4-inch Pacific Gas and Electric (PG&E) gas line would be relocated outside of the support building foundation. The relocated line would connect to a new gas line and meter for the support building.
- **Stormwater.** A new 6-inch storm drain would be connected to an existing catch basin located in the northwest corner of the site. This storm drain would connect to multiple catch basins throughout the site.
- **Water.** Water connections and improvements would be required for the new support building and for fire suppression needs. A new 3-inch water service line would connect the support building to a water service line on Sports Lane. A 3-inch smart meter and backflow preventer would be installed immediately north of the water service line connection. Fire service water connections would occur on the southeast corner of the site; from there a 6-inch fire service water line would connect to the support building and a separate 6-inch water line would connect to a new fire hydrant at the southeast corner of the site.
- **Sewer.** To accommodate the beach volleyball courts support building restrooms, a lift station with a 2-inch pressure sewer outlet would be constructed. A new manhole would be constructed in Sports Lane to connect to the existing sewer main.



SOURCE: UC Berkeley 2018

FIGURE 3-4

Tree Survey for the Beach Volleyball Courts Site

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

3.5.2 PARTIAL DEMOLITION OF BUILDING 21

As shown on Figure 3-5, approximately 9,230 square feet of the eastern portion of Building 21 would be demolished with the proposed project. The connecting wall on the western portion of the building that would be retained would be reinforced so that it functions as an exterior wall. The two existing doors on that wall would be retained to provide access to a new paved driveway and loading area (see further description below). The remaining wall and its doors would be painted to match the exterior paint on the existing building. Additionally, an existing exterior stairway and retaining wall south of the building would be retained. The western portion of the building would continue to serve as storage for the RSSP, as described previously. No trees would be removed for the partial demolition of Building 21. New landscape trees and shrubs would be planted on either side of the new paved driveway and decorative gravel mulch and rocks would also be installed. Figure 3-6 shows the remaining western portion of the building, new driveway and loading area, and new landscaping, as further described below.

After building demolition, a new paved driveway to the building and loading area would be constructed to allow for vehicle access and loading for the western portion of the building that would be retained for storage. The paved driveway and loading area would provide vehicle access to the adjacent parking lot on Eastway Drive. Limited access to this loading area would be provided via removable bollards. The proposed project would not modify the current use of Building 21 for storage.

3.6 DEMOLITION AND CONSTRUCTION

Overall, construction of the proposed project is anticipated to occur over approximately 8 months starting in the spring of 2022, after certification of this EIR and project approval. Specifically, construction of the new beach volley courts would occur over approximately 6 months and the demolition and related work on Building 21 would occur over approximately 8 months. Construction on the two sites would be concurrent with work on the Building 21 site extending beyond completion of the new beach volleyball courts. Project construction would occur during weekdays, Monday to Friday, from 7:00 a.m. to 7:00 p.m., with limited weekend hours if needed, consistent with the City of Berkeley noise ordinance (City of Berkeley 2020). Construction workers, vehicles, and equipment would access the beach volleyball courts project site from Dwight Way and Sports Lane and the Building 21 project site from Derby Street and Eastway Drive. Pile-driving activities would not be required for construction/demolition.

Construction activities for the new beach volleyball courts would entail the following phases: 1) demolition of the existing softball field, minor grading, tree removal, trenching for utilities, and site preparation; 2) construction of the volleyball courts and support building, including structural mat foundation; and 3) finishing of the courts, building interior, circulation and signage, and installation of landscaping. Construction staging would occur within the limits of work. The beach volleyball courts would generally be constructed within the level portion of the existing softball field, and the eastern portion of the lawn remaining after construction of the courts and support building would be used as a spectator area. The project site is approximately 50,000 square feet, including the sloped area with trees along the periphery of the site. Approximately 40,000 square feet of the site would be graded, approximately 15,000 square feet of existing impervious surfacing on the existing softball field would be removed, and approximately 12,000 square feet of new impervious surface would be constructed on the site (including the support building and paved areas), for a net reduction in impervious surfacing of 3,000 square feet. The area around existing trees to be retained would be excluded from the work area to protect the trees. Approximately 80 cubic yards of debris materials would be removed from the site. Transport of soil on or off site is not anticipated for the project. Construction would achieve LEED Silver and low-volatile-organic-compound architectural coatings would be used for the support building.

Construction activities for the partial demolition of Building 21 would generally include the following phases: 1) demolition of the eastern portion of the building and grading of the area demolished, including slope stabilization along the eastern edge of the building; 2) closing off the remaining portion of the building; and 3) paving to extend driveway access to the back of the building from the existing parking lot. The limit of work would include an approximately 14,000-square-foot area encompassing the portion of Building 21 to be demolished. Approximately 320 cubic yards of debris materials would be removed from the site. Transport of additional soil on or off site is not anticipated for the project. Approximately 8,000 square feet of new impervious surface would be constructed on the site associated with the new paved driveway.

To reduce emissions from construction equipment, UC Berkeley shall use equipment that meets the United States Environmental Protection Agency Tier 4 Final emissions standards or higher for off-road diesel-powered construction equipment with more than 50 horsepower, unless it can be demonstrated to UC Berkeley that such equipment is not commercially available.[6] Where such equipment is not commercially available, as demonstrated by the construction contractor, Tier 4 interim equipment shall be used. Where Tier 4 interim equipment is not commercially available, as demonstrated by the contractor, Tier 3 equipment retrofitted with a California Air Resources Board's Level 3 Verified Diesel Emissions Control Strategy (VDECS) shall be used. The requirement to use Tier 4 Final equipment or higher for engines over 50 horsepower shall be identified in construction bids and the following shall also be completed:

- Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for United States Environmental Protection Agency Tier 4 Final or higher emissions standards for construction equipment over 50 horsepower.
- During construction, the construction contractor shall maintain a list of all operating equipment in use over 20 hours on the construction site for verification by UC Berkeley.
- The construction equipment list shall state the makes, models, and numbers of construction equipment on-site.
- To the extent that equipment is available and cost-effective, contractors shall use electric, hybrid, or alternate-fueled off-road construction equipment.
- Contractors shall use electric construction tools, such as saws, drills, and compressors, where grid electricity is available.
- Construction activities shall be prohibited when the Air Quality Index (AQI), as measured by the closest Bay Area Air Quality Management District monitoring station (e.g., Berkeley Aquatic Center), is greater than 150 for particulates and ozone in the project area.
- Contractors shall provide information on transit and ridesharing programs and services to construction employees. Additionally, meal options on-site and/or shuttles between the project sites and nearby meal destinations for construction employees shall be provided.

The contractor would coordinate with both the City of Berkeley and UC Berkeley to limit overlap of construction of multiple projects that would require use of the same truck routes. Construction work may require temporary sidewalk or parking lane closures on or near the site; however, these temporary changes would be coordinated and would follow CBPs (see Section 3.11.4, Continuing Best Practices). Consistent with the CBP TRAN-5, the Construction Traffic Management Plan for the proposed project would describe standards and protocols to protect bicyclists and pedestrians and provide a campus point of contact for construction-related complaints.

[6] "Commercially available" means the availability of Tier 4 Final engines similar to the availability for other large-scale construction projects in the city occurring at the same time and taking into consideration factors such as (i) potential significant delays to critical-path timing of construction and (ii) geographic proximity to the project site of Tier 4 Final equipment.

SOURCE: Bing Maps 2020, Alameda County 2018

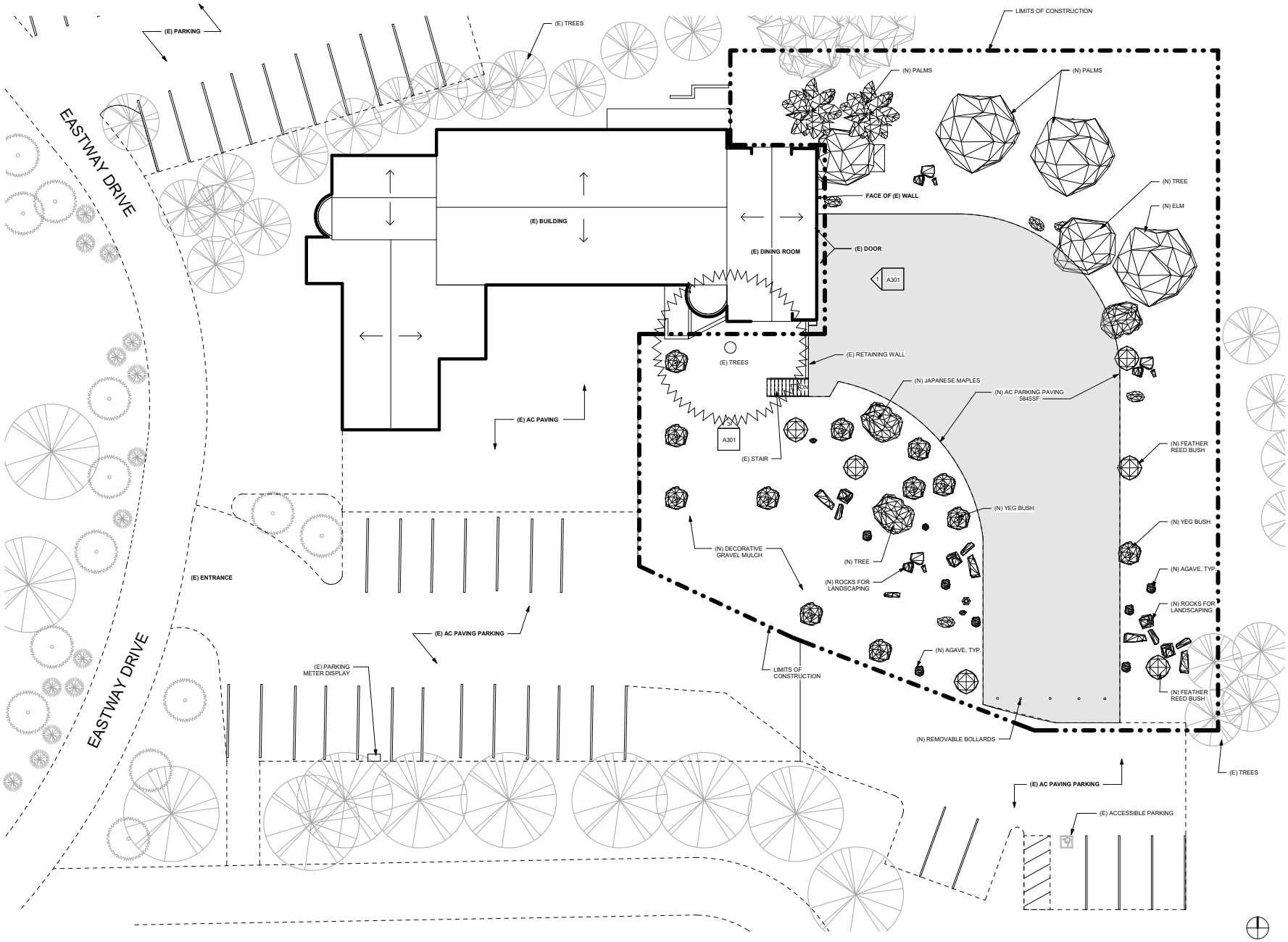
0 25 50 Feet

FIGURE 3-5

Proposed Partial Demolition of Building 21 and Modifications

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.



SOURCE: Interactive Resources 2021

FIGURE 3-6

Proposed Partial Demolition of Building 21 Site Plan

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

3.7 PLANNING CONTEXT

Applicable university plans and policies are described below.

3.7.1 2020 LRDP AND 2021 LRDP

Adopted by the Regents in January 2005, the 2020 LRDP describes both the scope and nature of physical development necessary to achieve the academic mission of UC Berkeley for an estimated campus population projected through academic year 2020 to 2021 (UC Berkeley 2005). The 2020 LRDP also prescribes a comprehensive set of principles, policies, and guidelines to inform the location, scale and design of individual capital projects. The CKC is adjacent to the Southside area of the LRDP. The CKC includes student and faculty housing, conference facility, childcare, maintenance and storage, and recreational facilities. Although many of its 26 buildings require extensive repairs and upgrades, including seismic upgrades, no significant change in either the use or physical character of CKC was proposed in the 2020 LRDP.

In response to future space demand by campus programs, the 2020 LRDP indicated that capital investment in the Southside, adjacent the CKC, through 2020 could result in a net increase in program space of up to 50,000 gross square feet through more intensive redevelopment of existing university-owned sites. New space could also be produced on other sites by the university directly or through joint ventures. In 1982, the university executed the Covenants with neighboring property owners and a MOU with the City of Berkeley, both of which generally commit the university to a site plan and land use program on the CKC for a period of 50 years.

The university recently prepared the 2021 LRDP, which was adopted by the Regents in July 2021 (UC Berkeley 2021a). The land use element of the 2021 LRDP identifies potential areas of new development and redevelopment in the CKC land use zone. Uses include student and faculty housing, a conference center, childcare facilities, and indoor and outdoor athletics and recreation facilities. As previously indicated, the Covenants that apply to the CKC and the MOU with the City of Berkeley, generally limit significant changes in either the use or physical character of the CKC through the year 2032, absent a change in circumstance. Land use objectives for the CKC identified in the 2021 LRDP include the following:

- Maintain and enhance the residential and historic character of the existing CKC. Consider strategic renovation and seismic improvement projects that address existing buildings' space needs and life-safety requirements.
- Through strategic development on infill sites, make the highest and best use of the CKC to meet UC Berkeley's housing objectives. Prioritize infill development and mobility improvements on existing surface parking or underutilized open spaces.
- Consider and evaluate demolition, redevelopment, or renovation of existing buildings that no longer meet programmatic needs, or that have significant seismic or other physical deficiencies that cannot feasibly be corrected. Additional uses should contribute to the CKC's residential community.
- Maintain, improve, and expand indoor and outdoor athletics and recreation facilities and open space resources on the CKC as amenities for the campus community, and to provide broader community access where capacity is available.

3.7.2 2020 LRDP EIR AND 2021 LRDP EIR

The 2020 LRDP EIR provides a comprehensive program-level analysis of the 2020 LRDP, including potential effects on the environment that would result from implementation of the 2020 LRDP in accordance with Section 15168 of the CEQA Guidelines. The 2020 LRDP EIR prescribes CBPs and mitigation measures for all projects implemented under the 2020 LRDP. The 2020 LRDP was adopted in January 2005 and projected development needs through the academic year 2020-2021. UC Berkeley recently updated the 2020 LRDP in its 2021 LRDP, and completed the 2021 LRDP EIR, which has a planning horizon through the 2036-37 academic year and was certified by the Regents in July 2021 (UC Berkeley 2021b and 2021c).

3.7.3 1979 DWIGHT-DERBY SITE PLAN EIR

The 1979 Dwight-Derby Site Plan EIR evaluates the Dwight-Derby Site Plan dated May 1979, as revised by the University Plan-Dwight Derby Site dated March 1982, which are collectively referred to as the Dwight-Derby Site Plan (UC Berkeley 1979). The Dwight-Derby Site Plan generally provides for the retention and maintenance of the existing buildings and recreational facilities on the CKC. Building 21 is designated as storage in the site plan. The proposed project site for the beach volleyball portion of the project is designated for recreational uses, and the intent of the Dwight-Derby Site Plan is to maintain and expand recreational uses on the CKC. Some of the mitigation measures from the 1979 Dwight-Derby Site Plan EIR apply to the proposed project. The mitigation measures from the 1979 Dwight-Derby Site Plan EIR are provided and reviewed in Appendix C, Review of 1979 Dwight-Derby Site Plan EIR Mitigation Measures. As indicated in Section 2, Introduction, Appendix C contains a list of the 1979 mitigation measures, including their applicability to the proposed project, and where relevant, proposed revisions and/or replacement of several of these mitigation measures are provided to make them feasible[7] to implement through the inclusion of objective performance standards. Some of these measures do not provide objective performance standards, do not reflect CEQA best practices for mitigation, and are otherwise outdated and obsolete. For 1979 mitigation measures that have been revised and/or replaced in this Draft EIR, Appendix C provides substantial evidence demonstrating the infeasibility of these 1979 mitigation measures, and the effectiveness of these revised mitigation measures in eliminating or reducing the applicable potentially significant environmental impact relative to the 1979 mitigation measures being modified or replaced.

In some cases, applicable 1979 mitigation measures are identified in the technical analysis contained in this Draft EIR, in Chapter 4, Environmental Setting, Impacts and Mitigation Measures, when needed to address an identified adverse physical effect on the environment. In other cases, the applicable mitigation measures are implemented as part of the proposed project, as the project characteristics and design implement the measures. The 1979 mitigation measures that are implemented as part of the proposed project are listed in Table 3-2. See Appendix C for all 1979 mitigation measures.

[7] As indicated in CEQA Guidelines Section 15364, “feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

TABLE 3-2. 1979 MITIGATION MEASURES IMPLEMENTED BY THE PROPOSED PROJECT

1979 EIR Mitigation Measures	How Proposed Project would Implement 1979 Mitigation Measures
1. Community Concerns	
1.a. Continuing notification to the community and the City of the steps and time of the possible acquisition and reuse process.	The mitigation measure would be implemented as part of the proposed project, as UC Berkeley has been notifying the community and City about the proposed project per University continuing best practice (CBP) AES-4 (see Draft EIR Appendix D).
1.b. Completion and implementation of joint recreation agreements.	The mitigation measure would be implemented as part of the proposed project as the new beach volleyball courts would be available for use by the broader community on a reservation basis, consistent with the current reservation practices of Intercollegiate Athletics (IA) (see here in Draft EIR Chapter 3, Project Description).
1.c. A commitment to maintain the site in a form which keeps its appearance as close to the present as possible.	The mitigation measure would be implemented as part of the proposed project by not resulting in changes to existing land uses.
2. Geology, Soils and Seismicity	
2.a. No buildings will be constructed within 50 feet of the accurately located active trace of the Hayward fault.	The mitigation measure would be implemented as part of the proposed project, as the project sites avoid locations within 50 feet of the active trace of the Hayward fault (see Draft EIR Appendix B).
2.d. Any new facilities will be designed in accordance with the most modern applicable codes for earthquake design and reduction of life hazard.	The mitigation measure would be implemented as part of the proposed project as it is required to comply with all applicable codes for earthquake design and reduction of life hazard regardless of this mitigation measure. The proposed project would also comply with University of California Seismic Safety Policy per University CBP-GEO-1 (see Draft EIR Appendix D).
2.e. In final detailed planning and analyses, each area, structure or other facility will be individually and specifically considered.	The mitigation measure would be implemented as part of the proposed project as it would implement University CBPs GEO-1 through GEO-8, which require compliance with University of California Seismic Safety Policy, preparation of site-specific geotechnical studies, and implementation of design parameters and other recommendations from these studies (see Draft EIR Appendix D).
3. Hydrology and Drainage	
3.a. The University will provide good maintenance of drainage facilities, particularly at inlet areas *).*	The mitigation measure would be implemented as part of the proposed project as it would implement University CBP HYD-9, which requires that the campus storm drain system be maintained and cleaned to accommodate runoff (see Draft EIR Appendix D).
4. Air Quality	
4.a. In addition to transportation mitigation measures, and a reduction of pollutant emissions, air quality impacts due to construction and demolition will be controlled by watering demolition debris.	The mitigation measure would be implemented as part of the proposed project as it would implement University CBPs AIR-2 and AIR-3, which provide for compliance with the current Bay Area Air Quality Management District basic control measures for fugitive dust control, including watering active construction areas (see Draft EIR Appendices B and D).
5. Flora and Fauna	
5.a. The existing landscape will be maintained or improved.	The mitigation measure is implemented as part of the proposed project as it would result in planting approximately 11 trees on site to replace six trees that would be removed. Additionally, per UC Berkeley Specimen Tree Program and University CBP BIO-9, the specimen trees removed would be replaced at a 3:1 ratio (see here in Draft EIR Chapter 3, Project Description and Draft EIR Appendix D).
9. Water System	
The University will evaluate the installation of water conserving equipment (e.g., timed lawn sprinklers).	The mitigation measure would be implemented as part of the proposed project as it would implement green facility standards of the University of California Sustainable Practices Policy, the UC Berkeley Campus Design

TABLE 3-2. 1979 MITIGATION MEASURES IMPLEMENTED BY THE PROPOSED PROJECT

1979 EIR Mitigation Measures	How Proposed Project would Implement 1979 Mitigation Measures
	Standards, and University CBP USS-3 (see Draft EIR Appendix D), which would incorporate specific water conservation measures into the proposed project design. Further, sod lawn would be minimized with the proposed project (see here in Draft EIR Chapter 3, Project Description).
10. Electric System	
The installation of individual meters at each apartment will be evaluated.	The mitigation measure would be implemented as part of the proposed project as the new electrical line connection to the proposed support building would have a new meter (see here in Draft EIR Chapter 3, Project Description).
15. Street Lighting	
Energy efficient lamps and fixtures will be considered.	The mitigation measure would be implemented as part of the proposed project as it would implement the energy efficiency and green facility standards of the University of California Sustainable Practices Policy, the UC Berkeley Energy Use Policy, and the UC Berkeley Campus Design Standards. At a minimum, the proposed project would be designed and constructed to the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Building Design and Construction (BD+C) Silver Certification. The support building would incorporate passive cooling, high solar reflectance surfaces, natural daylighting, radiant heat, low-flow fixtures, recycled materials, and LED lighting to reduce water and energy consumption (see here in Draft EIR Chapter 3, Project Description).
16. Energy Consumption	
Energy conservation will be practiced, including study of individual meters at each apartment, use of insulation, and installation of efficient lighting.	The mitigation measure would be implemented as part of the proposed project as it would implement energy efficiency and green facility standards of the University of California Sustainable Practices Policy, the UC Berkeley Energy Use Policy, and the UC Berkeley Campus Design Standards. At a minimum, the proposed project would be designed and constructed to the U.S. Green Building Council's LEED BD+C Silver Certification. The support building would incorporate passive cooling, high solar reflectance surfaces, natural daylighting, radiant heat, low-flow fixtures, recycled materials, LED lighting to reduce water and energy consumption, and would have separate metering (see here in Draft EIR Chapter 3, Project Description).
19. Fire Suppression	
Remodeling of the interior of the buildings by the University will bring the buildings up to code. University policy calls for the installation of fire sprinklers in buildings. The campus will be supportive of City efforts again to introduce legislation to have the State provide funds to the University to pay the City for fire suppression services. Currently, such payments are prohibited by law.	The proposed project does not involve remodeling the interior of existing buildings. However, the mitigation measure would be implemented as part of the proposed project, where relevant, as the new support building will include fire sprinklers and a fire alarm system. Additionally, a new fire hydrant would be installed at the southeast corner of the site (see here in Draft EIR Chapter 3, Project Description).
22. Neighborhood Identity	
22.a. The potential acquisition of the site by the University will result in maintenance of the site in its current appearance as part of the neighborhood land uses.	The mitigation measure would be implemented as part of the proposed project by not resulting in changes to existing land uses.
22.b. The concern that the residential areas surrounding the site will change in use as a result of the University's acquisition can best be	The mitigation measure would be implemented as part of the proposed project by not resulting in changes to existing land uses.

TABLE 3-2. 1979 MITIGATION MEASURES IMPLEMENTED BY THE PROPOSED PROJECT

1979 EIR Mitigation Measures	How Proposed Project would Implement 1979 Mitigation Measures
mitigated by continued observance of the City's building and zoning regulations.	
22.c. The University will continue to cooperate and meet with neighborhood and community organizations to improve community-campus relations, and maintain the integrity of the existing neighborhoods.	The mitigation measure would be implemented as part of the proposed project, as UC Berkeley has been notifying the community and City about the proposed project per University CBP AES-4 (see Draft EIR Appendix D).
23. Recreation	
23.e. Joint-use agreements between the campus and the city for the recreation facilities on the site will be adopted and implemented.	The mitigation measure would be implemented as part of the proposed project as the new beach volleyball courts would be available for use by the broader community on a reservation basis, consistent with the current reservation practices of IA (see here in Draft EIR Chapter 3, Project Description).
23.f. Neighborhood use of the recreation facilities will be encouraged.	The mitigation measure would be implemented as part of the proposed project as the new beach volleyball courts would be available for use by the broader community on a reservation basis, consistent with the current reservation practices of IA (see here in Draft EIR Chapter 3, Project Description).
24. Traffic, Transportation, Circulation and Parking	
24.f. Staff members will be encouraged to take alternative means of transportation other than the auto.	The proposed project would not result in the hiring of new staff. However, the mitigation measure would be implemented as part of the proposed project as it would implement project-specific Transportation Demand Management (TDM) measures, as described here in Chapter 3, Project Description. Additionally, UC Berkeley is already implementing a comprehensive TDM program and recent surveys indicate that 44 percent of UC Berkeley staff drive alone, given the existing university-wide TDM measures that are in place on the campus (see Draft EIR Section 4.6, Transportation).
26. Visual Resources	
26.b. In general, the appearance of the buildings will be maintained, with minimal exterior visual modifications.	The mitigation measure would be implemented as part of the proposed project, as only a partial demolition of seismically deficient Building 21 would be implemented and walls and doors on the remaining exterior wall would be maintained and painted to match the existing paint (see here in Draft EIR Chapter 3, Project Description).
26.d. The attractive series of outdoor spaces will be maintained in their present condition.	The mitigation measure would be implemented as part of the proposed project by not resulting in changes to existing land uses. The outdoor recreational use type of the existing softball field will be retained with the implementation of the beach volleyball courts. The attractive series of outdoor spaces and courtyards will be maintained and are not affected by the proposed project, as such courtyards do not exist on the project site locations.
29. Construction	
Procedures to minimize construction impacts will be developed. Such measures will include the instructing of the various contractors to become familiar with the traffic and circulation patterns around the site, and to schedule their activities to ensure that potential impacts are not compounded.	The mitigation measure would be implemented as part of the proposed project as it would implement University CBPs TRAN-5 through TRAN-8, which provide for the preparation of a Construction Traffic Management Plan, management of construction schedules to minimize overlap, and reimbursement for damage to City streets (see Draft EIR Appendix D).

3.7.4 UNIVERSITY CONTINUING BEST PRACTICES

UC Berkeley currently implements CBPs to ensure environmental impacts from development and ongoing UC Berkeley operations would be reduced and/or avoided to the greatest extent feasible. CBPs are imposed against both proposed projects and as part of UC Berkeley's standard, ongoing operations. In some cases, CBPs reference existing regulatory requirements that have been determined to be the most effective and practical means of preventing or reducing environmental impacts. The current CBPs were recently updated as part of the 2021 LRDP EIR. Relevant CBPs would be applied to the proposed project. The CBPs have been reviewed for their adequacy in reducing and/or avoiding impacts to the environment in the 2021 LRDP EIR. The CBPs are listed where relevant in the impact analyses presented in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, to illustrate how they would help to reduce and/or avoid environmental impacts from the proposed project. A list of CBPs applicable to the proposed project is provided in Appendix D, University Continuing Best Practices, of this Draft EIR.

3.7.5 CITY OF BERKELEY SOUTHSIDE PLAN

The university is constitutionally exempt from local land use regulations, including City of Berkeley regulations and designations, when using property under its control in furtherance of its educational mission. However, the university seeks consistency with local plans and policies when feasible. The 2021 LRDP requires the consideration of the City of Berkeley Southside Plan (City of Berkeley 2011) to the extent feasible in the planning and development of university properties within the City Environs, to support the vitality of surrounding neighborhoods (UC Berkeley July 2021a). The City Environs are shown in Figure 3-1 and are located north and west of the CKC. The 2011 Berkeley Southside Plan applies to the city's Southside neighborhood, which encompasses approximately 28 city blocks south of the Campus Park and north and west of the CKC. Land uses within this area include a mix of residential, institutional, office, retail, social/cultural, mixed-use, open space, and others, and there are a number of UC Berkeley–owned properties in this area. Some of the goals of the land use and housing element of the Southside Plan focus on prioritizing the creation of housing, including the creation of additional affordable housing for students and local residents; the construction of infill buildings on underutilized sites; the protection of the historic, physical, and social character of the neighborhood; and the enhancement of pedestrian space.

3.7.6 PHYSICAL DESIGN FRAMEWORK AND UC BERKELEY DESIGN REVIEW

The UC Berkeley Physical Design Framework (Framework), accepted by the Regents in November 2009 and updated concurrently with the 2021 LRDP (UC Berkeley 2021d), includes principles for both land use and architecture. The Framework is an advisory guidance document intended to convey a set of design intentions, rather than prescriptive regulations or mandates, and is used by the UC Berkeley Design Review Committee when reviewing a project's design. While campuses are required to consider the Framework's guidelines and principles in developing their projects, a project is not required to be consistent with every guideline in the Framework. The following are applicable guidelines to the proposed project, which is within the CKC and adjacent to the City Environs as defined in the 2021 LRDP (see Figure 3-1):

- Strategy CKC-1: Respect and respond to existing development patterns and enhance the campus's visual appearance.
    - Complement how the Clark Kerr Campus's buildings frame and enclose landscape spaces, and the emphasis on human-scaled environments.

    - Strive to reduce impervious surface area and incorporate stormwater management strategies in new and existing open spaces.
- Strategy CKC-2: Plan new facilities to foster a dynamic and active community that is connected to the campus as a whole.
    - Enhance connectivity between the Campus Park and the Clark Kerr Campus through the addition of new pedestrian pathways and gateways, and other site and mobility improvements.
    - Strengthen pedestrian and programmatic connectivity within the Clark Kerr Campus, and prioritize pedestrian and bicycle circulation.
    - Renew and complement housing and athletics and recreation facilities, in support of the campus community, the residential community, and the public.

In accordance with CBP AES-2, the proposed beach volleyball courts design was reviewed by the UC Berkeley Design Review Committee in 2018 and 2019. Comments received were reviewed with the project design team. The Design Review Committee was primarily concerned with mass, scale, aesthetics, tree removal, natural lighting for the support structure and the historic context of the CKC. The proposed design was refined based on the feedback from the Design Review Committee to integrate it within the context of the CKC, and to reduce the scale and introduce clerestory lighting for the support structure. Modifications to Building 21 are subject to review by the Campus Architect and were reviewed in 2021.

3.7.7 UNIVERSITY OF CALIFORNIA SUSTAINABLE PRACTICES POLICY

At the direction of the Regents of the University of California, the University of California Office of the President (UCOP) developed a Sustainable Practices Policy which establishes sustainability goals to be achieved by all campuses, medical centers, and the Lawrence Berkeley National Laboratory within the UC system. This policy was adopted by the UC system and is regularly updated, with the most recent update occurring in July 2020. The policy goals encompass nine areas of sustainable practices: green building, clean energy, transportation, climate protection, sustainable operations, waste reduction and recycling, environmentally preferable purchasing, sustainable food service, and sustainable water systems. It requires UC campuses to achieve climate neutrality by having net zero climate impacts from greenhouse gas (GHG) emissions attributed to scope 1 direct emission sources and scope 2 indirect emission sources as defined by The Climate Registry by 2025, and specific scope 3 emissions as defined by Second Nature's Carbon Commitment by 2045. This will be achieved by minimizing GHG emissions from these sources as much as possible and using carbon offsets or other measures to mitigate the remaining GHG emissions.

3.7.8 UNIVERSITY OF CALIFORNIA SEISMIC SAFETY POLICY

The project would comply with the University of California Seismic Safety Policy. According to the University of California Seismic Safety Policy, the design and construction of University of California facilities shall comply with the current seismic provisions of the California Building Code for new or existing buildings, as appropriate, and with university policies (UCOP 2021). An engineer of record shall be responsible for the structural aspects of the entire project and must sign and stamp all final documents, including deferred submittals, for which he/she is responsible. Peer review, with an independent seismic peer reviewer, shall be conducted on all new construction and all renovation of University of California facilities that involve structural design and that are intended for human occupancy or that may affect the life or safety of the occupants. The independent seismic peer reviewer shall be

contracted and paid directly by the University of California. The designated campus building official shall select the independent seismic peer reviewer and plan for the peer review.

The beach volleyball courts project was reviewed by UC Berkeley's Seismic Review Committee on January 22, 2019 (UC Berkeley 2019b). The committee agreed with the selection of a structural mat foundation for the support building and provided recommendations for utility design.

Building 21 has been vacant since 1979 due to seismic concerns, except for storage use. Preliminary seismic evaluation rated the building's seismic performance as "poor," and identified a number of serious seismic hazards on the building interior, such as brittle clay walls that are prone to cracking and even potential 'explosion' under sufficient deflection in addition to risk of roof collapse. A subsequent 2020 seismic evaluation concurred with the preliminary seismic performance, with deficiencies found in the wood roof diaphragm and non-critical deficiencies in concrete wall reinforcing steel offset by the length of concrete wall and floor structure (Degenkolb 2020). Nonstructural interior hollow clay tile partitions found in some partitions were noted as a falling hazard.

3.7.9 UC BERKELEY SPECIMEN TREE PROGRAM

The UC Berkeley Specimen Tree Program guides the evaluation and designation of Specimen Trees. Other plants (e.g., shrubs, groundcover, or grasses) that 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; should not pose a hazard to pedestrian and automotive traffic, existing buildings, or utilities; and should have one or more of the following qualities: aesthetic, historical, or educational value, or location in Strawberry Creek or a natural area. Determination of specimen status may extend to a group of trees where individually a tree may not merit such status, but as a group or association the collective import is greater than that of the individual plants alone.

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. Specimen species that are impacted must either be transplanted or replaced by new plantings in kind or from species previously recorded on the CKC at a ratio of 3 to 1. New plantings are selected as horticulturally appropriate at the largest possible nursery sizes. Landscaped areas are restored to the full feasible extent.

As shown in Figure 3-4, a total of four specimen trees (compact blue gum trees) would be removed along the perimeter of the beach volleyball courts site (Hort Science 2018). Specimen trees would be replaced by transplanting or would be replaced by new planting in kind on the CKC at a ratio of 3 to 1 in the closest available sizes, as required by the UC Berkeley Specimen Tree Program. No specimen trees would be removed for the partial demolition of Building 21.

3.7.10 STATE HISTORIC PRESERVATION OFFICE

As described above, the proposed project is located within a NRHP Historic District, as previously described. The Historic District is also listed in the California Register of Historic Resources (CRHR) and is a City of Berkeley landmark. As such, the Historic District and its contributing elements are historical resources under CEQA. The university initiated consultation with the California State Historic Preservation Officer (SHPO) on July 15, 2020 via a letter describing the proposed project and affected Historic District properties.

3.7.11 CITY OF BERKELEY LANDMARKS PRESERVATION COMMISSION

Consistent with the university's CBP AES-4, UC Berkeley makes informational presentations of all major projects in the City Environs in Berkeley, which includes the CKC, to the Berkeley Planning Commission or, if relevant, the Berkeley Landmarks Commission.

Previously, as part of the outreach process for interested parties in September 2018, UC Berkeley provided the City of Berkeley Landmarks Preservation Commission an overview of the proposed beach volleyball courts, the project objectives, and the university approval process and identified Building 21, as well as possible other buildings on the CKC for demolition, per the UC Seismic Safety Policy, due to the serious seismic risk associated with the buildings.

UC Berkeley presented to the Landmarks Preservation Commission on November 4, 2021. The university received comments from the public and the commissioners on the project and responded to the comments.

3.8 REFERENCES

City of Berkeley. 2011. Southside Plan. Adopted by the Berkeley City Council September 27, 2011.

City of Berkeley. 2020. Municipal Code Section 13.40.070, Prohibited acts. December 15, 2020. Accessed March 29, 2021 at: https://www.codepublishing.com/CA/Berkeley/?Berkeley13/Berkeley1340/Berkeley1340070.html&?f#:~:text=Noise%20Disturbances%20Prohibited.,030.&text=060%2C%20except%20for%20sound%20levels,been%20issued%20by%20the%20EHD.

Degenkolb. 2020. ASCE 41-17 Tier 1 Seismic Evaluation for Clark Kerr Campus 21 – Storage. January.

Hort Science. 2018. University of California Berkeley, Clark Kerr Ball Field, Tree Assessment. Prepared by Hort Science. May 2018.

NRHP (National Register of Historic Places). 1982. National Register of Historic Places Inventory Nomination Form, State Asylum for the Deaf, Dumb, and Blind. Received May 8, 1982.

Preservation Architecture. 2019. Buildings 21 and 22 Clark Kerr Campus, UC Berkeley Historical Documentation. June 12, 2019.

UC Berkeley (University of California, Berkeley). 1979. *Dwight Derby Site Plan (Schools for the Deaf and Blind) and Final Environmental Impact Report*. May 1979.

UC Berkeley. 2005. *2020 Long Range Development Plan*. January 2005.

UC Berkeley. 2019a. Parking Study. Prepared by National Data & Surveying Services. 9/17/2019-9/18/2019.

UC Berkeley. 2019b. Seismic Review Committee Meeting Notes. January 22, 2019.

UC Berkeley. 2021a. *UC Berkeley 2021 Long Range Development Plan.* July 2021.

UC Berkeley. 2021b. *UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Draft Environmental Impact Report (State Clearinghouse Number: 2020040078).* March 2021.

UC Berkeley. 2021c. *UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Final Environmental Impact Report (State Clearinghouse Number: 2020040078)*. July 2021.

UC Berkeley. 2021d. *UC Berkeley Physical Design Framework*. July 2021.

UCOP (University of California Office of the President). 2021. Seismic Safety Policy. January 16, 1975; last amended March 19, 2021.

4. Environmental Setting, Impacts, and Mitigation Measures

4.1 INTRODUCTION TO ANALYSES

This chapter provides an analysis of the physical environmental effects of implementing the Clark Kerr Campus (CKC) Beach Volleyball Courts Project (proposed project or project). The following sections in this chapter evaluate the environmental impacts of the proposed project:

- 4.2 — Aesthetics
- 4.3 — Cultural Resources and Tribal Cultural Resources
- 4.4 — Land Use and Planning
- 4.5 — Noise
- 4.6 — Transportation

4.1.1 SCOPE OF ANALYSES

4.1.1.1 SECTION ORGANIZATION

Each environmental resource section listed above is organized as follows:

- **Environmental Setting.** This section provides a general overview of the existing physical environmental conditions related to the topic being addressed, based on the conditions present at the time that the Notice of Preparation for the EIR was released (2020).
- **Regulatory Framework.** This section describes applicable University, federal, state, and local laws and regulations relevant to the environmental resource topic and the proposed project.
- **Impacts and Mitigation Measures.** This section identifies thresholds of significance used to evaluate whether an impact is considered significant, based on standards derived from Appendix G of the California Environmental Quality Act (CEQA) Guidelines. In some cases, agency policies and regulations or professional judgment are used to further define CEQA significance thresholds.

  This section first presents a discussion of the significance thresholds for which no impacts have been identified, if any. The section then evaluates and analyzes project impacts, states the level of significance prior to mitigation, and proposes mitigation measures for significant or potentially significant impacts that would reduce such impacts, if feasible. A statement regarding the level of significance of each impact after mitigation precedes the mitigation measures for that impact.

  Cumulative impacts are discussed in each environmental resource section following the description of the project-specific impacts. The cumulative impact analysis considers the effects of the proposed project together with, and against the backdrop of, other past, present, or reasonably foreseeable future projects proposed in the project vicinity and region. The cumulative impact analysis is based on the same setting, regulatory framework, and significance thresholds presented for each respective resource topic. Additional mitigation measures may be identified if the analysis determines that the proposed project's incremental contribution to a significant cumulative impact would be cumulatively considerable and, therefore,

significant in and of itself. Section 4.12, Cumulative Impacts Overview, below describes the assumptions and methodology for assessing cumulative impacts.

4.1.1.2 SIGNIFICANCE DETERMINATIONS

In accordance with CEQA, specifically Public Resources Code Section 21068, a "significant effect on the environment" means a substantial or potentially substantial adverse change in the environment. The significance thresholds used for each environmental resource topic are presented in each section of this chapter immediately before the discussion of impacts. For each impact described, one of the following significance determinations is made:

- ***No Impact.*** This determination is made if there is no potential that the proposed project could affect the resource at issue.
- ***Less than Significant.*** This determination applies if there is a potential for some limited impact on a resource, but the impact is not significant in accordance with the significance standard.
- ***Less than Significant with Mitigation.*** This determination applies if there is the potential for a substantial adverse effect in accordance with the significance standard, but mitigation is available to reduce the impact to less than significant.
- ***Significant and Unavoidable.*** This determination applies to impacts that are significant, and for which there appears to be no feasible mitigation available to substantially reduce the impact.

4.1.2 CUMULATIVE IMPACTS OVERVIEW

The section below presents the CEQA requirements pertaining to the cumulative impacts analysis and the cumulative projects that have been considered in the cumulative impacts analysis presented for each environmental resource topic, at the end of each section in this chapter.

4.1.2.1 CEQA GUIDELINES REQUIREMENTS

CEQA Guidelines Section 15130(a) requires that an environmental impact report (EIR) discuss cumulative impacts of a project "when the project's incremental effect is cumulatively considerable." As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. Pursuant to CEQA Guidelines Section 15065(a)(3), "cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," the lead agency need not consider the effect significant.

CEQA requires an evaluation of cumulative impacts when they are significant. When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. Furthermore, according to CEQA Guidelines Section 15130 (a)(1), there is no need to evaluate cumulative impacts to which the project does not contribute.

An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus not significant when, for example, a project funds its fair share of a mitigation

measure designed to alleviate the cumulative impact. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide detail as great as that provided for the impacts that are attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified project contributes.

CEQA Section 21094(e)(1) states that if a lead agency determines that a cumulative effect has been adequately addressed in a prior environmental impact report, that cumulative effect is not required to be examined in a later EIR. The section further indicates that cumulative effects are adequately addressed if the cumulative effect has been mitigated or avoided as a result of the prior EIR and adopted findings or can be mitigated or avoided by site-specific revisions, imposition of conditions or other means in connection with the approval of the later project (CEQA Section 21094[e][4]).

4.1.2.2 CUMULATIVE PROJECTS AND SCOPE OF ANALYSIS

The analysis of cumulative impacts may consider either 1) a list of past, present, and probable future projects producing cumulative impacts or 2) a summary of growth projections contained in an adopted plan that evaluates conditions contributing to cumulative impacts, such as those contained in a General Plan. Projects that are relevant to the cumulative analysis include projects that could:

- Contribute incremental environmental effects on the same resources as, and would have similar impacts to, those discussed in the EIR applicable to the proposed project.
- Be located within the defined geographic scope for the cumulative effect. The defined geographic scope is dependent on the environmental resource affected.
- Contribute impacts that coincide with the proposed project's impacts during either construction (short-term) or operation (long-term).

This EIR uses a list-based approach for the development of the cumulative projects. Based on the above factors, cumulative projects considered for the analysis include pending projects in the City of Berkeley, on the UC Berkeley campus, and on the Lawrence Berkeley National Laboratory campus (see Table 4.1 1).

TABLE 4.1-1. CUMULATIVE PROJECTS

Project Name	Project Location / UC Berkeley Campus Zone	Project Description	Estimated Construction Schedule
Pending Projects in the City of Berkeley			
2510 Channing Way	2510 Channing Way	Construction of 8-story building with ground-floor commercial and 40 dwelling units	Unknown
Alexander C. Stuart House	2524 Dwight Way	Construction of detached 2-story residence and renovation of existing City Landmark single-family residence	Unknown
2435 & 2441 Haste Street	2435 & 2441 Haste Street	Demolition of existing 2-story residential building at 2435 Haste St. and replacement with 32-unit, 5-story, residential building that would occupy space on both 2435 and 2441 Haste St.	Unknown

TABLE 4.1-1. CUMULATIVE PROJECTS

Project Name	Project Location / UC Berkeley Campus Zone	Project Description	Estimated Construction Schedule
1951 Shattuck Avenue Mixed-Use Project	1951 Shattuck Avenue	Construction of 12-story residential building with 156 rental units and ground-floor retail	24-month construction duration; start date unknown
Shattuck Square	2023 Shattuck Avenue	Demolition of existing structure; construction of new 7 story mixed-use building with 46 units and ground-floor commercial space	Unknown
Regent Terrace	2597 Telegraph Avenue	Construction of 10 mixed-income townhouse units	Unknown
Acheson Commons	1979–1987 Shattuck Avenue, 2101–2113 and 2125–2145 University Avenue, 1922 and 1930 Walnut Street	Construction of 250 mixed-income housing units and 14,000 square feet of retail space	August 2018 – Ongoing as of March 2021
Southside Plan Area	Southside Plan Area: bounded by Dwight Way to the south, Bancroft Way to the north, Prospect Street to the east, and Fulton Street to the west	Southside Plan (Zoning Ordinance) Amendments by City of Berkeley Planning Department	N/A
East Bay Municipal Utility District (EBMUD) Summit Pressure Zone South Pipeline Replacement Phase 1	Pipeline work will take place on Dwight Way near Fernwald Road and on UC Berkeley's CKC, east of the CKC Golden Bear Field, as well as in other surrounding areas west and south of the CKC.	EDMUD will install a new pipeline in a segment of Dwight Way between Prospect Street and Piedmont Avenue and will also replace an existing pipe in the CKC east of the Golden Bear Field. Other new pipe will be installed west and south of the CKC.	Fall 2021 – Spring 2023
Pending UC Berkeley Projects			
Albany Village Graduate Student Housing	Albany, CA (outside of EIR Study Area)	Approximately 760 single bedroom apartments for graduate students in 6-story building	September 2022 – August 2024
Bakar BioEnginuity Hub Incubator Space	City Environs Properties	Full-service life science incubator with labs and lab benches for faculty and student start-up researchers; preserves Woo Hon Fai Hall	March 2020 – October 2021
Centennial Drive Bridge Replacement	Hill Campus East	Replacement of structurally deficient bridge on Centennial Drive; new overcrossing and re-route of Centennial Bridge, in partnership with Lawrence Berkeley National Laboratory	June 2022 – June 2024
Housing Projects #1 and #2	UC Berkeley	Housing Project #1 would involve the demolition of existing on-site structures and the construction and operation of a new 16-story (14 stories above ground) mixed-use building that would include student housing (approximately 770 beds), campus life space (approximately 20,000 square feet), and ground-floor commercial (approximately 17,000 square feet) Housing Project #2 would involve the demolition of the existing on-site structures and park amenities, and the construction and operation of two new mixed-use buildings and revitalized open space, including: (1) a proposed student residential building for student and	Housing Project #1 December 2021 – August 2024 Housing Project #2 Summer 2022 – August 2025

TABLE 4.1-1. CUMULATIVE PROJECTS

Project Name	Project Location / UC Berkeley Campus Zone	Project Description	Estimated Construction Schedule
		faculty/staff housing (approximately 1,187 beds), campus life space (approximately 12,000 square feet), and ground-floor public space (approximately 3,500 square feet); and (2) an affordable and supportive housing building (approximately 125 beds) and academic life space for a clinic (approximately 7,000 square feet)	
Moffitt Library Seismic Retrofit	Campus Park	Seismic corrections and retrofitting	February – July 2022
Softball Project	Hill Campus West	Demolition of all existing facilities and construction of an NCAA-compliant field with a 1,500-seat capacity	April 2023 – October 2024
Upper Hearst	City Environs Properties	Faculty housing and Goldman School of Public Policy expansion	Unknown
Weill Hall Neurohub	Campus Park	Renovation of several areas of Weill Hall (formerly LSA) to create the physical center of Weill Neurohub East	February – August 2022
Wildland Vegetative Fuel Management Plan	Hill Campus East	Plan intended to provide guidance to implement projects that reduce wildfire risk	Summer 2021 – Not yet determined
Pending Lawrence Berkeley National Laboratory (LBNL) Projects			
Advanced Light Source Upgrade	LBNL	Upgrade of the Advanced Light Source (ALS) that will endow the ALS with revolutionary x-ray capabilities	2021 – 2025
BioEPIC Building	LBNL	Construction of new 73,000-square-foot laboratory and office building	2021 – 2024
Linear Asset Replacement Project (LAMP)	LBNL	Sitewide utility project; utilities include natural gas, domestic water, electrical, communication/data, storm drain, and sanitary sewer systems. In planning stages.	Phase 1: 2024 – 2026 Phase 2: 2026 – 2030
B79 Demolition	LBNL	Historical site assessment, characterization, and demolition of 4,593-square-foot Salvage Processing Facility; includes slab and soil removal	Feb 2021 – Aug 2022
Grizzly Yard and Substation Expansion (LAMP Subproject 1)	LBNL	Increase of main substation permanent capacity; includes two new transformers	2024 – 2026
Transit Hub Sitework and Utilities	LBNL	Construction of new transit hub (main shuttle drop-off station) to support the with Lawrence Berkeley National Lab (LBNL) shuttle system; utility renewal-based modifications and improvements, including new electrical, sanitary sewer, water and storm drain	May 2021 – August 2024
Seismic Safety and Modernization (SSM)	LBNL	Demolition of Building 54 and construction of new "Welcome Center" facility with a cafeteria, conference room space for relocating Health Services and Human Resources personnel; includes seismic retrofit of B48	May 2022 – August 2025
B73 Modernization	LBNL	Seismic upgrade of Building and renovation to accommodate lab, office use and storage option; includes demolition of building interior and a small nearby utility building (Building 73A)	May 2022 – March 2023

Sources: UC Berkeley 2021; Lawrence Berkeley National Laboratory 2021, City of Berkeley 2021.

4.1.3 REFERENCES

City of Berkeley. 2021. City of Berkeley Planning & Development website, https://www.cityofberkeley.info/planning/, accessed June 15, 2021

UC Berkeley. 2021. *UC Berkeley Long Range Development Plan and Housing Projects #1 and #2 Final Environmental Impact Report*. July 2021.

4.2 AESTHETICS

This section describes the existing aesthetic conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the Clark Kerr Campus (CKC) Beach Volleyball Courts Project (project or proposed project). The analysis is based on site observations and photographs, review of aerial imagery of the site and surrounding area to determine existing uses and visual character, and review of project plans including field lighting.

4.2.1 ENVIRONMENTAL SETTING

The proposed project is located within the CKC land use zone and immediately east of the City Environs land use zone, as identified in the 2021 LRDP (UC Berkeley 2021a). The City Environs consist of a grid of city blocks developed with a dense but almost entirely low-rise mix of residential, commercial, and institutional buildings, which lends to its varied visual character. One- to four-story buildings with street-level shops and services and offices or residences on upper floors predominate along arterials, while interior blocks tend to be exclusively residential. The City Environs contain an eclectic mix of old and new development, with one- and two-family Craftsman homes dating from the 1910s to 1930s intermingled with newer, larger apartment buildings developed in recent decades (UC Berkeley 2005).

The CKC is a Spanish mission-style school that was built in 1949, with white facades and red tile roofs defining its unique architecture. It consists of a series of buildings, some connected by roofs over walkways, which are spread out on the CKC with small open spaces and walkways in between. The buildings range from one to four stories. The CKC currently consists of student housing and amenities, conference space including the Krutch Theater, childcare and development centers. The CKC also includes recreational facilities, including a pool, multi-purpose tennis/basketball courts, softball field, sand volleyball courts, and track field (UC Berkeley 2021a).

4.2.1.1 BEACH VOLLEYBALL COURTS SITE

VISUAL CHARACTER AND QUALITY

The proposed beach volleyball courts site comprises the existing approximately 1.1-acre (50,000-square-foot) softball field on CKC (“Golden Bear Softball Field”) that is a generally flat grass and dirt field, sloping from approximately 410 feet in elevation at the southeast corner to approximately 400 feet in elevation at the northwest corner. The west, north, and east perimeter of the site is lined by approximately 63 mature trees. Tree species include compact blue gum eucalyptus, blue gum eucalyptus, silver dollar gum, blackwood acacia, coast live oak, valley oak, coast redwood, Monterey pine, Siberian elm, and Victorian box trees. Due to the scale and density of plantings, views of the site from Dwight Way to the north and Sports Lane to the east are obscured. Several trees line the site’s southern perimeter; however, the density of vegetation is visibly less than that of the rest of the site perimeter. Chain-link fencing with attached screening fabric is also installed along the site’s north and west perimeter, further obscuring views of the site from Dwight Way. A 10- to 12-foot-high chain-link backstop structure is also erected behind the field’s home plate area and overhangs the home plate area. A narrow dirt path is located along the perimeter of the field and contains trash and recycling receptacles. Two steel shipping containers painted green have been placed along the first and third base sides of the field and are used for storage. Existing field

lighting is supported by 6 poles that are approximately 50 feet high; however, existing field lighting is in disrepair and is not currently in use. Two public announcement speakers are also mounted to the poles behind home plate.

Photographs of existing conditions at the beach volleyball courts site including existing mature trees along the site's northern boundary as viewed from Dwight Way, are included on Figure 4.2-1.

SCENIC VIEWS AND VISTAS

No scenic views and vistas (i.e., broad, long-range views such as from an elevated vista point) are available from the beach volleyball courts site due to the presence of mature trees that line the site perimeter, relatively flat topography, and intervening development.

Scenic vistas within the UC Berkeley campus are primarily located within the Hill Campus East, located north of the CKC (see Chapter 3, Project Description, Figure 3-1), where a higher elevation provides panoramic westward views toward the San Francisco Bay, with San Francisco and the Golden Gate Bridge visible on the horizon. In particular, there are a number of scenic vistas off of Grizzly Peak Boulevard, such as the Grizzly Peak Vista Point and the Grizzly Peak Boulevard Overlook, as well as views offered from the Lawrence Hall of Science and from fire roads in this zone. While views from other locations and from some of the taller UC Berkeley buildings in the rest of the UC Berkeley may also provide views, scenic vistas in terms of this analysis are limited to those accessible by the general public.

In addition to Hill Campus East, scenic vistas are available from the higher-elevation terrain of the Claremont Canyon Regional Preserve and residentially developed hillsides located to the east and northeast of the beach volleyball courts site in the Panoramic Hill area. Within the Claremont Canyon Regional Preserve, several trails and lookouts are located in the general vicinity of the beach volleyball courts site including the Stonewall Panoramic Trail (East Bay Regional Park District 2019) and a neighborhood viewpoint adjacent to Panoramic Way. The viewpoint is located approximately 0.5 miles to the east over 700 feet higher in elevation than the beach volleyball courts site. The Clark Kerr Fire Trail, which is accessible from the eastern terminus of Dwight Way approximately 250 feet east of the beach volleyball courts project site and ascends into Derby Canyon, also provides scenic vistas. Despite its proximity and hillside alignment, views from the Clark Kerr Fire Trail to the proposed beach volleyball courts site are partially to fully screened by mature eucalyptus trees planted on the slope to the east of CKC Golden Bear Field. The scenic vistas identified above, and their general proximity to the project, are depicted on Figure 4.2-2.

SCENIC RESOURCES/SCENIC HIGHWAYS

There are no eligible or officially designated state scenic highways in the immediate project area. The nearest state scenic highway, State Route 13 from approximately State Route 24 to Interstate 580 (milepost 4.2 to milepost 9.6) is approximately 1.6 miles from the beach volleyball courts site (Caltrans 2021). The nearest officially designated state scenic highway, State Route 24 east of the Caldecott Tunnel, is over two miles from the beach volleyball courts site.

LIGHT AND GLARE

Existing light and glare on the proposed beach volleyball courts site is normally associated with field lighting, which currently consists of 6 lighting poles (approximately 50 feet high) with arrays of either two or four luminaires/floodlights each on the existing softball field. However, as discussed in Chapter 3, Project Description, the existing field lighting is in disrepair and not currently in use. When the lighting was previously in use, it provided between 2 foot-candles and 93 foot-candles of illumination across the existing softball field.

Photo A

Photo B

Photo C

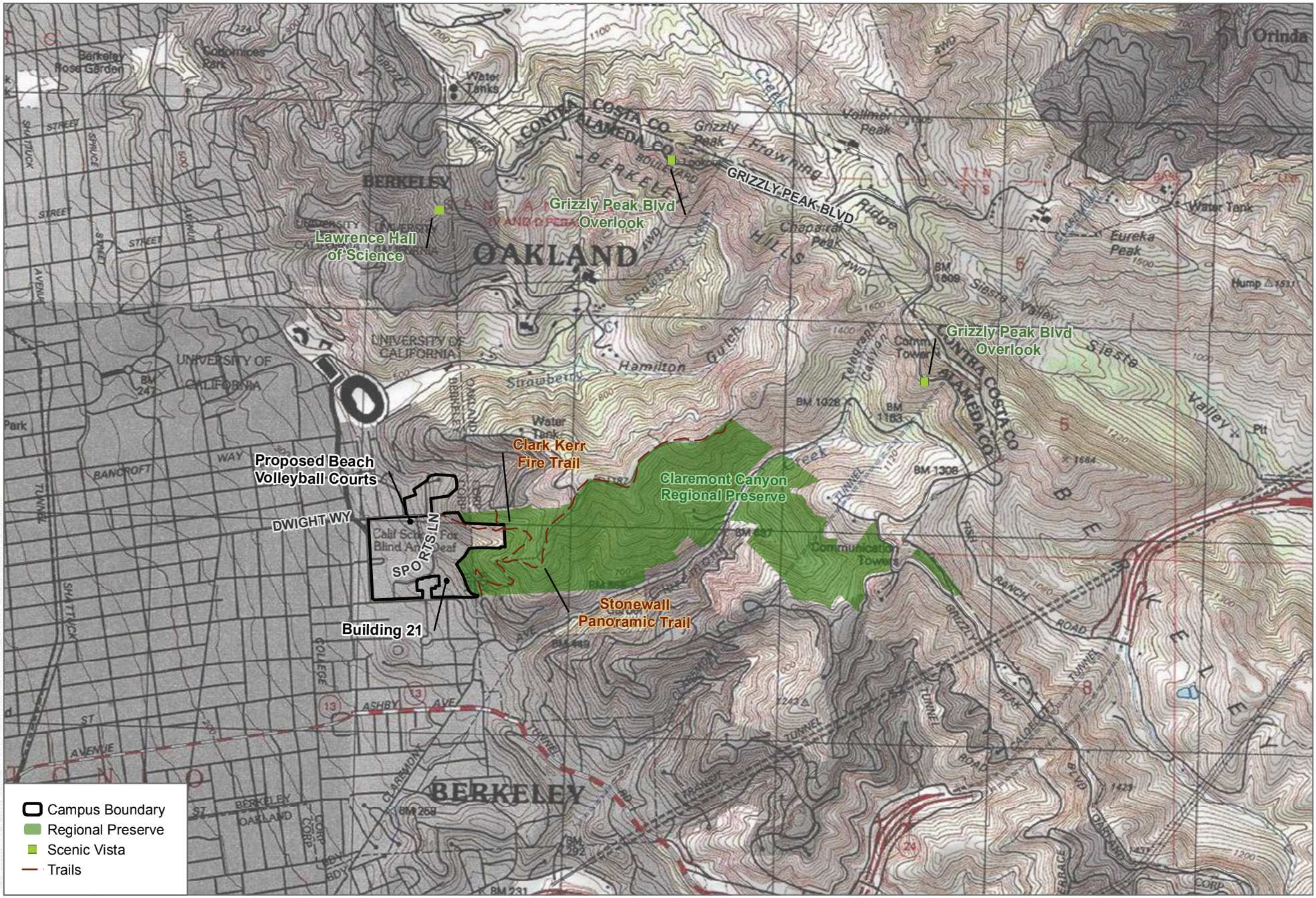
Photo D

FIGURE 4.2-1

Existing Conditions: Beach Volleyball Courts Site

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.



SOURCE: USGS 7.5-Minute Series Quadrangle

DUDEK

0 1,000 2,000 Feet

FIGURE 4.2-2

Scenic Vistas within the Project Viewshed

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

VIEWER SENSITIVITY

Viewer sensitivity in the vicinity of the beach volleyball courts site is considered high. While the existing site is developed as a softball field with inoperable field lights and is partially screened by mature trees, viewers generally have high expectations for recreational land uses. Further, the project site is located near residential uses and residents in the surrounding area have expressed concerns over development of the project site. Thus, a high viewer sensitivity is assumed for the beach volleyball courts site.

VIEWER EXPOSURE

Viewer exposure is a function of three elements: visibility, number of viewers, and duration of view. These elements, as related to the project site and primary groups provided views to the project site (i.e., road users [motorists, pedestrians, cyclists, etc.], residents, and trail-based recreationists), and project features (i.e. lighting) are described below. For purposes of this assessment, viewer exposure is associated with the duration of available daytime and nighttime views.

Motorists' views of the project site include those on Dwight Way, Sports Lane, and Hillside Avenue. The northern boundary of the project site parallels Dwight Way for approximately 230 feet and the eastern boundary parallels Sports Lane for approximately 285 feet. Existing perimeter trees and fabric-covered fencing may block the project site from view of motorists on Dwight Way (see Figure 4.2-3A, see Photo A); however, near the intersection with Hillside Avenue, fencing fabric is degraded and/or torn and makes views to the project site possible (see Figure 4.2-3A, Photo B). While the project site does not abut Hillside Avenue, southbound motorists on Hillside Avenue are provided a narrow, partial, intermittent view to the site as they approach Dwight Way due to degraded and/or torn fencing fabric on the fence lining the project site perimeter. In regard to Sports Lane, fencing is not installed along the project site's frontage along the roadway; however, available views towards the existing softball field are routinely interrupted by the presence of mature eucalyptus trees (see Figure 4.2- 3b, see Photo C). Lastly, the duration of available views to the project site for nearby motorists is short, generally lasting less than 5 seconds.

The primary residential areas with views to the project site include those to the northwest fronting Dwight Way and Hillside Avenue, and homes to the east off Dwight Place constructed on hillsides that provide an elevated vantage point and opportunities for long-range, scenic views. Homes constructed off Dwight Place are approximately 900 feet to the northeast of the project site and approximately 350 feet higher in elevation than the existing softball field. Project site visibility from hillside residential locations is limited due to mature trees along the site perimeter and in the surrounding area, which effectively block the site from view (see Figure 4.2-3B, Photo D). However, lighting generated by field lights previously in use at the softball field would likely have been visible from hillside residences (and from homes fronting Dwight Way). Due to the nature of residential land uses, view duration is considered permanent/long-term and the number of private residences that would have had visibility to field lighting illumination previously in use is estimated to be between 50 and 100 homes.

This page intentionally left blank.

Photo A

Photo B

FIGURE 4.2-3A

Typical Views to Beach Volleyball Courts Site from Surrounding Area

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

Photo C

Photo D

FIGURE 4.2-3B

Typical Views to Beach Volleyball Courts Site from Surrounding Area

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

Off-campus trail-based recreationists with views to the project site consist of users of the Stonewall Panoramic Trail and Clark Kerr Fire Trail. Both trails are located on steep terrain to the east of the project site; the Clark Kerr Fire Trail generally extends east from Dwight Way, rounding and climbing the hillside toward Dwight Way/Panoramic Way in the Panoramic Hill area toward the Stonewall Panoramic Trail. The Stonewall Panoramic Trail trailhead is located west of the Tanglewood Path/Stonewall Road confluence and climbs nearly 800 feet in elevation atop a steep ridgeline and towards Panoramic Way. Both trails are located within the Claremont Canyon Regional Preserve and the combined path/alignment is identified as a heavily trafficked trail (AllTrails 2021). While identified as heavily trafficked, viewer exposure from the trail is low due to the presence of mature trees along the site perimeter that effectively screen the site from view. Similar to the visibility from hillside residential areas, illumination associated with field lighting previously in use would have been available; however, evening and nighttime trail use is assumed to be severely limited.

4.2.1.2 BUILDING 21 PARTIAL DEMOLITION SITE

VISUAL CHARACTER AND QUALITY

CKC Building 21 is a one- to two-story, slight v-shaped building located in the southeast area of the CKC, adjacent to Eastway Drive, north of Derby Street, and south of the Sports Lane. Since 1979, Building 21 has been vacant except for storage use and due to extended vacancy, the building has been a target for vandalism and homeless occupancy. Graffiti is visible on sections of the building's northeastern and southern façade as well as in interior spaces including walls and windows, and several windows have been boarded up. While second-story windows are aged and show signs of rot and broken glass, the building's western façade is generally free of graffiti and has been subject to recent renovation efforts (see Figure 4.2-4). The western portion of Building 21 serves as storage for the Residential and Student Service Programs (RSSP) and fencing has been added to the south to create a secure storage yard for the RSSP grounds maintenance staff. The building features an off-white stucco-clad exterior with varying exterior planes as the structure wraps and bends from the west to the southeast. The building site is atop two building pads constructed at differing elevations such that the ground floor of the southeastern wing is at a higher elevation than the ground floor of the western wing and adjacent small CKC Building 19 parking lot. The building features an assortment of roof pitches and lines. The building's red clay tile roof and off-white stucco-clad exteriors is in keeping with the Spanish Colonial Revival style of the CKC. Photographs of existing conditions and views to Building 21 are included on Figure 4.2-4.

SCENIC VIEWS AND VISTAS

Building 21 abuts a forested hillside to the east and generally, a densely landscaped CKC setting to the north, west, and south. The existing CKC sand volleyball courts and existing one- to three-story development, including the Redwood Gardens Apartments, Building 19, and Building 20 are situated to the north, southwest, and south, respectively (see Chapter 3, Project Description, Figure 3-2). Due to the presence of mature trees and CKC development, there are no scenic vistas at the Building 21 site. The Stonewall Panoramic Trail is located as close as approximately 320 feet to the east of the Building 21 site (the nearest segment of the trail is approximately 80 feet higher in elevation than the Building 21 site). While the trail provides broad and long-range scenic views stretching to the Berkeley waterfront and San Francisco Bay, the Building 21 site is generally obscured from view of trail users by intervening mature trees.

This page intentionally left blank.

Photo A

Photo B

Photo C

Photo D

FIGURE 4.2-4

Existing Conditions: Building 21

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

SCENIC RESOURCES/SCENIC HIGHWAYS

There are no eligible or officially designated state scenic highways in the immediate project area. The nearest state scenic highway, State Route 13 from approximately State Route 24 to Interstate 580 (milepost 4.2 to milepost 9.6) is approximately 1.4 miles from Building 21 (Caltrans 2021). The nearest officially designated state scenic highway. State Route 24 east of the Caldecott Tunnel, is over two miles from the Building 21 site.

LIGHT AND GLARE

No lighting fixtures are affixed/installed on the Building 21 exterior. Given that the interior portion of the building used for storage is used only during the day, interior lighting is not in use at night. Furthermore, neither the stucco-clad exterior nor the red clay tile roof and structure windows are potential sources of glare. However, security fencing installed along the western elevation of the Building 21 west wing includes several small overhead lighting fixtures atop thin steel poles that are installed at regular intervals. In addition, in the vicinity of the project site, an overhead streetlight is installed at the Building 19 parking lot entrance off Eastway Drive (approximately 50 feet from the west wing of Building 21) and a similar streetlight is installed in the Building 19 parking lot. Overhead and downward-casting lights are also installed off site in the small parking lot to the north of the west wing of Building 21 and occasionally, along Eastway Drive. No lighting is installed at the existing CKC sand volleyball courts that are located off site and to the north of Building 21.

Additional sources of light and glare in the surrounding area include interior lighting at nearby development including the Redwood Gardens Apartments and streetlights and traffic signals on Derby Street/Tanglewood Road.

VIEWER SENSITIVITY

Viewer sensitivity for Building 21 is considered high. While the visual quality of the existing site is degraded by visible evidence of vandalism and disrepair and the eastern wing of the building is partially screened from view of motorists and other road users, it is assumed that viewers generally have high expectations for maintained development on the CKC. The project site is located near the Redwood Gardens Apartments and residents likely have high viewer sensitivity. Furthermore, a higher viewer sensitivity for the structure is assumed because Building 21 is a contributing feature of the California Schools for the Deaf and Blind Historic District (Historic District) listed on the National Register of Historic Places and because of the CKC's status as a City of Berkeley landmark. See Section 4.3, Cultural and Tribal Cultural Resources, for a discussion of historical significance.

VIEWER EXPOSURE

Road users, in particularly those on Eastway Drive, residents of the Redwood Gardens Apartments, and visitors to the existing CKC sand volleyball courts are the primary groups provided views to Building 21. While the western wing of Building 21 briefly parallels Eastway Drive, the eastern wing considered in this assessment is set back from the road and partially screened from view of road users by intervening development, terrain, and mature trees. Visibility to Building 21 improves as road users leave Eastway Drive and enter the Building 19 parking lot; however, the volume of these viewers is assumed to be low and primarily consists of campus staff utilizing Buildings 21 and 20. The duration of available views to Building 21 provided to typical road users is brief, lasting less than 5 seconds, and as mentioned previously, views are partially screened by intervening elements between Eastway Drive and the building site.

The nearest residents to Building 21, those in the Redwood Gardens Apartments, are located approximately 240 feet to the west. While views from residences are generally considered permanent/long-term, intervening

landscaping and mature trees between the eastern elevation of the apartment building and the Building 21 site severely limits site visibility. From elsewhere on the Redwood Gardens Apartments property, site visibility is impeded by Building 19 and other mature landscaping and trees.

Due to proximity and lack of surrounding development, Building 21 is visible to users of and visitors to the existing CKC sand volleyball courts. Because use of the courts is assumed to be limited to athletes and coaching staff (practices and competitions) and spectators (competitions) during the competitive season (practice is assumed to occur during the academic year), and the women's beach volleyball intercollegiate competition season runs from approximately late February to early May, frequency of use is regular but viewer volume is reduced outside of the competition season and may fluctuate with team success. Year-round regular use of the sand courts is by athletes for practices and recreational users. Since athletes, spectators, and recreational users would be at the sand volleyball courts to practice, compete in matches, and observe competitions, attention would be focused on the courts as opposed to off-site structures including Building 21. Because users of the courts and competition spectators would potentially be on site for a limited number of hours, duration of views to Building 21 is low to moderate.

4.2.2 REGULATORY FRAMEWORK

4.2.2.1 FEDERAL

There are no federal plans, policies, regulations, or laws related to aesthetics applicable to the proposed project.

4.2.2.2 STATE

CALIFORNIA SCENIC HIGHWAY PROGRAM

The California Department of Transportation (Caltrans) manages the State Scenic Highway Program. Established by the State Legislature in 1963, the State Scenic Highway Program lists highways that are either eligible for designation as a scenic highway or already are designated as a scenic highway. A highway may be designated as scenic on the basis of the amount of natural landscape that can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260 through 263. The Streets and Highways Code establishes State responsibility for protecting, preserving, and enhancing California's natural scenic beauty of scenic routes and areas that require special scenic conservation and treatment. As indicated in Section 4.2.1, Environmental Setting, there are no eligible or officially designated state scenic highways in the immediate project area.

CALIFORNIA BUILDING CODE

The State of California provides a minimum standard for building design through Title 24, California Building Standards Code, of the California Code of Regulations. The California Building Code (CBC) is in Part 2 of Title 24. The CBC is updated on a three-year cycle. It is effective statewide, but a local jurisdiction may adopt more restrictive standards based on local conditions under specific amendment rules prescribed by the State Building Standards Commission. The CBC includes standards for outdoor lighting that are intended to reduce light pollution and glare by regulating light power and brightness, shielding, and sensor controls.

4.2.2.3 UNIVERSITY OF CALIFORNIA

UC AND UC BERKELEY DESIGN REVIEW

UC capital projects require review prior to approval for design, cost, site, seismic safety, and environmental impact. This process includes several policies and procedures required for capital improvement projects. The UC's Policy for Independent Design and Cost Review of Building Plans is to maintain the quality of design of UC construction projects, and review may focus on compatibility and appropriateness of a project's design within its setting. For the UC Berkeley campus, the UC Berkeley Design Review Committee provides advice to the Campus Architect regarding historic preservation and design of UC Berkeley buildings and spaces. The UC Berkeley Design Review Committee is made up of design professionals and faculty from the disciplines of architecture, landscape architecture, urban design and planning, and historic preservation.

PHYSICAL DESIGN FRAMEWORK

UC requires every campus to have a Physical Design Framework. The UC Berkeley Physical Design Framework (Framework), accepted by the Regents in July 2021, includes principles for both land use and architecture, and was built on the policies and guidelines in the 2021 LRDP (UC Berkeley 2021b). The Framework is an advisory guidance document intended to convey a set of design intentions, rather than prescriptive regulations or mandates, and is used by the campus Design Review Committee when reviewing a project's design. While campuses are required to consider the Framework's guidelines and principles in developing their projects, a project is not required to be consistent with every guideline in the Framework. The following are applicable guidelines to the proposed project (which is in the Clark Kerr Campus land use zone as defined in the 2021 LRDP and reflected in the Physical Design Framework):

- Strategy CKC-1: Respect and respond to existing development patterns and enhance the campus's visual appearance.
    - Complement how the Clark Kerr Campus's buildings frame and enclose landscape spaces, and the emphasis on human-scaled environments.
    - Strive to reduce impervious surface area and incorporate stormwater management strategies in new and existing open spaces.
- Strategy CKC-2: Plan new facilities to foster a dynamic and active community that is connected to the campus as a whole.
    - Enhance connectivity between the Campus Park and the Clark Kerr Campus through the addition of new pedestrian pathways and gateways, and other site and mobility improvements.
    - Strengthen pedestrian and programmatic connectivity within the Clark Kerr Campus, and prioritize pedestrian and bicycle circulation.
    - Renew and complement housing and athletics and recreation facilities, in support of the campus community, the residential community, and the public.

UC BERKELEY CAMPUS DESIGN STANDARDS

UC Berkeley created the Campus Design Standards to guide design and construction professionals to complete lasting, high-quality additions to the UC Berkeley built environment. The Campus Design Standards, along with applicable codes such as the CBC, ensure that new construction and renovation projects at UC Berkeley integrate industry best practices and experience with existing campus buildings, infrastructure, grounds, and maintenance

issues. UC Berkeley's Campus Design Standards contain construction specifications to guide design and ensure that new construction and renovation projects at UC Berkeley utilize continuing best practices (CBPs) (see below) and are integrated with the existing campus. They are administered by the Campus Building Department and apply to all construction projects sponsored by the UC. The Campus Design Standards include requirements for building materials, lighting, glass and glazing, screening, planting, and more. They largely adapt and build from other applicable regulations, such as the CBC. The Campus Design Standards are updated every three years to incorporate updates to the CBC. In addition to providing lighting that complies with the CBC, the Illuminating Engineering Society light levels, the California Energy Code, and applicable UC policies such as the UC Sustainability Practices Policy, the Campus Design Standards include these requirements for exterior lighting:

- The campus goal for exterior lighting is to promote safety and create visibility by creating layers of light as well as reducing light pollution and energy consumption.
- Light fixtures shall generally include cut-off shields as needed to prevent light trespass into neighboring off-campus areas; however, some trespass may be allowable in lower-density areas, such as through glades and natural areas, where minimal light spill enhances safety.
- Pedestrian and bicycle parking area lighting shall be downlit.

UC BERKELEY CONTINUING BEST PRACTICES

UC Berkeley applies continuing best practices (CBPs) relevant to aesthetics as part of the project approval process. CBPs applicable to the proposed project are provided in Appendix D, UC Berkeley Continuing Best Practices, of this Draft EIR. Applicable CBPs are identified and assessed for their potential to reduce adverse physical impacts later in this section under Section 4.2.3, Impacts and Mitigation Measures.

4.2.2.4 LOCAL

As discussed in Chapter 3, Project Description, UC Berkeley is constitutionally exempt from local governments' regulations, such as city and county general plans, land use policies, and zoning regulations, whenever using property under its control in furtherance of its educational purposes. As such, the proposed project is generally exempt from local policies and regulations. However, UC Berkeley may consider, for coordination purposes, aspects of local policies and regulations for the communities surrounding the UC Berkeley campus when it is appropriate and feasible, although it is not bound by those policies and regulations. Therefore, this section outlines the policies and regulations of the City of Berkeley and Oakland related to aesthetics that UC Berkeley may consider in the evaluation of the proposed project.

CITY OF BERKELEY GENERAL PLAN

The City of Berkeley General Plan contains the following policies related to aesthetics from the Land Use (LU) Element, Environmental Management (EM) Element and Urban Design (UD) and Preservation Element (City of Berkeley 2001):

- **Policy LU-3: Infill Development.** Encourage infill development that is architecturally and environmentally sensitive, embodies principles of sustainable planning and construction, and is compatible with neighboring land uses and architectural design and scale.
- **Policy EM-42: Outdoor and Street Lighting.** Outdoor lighting should be chosen to avoid glare and provide an attractive nighttime environment with "fully shielded" fixtures to limit light rays emitted above the horizontal plane.

- **Policy UD-3: Neighborhood Character.** Use regulations to protect the character of neighborhoods and districts and respect the particular conditions of each area.
- **Policy UD-9: Trees.** Wherever feasible and appropriate, tree replacement should emphasize maintaining historic planting patterns and native species and be consistent with the City of Berkeley 1990 Street Tree Policy or subsequent tree policies.
- **Policy UD-24: Area Character.** Regulate new construction and alterations to ensure that they are truly compatible with and, where feasible, reinforce the desirable design characteristics of the particular area they are in.
- **Policy UD-31: View Blockage.** Construction should avoid blocking significant views, especially ones toward the Bay, the hills, and significant landmarks such as Sather Tower, Golden Gate Bridge, and Alcatraz Island. Whenever possible, new buildings should enhance a vista or punctuate or clarify the urban pattern.

CITY OF OAKLAND GENERAL PLAN

The Oakland General Plan includes policies pertaining to aesthetics and relevant to the proposed project in its Open Space, Conservation, and Recreation Element, dated June 1996. The relevant open space (OS) policies are as follows:

- **Policy OS-10.1: View protection.** Protect the character of existing scenic views in Oakland, paying particular attention to views of the Oakland Hills from the flatlands; views of downtown and Lake Merritt; views of the shoreline; and panoramic views from Skyline Boulevard, Grizzly Peak Boulevard and other hillside locations.
- **Policy OS-10.2: Minimizing adverse visual impacts.** Encourage site planning for new development which minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.

4.2.3 IMPACTS AND MITIGATION MEASURES

4.2.3.1 STANDARDS OF SIGNIFICANCE

The standards of significance used to evaluate the impacts of the proposed project related to aesthetics are based on Appendix G of the CEQA Guidelines, as listed below. The proposed project would result in a significant impact if it would:

A. Have a substantial adverse effect on a scenic vista.
B. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
C. Substantially degrade the existing visual character or quality of public views (i.e., views that are experienced from publicly accessible vantage points) of the site and its surroundings if in a non-urbanized area, or would conflict with applicable zoning and other regulations governing scenic quality if in an urbanized area.
D. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.
E. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact.

Regarding Significance Standard C (discussed in Impact AES-2 below), both the beach volleyball courts and Building 21 sites are located within an urbanized area. Pursuant to Public Resources Code Section 21071, "urbanized area" means (among several definitions) an incorporated city with at least 100,000 persons. According to the California Department of Finance, the estimated January 2021 population for the City of Berkeley was 116,761 persons (Department of Finance 2021).

4.2.3.2 ANALYTICAL METHODS

ANALYSIS METHODS

The evaluation of aesthetics and aesthetic impacts is highly subjective. It requires the application of a process that objectively identifies the visual features of the environment and their importance. The existing aesthetic setting involves identifying existing visual character, including visual resources and scenic vistas unique to the project area, as described in Section 4.2.1, Environmental Setting. Changes to aesthetic resources resulting from implementation of the proposed project are identified and qualitatively evaluated based on the proposed modifications to the existing setting and the viewer's sensitivity. Aesthetic impacts from the proposed project are determined using the standards of significance discussed in Section 4.2.3.1, Standards of Significance.

The analysis of potential impacts related to aesthetics and visual resources is limited to public views, which are defined as exterior locations accessible by the general public. Accordingly, this analysis considers public views of the beach volleyball courts site and Building 21 from more distant offsite locations, and public views from within the CKC and nearby areas where public views to the project site(s) are available. Significance determinations account for the overall visibility of proposed changes and alterations from public viewing areas and severity of change within the context of existing conditions, as well as the physical characteristics (i.e., scale, mass, color) of project components. Existing condition photographs presented in Section 4.2.1, Environmental Setting, inform the environmental baseline for aesthetics and project information including design plan sets, renderings, and photometric plans for the beach volleyball courts site, and demolition and site plans for the Building 21 partial demolition, assist in the impact determinations.

APPLICABILITY OF 1979 FINAL EIR MITIGATION MEASURES

The university adopted mitigation measures in its 1979 Final EIR for the Dwight-Derby Site Plan, which included the Draft EIR, when it acquired the CKC in 1982 ("1979 mitigation measures"). As applicable to the proposed project, the 1979 mitigation measures are either retained as is, or are revised and/or replaced based on a finding of infeasibility backed by substantial evidence. Appendix C contains a list of the 1979 mitigation measures, including their applicability to the proposed project, and where relevant, proposed revisions and/or replacement of several of these mitigation measures are provided to make them feasible[1] to implement through the inclusion of objective performance standards. Some of these measures do not provide objective performance standards, do not reflect CEQA best practices for mitigation, and are otherwise outdated and obsolete. For the 1979 mitigation measures that have been revised and/or replaced in this Draft EIR, Appendix C provides substantial evidence demonstrating the infeasibility of these 1979 mitigation measures, and the effectiveness of these revised mitigation measures in eliminating or reducing the applicable potentially significant environmental impact relative to the 1979 mitigation measures being modified or replaced.

Table 4.2-1 summarizes applicable 1979 mitigation measures pertaining to aesthetics, as well as any proposed revisions and/or replacements to those measures. The table is based on the numbered list of 1979 mitigation measures from 1979 Draft EIR Chapter XII. As indicated in the table, the applicable 1979 mitigation measures related to aesthetics would be implemented as part of the proposed project, as indicated in Chapter 3, Project Description, and none of these measures is proposed for revision and/or replacement. Project-specific mitigation

[1] As indicated in CEQA Guidelines Section 15364, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

measures may be included in Section 4.2.3.3, Impact Analysis, where feasible and necessary to reduce potentially significant impacts.

TABLE 4.2-1. APPLICABLE 1979 MITIGATION MEASURES FOR AESTHETICS AND PROPOSED REVISION

1979 Mitigation Measure Applicable to Proposed Project	Applicable to the Proposed Project?	Substantial Evidence for Revised or New Mitigation Measure	Revised or New Mitigation Measure
1.c. A commitment to maintain the site in a form which keeps its appearance as close to the present as possible.	Yes The mitigation measure would be implemented as part of the proposed project by not resulting in changes to existing land uses.	No changes proposed.	No changes proposed
22.a. The potential acquisition of the site by the University will result in maintenance of the site in its current appearance as part of the neighborhood land uses.	Yes The mitigation measure would be implemented as part of the proposed project by not resulting in changes to existing land uses.	No changes proposed.	No changes proposed.
22.c. The University will continue to cooperate and meet with neighborhood and community organizations to improve community-campus relations, and maintain the integrity of the existing neighborhoods.	Yes The mitigation measure would be implemented as part of the proposed project, as UC Berkeley has been notifying the community and City about the proposed project per University CBP AES-4 (see Draft EIR Appendix D).	No changes proposed.	No changes proposed.
26.a. Changes in the exterior appearance of the buildings, due to the addition of handicapped access means, will be minimized through the use of ramps that take advantage of the natural grades and terrain features of the site. Wherever possible handicapped access to upper floors will be provide through ramps that lead directly to that floor from an elevated part of the site that is immediately adjacent to the building.	No The proposed project does not involve building renovations to provide for ADA access.	NA	NA
26.b. In general, the appearance of the buildings will be maintained, with minimal exterior visual modifications.	Yes The mitigation measure would be implemented as part of the proposed project, as only a partial demolition of seismically deficient Building 21 would be implemented and walls and doors on the remaining exterior wall would be maintained and painted to match the existing paint (see Draft EIR Chapter 3, Project Description).	No changes proposed.	No changes proposed.

TABLE 4.2-1. APPLICABLE 1979 MITIGATION MEASURES FOR AESTHETICS AND PROPOSED REVISION

1979 Mitigation Measure Applicable to Proposed Project	Applicable to the Proposed Project?	Substantial Evidence for Revised or New Mitigation Measure	Revised or New Mitigation Measure
26.c. Adverse visual impacts of the modification of the interiors of the building will be minimized through (1) good interior design practices that will take advantage of the renovation activities to improve the overall visual qualities for the interiors of the buildings, and (2) by continuing the special purpose rooms within the building complex (assembly hall, auditorium, meeting rooms, study halls, recreation rooms, etc.) at their original visual quality, and by maintaining these rooms as visual "high points" within the interior environment for the overall building complex.	No The proposed project does not involve modification of the interior of any existing building.	NA	NA
26.d. The attractive series of outdoor spaces will be maintained in their present condition.	Yes The mitigation measure would be implemented as part of the proposed project, by not resulting in changes to existing land uses. The outdoor recreational use type of the existing softball field will be retained with the implementation of the beach volleyball courts. The attractive series of outdoor spaces and courtyards will be maintained and are not affected by the proposed project, as such courtyards do not exist on the project site locations.	No changes proposed.	No changes proposed.

Source: UC Berkeley 1979 and Draft EIR Appendix C.

4.2.3.3 IMPACT ANALYSIS

AREAS OF NO IMPACT

The proposed project would not damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway (Significance Standard B). There are no eligible or officially designated state scenic highways in the immediate project area. The closest designated state scenic highway, State Route 13 from State Route 24 to Interstate 580, is approximately 1.4 miles from Building 21 and 1.6 miles from the beach volleyball courts site. Neither Building 21 nor the beach volleyball courts would be visible from State Route 13 due to intervening terrain, development, and vegetation. State Route 13 is partially located within a densely canopied (and developed) valley featuring rising terrain to the east and west. This terrain and vegetation, and similar terrain and vegetation to the north of the junction of State Route 13 and State Route 24 towards the CKC effectively limits the potential for particularly long views including views to the project sites. State Route 24 east of the Caldecott Tunnel is also a designated state scenic highway; however, the route is situated east of the Berkeley Hills that block UC Berkeley and the CKC (and surrounding areas) from view of motorists on State Route 24 east of the tunnel. Because the project sites are not visible from designated scenic segments of State Route 13 or State Route 24, the project would have no impact on scenic resources within a state scenic highway and this standard is not addressed further.

IMPACTS

Impact AES-1: Scenic Vistas (Significance Standard A). The proposed project would not result in a substantial adverse effect on a scenic vista. *(Less than Significant)*

BEACH VOLLEYBALL COURTS

Construction

As previously discussed in Section 4.2.1.1, Beach Volleyball Courts Site, scenic vistas near the beach volleyball courts site primarily consist of trails on comparatively higher elevation terrain within the Claremont Canyon Regional Preserve and residentially developed hillsides located to the east and northeast. From these trails and developed hillsides, features on the project site do not currently impede or degrade scenic vistas looking west that extend to the San Francisco Bay and points beyond.

Construction of the beach volleyball courts is anticipated to occur over approximately 6 months and would include demolition, minor grading, and tree removal; construction of courts and support building; and finishing of courts, the building, and landscape installation. According to the project demolition plan, a total of six trees would be removed from the site to accommodate proposed grading. Three of the existing trees to be removed are located along the edge of the existing site grass (i.e., near the bottom of slopes) in the northern and eastern portions of the site. The remaining trees to be removed are clustered in the southwest corner of the site. A meandering retaining wall would be constructed along the eastern and northern portions of the beach volleyball courts site and would allow for the creation of new and gradual stepped terrain that would be planted with sod or covered with synthetic turf and offer informal seating areas for spectators. Construction vehicles, equipment, and personnel would be a regular presence on site and on nearby streets through the duration of construction. While construction activities would gradually change the aesthetics of the site through limited tree removal, grading, installation of new surfaces, and construction of new structures and lighting, construction activities and effects would be temporary and would not dominate a view or block any views from identified scenic vistas. The majority of the 63 trees located on site

would be retained in place and would continue to partially screen views onto the project site from scenic vistas or other public areas outside of the immediate project area. Furthermore, due to the temporary nature of construction, construction vehicles and equipment would not result in substantial short- or long-term obstruction of views from a scenic vista. Therefore, construction of the beach volleyball courts would not result in a substantial adverse effect on a scenic vista and impacts would be *less than significant.*

Operation

As proposed, the existing recreational softball field at the southwest corner of Dwight Way and Sports Lane would be demolished and beach volleyball courts would be constructed. In addition to four sand courts, the beach volleyball courts project component would feature field lights, a light-emitting diode (LED) scoreboard, support building, a hardscape area with available spectator seating, a turf spectator lawn, and storage containers. The proposed site plan is depicted on Figure 3-3 (Chapter 3, Project Description) and conceptual three-dimensional renderings of the courts are included on Figures 4.2-5 and 4.2-6.

During operation and, in particular, nighttime use of the beach volleyball courts, the new field lighting and LED scoreboard would illuminate the courts site and contribute lighting to the nighttime environment. As described in Chapter 3, Project Description, four 50-foot-high light poles with LED light arrays would be installed at each of the corners of the site. The scoreboard would have a maximum height of 28 feet above grade. New lighting poles, the LED scoreboard, and other features of the beach volleyball courts would not be visible from identified scenic vistas within the UC Berkeley campus (i.e., Grizzly Peak Vista Point and the Grizzly Peak Boulevard Overlook) due to the presence of intervening terrain and vegetation that would block project features from view. Project-related lighting is also unlikely to be visible at night from these elevated vantage points due to intervening terrain and vegetation. In addition, proposed lights affixed to the poles would be shielded (to control and focus lighting on the courts) and directed downward, as described in Chapter 3, Project Description and as indicated in CBP AES-6 and AES-7 that would be implemented as part of the proposed project:

- **CBP AES-6:** Lighting for new development projects will 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 will be in those areas where such features would be incompatible with the visual and/or historic character of the area.
- **CBP AES-7:** As part of UC Berkeley's design review procedures, light and glare will be given specific consideration and measures will be incorporated into the project design to minimize both. In general, exterior surfaces will not be reflective; architectural screens and shading devices are preferable to reflective glass.

The installation of light shields would also reduce the potential for uplighting/skyglow and visibility of field lighting from locations that do not offer a direct line of sight to the proposed beach volleyball courts site (such as Grizzly Peak Vista Point and the Grizzly Peak Boulevard Overlook).

Due to proximity and the elevated vantage point, views to the beach volleyball courts and illumination from field lighting may be available from public roads within residential developed hillside areas and the Claremont Canyon Regional Preserve trails to the east of the beach volleyball courts site. As previously discussed in Section 4.2-1, Environmental Setting, evening and nighttime use of area regional trails is assumed to be severely limited. New 50-foot-high light poles would not obstruct or substantially interrupt existing views from nearby residential developed hillsides and regional preserve trails as these locations are located over 100 feet higher in elevation than the top of new light poles. From these locations, the transformation of the site from softball field to beach volleyball courts would be obscured by dense clusters of intervening mature trees. Illumination from field lighting may be visible over intervening trees; however, this potential would be reduced by the installation of glare shielding on light fixtures, the precise downward

direction of installed field lights, and operation of a lighting control system that would facilitate quick and computer-controlled fixture adjustments to ensure proper field illumination. In addition, from elevated developed areas and trails to the east of the site, views extend west to the San Francisco Bay and include the urban UC Berkeley and City of Berkeley landscapes that support numerous sources of existing nighttime lighting. For the reasons described above, implementation of the beach volleyball courts would not result in a substantial adverse effect on a scenic vista on an on- or off-campus scenic vista. Impacts would therefore be *less than significant.*

Significance without Mitigation: Less than significant.

BUILDING 21 PARTIAL DEMOLITION

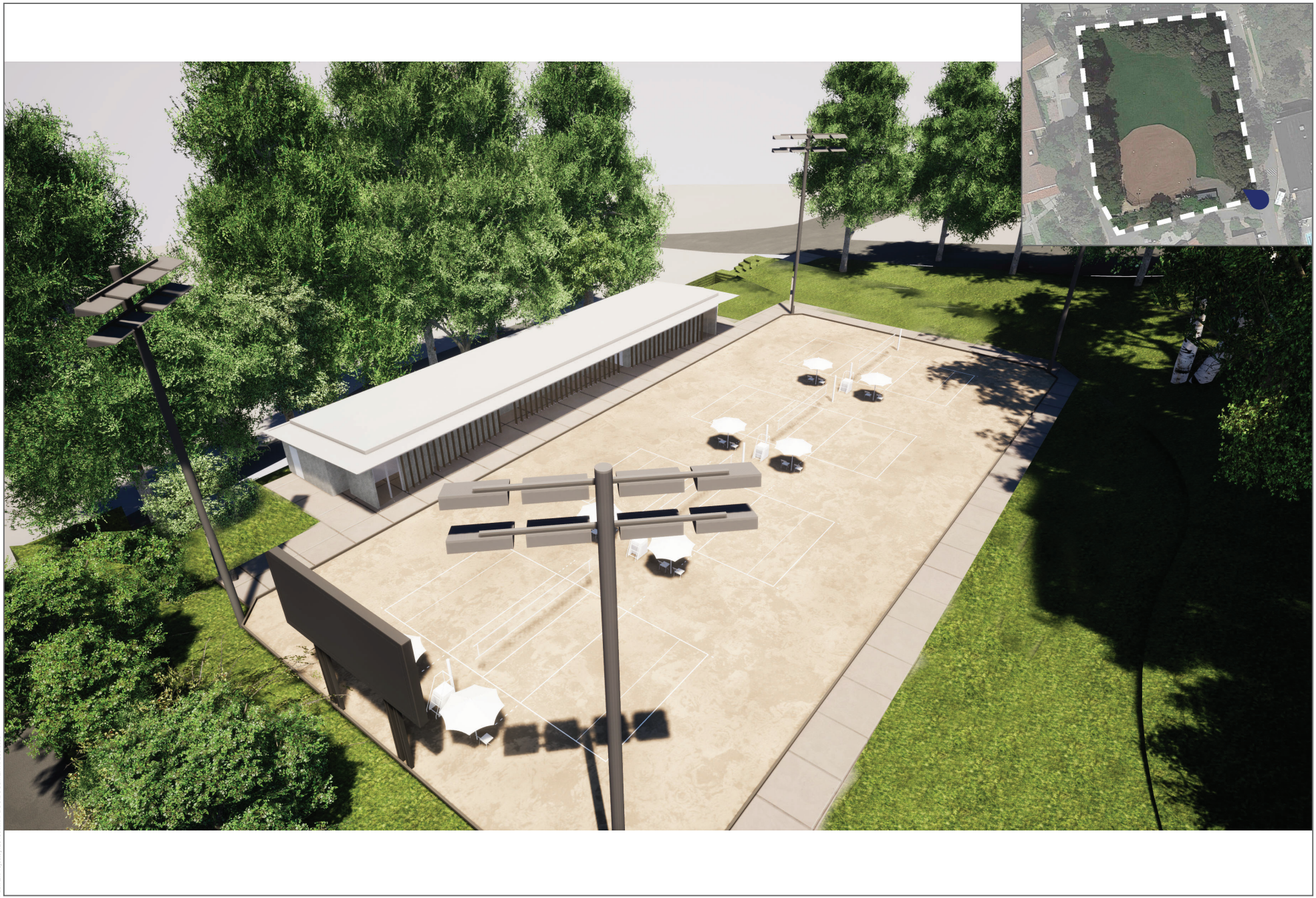
Due to the presence of dense stands of mature trees that occur to the east, the Building 21 site is not readily visible from nearby scenic vistas. A trailhead for the Stonewall Panoramic Trail is located 470 feet to the northeast of the site and from the trailhead, the trail climbs the face of a local slope in a northerly alignment prior to transitioning to a series of switchbacks. This lower portion of the trail is densely forested and at its nearest location, the Building 21 site is located approximately 320 feet to the west. Narrow and partially obscured views may be available to users of the lower trail segment; however, due to the densely forested character of the surrounding landscape, views from the lower trail segment are neither panoramic nor long-range and thus, are not considered scenic vistas. The existing site, partial building demolition, and building and site renovations (i.e., retaining and reinforcing the connecting wall on the western portion of the building to be retained, painting to match existing paint, constructing a new paved driveway and loading area, and landscaping in the area of the new driveway), would not be visible from higher elevation segments of the trail offering long-range, scenic views, and would not be visible from identified scenic vistas in the surrounding landscape during the 8-month construction period for this project component. While CBPs AES-6 and AES-7 would also apply to this project component, no new night lighting is proposed as part of the Building 21 partial demolition and building and site renovations (i.e., retaining and reinforcing the connecting wall on the western portion of the building to be retained, painting to match existing paint, constructing a new paved driveway and loading area, and landscaping in the area of the new driveway). Therefore, the partial demolition of Building 21, building and site renovations, and ongoing continued operational use of the remainder of Building 21 would not result in an adverse effect to scenic vistas and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

MITIGATION MEASURES

As described above, the proposed project would not result in significant impacts related to scenic vistas, and therefore, no mitigation measures are required.

This page intentionally left blank.



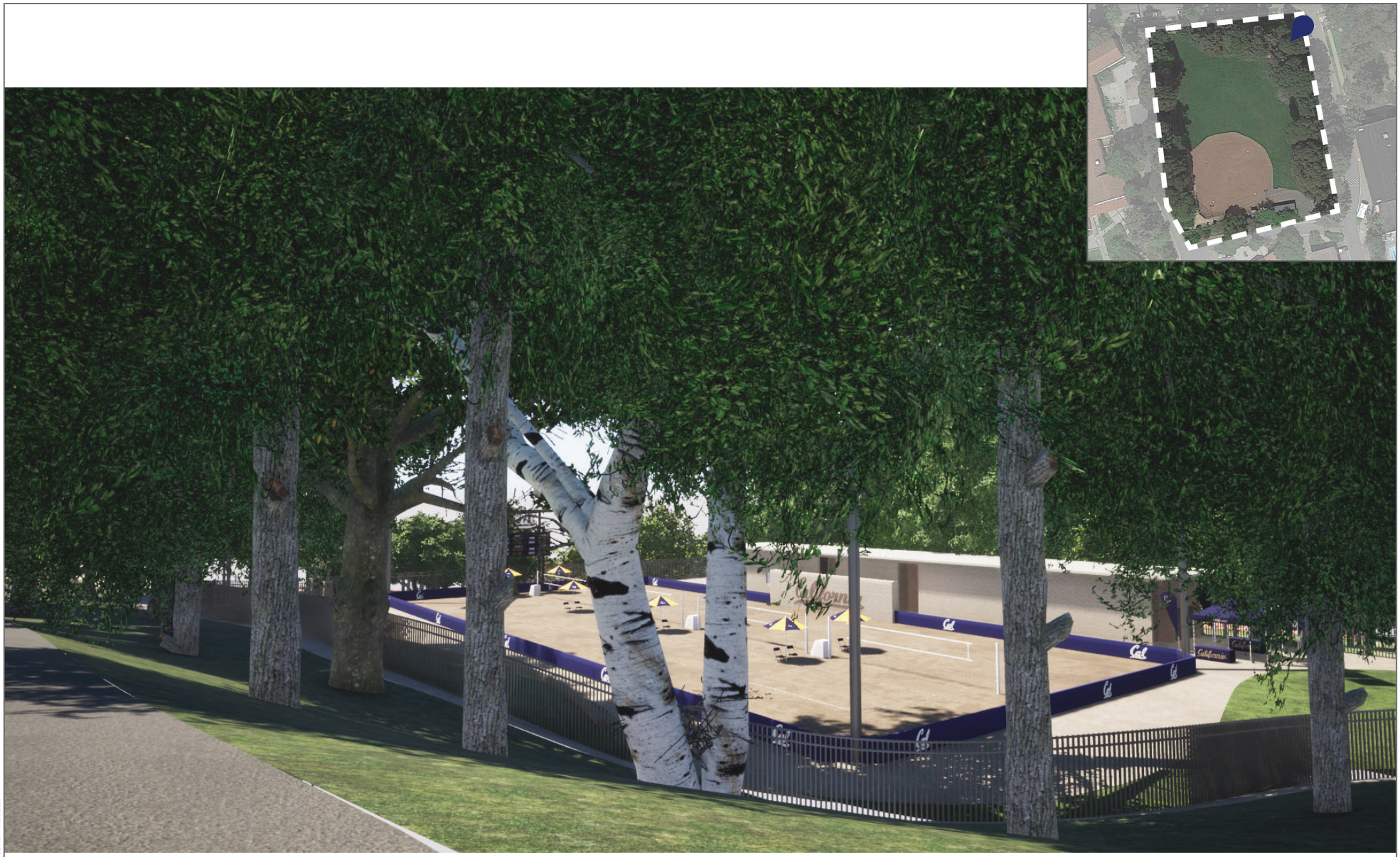
SOURCE: UC Berkeley 2020

FIGURE 4.2-5

Bird's Eye Conceptual 3D Rendering of Proposed Beach Volleyball Courts

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.



Note: This image is representative of the project design but may differ slightly from the final design.

SOURCE: UC Berkeley 2020

FIGURE 4.2-6

Street Level Conceptual 3D Rendering of Proposed Beach Volleyball Courts

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

Impact AES-2: Scenic Quality (Significance Standard C). The proposed project is in an urbanized area and would not conflict with applicable zoning and other regulations governing scenic quality. *(Less than Significant)*

As indicated in Section 4.2.3.1, Standards of Significance, the beach volleyball courts and Building 21 sites are located within an urbanized area. Pursuant to Public Resources Code Section 21071, "urbanized area" means (among several definitions) an incorporated city with at least 100,000 persons. According to the California Department of Finance, the estimated January 2021 population for the City of Berkeley was 116,761 persons (Department of Finance 2021). Therefore, the proposed project would result in adverse effects to scenic quality if it were to conflict with applicable zoning or other regulations governing scenic quality.

UC Berkeley is the only agency with land use jurisdiction over programs and projects proposed on UC Berkeley property, including the project sites on the CKC. Therefore, applicable regulations governing scenic quality include UC Berkeley policies and plans, as described in Section 4.2.2, Regulatory Framework, including implementation of UC Berkeley Design Review, Physical Design Framework, Campus Design Standards, and CBPs, as applicable to the proposed project. As indicated in Chapter 3, Project Description, the beach volleyball courts design was reviewed by the UC Berkeley Design Review Committee in 2018 and 2019 (per CBP AES-2 below), during which the Physical Design Framework, Campus Design Standards and relevant CBPs were considered. Comments received were reviewed with the project design team. The Design Review Committee was primarily concerned with mass, scale, aesthetics, tree removal, natural lighting for the support structure and the historic context of the CKC. The proposed design was refined based on the feedback from the Design Review Committee to integrate it within the context of the CKC, and to reduce the scale and introduce clerestory lighting for the support structure. Additionally, UC Berkeley would implement the aesthetics (AES) CBPs listed here (see Appendix D for all applicable CBPs):

- **CBP AES-1:** New projects will as a general rule conform to the Physical Design Framework. While the guidelines in the Physical Design Framework would not preclude alternate design concepts when such concepts present the best solution for a particular site, UC Berkeley will not depart from the Physical Design Framework except for solutions of extraordinary quality.
- **CBP AES-2:** Major new campus projects will continue to be reviewed at each stage of design by the UC Berkeley Design Review Committee. The provisions of the LRDP, as well as project-specific design guidelines prepared for each such project, will guide these reviews.
- **CBP AES-3:** To the extent feasible, UC Berkeley will enhance the visual quality of mapped high fire risk zones by focusing fuel management practices that promote landscape resilience, native habitats, and biodiversity.
- **CBP AES-4:** UC Berkeley will make informational presentations of major projects in the city environs of the Cities of Berkeley and Oakland, and the Clark Kerr Campus, to the relevant city commission(s) and board(s). Relevant commissions and boards, to be determined jointly by the Campus Architect and appropriate City Planning Director, may include the Berkeley Zoning Adjustments Board and Berkeley Landmarks Preservation Commission. Major projects in the Hill Campus East within the city of Oakland may also be presented to relevant City of Oakland boards or commissions, after consultation and mutual agreement between those agencies and UC Berkeley. Major projects may include new construction or redevelopment projects with substantial community interest as determined by UC Berkeley. Whenever a major project in the city environs or Clark Kerr Campus is under consideration, the Campus Architect may invite the appropriate city planning director or their designee to attend and comment on the project at the UC Berkeley Design Review Committee.

(In conformance with CBP AES-4, UC Berkeley completed an informational presentation to the Berkeley Landmarks Preservation Commission on November 4, 2021. The proposed project along with its components were presented, and the public as well as the commissioners provided comments on the proposed project.)

These CBPs are designed to reduce impacts to visual resources through the review process for new projects by ensuring adherence to UC Berkeley objectives for preserving important existing visual resources. The implementation of CBP AES-1 through CBP AES-4, and the other CBPs discussed throughout this Draft EIR and listed in Appendix D, would not create additional impacts to scenic quality, but would rather help reduce impacts to visual resources as part of the design review process. Additionally, while the UC Berkeley is not subject to local plans, policies, and regulations, the proposed project would not conflict with identified local policies in Section 4.2.2, Regulatory Framework, given that the beach volleyball courts would: maintain the existing recreational land use on the site, include shielded light fixtures, include tree replacement for removed trees, and avoid view blockage and minimize views from the hills to the east and northeast of the site, as described in Impact AES-1. The Building 21 partial demolition and building and site renovations would similarly not conflict with identified local policies. Therefore, the proposed project would not conflict with applicable zoning and other regulations governing scenic quality and the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

MITIGATION MEASURES

As described above, the proposed project would not result in significant impacts related to conflicts with applicable regulations governing scenic quality, and therefore, no mitigation measures are required.

Impact AES-3: Light and Glare (Significance Standard D). The proposed project would not create a new source of substantial light and glare which would adversely affect day or nighttime views in the area. *(Less than Significant)*

BEACH VOLLEYBALL COURTS

Demolition of the existing recreational softball field and construction of the beach volleyball courts would occur during daylight hours and as such, nighttime construction and use of nighttime lights during the 6-month construction period for this project component would not occur.

In addition to a LED scoreboard, low site lighting, and fixtures associated with the support building, four 50-foot-high light poles with LED light arrays would be installed at each of the corners of the beach volleyball courts site. Each light pole would include an array of 8 fixtures that would provide between 50 and 115 foot-candles of illumination across the courts. Fixtures would be directed downward onto the site and would be affixed with glare shields to limit the potential for glare to be received off site and unnecessary uplighting. A lighting control system would be installed that would allow from lighting programming and independent control of individual light units. While light poles are currently installed on the existing recreational softball field, the lights are inoperable and are in disrepair. Therefore, nighttime lighting does not currently operate on site (although it did operate up to three years ago) and the field lights would be a new source of potentially substantial light and glare.

To demonstrate proposed light levels on the site and potential spillover to off-site areas, a photometrics plan was prepared and is included as Figure 4.2-7. The photometric plan includes the beach volleyball courts site plan in plan view and places the proposed light poles at their proposed locations. Light pole heights, fixture and array mounting heights, wattage of individual luminaires, inclusion of glare shields, and precision directional positioning

of luminaires is included in the photometrics plan software. The output (i.e., the photometrics plan) depicts lighting levels in foot-candles at the finished site surface approximately 50 feet on center in a grid pattern throughout the beach volleyball courts site. The intent of the photometrics plan is to demonstrate the provision of adequate illumination on the playing surface (i.e., the sand courts) pursuant to National Collegiate Athletic Association and other applicable standards and sufficient illumination of other programmed areas to be used by the public. The photometric plan also demonstrates the effects of distance on light levels from the source (i.e., light arrays/field lights) and depicts light levels in foot-candles at the site property line. On Figure 4.2-7, the property line is denoted with a bold dashed line.

As shown on Figure 4.2-7, calculated light levels at the northern boundary of the beach volleyball courts site (i.e., onsite) would generally be between 0.7 and 0.5 foot-candles. As the closest sensitive viewers (i.e., off-campus residents) are located to the northwest of the site and north of Dwight Way, this analysis focuses on Dwight Way and the Dwight Way residences. Measurable lighting from the field lights (between 0.5 and 0.1 foot-candles) would fall onto the surface of Dwight Way (i.e., offsite) and at the northeastern corner of the Dwight Way/Hillside Avenue intersection (a vacant lot), calculated light levels would be approximately 0.1 foot-candles. While not depicted on the photometrics plan, calculated light levels at the northwestern corner of the intersection (and at the residential properties off Dwight Way and Hillside Avenue) would be approximately 0.0 foot-candles based on the anticipated light spill line for 0.0 foot-candle values depicted on Figure 4.2-7. Based on the photometrics plan, 0.0 foot-candles of light would also fall on the nearest residences to the northeast of the site (i.e., east of Fernwald Road). Properties to the west, south, and east are developed with campus facilities and for the purposes of this assessment, are not considered to be sensitive viewers. Due to distance (approximately 730 feet away from the beach volleyball courts site) and the presence of intervening trees and development, project lighting levels at the existing Redwood Gardens Apartments would be 0.0 foot-candles.

Given the information presented above, light levels at sensitive viewer property lines would be very low (0.0 foot-candles) and with the installation of glare shields, precision downward alignment of fixtures, and implementation of applicable CBPs (AES-6 and AES-7 described in Impact AES-1) as part of the proposed project, light and glare impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

Building 21

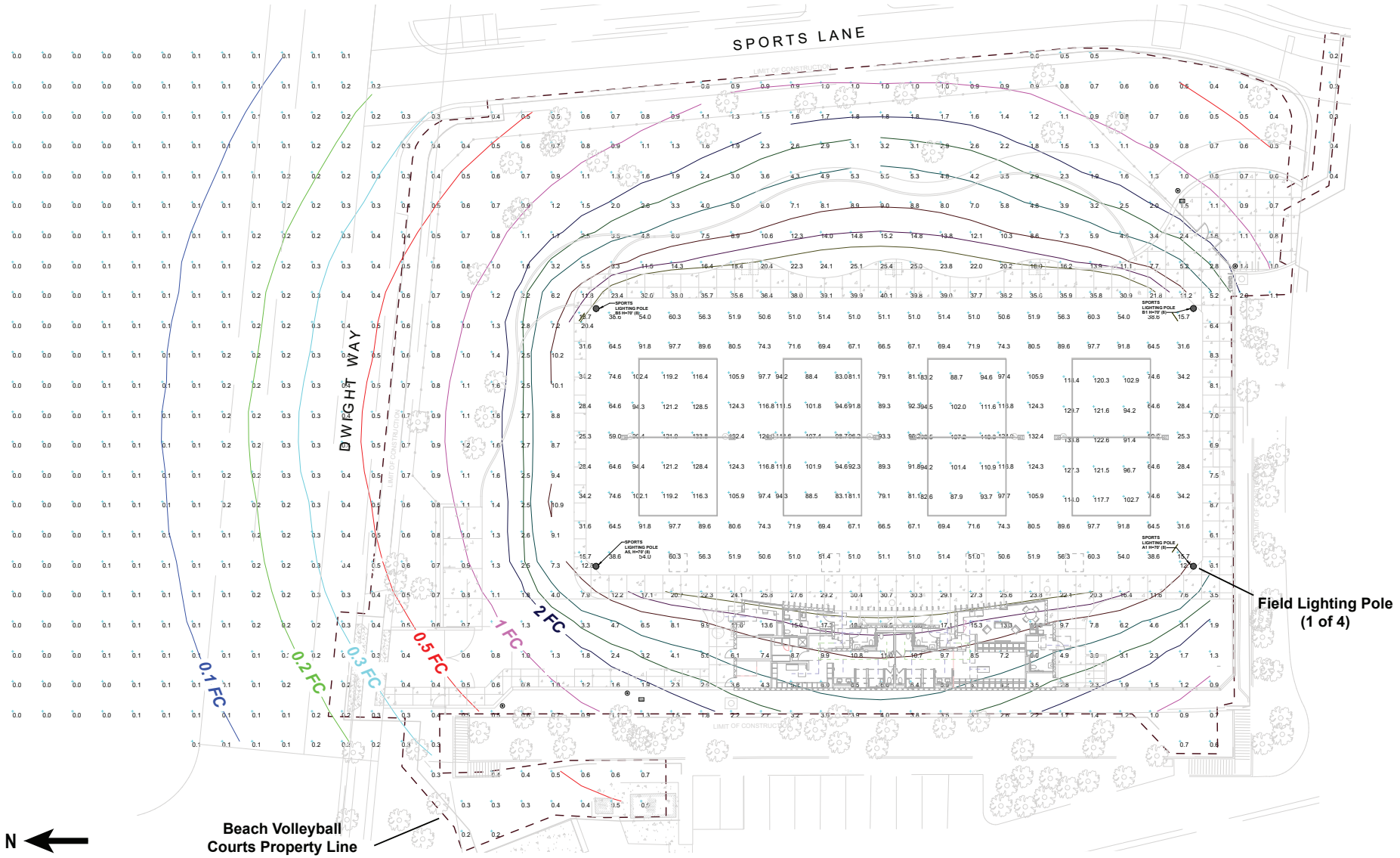
As with the beach volleyball courts, demolition of a portion of Building 21, construction of a new driveway, site grading, and installation of new landscaping would occur during daylight hours. Therefore, nighttime construction and use of nighttime lights during construction would not occur during the 8-month construction schedule for this project component. As indicated in Impact AES-1, no new permanent sources of lighting at the Building 21 site would be installed with the proposed partial demolition and renovation. Therefore, the partial demolition of Building 21 and site renovations would not create a new source of substantial light and glare and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

MITIGATION MEASURES

As described above, the proposed project would not result in significant impacts related to light and glare, and therefore, no mitigation measures are required.

This page intentionally left blank.



Note: Calculated light levels are reported in foot-candles (FC).

HOK 2021

FIGURE 4.2-7

Photometric Plan: Beach Volleyball Courts Site

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

Impact AES-4 Cumulative Impacts Related to Aesthetics (Significance Standard E). The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in a cumulative impact related to aesthetics. *(Less than Significant)*

This section provides an evaluation of cumulative aesthetic impacts associated with the proposed project and past, present, and reasonably foreseeable future projects within the CKC and beyond, as identified in Table 4.1-1 in Section 4.1, Introduction to Analyses, and as relevant to this topic. The geographic area associated with cumulative aesthetics analysis in the vicinity of the proposed project would be limited to the viewsheds of the project components. Therefore, the geographic scope of cumulative effects associated with the beach volleyball courts and the Building 21 partial demolition includes the immediate surrounding area as well as residentially developed hillsides to the east in the Panoramic Hill area, due to the height of light poles and visibility to the beach volleyball courts from this area. Cumulative projects in this area include potential future development under the 2021 LRDP Update at the CKC and could include limited development near the CKC in the City of Berkeley.

Project impacts to scenic vistas and related to conflicts with existing regulations governing scenic quality (Impacts AES-1 and AES-2, respectively) were determined to be less than significant with implementation of CBPs as part of the proposed project. Regarding lighting and glare (Impact AES-3), effects to nighttime views would generally be localized and with the installation of fixtures with glare shields, precision-aligned luminaries controlled by a lighting controlled system, and implementation of CBPs entailing the design of project lighting that minimizes light spillage and light pollution, the impacts related to light and glare would be less than significant. Furthermore, new sources of lighting associated with the project would be installed on an existing developed site located in the developed, urban environment of UC Berkeley.

Individual cumulative development projects on the CKC associated with the 2021 LRDP would continue to be subject to UC Berkeley requirements related to aesthetics, including project-level design review requirements and compliance with relevant CBPs to ensure that the development is aesthetically pleasing and compatible with adjoining land uses, where possible. Similarly, non–UC Berkeley cumulative projects under the jurisdiction of the City of Berkeley (and Oakland if any cumulative projects were to occur in this jurisdiction near the project sites) would require review subject to those relevant local policies pertaining to aesthetics, such as those described in Section 4.2.2, Regulatory Framework. Local plans and polices include general plan and municipal code policies and regulations for both cities that ensure compatibility between various developments and preservation of significant scenic features, such as the East Bay hills and San Francisco Bay, and related scenic views.

Since there is limited space in the cities of Berkeley and Oakland for new development, most cumulative projects would be infill, and the overall scenic quality of the urbanized area would be unlikely to be substantially changed by the cumulative development of these projects. With the development review mechanisms in place for both UC Berkeley, City of Berkeley, and City of Oakland projects, cumulative development is not anticipated to create substantial impacts to aesthetics. Therefore, with the existing developed nature of the cumulative setting, combined with compliance with existing regulations, policies, and plans, cumulative impacts to aesthetics would be *less than significant.*

4.2.4 REFERENCES

AllTrails. 2021. UC Berkeley to De La Veaga Trail. Accessed May 21, 2021 at: https://www.alltrails.com/trail/us/california/uc-berkeley-to-de-la-veaga.

California Department of Finance. 2021. Table E:1: City/County Population Estimates with Annual Percent Change – January 2020 and 2021. Accessed May 28, 2021 at: https://dof.ca.gov/Forecasting/Demographics/Estimates/e-1//.

Caltrans (California Department of Transportation). 2021. California State Scenic Highways (State Scenic Highways Map). Accessed May 29, 2021 at: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

City of Berkeley. 2001. General Plan: A Guide for Public Decision Making. Accessed May 29, 2021 at: https://www.cityofberkeley.info/contentdisplay.aspx?id=488.

East Bay Regional Park District. 2019. Map for Claremont Canyon Regional Preserve. Accessed May 29, 2021 at: https://www.ebparks.org/parks/maps/default.htm.

UC Berkeley (University of California, Berkeley). 1979. *Dwight-Derby Site Plan (Schools for the Deaf and Blind).* Final Environmental Impact Report. May 1979.

UC Berkeley. 2005. *2020 Long Range Development Plan*. January.

UC Berkeley. 2009. *Physical Design Framework*. November.

UC Berkeley. 2011. Campus Parking Map. Accessed May 29, 2021 at: https://pt.berkeley.edu/parking/student-permits/maps.

UC Berkeley. 2021a. *2021 Long Range Development Plan*. July.

UC Berkeley. 2021b. *UC Berkeley Physical Design Framework*. July.

UC Berkeley. 2021c. *UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Draft Environmental Impact Report (State Clearinghouse Number: 2020040078).* March 2021.

UC Berkeley. 2021d. *UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Final Environmental Impact Report (State Clearinghouse Number: 2020040078).* July 2021.

4.3 CULTURAL AND TRIBAL CULTURAL RESOURCES

This section describes the existing setting of the project sites and vicinity related to cultural and tribal cultural resources, identifies associated regulatory requirements, evaluates potential project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the of the Clark Kerr Campus (CKC) Beach Volleyball Courts Project (project or proposed project). The analysis is based on a Cultural Resources Inventory and Evaluation Report prepared for the proposed project, which is included in Appendix E.

4.3.1 ENVIRONMENTAL SETTING

Information in this section was obtained through cultural resource records searches, archival research, pedestrian surveys of the project sites, historical significance evaluations, and correspondence with Native American tribes and other interested parties. The information is summarized below and described in detail in the project's Cultural Resources Inventory and Evaluation Report included in Appendix E.

4.3.1.1 STUDY AREA

The proposed project is located within the historic property boundary of the National Register of Historic Places (NRHP) District No. 82000962 *State Asylum for the Deaf, Dumb, and Blind (also known as California Schools for the Deaf and Blind)* (Historic District). The study area for cultural and tribal cultural resources is the area of potential effect for the project, which is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties.

The built environment study area follows the maximum possible area of potential effects resulting from the proposed project. Because the proposed project is taking place within a listed NRHP Historic District potential effects or impacts to individual resources as well as to the Historic District, must be considered. As such the study area for this project follows the same line as the historic property boundary for NRHP Historic District.

The archaeological study area for the proposed project includes the proposed project boundary. This area represents the maximum area of direct project disturbance. The study areas for the proposed project are shown on Figure 4.3-1 and includes the maximum possible area that could be affected by the project.

4.3.1.2 PREHISTORIC CONTEXT

The San Francisco Bay region has been occupied by humans for at least 12,000 years. Sites dating to the Early Holocene/Lower Archaic between 8000 and 3500 BC are extremely rare, though at least one has been recorded. During that time period people were largely mobile foragers using large leaf-shaped projectile points and handheld milling stones. The Early Period/Middle Archaic, between 3500 and 500 BC, saw increased stone technologies, trade, and sedentism. Many sites in the San Francisco Bay region dating this period are shellmounds, midden sites containing large quantities of mollusk shells. Over 400 shellmounds around the San Francisco Bay were recovered in the early 20th century. One such site near the study area is the West Berkeley shellmound, which was situated at the mouth of Strawberry Creek at the San Francisco Bay approximately two and a half miles west of the CKC and was occupied by humans as early as 4,000 years ago.

This page intentionally left blank.

Archaeological Study Area / Proposed Project Boundary

Proposed Project Boundary

Built Environment Study Area (California Schools for the Deaf and Blind NRHP District Boundary)

NRHP District Building Name / UCB Building Name

NRHP Contributing Building (Building / Structure Modification post 1982 NRHP Listing)

B-11 - Wilkinson Hall, Boys Residence (Partial Demolition) 1928/1985

NRHP Contributing Building

B-1 - Administration, Assembly & Library Building (UCB 19 - Faculty Apartments) 1926/1930

B-2 - Vista Del Mar Girls Residence (UCB - No Name / Number) 1924

B-4 - Monroe Hall (UCB 17 - Suites) 1940

B-6 - Infirmary (UCB 16 - Suites) 1940

B-9 - Gymnasium (UCB 22 - Archives) 1914

B-12 - Wilkinson Lodge Annex (UCB 20 - Faculty Apartments) 1930

D-1 - Administration Bldg. (UCB 1 - Administration) 1949

D-2 - Stevenson Secondary School (UCB 2 - Suites) 1949

D-6 - Grady Hall (UCB 3 - Residence Hall) 1948

D-16 - Intermediate Girls Dormitory (UCB 8 - Residence Hall) 1950

D-18 - Main dining Room (UCB 10 - Dining Center) 1931/1950

D-19 - Kitchen and Commissary Building (UCB 10 - Dining Center) 1930

D-20 - Elementary Dining Hall (UCB 10 - Dining Center) 1930

D-21 - Commissary Building (UCB 10 - Dining Center) 1932

D-24 - Caldwell Elementary School (UCB 11 - Suites) 1931

D-25 - D'Estrella Assembly Hall (UCB 14 - Clark Kerr Campus Center) 1931

D-26 - Norton Hall for Elementary Girls (UCB 12 - Residence Hall)1930

D-27 - Runde Hall for Elementary Boys (UCB 12 - Residence Hall) 1930

D-28 - Elementary Gymnasium (UCB 15 - Child Care Center) c.1940

NRHP Non-Contributing Building (Building / Structure Modification post 1982 NRHP Listing)

B-7 - Temporary Classroom Building (Demolished) 1971

B-8 - Kitchen, Dining, and Commissary Building (Demolished / Altered) 1956

No ID A, Northwest Corner Building (UCB No Name / Number) 1993-2002

No ID B, Redwood Garden Apartments (Non-UCB Building) 1986

No ID C, Sand Volleyball Courts (UCB No Name/Number) c.1993-2002

No ID D, Skate Park (UCB No Name/Number) c.2002-2005

No ID E, Tennis Court (UCB No Name/Number) c.1993-2002

NRHP Non- Contributing Building

B-3 - Superintendent's Residence (UCB 18 - Faculty House) 1922/1950

B-5 - Keller Classroom & Children's Residence (UCB 17 - Suites) 1948

D-5 - Superintendent's Residence (UCB 5 - Child Care) 1954

D-3 - Stevenson Secondary Addition (UCB 2 - Suites) 1959

D-7 - Crandall Hall (UCB 4 - Residence Hall) 1948

D-8 - Tilden Vocational Bldg. (UCB 23 - Archives) 1952

D-9 - Vocational Auto Body Shop (UCB 24 - Recreational Maintenance) 1968

D-10 - Howson Gymnasium (UCB 25 - Golden Bear Recreation Center) 1955

D-11 - Swimming Pool (UCB 25 - Golden Bear Recreation Center) 1962

D-12, The Athletic Field (UCB No Name / Number) 1955/1956/1960

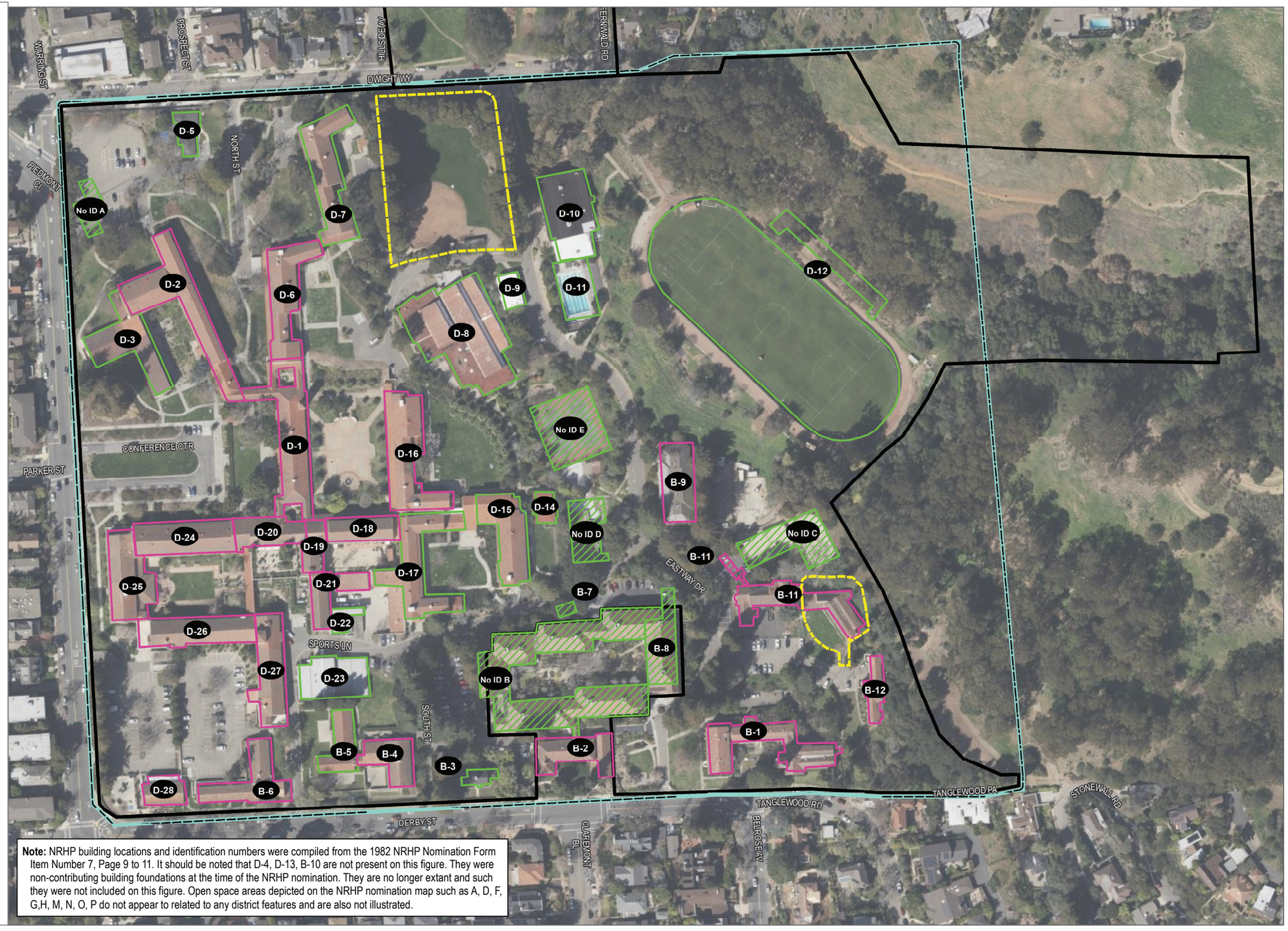
D-14 - Practice Cottage (UCB 6 - Residence Hall) 1950

D-15 - Clark Hall (UCB 7 - Residence Hall) 1950

D-17 - Birk Hall (UCB 9 - Suites) 1950

D-22 - Bakery Building (UCB 10 - Dining Center) 1953

D-23 - Heating Plant and Maintenance Bldg. (UCB 13 - Steam Plant) 1951



Note: NRHP building locations and identification numbers were compiled from the 1982 NRHP Nomination Form Item Number 7, Page 9 to 11. It should be noted that D-4, D-13, B-10 are not present on this figure. They were non-contributing building foundations at the time of the NRHP nomination. They are no longer extant and such they were not included on this figure. Open space areas depicted on the NRHP nomination map such as A, D, F, G,H, M, N, O, P do not appear to related to any district features and are also not illustrated.

SOURCE: Bing Maps 2021, Alameda County 2018, NRHP District No. 82000962 Nomination Form

DUDEK

0 87.5 175 Feet

FIGURE 4.3-1

Cultural Resources Study Area

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

4.3.1.3 ETHNOGRAPHIC BACKGROUND

Prior to European arrival in the 18th century, the EIR study area was situated within territory occupied by the Ohlone people, specifically the Huchiun Ohlone who spoke the Chochenyo Ohlone dialect. The Ohlone culture may have come from the fusion of Hokan and Utian cultures; the proto-Utian migration, one of three estimated major migrations of the Penutian-speaking peoples, entered California from the Great Basin and settled the Sacramento/San Joaquin Basin, likely coming in contact with existing Hokan populations after spreading further west after 2,000 BC (Moratto 1984; Hattori 1982). Linguistic affiliation with the Ohlone included up to seven distinct language branches (Kroeber 1925).

4.3.1.4 HISTORIC CONTEXT

The following summary historic context chronicles the development of the CKC. See Appendix E for the comprehensive historic context of the CKC. Appendix E presents the historic context (pre-1980) verbatim in its entirety from *The Architectural/Historical Aspects of the California School for the Blind and California School for the Deaf, Berkeley (1867-1979)* prepared by David Gebhard and David Bricker in 1979 for UC Berkley in conjunction with the 1979 Dwight-Derby Site Plan and Final Environmental Impact Report.

Table 4.3-1 provides a list of the extant buildings that were identified in the 1982 NRHP Historic District nomination and documented in the 1979 text below from David Gebhard and David Bricker summarized below. The table also presents the corresponding UC Berkeley CKC building number currently in use and also the present use of each building. The location and building name and number of each building discussed in Table 4.3-1, are presented on Figure 4.3-1.

TABLE 4.3-1. EXTANT CALIFORNIA SCHOOLS FOR THE DEAF AND BLIND NRHP HISTORIC DISTRICT BUILDINGS

California Schools for the Deaf and Blind NRHP District Building Number/ Name	NRHP District Contributor or Non-Contributor	Corresponding UC Berkeley Clark Kerr Campus Building Number/ Present Use
School for the Deaf		
D-1/ Administration Building	Contributor	1 /Administration
D-2/ Stevenson Secondary School	Contributor	2/ Suites
D-3/ Stevenson Secondary School Addition	Non-Contributor	
D-5/ Superintendent's Residence	Non-Contributor	5/ Child Care
D-6/ Grady Hall	Contributor	3/ Residence Hall
D-7/ Crandall Hall	Non-Contributor	4/ Residence Hall
D-8/ Tilden Vocational Building	Non-Contributor	23/ Archives
D-9/ Vocational Auto Body Shop	Non-Contributor	24/ Recreation Maintenance
D-10/ Howson Gymnasium	Non-Contributor	25/ Golden Bear Recreation Center
D-11/ Swimming Pool	Non-Contributor	
D-12/ The Athletic Field	Non-Contributor	No UC Berkeley Number/ No UC Berkeley Name
D-14/ Practice Cottage	Non-Contributor	6/ Residence Hall
D-15/ Clark Hall	Non-Contributor	7/ Residence Hall
D-16/ Intermediate Girls Dormitory	Contributor	8/ Residence Hall
D-17/ Birk Hall	Non-Contributor	9/ Suites
D-18/ Main Dining Room	Contributor	10/Dining Center
D-19/ Kitchen & Commissary Building	Contributor	

TABLE 4.3-1. EXTANT CALIFORNIA SCHOOLS FOR THE DEAF AND BLIND NRHP HISTORIC DISTRICT BUILDINGS

California Schools for the Deaf and Blind NRHP District Building Number/ Name	NRHP District Contributor or Non-Contributor	Corresponding UC Berkeley Clark Kerr Campus Building Number/ Present Use
School for the Deaf		
D-20/ Elementary Dining Hall	Contributor	10/ Dining Center
D-21/ Commissary Building	Contributor	
D-22/ Bakery Building	Non-Contributor	
D-23/ Heating Plant and Maintenance Building	Non-Contributor	13/ Steam Plant
D-24/ Caldwell Elementary School	Contributor	11/ Suites
D-25/ D'Estrella Assembly Hall	Contributor	14/ Clark Kerr Campus Center
D-26/ Norton Hall for Elementary School Girls	Contributor	12/ Residence Hall
D-27/ Runde Hall for Elementary School Boys	Contributor	
D-28/ Elementary Gymnasium	Contributor	15/ Child Care Center
School for the Blind		
B-1/ Administration, Assembly & Library Building	Contributor	19/ Faculty Apartments
B-2/ Vista Del Mar Girls Residence	Contributor	No UC Berkeley Number/ No UC Berkeley Name
B-3/ Superintendent's Residence	Non-Contributor	18/ Faculty House
B-4/ Monroe Hall	Contributor	17/ Suites
B-5/ Keller Class Room & Children's Residence	Non-Contributor	
B-6/ Infirmary	Contributor	16/ Suites
B-9/ Gymnasium	Contributor	22/ Archives
B-11/ Wilkinson Lodge	Contributor	21/ Archives
B-12/ Wilkinson Lodge Annex	Contributor	20/ Faculty Apartments

THE SCHOOLS FOR THE DEAF AND BLIND (1867-1920)

In 1866, the California State Legislature passed legislation to establish the California Institution of the Deaf and Dumb, and Blind. One of the first tasks of the newly appointed Board for the School was to select a new site for the institution to replace the limited facilities then being used in San Francisco. The site selected was a 130-acre former farm site in the then-developing village of Berkeley.

Early the following year, in 1867, the Directors solicited proposals from San Francisco architects for the design of the new building. The winning firm was that of John Wright and George H. Saunders. The Office of Wright and Saunders represented one of the principle architectural firms in the Bay Area, having been established in 1860. Their task in designing the new building for the School For The Deaf and Blind was to provide "...a building not extravagant in costliness, yet of fine lines, beautiful appearance, enduring character and general fitness, which will be an honor to the State, an ornament to the Region..."

The building produced by the firm would certainly seem to have beautifully fulfilled each of the points mentioned above. The structure was a three-story raised basement building which was sheathed in sandstone. Its plan was basically H-shaped, with the two pairs of arms of the H connected by single story units, thus forming two small interior light courts. A separate kitchen wing was connected to the rear (east) side of the building, and four single story wood pavilions which housed the bathrooms extended from the ends of each of the arms of the H. The plan was essentially a Classical, Neo-Baroque one, consisting of four terminating pavilions which projected out from the

four arms, and a dominant central pavilion which dominated the principal (west) facade. Four side halls provided entrance to the rooms in each of the wings. A Chapel occupied the space above the first-floor dining saloon. The architectural imagery utilized in the building was what we today would label Ruskin-ian Gothic. At the time the building was constructed it was described as "...domestic Gothic, but of a Light and Cheerful Character."

The contract for the construction of the building was signed at the end of July, and the cornerstone was laid on September 26, 1867. In October of the following year, an earthquake damaged the then-incomplete building, and several minor changes were made in its design, including the substitution of wood instead of masonry for the high gables, and galvanized iron for the tops of the tall projecting chimneys. The picturesque edifice was finally completed in 1869, but its life was brief, for on January 17th, 1875, it was completely destroyed by fire. Immediately after the fire the Board authorized Wright and Saunders to design a temporary wood building which could serve the School's need while more permanent buildings were being constructed.

The destruction of the building prompted the principal, Warring Wilkinson, the Board and the architects to rethink the physical layout for the School. It was decided that living quarters should be designed in separate buildings, and the classrooms and other educational and utilitarian needs would be located in other buildings. Wright and Saunders produced a new plan which they felt would allow for "indefinite expansion." The site plan established a central spine of academic and utilitarian buildings. This spine would be dominated by a large imposing Education building, behind which would be the workshop-classrooms, Dining Saloon, Kitchen, Gymnasium, etc. Parallel, to each side, were to be a row of residential homes, each three stories in height.

As the large-scale perspective drawing for the site indicates, the general design of the Central Education building, five of the homes, the Refectory, and several other smaller buildings were decided upon in 1875. Lack of architectural records makes it impossible at this time to precisely determine the exact design sequence of each of the buildings which were constructed between 1876 and 1880.

One of the real surprises of the 1875 design is how Wright and Sanders completely disregarded the Ruskin-ian Gothic Revival image of the 1860s and replaced it with a version of the Romanesque Revival. The general effect of the Education Building and of the other buildings of the 1870s and 80s is Romanesque Revival with a continual side glance at the earlier Italianate (on Tuscan Revival). If taken separately, a number of the individual arched window openings, the extensive bracketed roof, and the gable and hipped roof venting towers of the residential homes read as Italianate. But taken as a whole, each of the buildings, and the buildings as a group, read as a Romanesque Revival image.

By 1900 the School contained five homes. All of these would seem to have been conceptually designed in 1876-77, and though built over a period of time it would not appear that any major modifications were made in their design. Another structure constructed during the late 1870s building campaign was the two-story wood frame principal's cottage which was situated within the northwest portions of the site.

With the completion of the Education Building, the two-story temporary building of 1875 became the shop building. Other small utilitarian buildings were placed around the site including a powerhouse, a bake shop, and a greenhouse. In 1901-1904 a single-story wood hospital was built, and sometime before this a milking barn, milkhouse and farm storage shed had been built on the hillside.

Several physical changes occurred within the site between 1910 and 1920. On October 30, 1910 the wooden 1875 Industrial Arts building (the former temporary building) was destroyed by fire. This was replaced by a three-story concrete and brick building. In contrast to all of the previous buildings, this new building, named "Manual

Arts," was designed by the Office of the State Architect and was completed in 1912. The general sense of the building was simplified Classical, with a reference to northern Italian architecture.

In 1916 the Manual Arts building was joined by a second lightly Italian building, a gymnasium which was placed further up the hill towards the east. The working drawings for this building are dated June 7, 1914, and they were also produced by the Office of the State Architect. Though a new State Architect, George B. McDougall, had been appointed on August 22, 1913, the design of this building closely matched that of the 1912 Manual Arts building. The horizontal classical orientation of these two buildings produced a strong visual contrast to the vertical Romanesque Revival imagery of the 19th century buildings. In a way these two new buildings suggested that the life span of the older buildings was limited, not only because of a change in architectural taste, but also because the Manual Arts building and the Gymnasium were reinforced concrete buildings which marked a major structural advance over the older buildings. For a site situated in an earthquake sensitive area, new structural forms which could successfully weather a tremor would become increasingly imperative.

When the School was established in Berkeley in 1865, it bore the designation of the California Institution For the Education of the Deaf and Dumb, and the Blind. It was also officially referred to off and on as the "State Deaf, Dumb and Blind Asylum." By 1900 the title had become The California Institution For the Education of the Deaf and Blind. In 1915 the School was officially renamed the California School For the Deaf and Blind. For some years suggestions had been advanced to separate the two schools, but it was Laurence Edwards Milligan (appointed principal in 1912) who pressed the Governor and Legislature to consider such a separation. The new enabling legislation of 1915 provided the framework for such a separation which finally took place in 1921.

Between 1915 and 1921 consideration was given to the possibility for removing both Schools from their Berkeley site to another location. In 1921 it was decided that the two Schools should remain at their present site. A loose north/east south/west diagonal line was drawn, giving the northern two-thirds of the site to the School For the Deaf, and the southern third to the School For the Blind. Though no building funds were provided in 1921 for the newly separated Schools, the stage was set for the mid to late 1920s extensive building activities.

THE SCHOOL FOR THE DEAF (1921-1979)

The separation of the two Schools in 1921 encouraged a reappraisal of how the needs for the education of the blind could best be accommodated within the State. Eventually it was decided that two residential schools should be established, one in Southern California, and one in Northern California. The question was once again raised as to whether the School For the Deaf should remain at its present Berkeley site, or whether a new, larger and more rural site should be obtained. Ultimately, a decision was made to remain at the Berkeley site.

A study was made of all of the buildings by the Office of the State Architect, with the result that this Office concluded in its report that "Practically all of these buildings are out of date at this writing, and remodeling is not practical. A Special Legislative Committee appointed by the State Senate with the concurrence of the State Assembly was established in 1927, to prepare recommendations on how the needs of the School could best be met. This Committee concurred with the recommendation of the Office of the State Architect that the existing physical plant be replaced by new buildings to be constructed over a period of ten years and the recommendations were adopted by the State Senate, Assembly and the Governor.

The 1929 Report of the Special Legislative Committee set forth an orderly program of destruction of the older buildings and the construction of new buildings. The Report presented a site plan indicating the general layout of the proposed new buildings, patios, play areas, garden and athletic field; and also it indicated the basic time program for new

construction over a ten year period. Funding was provided in 1929 for the first phase of the plan. This initial phase consisted of dining, kitchen and commissary buildings (Buildings D-19, D-20 and 'D-.21), a Boys' Dormitory (Building D-27), and a Girls' Dormitory (Building D-26). A second appropriation the following year provided state funds for Coldwell Elementary School (Building D-24), and the adjacent D'Estrella Assembly Hall (Building D-25).

By the time all of these buildings were completed in 1932, the full impact of the Great Depression of the 1930s inhibited the State from appropriating any additional funds to carry out the next phases of the ten year construction plan. The gradual involvement of the United States in defense-related activities at the end of the 1930s, and then the direct involvement in the Second World War between 1942 and 1944 meant that the realization of the ten year program had to wait until after 1945.

The design history of the School For the Deaf, between 1926 and the mid-1930s is even more confused than that of the School for The Blind. As with its sister school, the 1920s and later design responsibility has generally been accorded to Alfred W. Eichler. Caroline Hyman Burnes and Catherine Marshall Ramger in their 1960 History of the California School For the Deaf, wrote that "Mr. Eichler began the building program with Dr. Stevenson (Elwood A. Stevenson became the principal of the School in 1928) and they worked together until the present time.

In both the 1929 and 1933 site plans, the architects abandoned the nineteenth century ideas of separate structures scattered about in a suburban/semi-rural environment. Instead they argued for a much tighter organization of all of the buildings. This view that the uses should be in close proximity had been proposed in the 1929 Special Legislative Report. The agreed upon design imagery to be employed for the School For the Deaf was, as with the neighboring School For the Blind, Spanish Colonial Revival (Mediterranean). The earliest drawing in possession is a sketch for a proposed gymnasium, dated 1926, and signed by R.D. Murray. The building depicted is reasonably close to the small Gymnasium (Building D-28) which was built in 1940. All of Eichler's early sketches, and the designs of Oakland Architect Charles F.B. Roeth, adhere to the same basic Hispanic set of images. As in the design for the School For the Blind, the architects of the School For the Deaf played off Classical Beaux Arts axis and balance with the picturesque Hispanic traditions of Spain and Mexico. In both the 1929 and 1933 site plans, the symbolic placement and design of the Administration Building was strongly countered by an off-center tower -- just to the north side of the principal entrance in the 1929 site plan, and in Roeth's 1933 design he placed it way over in the north corner, where the north flank of the Education Building joined the Administration Building.

One of the major visual shifts which occur in the Spanish Colonial Revival imagery of the twenties and thirties utilized for the buildings of the School For the Deaf is the direct expression of their concrete frame through leaving the board pattern of the forms within which the concrete was poured. This accomplished two purposes -- it conveyed that the buildings were of "Modern" construction, and the rough tactile nature of their surfaces suggests a sense of the primitive and provincial. The expression of exposed concrete in non-utilitarian buildings in California has enjoyed a long, but only partially documented history. From the early nineteen hundreds on, schools, churches, governmental buildings and commercial buildings were constructed throughout California with exposed concrete surfaces. Its period of ascendancy was through the late 1920s and on into the 1930s.

The first two new Spanish Colonial Revival buildings constructed for the School For the Deaf were Norton Hall, a residence for Elementary girls, and Rundo Hall, a residence for Elementary boys. These exposed concrete buildings were designed in 1930, completed in 1932, and the signed detailed drawings and the sketches are by Alfred Eichler. Some additional studies were made for projected buildings for the School For the Deaf at the end of the 1930s and these drawings are signed by Eichler, and they indicate that the architect continued to adhere to the imagery of the Spanish Colonial Revival. There were a few additional "Moderne" notes, such as vertical glass brick window units for the stair hall for what was eventually to become the Elementary Girls' Dormitory (Building D-16).

The only buildings actually constructed for the School just before the Second World War were a small addition to the commissary building (D-21), and the Elementary Gymnasium (Building D-28). Both of these additions to the School were completed in 1941. Since Eichler's name does not appear on any of the known existing drawings it cannot be ascertained whether he had any part in the design of the Gymnasium.

In 1945 the State Legislature allotted funds for the construction of additional buildings. The first two buildings to be designed were Grady Hall, the Junior High School for Boys, and Crandall Hall, the High School for Boys. The working drawings for these buildings are dated June 7, 1948, and they were completed in 1949. These buildings were followed by the Administration Building, Stevenson Secondary School (both started in 1949), and the Intermediate Girls' Dormitory (Building D-16), and Clark Hall, the High School for Girls (Building D-15) (Drawings dated October 2, 1950). Contemporary with the latter two buildings was the small Cottage (Building D-14) of 1950. In 1952 the Tilden Vocational Building was added, and this was followed by Howson Gymnasium of 1955, the enclosed swimming pool of 1962, and the Vocational Auto Body shop of 1968.

Up until 1952 the Spanish Colonial Revival imagery for the School had been adhered to, though it should be noted that the imagery slowly became less Spanish and more Modern (Moderne). Eichler tried to carry out the basic concept of the 1929 plan and the unified adherence to one architectural image. The architect departed from the traditional classical balance and rectilinearism of the 1929 scheme because such an oblique placement conveys a Modern image.

The first major departure from the unity of the Hispanic imagery was the Tilden Vocational Building, designed in 1952 by Fred Langhorst, Donald Kirby and Thomas Mulvin. The architects have successfully brought together the industrial machine image in the saw-tooth partially metal-clad shop area, and they have balanced this with a low, flat roofed section, which with its broadly overhanging roof, horizontal banks of French doors and casement windows, and its terraces and steps looks both to the Bay tradition of William W. Wurster and Gardner Dailey to the pre-World War II vocabulary of Frank Lloyd Wright. The remaining later buildings of the 1950s and 1960s are of no distinction.

THE SCHOOL FOR THE BLIND (1921-1979)

The first and most pressing need for the two Schools was to provide a new, separate physical plan for The School For the Blind. From 1921, the year of the separation of the two Schools, until 1925, when the first of the School for the Blind's new Girls' Residences (Vista Del Mar) was completed, the two Schools continued to share the older facilities together. Due to lack of documentation, it is unclear when the Office of the State Architect began to design the buildings for the School For the Blind. It would be reasonable to assume that as early as the fall of 1921, or early in 1922, that the Office of the State Architect began at last to work on the site plan and the general design for these buildings. The site plan placed the Administration, Auditorium and Classroom Building, Vista Del Mar Girls' Residence, and the Superintendent's Residence facing onto Derby Street, while Wilkinson Lodge, the Boys' Residence, and Wilkinson Lodge Annex were sited to the north, somewhat up the hill. The principal entrance onto the grounds, located between the Administration, Auditorium and Classroom Building and Vista Del Mar Girls' Residence, was designed not as a public entrance, but rather as an informal service entrance onto the grounds of the School. The dramatic public entrance was the south walkway and porticoed porch of the Administration, Auditorium and Classroom Building. With its open lawn and dominant tower, this building effectively established the existence of the School as a major public institution.

Though the working drawings from the Office of the State Architect are in existence, they do not reveal the conceptual and final designs for all of the buildings for the School For the Blind, which was accomplished wholly or principally by Alfred Eichler. The period after the First World War marked the heyday for the Spanish Colonial Revival.

This was a moment in California's architecture and landscape architectural history when there was a remarkable agreement among clients, architects and landscape architects that coastal California should develop a regional architecture of its own which would closely tie it to its earlier Spanish tradition and the general imagery of the Mediterranean. And like other earlier and later borrowers of imagery of the past, the architects of California's Spanish Colonial Revival of the 1920s and 1930s wished to use these elements of remembrances so that they would indicate the present as well as the past. In the Administration, Auditorium and Classroom Building, Eichler borrowed from the Mediterranean world of Spain and Italy.

The Depression of the 1930s stopped all building activities at the School For the Blind until 1940. In that year three new buildings were added: Monroe Hall, Classrooms and Children's Residence (Building B-4), (drawings dated January 18, 1940); Receiving and Primary Building (Building B-5) (drawings dated: January 8, 1940); and Infirmary (Building B-6) (drawings dated: January 8, 1940). The current consensus of members of the State Architect's Office is that the initial drawings of these buildings were produced by Alfred Eichler. These three buildings of 1940 were all small in scale -- one and two stories high, and their general imagery was Spanish Colonial Revival. But their version of the Spanish incorporated a number of design features which are indicative of the Monterey Revival of the 1930s, i.e., they represent a mild mixture of Spanish and American Colonial which one finds in so much of California's architecture of the 1930s.

HISTORY OF THE HISTORIC DISTRICT (1980 TO PRESENT)

In the late 1970s, citing the threat of seismic activity, the State of California Department of Education proposed to relocate the California School for the Deaf and the School for the Blind to a new campus in Fremont, California. Despite protests from families, faculty, and the City of Berkeley to retain the programs at their current site, the State ultimately elected to move the schools to the new campus in time for the Fall 1980 term. In anticipation of the vacancy on the original campus, the University of California quickly positioned itself for acquisition of the property. In 1979, the University published the Dwight-Derby Site Plan Draft Environmental Impact Report (draft EIR) which assessed the potential impacts of the property acquisition and use by the University of California, Berkeley for student and faculty housing, administration, and research facilities. The draft EIR provided three possible alternative uses for the facilities that consisted of variable levels of building space converted to student housing (UC Berkeley 1979).

Several local preservationists considered the campus one of Berkeley's historic and architectural gems and the proposed acquisition of the campus by UC Berkeley prompted a series of community-initiated historic preservation efforts. By 1981, the campus was recorded as a City of Berkeley Landmark by the Berkeley Architectural Heritage Association. In 1982, the campus was listed on the NRHP as the State Asylum for the Deaf, Dumb and Blind Historic District (see Section 4.3.1.5, Cultural Resources, for additional information). That same year, UC Berkeley took possession of the combined 50-acre campus and 80-acres of parkland. This acquisition was evaluated in the 1979 Dwight-Derby Site Plan and Final EIR (UC Berkeley 1979). In 1986, the campus was renamed by UC Berkeley the CKC in honor of Dr. Clark Kerr, who served as the first Chancellor of UC Berkeley between 1952 and 1958 (UC Berkeley 1979 and 2021a).

Under UC ownership, the campus has undergone few changes since it was listed to the NRHP in 1982 including the demolition of a non-contributing building B-8, Kitchen, Dining, and Commissary Building, and the demolition of the western wing of B-11, Wilkinson Lodge in 1985. New buildings and structures added to the NRHP District Boundary between 1985 and 2005 include: the Redwood Gardens Apartments on the former site of B-8, a multi-unit Senior Housing Community; new Tennis Courts southeast of D-8, Tilden Hall; new sand courts north of B-11, Wilkinson Lodge; a building in the northwest corner of the CKC (now demolished); and the Skatepark north of the

Redwood Gardens Apartments (NETR 2021). Today, UC Berkeley utilizes the CKC primarily for student and faculty housing and for sports and recreation facilities for students and residents. Several CKC buildings are also dedicated to conference rooms, archives and storage, and childcare.

B-11, WILKINSON LODGE, BOYS RESIDENCE (UC BERKELEY BUILDING 21) (1928)

Plans for the Wilkinson Lodge boy's residence were completed for the School of the Blind in 1928 to serve as a combination boys' dormitory and dining hall. The Wilkinson Lodge, along with other California School for the Blind buildings was designed by the State Division of Architecture, under State Architect, George B. McDougall who served in the post between 1913 and 1938. Many of the early buildings located on the California Deaf and California Blind School campuses including the Wilkinson Lodge were designed by architect, Alfred Eichler. As indicated previously, Eichler designed the California Deaf and California Blind School campus buildings, including the Wilkinson Lodge, in the Spanish Colonial Revival style with unique Public Works Administration Moderne (PWA Moderne) style elements. The building was designed to conform to the topography of the site and spreads out and into a steep hillside towards the parkland to the east of the CKC. The NRHP nomination also references an addition that was made to the building during the 1950s, however no evidence of the plans for these alterations was uncovered. It is possible that the addition is the set of concrete stairs with a protective overhang located on the far south-end of the eastern-most wing of the building, which does not appear in the original plans (CA DPW Arch 1928a; 1928b).

During the 1960s, the building was dedicated as the Wilkinson Lodge after, Warring Wilkinson, acting principal between 1867 and 1911. Since 1979, when the California School for the Blind moved to a new campus in Fremont, California, the building has remained vacant except for use as storage. In 1985, the northwest wing was removed to make adequate space for a parking lot. Today, the building continues to be mostly vacant, despite recent efforts to rehabilitate the western half of the building including the repair of roofing, siding, and windows for continued use as storage. The remainder of the building features graffiti throughout, boarded up and inoperable windows, and general deterioration due to neglect. (San Francisco Chronicle 1868; 1918).

SOFTBALL FIELD (C.1958-1985)

The development of sports facilities and fields on educational properties in the United States is tied to the advancement of physical education during the 20th century as part of a well-rounded curriculum for primary, secondary, and higher education institutions. By the 1920s, as more Americans gained access to higher education, sports became a fundamental aspect of higher education curriculum in the United States. As a source of entertainment and recreational value to the public, collegiate sports programs continued to gain in popularity during the 1930s and 1940s (Smith 2000; Kennard 1977).

Following the end of World War II, the Servicemen Readjustment Act, also known as the G.I. Bill of Rights, afforded service members the opportunity to receive a college education. Of the 16 million World War II veterans in the United States, 7.8 million participated in higher education programs because of the G.I. Bill. As a result of this surge, additional educational facilities were added and expanded across California and the United States overall, which frequently included new physical education and sports facilities. Public popularity of collegiate sports programs continued to grow, leading to commercialization of collegiate sport programs during this period. Many colleges and universities established and expanded sports programs, as well as educational opportunities to include Physical Education degrees. The expansion at the higher education level also promoted a renewed emphasis on sports as part of primary and secondary education during the Mid-Century period (History.com 2021; Smith 2000).

The area that currently comprises that softball field appears to have served as an undeveloped portion of the School for the Deaf campus until the 1930s. An aerial photograph indicates that the area served as an agricultural field between 1939 and 1947 and was established into a recreational sports field during the same period that the northern section of the campus was redeveloped between 1947 and 1965. The softball field was completed between 1958 and 1965 as one component of a number of physical education facilities added to the undeveloped northern section of the School for the Deaf campus between 1947 and 1965 including the D-10, Howson Gymnasium (1955), and the D-12, Athletic Field (1955). The softball field and the associated elements including the chain-link backstop appears in the 1965 aerial photograph. The pitcher's mound and home plate are also visible in the 1965 photograph, indicating the field was in use for this purpose by this time. Research did not indicate that an architect or engineer was involved in the development of the softball field (UCSB 2021; NETR 2021).

To the north of the field's perimeter along Dwight Way is a line of mature trees, of which nineteen were identified as specimen trees per UC Berkeley's Specimen tree program. Historical aerial photographs confirm the vegetation barrier is present on the site in 1939.

ARCHITECT: ALFRED W. EICHLER (1895-1977)

After Alfred Eichler was born in Missouri in 1895 to Dr. Alfred and Laura Eichler, the young family relocated to San Francisco in 1896. At the age of 13, Eichler contracted spinal meningitis which resulted in him becoming permanently deaf. While Eichler learned to read lips, he never learned to use sign language. Despite this, Eichler excelled scholastically and went on to apprentice with the renowned San Francisco architectural firm, F.D. & H.A. Boese beginning at the age of 16 in 1911 (CSLF 2020; CSA 2020). Between 1917 and 1918, Eichler acquired a position with the U.S. Navy in Washington D.C. as a civilian architect and took advantage of his location on the East Coast to train at Columbia University and the Beaux Arts Institute of Design. He returned to California and secured a position in Los Angeles with architect Myron Hunt, and became a certified licensed architect in California in 1922 (CSLF 2020; CSA 2020).

In 1925, Eichler was hired as a senior architectural designer for then State of California Division of Architecture. He remained employed with the State for nearly 40 years, progressing to Supervisory Architect in 1949, where he oversaw the design section of the Division of Architecture until his retirement in 1963. Eichler designed an impressive number of state buildings throughout California in a range of popular architectural styles during his career including schools, hospitals, office buildings, prisons, border inspection stations, bridges, historic restoration projects, and state parks and fairgrounds (Sacramento Bee 1963; CSLF 2020; CSA 2020).

SPANISH COLONIAL REVIVAL ARCHITECTURE (1915-PRESENT)

The Spanish Colonial Revival style has a rich history and popularity in California. The history of the style began with architectural forms originating in Spain that were carried to California during the Spanish Period. Californian Architects Bertram G. Goodhue and Carleton M. Windslow helped to popularize the style well into the 1920s and 1930s, by which time the style was well represented in many coastal cities throughout California. The popularity of the style persisted well into the second half of the 20th century, spurring interest in new, offshoot styles such as the Monterey Revival and even the California Ranch House.

The character-defining features of the Spanish Colonial Revival style include the following (Gebhard 1985): asymmetrical façades; sprawling, irregular massing; low pitched roofs fitted with clay tiles; stucco walls that predominate over openings; limited number of openings, often deeply recessed into the wall surface and irregularly placed; arched entryways; heavy, wood entry doors with single or no light; decorative wrought-iron screens and

details for windows, doors, balconies, and hardware; turned-wood grilles over windows and doors; and relationship to outdoors through the use of French doors, terraces, courtyards and pergolas.

PWA MODERNE ARCHITECTURE (1928-1941)

The PWA Moderne style describes a popular style of architecture employed under the Public Works Administration, one of many programs established during the Great Depression under the New Deal. While examples of the style predate the New Deal era, the style has come to have a strong association with undertakings of the PWA. PWA Moderne buildings are characterized by classical, conventional forms in line with the clean, formal Beaux Arts style which have been updated with modern stylistic elements drawn from the early 1920s Art Deco and Streamline Moderne styles. The style was frequently employed in California in the construction of public schools.

The character-defining features of the PWA Moderne style include the following (Gebhard 1985; Marter 2011): basic classical balance and symmetry including horizontal proportions; rounded bays and projecting wings; use of piers in place of columns (piers can be fluted, but generally contain no base or capitals); inset windows arranged in vertical panels; smooth exterior surfaces; and use of relief sculpture and interior murals.

4.3.1.5 CULTURAL RESOURCES

This section presents information about known historic built environment, archaeological and tribal cultural resources on or in proximity to the project sites (see Appendix E for additional details). Section 4.3.2, Regulatory Framework, provides background information on the federal, state and local regulations and requirements related to these resources.

HISTORIC BUILT ENVIRONMENT RESOURCES

NRHP Historic District No. 82000962 California Schools for the Deaf and Blind

The built environment study area is comprised of the 50-acre NRHP Historic District No. 82000962 California Schools for the Deaf and Blind. The Historic District boundary for the NRHP-listed Historic District is shown on Figure 4.3-1. The campus was listed on the NRHP in 1982 as an early state institution dedicated to the education of deaf and blind pupils (NRHP Criterion A), as well as for its cohesive architectural character and landscape design (NRHP Criterion C). The period of significance identified in the NRHP nomination is 1914 to 1949 (Page & Turnbull 2020).

The buildings located on the central and southern sections of the campus adhere to a Spanish Colonial Revival design aesthetic and feature red tile roofs, with board-formed concrete exterior walls in the School of the Deaf and light-colored stucco walls on the buildings in the School for the Blind. The northern section of the Historic District features several buildings which depart from the early Spanish Colonial Revival designs altogether and are constructed in the Mid-Century Modern and Utilitarian styles (non-contributing resources). A total of 35 buildings consisting of both contributing and non-contributing resources exist in the Historic District (see Table 4.3-1). Character defining features of the Historic District, the elements or qualities of a historic property that help convey why the property is significant, include: stylistic unity of the Spanish Colonial Revival style buildings, light colored walls surfaced with stucco (School for the Blind buildings) or board-formed concrete (School for the Deaf buildings), reinforced concrete construction, red tile roofs, arched openings, miradors (towers), circular and quatre-foil windows, metal grilles, perforated walls, cantilevered exterior staircases, balconies, interior tilework, coffered ceilings, hanging lamps, arrangement of buildings, landscaping used to define exterior spaces, building complexes formed by individual buildings connected by indoor/outdoor loggias around semi-protected courtyards, and park-like setting exhibiting a variety of plantings. (Loggias are galleries or rooms with one or more open sides that open to gardens or in this case, courtyards.)

Built Environment Resources on the Project Sites

Two resources were individually surveyed and evaluated within the study area during the preparation of this EIR: B-11, Wilkinson Lodge (UC Berkeley Building B-21), and the softball field. Each property was photographed, researched, and recorded. Each property was also evaluated for historical significance in consideration of the NRHP, California Register of Historic Resources (CRHR), California Historic Landscape (CHL), and local designation criteria and integrity requirements. Of the two properties, the softball field appears not eligible for inclusion in the NRHP, CRHR, CHL, or local register due to a lack of significant historical associations. As such, the property is not considered a historical resource for the purposes of CEQA.

The B-11 (UC Berkeley B-21), Wilkinson Lodge property was not found individually ineligible for inclusion in the NRHP, CRHR, or CHL. Although the Wilkinson Lodge does not rise to the level of meeting significance criteria individually, the building is still an important contributing element of the Historic District and is considered a historical resource for the purposes of CEQA. The Wilkinson Lodge remains in its original position on the site looking out towards the remaining School for the Blind campus buildings to the south, and therefore retains integrity of location. The building retains many of its original Spanish Colonial Revival features including an asymmetrical façade, a low-pitched roof fitted with clay tiles, stucco exterior walls, irregularly placed, recessed fenestration, and a clear relationship to the landscape and the Historic District as a whole. The building also retains several details related to the PWA Moderne style including horizontal massing with rounded bays, smooth exterior surfaces, squat columns and use of exterior relief sculpture. Regardless of this, the building has undergone several large-scale alterations that have negatively impacted the integrity of design, materials, and workmanship including the removal of the northwest wing in 1985 and the removal and replacement of original doors, concealing windows with plywood, and the replacement of original roofing materials and original siding on the western half of the building only. As a result, the building retains only diminished integrity in the areas of design, workmanship, and materials. The removal of the northwest wing, the conversion of greenspace to parking in the areas surrounding the west -end of the building, and the proximate construction of the large-scale, Redwood Gardens Apartments has considerably diminished the integrity of setting and feeling. The change in use of the space from a residential building to storage after the UC acquisition in 1982 coupled with the loss of integrity in the areas of design, materials, workmanship, setting and feeling, has caused the property to no longer be capable of conveying an association to the early twentieth century period when it was first developed and for the purpose for which it is known. Therefore, the Wilkinson Lodge is not individually eligible but retains enough historic integrity to be considered eligible under NRHP, CRHR, and local criteria as a contributor to the Historic District. However, Wilkinson Lodge was found eligible as a structure of merit on the local Berkeley register.

ARCHAEOLOGICAL RESOURCES

Background research and analyses completed by Archeo-Tec (2021) for the UC Berkeley 2021 LRDP EIR (UC Berkeley 2021b), including a records search, and subsequent archaeological efforts conducted during the preparation of this EIR, including archaeological survey, did not result in the identification of archaeological resources within areas that would be affected by the proposed project. Although no resources were identified, the area appears to have a moderate potential for supporting the presence of buried and/or unanticipated archaeological resources.

TRIBAL CULTURAL RESOURCES

The proposed project is subject to compliance with AB 52 (PRC, Section 21074), which requires consideration of impacts to “tribal cultural resources” as part of the CEQA process and requires the CEQA lead agency to notify any

groups (who have requested notification) of the proposed project who are traditionally or culturally affiliated with the geographic area of the project.

On August 11, 2020, UC Berkeley notified all applicable tribes informing them of the proposed project, providing a project description and background, and requesting consultation pursuant to AB 52. Contacts included Alex R. Watts-Tobin, of the Karuk Tribe; Katherine Erolinda Perez, of the Northern Valley Yokuts Tribe; and Andrew Galvan, of the Ohlone Indian Tribe. No tribes responded to UCB with a request to consult on the project. There are no known tribal cultural resources on the project sites.

4.3.2 REGULATORY FRAMEWORK

4.3.2.1 FEDERAL

NATIONAL HISTORIC PRESERVATION ACT (NHPA)

The NHPA established the NRHP and the President's Advisory Council on Historic Preservation (ACHP), and provided that states may establish State Historic Preservation Officers to carry out some of the functions of the NHPA. Most significantly for federal agencies responsible for managing cultural resources, Section 106 of the NHPA directs that:

> [t]he head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP.

Section 106 also affords the ACHP a reasonable opportunity to comment on the undertaking (16 U.S.C. 470f).

36 CFR Part 800 implements Section 106 of the NHPA. It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for listing in the NRHP), including consultation with federally recognized Native American tribes to identify resources with important cultural values; to determine whether or not they may be adversely affected by a proposed undertaking; and the process for eliminating, reducing, or mitigating the adverse effects.

The content of 36 CFR 60.4 defines criteria for determining eligibility for listing in the NRHP. The significance of cultural resources identified during an inventory must be formally evaluated for historic significance in consultation with the ACHP and the California State Historic Preservation Officer to determine if the resources are eligible for inclusion in the NRHP. Cultural resources may be considered eligible for listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association.

Regarding criteria A through D of Section 106, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, cultural resources, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that (36 CFR 60.4):

A. Are associated with events that have made a significant contribution to the broad patterns of our history; or
B. Are associated with the lives of persons significant in our past; or

C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield, information important in prehistory or history.

The 1992 amendments to the NHPA enhance the recognition of tribal governments' roles in the national historic preservation program, including adding a member of an Indian tribe or Native Hawaiian organization to the ACHP.

The NHPA amendments:

- Clarify that properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization may be determined eligible for inclusion in the National Register
- Reinforce the provisions of the Council's regulations that require the federal agency to consult on properties of religious and cultural importance.

The 1992 amendments also specify that the ACHP can enter into agreement with tribes that permit undertakings on tribal land and that are reviewed under tribal regulations governing Section 106. Regulations implementing the NHPA state that a federal agency must consult with any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by an undertaking.

NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT

The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) protects Native American remains, including Native American graves on federal and tribal lands, and recognizes tribal authority over the treatment of unmarked graves. NAGPRA prohibits the selling of Native American remains and provides guidelines for the return of Native American human remains and cultural objects from any collection receiving federal funding, such as museums, universities, or governments. Noncompliance with NAGPRA can result in civil and criminal penalties.

4.3.2.2 STATE

CALIFORNIA REGISTER OF HISTORICAL RESOURCES (CRHR)

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Public Resources Code [PRC] Section 5020.1[j]). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, enumerated below.

According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see 14 California Code of Regulations Section 4852[d][2]).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

PUBLIC RESOURCES CODE SECTIONS 5024 AND 5024.5

PRC Sections 5024 and 5024.5 provide the following guidance:

- 5024 (a–h): Describes the process of inventorying and evaluating state-owned historical resources in consultation with the State Historic Preservation Officer (SHPO).
- 5024.5 (a–g): Describes the process of identifying adverse effects and development of alternatives and mitigation for state-owned historical resources in consultation with, and as determined by, the SHPO.

Under PRC Sections 5024(f) and 5024.5, state agencies must provide notification and submit documentation to the SHPO early in the planning process for any project having the potential to affect state-owned historical resources on or eligible for inclusion in the Master List (buildings, structures, landscapes, archaeological sites, and other nonstructural resources). Under PRC Section 5024(f), state agencies request the SHPO's comments on the project.

Under PRC Section 5024.5, it is the SHPO's responsibility to comment on the project and to determine if it may cause an adverse effect (PRC Section 5024.5), defined as a substantial adverse change in the significance of a historical resource (PRC Section 5020.1(q)). In this case, historical resources are defined as resources eligible for or listed in the NRHP and/or resources registered for or eligible for registering as a CHL.

CALIFORNIA HISTORICAL LANDMARKS

CHLs are buildings, structures, sites, or places that have been determined to have statewide historical significance by meeting at least one of the criteria listed below (OHP 2019).

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
- Associated with an individual or group having a profound influence on the history of California.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

The resource also must have written consent of the property owner, be recommended by the State Historical Resources Commission, and be officially designated by the Director of California State Parks. CHLs #770 and above are automatically listed in the CRHR (OHP 2019).

CALIFORNIA ENVIRONMENTAL QUALITY ACT

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) define "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource." It also defines the circumstances when a project would materially impair the significance of an historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b)-(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; CEQA Guidelines Section 15064.5[b]). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1[q]), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; CEQA Guidelines Section 15064.5[a]). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; CEQA Guidelines Section 15064.5[a]).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines Section 15064.5(b)(1); PRC Section 5020.1[q]).

In turn, CEQA Guidelines section 15064.5(b)(2) states the significance of an historical resource is materially impaired when a project:

1. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b], and [c]).

PRC Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2[a]; CEQA Guidelines Section 15064.5[c][4]). However, if a non-unique archaeological resource qualifies as tribal cultural resource (PRC Section 21074[c], 21083.2[h]), further consideration of significant impacts is required. CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC Section 5097.98.

CALIFORNIA STATE ASSEMBLY BILL 52

Assembly Bill (AB) 52 of 2014 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 established that Tribal Cultural Resources (TCR) must be considered under CEQA and also provided for additional Native American consultation requirements for the lead agency. Section 21074 describes a TCR as a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American Tribe.

A TCR is either:

- On the California Register of Historical Resources or a local historic register; Eligible for the California Register of Historical Resources or a local historic register; or
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.

AB 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

Section 1 (a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on tribal cultural resources should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to tribal cultural resources, the consultation shall include those topics (PRC Section 21080.3.2(a)). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3(a)).

CALIFORNIA HEALTH AND SAFETY CODE

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the County Coroner has examined the remains (Health and Safety Code Section 7050.5b). PRC Section 5097.98 outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (Health and Safety Code Section 7050.5c). The NAHC would notify the most likely descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

4.3.2.3 UNIVERSITY OF CALIFORNIA, BERKELEY

UC BERKELEY CAMPUS DESIGN STANDARDS

UC Berkeley created the Campus Design Standards, which are updated every three years, to guide design and construction professionals to complete lasting, high-quality additions to the UC Berkeley built environment. The Campus Design Standards, along with applicable codes, ensure that new construction and renovation projects at UC Berkeley integrate industry best practices and experience with existing campus buildings, infrastructure, grounds, and maintenance issues.

Relevant sections of the 2020 Campus Design Standards are summarized below:

- In the event that artifacts, human remains, or other cultural resources are discovered during construction, the Contractor shall protect the discovered items, cease work for a distance of thirty-five feet radius in the area, and notify the Owner's Representative in writing. The Owner may retain an archaeological consultant to evaluate findings in accordance with standard practice and applicable regulations. Artifact recovery, if deemed appropriate, will be conducted during the period when construction activities are on hold.
- Development shall accommodate sites or areas of historical or archaeological significance. Approval shall be obtained before altering any archaeological, historical, or cultural resource eligible for, or listed on the National Register of Historic Places.
- If a utilities earthwork project is likely to affect a known cultural resource, mitigation shall be required by avoiding or reducing ground disturbance.

LONG RANGE DEVELOPMENT PLAN

Each campus in the UC system periodically prepares an LRDP, which provides a high-level planning framework to guide land use and capital investment in line with its mission, priorities, strategic goals, and enrollment projections. The purpose of an LRDP is to provide adequate planning capacity for potential population growth and physical infrastructure that may be needed to support future population levels on each UC campus. The LRDP does not mandate growth or the provision of new facilities. The current LRDP for UC Berkeley is the recently prepared and adopted 2021 LRDP (adopted in July 2021) that includes projected development needs through the academic year 2036-37. In terms of historic resources, LRDP Goal 1.4 calls UC Berkeley to "maintain and enhance the image and experience of the physical campus and support the continuing evolution of the UC Berkeley campus's notable and historic landscapes and architecture."

The land use element of the 2021 LRDP (UC Berkeley 2021a) identifies potential areas of new development and redevelopment in the CKC land use zone. The 2021 LRDP indicates that the CKC, added to the National Register of Historic Places in 1982 as a historic district, contains a complex of Spanish Colonial Revival-style buildings. Uses include student and faculty housing, a conference center, childcare facilities, and indoor and outdoor athletics and recreation facilities. Covenants and restrictions that apply to the CKC, and a memorandum of understanding with the City of Berkeley, generally limit significant changes in either the use or physical character of the CKC through the year 2032, absent a change in circumstance. Land use objectives for the CKC include the following:

- Maintain and enhance the residential and historic character of the existing CKC. Consider strategic renovation and seismic improvement projects that address existing buildings' space needs and life-safety requirements.
- Through strategic development on infill sites, make the highest and best use of the CKC to meet UC Berkeley's housing objectives. Prioritize infill development and mobility improvements on existing surface parking or underutilized open spaces.
- Consider and evaluate demolition, redevelopment, or renovation of existing buildings that no longer meet programmatic needs, or that have significant seismic or other physical deficiencies that cannot feasibly be corrected. Additional uses should contribute to the CKC's residential community.
- Maintain, improve, and expand indoor and outdoor athletics and recreation facilities and open space resources on the CKC as amenities for the campus community, and to provide broader community access where capacity is available.

UC BERKELEY CONTINUING BEST PRACTICES

UC Berkeley applies continuing best practices (CBPs) relevant to cultural resources as part of the project approval process. Applicable CBPs for the proposed project are provided in Appendix D, UC Berkeley Continuing Best Practices, of this Draft EIR. Applicable CBPs are identified and assessed for their potential to reduce adverse physical impacts in Section 4.3.3, Impacts and Mitigation Measures.

4.3.2.4 LOCAL

As discussed in Chapter 3, Project Description, UC Berkeley is constitutionally exempt from local government regulations, such as city and county general plans, land use policies, and zoning regulations, whenever using property under its control in furtherance of its educational purposes. As such, the proposed project is generally exempt from local policies and regulations. However, UC Berkeley may consider, for coordination purposes, aspects of local policies and regulations for the communities surrounding the UC Berkeley campus when it is appropriate and feasible, although it is not bound by those policies and regulations. Therefore, this section outlines the policies and regulations of the City of Berkeley related to cultural resources, which UC Berkeley may consider when evaluating the proposed project.

CITY OF BERKELEY GENERAL PLAN

The City of Berkeley General Plan was adopted in 2001. The overarching goal of the Urban Design and Preservation Element of the General Plan is to "Protect and enhance Berkeley's special built environment and cultural heritage by carefully conserving the numerous existing good buildings, areas, and other features and ensuring that new elements are so located and designed as to respect and strengthen the whole." In order to achieve this goal, the element outline four objectives:

1. Protection of Existing Resources - Preserve historically or culturally important structures, sites, and areas and protect the character of Berkeley's neighborhoods and districts. (See the Land Use Element for more policies on the Character of Berkeley.)
2. Preservation Incentives - Provide incentives for the preservation of historic and cultural resources.
3. New Construction and Alterations - Ensure that new construction and alterations are well designed and respect and enhance the existing environment.
4. Outreach - Promote awareness and understanding of Berkeley's built environment and cultural heritage, and of how to preserve and improve them.

CITY OF BERKELEY MUNICIPAL CODE

Berkley Municipal Code Chapter 3.24 outlines the designation and management standards for landmarks, historic districts and structures of merit within the City. A list of "structures, sites and areas deemed deserving of official recognition (3.24.070 A)" was established by the Landmarks Preservation Commission (Commission) in 1974 and maintained thereafter (3.24.050 A). The Commission is responsible for the designation of landmarks, historic districts and structures of merit and Chapter 3.24.110 outlines the criteria the Commission considers when evaluating structures, sites and areas for landmark, historic district, or structure of merit designation.

A. Landmarks and historic districts. General criteria which the commission shall use when considering structures, sites and areas for landmark or historic district designation are as follows:

1. Architectural merit:

    a. Property that is the first, last, only or most significant architectural property of its type in the region;

    b. Properties that are prototypes of or outstanding examples of periods, styles, architectural movements or construction, or examples of the more notable works of the best surviving work in a region of an architect, designer or master builder; or

    c. Architectural examples worth preserving for the exceptional values they add as part of the neighborhood fabric.

2. Cultural value: Structures, sites and areas associated with the movement or evolution of religious, cultural, governmental, social and economic developments of the City;

3. Educational value: Structures worth preserving for their usefulness as an educational force;

4. Historic value: Preservation and enhancement of structures, sites and areas that embody and express the history of Berkeley/Alameda County/California/United States. History may be social, cultural, economic, political, religious or military;

5. Any property which is listed on the National Register described in Section 470A of Title 16 of the United States Code.

B. Structures of merit. Criteria which the commission shall use when considering a structure for structure of merit designation are as follows:

1. General criteria shall be architectural merit and/or cultural, educational, or historic interest or value. If upon assessment of a structure, the commission finds that the structure does not currently meet the criteria as set out for a landmark, but it is worthy of preservation as part of a neighborhood, a block or a street frontage, or as part of a group of buildings which includes landmarks, that structure may be designated a structure of merit.

2. Specific criteria include, but are not limited to one or more of the following:

    a. The age of the structure is contemporary with (1) a designated landmark within its neighborhood, block, street frontage, or group of buildings, or (2) an historic period or event of significance to the City, or to the structure's neighborhood, block, street frontage, or group of buildings.

    b. The structure is compatible in size, scale, style, materials or design with a designated landmark structure within its neighborhood, block, street frontage, or group of buildings.

    c. The structure is a good example of architectural design.

    d. The structure has historical significance to the City and/or to the structure's neighborhood, block, street frontage, or group of buildings. (Ord. 5686-NS § 1 (part), 1985: Ord. 4694-NS § 3.1, 1974)

4.3.3 IMPACTS AND MITIGATION MEASURES

4.3.3.1 STANDARDS OF SIGNIFICANCE

The standards of significance used to evaluate the impacts of the proposed project related to cultural and tribal cultural resources are based on Appendix G of the CEQA Guidelines, as listed below. The proposed project would result in a significant impact if it would:

A. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

B. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

C. Disturb any human remains, including those interred outside of formal cemeteries.

D. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k).
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

E. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact related to cultural and tribal cultural resources.

4.3.3.2 ANALYTICAL METHODS

RECORDS SEARCH, CONSULTATION, RESEARCH, AND SURVEYS

CHRIS Records Search

As part of archaeological resources evaluation completed for the 2021 LRDP EIR, in June 2020 Archeo-Tec conducted the records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS), located at Sonoma State University (NWIC File No. 19-2167) (Archeo-Tec 2021). The search covered the CKC, and a surrounding half-mile buffer. The NWIC provided locational data for previously recorded archaeological and historic built environment resources, cultural resources site records, a summary of previous technical study coverage and related pertinent reports for review. In addition, the CHRIS search included a review of the NRHP, CRHR, California Inventory of Historic Resources, historical maps, and local inventories.

Native American Consultation

As indicated in Section 4.3.1.5, Cultural Resources, UC Berkeley notified all applicable tribes informing them of the proposed project, providing a project description and background, and requesting consultation pursuant to AB 52. No tribes responded to UCB with a request to consult on the project.

Historic Built Environment Research

Materials were reviewed during the preparation of this EIR and Appendix E including from: the University's online facilities information system; the Built Environment Resources Directory (BERD) files organized by County that are listed in the Office of Historic Preservation (OHP) inventory throughout the State; the digital holdings provided by the UC Berkeley Bancroft Library University Archives; and research materials available online at the California State Archives in Sacramento, California. Historical Fire Insurance Maps and historical aerial photographs were also reviewed.

Field Surveys

Dudek Architectural Historian Fallin Steffen, MPS, and Dudek Senior Architectural Historian, Kathryn Haley, MA, conducted a pedestrian survey of the study area on December 16, 2020. The survey focused on the built environment resources within the study area, documenting buildings and structures potentially impacted by the proposed project. The pedestrian survey entailed a tour of the site to confirm the presence or absence of the buildings recorded in the 1982 NRHP Historic District nomination. A full re-assessment of the NRHP District was not undertaken as part of this study; however as part of the survey the entire CKC was walked and contextual view photos were taken in order to properly assess potential project impacts to the Historic District as a whole. The two sites that will be subject to direct changes as a result of project implementation were recorded in detail during the course of the pedestrian survey, the Wilkinson Lodge and the softball field. The survey entailed walking all portions of the exterior of these sites, documenting each with notes and photographs, specifically noting character-defining features, spatial relationships, observed alterations, and examining any historic landscape features on the property. Fieldwork was documented using field notes, digital photography, close-scale field maps, and aerial photographs.

Dudek archaeologist William Burns, MSc, RPA, conducted an intensive-level pedestrian archaeological survey of the proposed project on October 25, 2021. The archaeological survey exceeded the applicable Secretary of Interior Professional Qualifications and Standards for archaeological survey and evaluation. Transects were spaced no more than 15 meters apart. Evidence for archaeological deposits was opportunistically sought in any areas that were not already paved or developed. The area has been substantially disturbed from development, though there is some potential for existing development to have capped and preserved native soils at depth. No archaeological resources were observed.

REVIEW OF 1979 FINAL EIR MITIGATION MEASURES

The university adopted mitigation measures in its 1979 Final EIR for the Dwight-Derby Site Plan, which included the Draft EIR, when it acquired the CKC in 1982 ("1979 mitigation measures"). As applicable to the proposed project, the 1979 mitigation measures are either retained as is, or are revised and/or replaced based on a finding of infeasibility backed by substantial evidence. Appendix C contains a list of the 1979 mitigation measures, including their applicability to the proposed project, and where relevant, proposed revisions and/or replacement of several of these mitigation measures are provided to make them feasible[1] to implement through the inclusion of objective performance standards. Some of these measures do not provide objective performance standards, do not reflect CEQA best practices for mitigation, and are otherwise outdated and obsolete. For the 1979 mitigation measures that have been revised and/or replaced in this Draft EIR, Appendix C provides substantial evidence demonstrating the infeasibility of these 1979 mitigation measures, and the effectiveness of these revised mitigation measures in eliminating or reducing the applicable potentially significant environmental impact relative to the 1979 mitigation measures being modified or replaced.

[1] As indicated in CEQA Guidelines Section 15364, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

Table 4.3-2 summarizes the 1979 mitigation measures pertaining to cultural resources as well as any proposed revisions and/or replacements to those measures. The table is based on the numbered list of 1979 mitigation measures from 1979 Draft EIR Chapter XII. As indicated in the table, none of the 1979 mitigation measures related to cultural resources are applicable to the proposed project. Project-specific mitigation measures may be included in Section 4.3.3.3, Impact Analysis, where feasible and necessary to reduce potentially significant impacts.

TABLE 4.3-2. APPLICABLE 1979 MITIGATION MEASURES FOR CULTURAL RESOURCES AND PROPOSED REVISIONS

1979 Mitigation Measure Applicable to Proposed Project	Applicable to the Proposed Project?	Substantial Evidence for Revised or New Mitigation Measure	Revised or New Mitigation Measure
27.a. The single use of the site for student housing and related activities would hold the maximum potential for the retention of the major historically significant interior public spaces – the auditorium in the School for the Blind, classroom, Library, Assembly and Administration (B-1) Building, the School for the Deaf Estrella (D-25) Assembly Hall, and the Dining Rooms for the School for the Deaf.	No The proposed project does not involve renovations to historically significant interior public spaces of existing CKC buildings.	NA	NA
27.b. The exterior remodeling of the buildings into student apartments will be sensitively handled, to add to the architectural character of the complex. Since the buildings are relatively simple in their outward form, the few changes which would have to be made will be accommodated without compromising the architectural character of each of the buildings.	No The proposed project does not involve remodeling student apartments.	NA	NA

Source: UC Berkeley 1979 and Draft EIR Appendix C.

4.3.3.3 IMPACT ANALYSIS

This section provides a detailed evaluation of potential cultural resource and tribal cultural resource impacts associated with the proposed project.

Impact CUL-1 Historic Built Environment Resources (Significance Standard A). The proposed project would cause a substantial adverse change in the significance of a historical built environment resource. *(Significant)*

The following analysis addresses historical built environment resources in the study area; NRHP Historic District No. 82000962 California Schools for the Deaf and Blind (District), and its associated NRHP Historic District No. 82000962 Contributor - Wilkinson Lodge and potential effects that may occur within the Historic District as a result of project implementation. Proposed project components that may result in adverse effects to the Historic District are discussed in detail to determine if it may cause an adverse effect, defined as a substantial adverse change in the significance of a historical resource (CEQA Guidelines Section 15064.5) (see Section 4.3.2, Regulatory Framework, for additional information).

BEACH VOLLEYBALL COURT

Construction of the proposed project would involve the conversion of the existing softball field into beach volleyball courts with four sand courts. The conversion of the existing field into beach volleyball courts demonstrates continuity of use from an existing recreational sports field to new women's recreational and IA sports courts with upgraded features.

The softball field is located within the NRHP Historic District, but it is not a contributing resource nor is it individually eligible for listing and therefore is not considered a historical resource under CEQA. However, as part of this conversion from a softball field to beach volleyball courts, a few alterations will be made to existing landscape features, specifically trees, that are considered character defining features of the District (see Section 4.3.1.5, Cultural Resources).

As part of the proposed construction, four compact blue gum trees identified as historic specimen trees by the UC Berkeley Specimen Tree Program would be removed along the perimeter of the beach volleyball courts site. These trees are proposed to be replaced in kind by new planting at a ratio of 3 to 1 with horticulturally appropriate trees at the largest possible nursery sizes. In general, replacement in-kind of historic vegetation features, through matching physical evidence of configuration, look, and existing habit, conforms to SOIS for rehabilitation of cultural landscapes (NPS 1995). For this reason, replacement of the historic specimen trees as proposed conforms to the SOIS. Following replacement in kind of the trees, the District will still retain important landscaping character defining features including landscaping used to define exterior spaces and a park-like setting exhibiting a variety of plantings. The Historic District will still be able to convey its significance following implementation of the project component and the impact would be *less than significant.*

Significance without Mitigation: Less than significant.

BUILDING 21 PARTIAL DEMOLITION

The Wilkinson Lodge (NRHP B-11/ UC Berkeley Building 21) is a contributing resource to the California Schools for the Deaf and Blind Historic District under NRHP Criteria A and C and is therefore considered an historical resource under CEQA. The Wilkinson Lodge is not individually eligible for the NRHP, CRHR, or CHL, as the building has undergone several large-scale alterations that have negatively impacted the integrity of design, materials, and workmanship including: the removal of the northwest wing in 1985; the conversion of greenspace to parking in the areas surrounding the west-end of the building; the removal and replacement of original doors, concealing windows with plywood, and the replacement of original roofing materials and original siding on the western half of the building only; and the proximate construction of the large-scale, Redwood Gardens Apartments. As a result, the building retains only diminished integrity in the areas of design, workmanship, materials, setting, and feeling. For this reason, it is necessary to analyze the impact of the proposed partial demolition and repair of the remaining building as part of the proposed project on the larger California Schools for the Deaf and Blind Historic District.

As detailed in the Chapter 3, Project Description, approximately 9,230 square feet of the eastern portion of Building 21 would be demolished with the proposed project. The connecting wall on the western portion of the building that would be retained would be reinforced and refinished so that it functions as an exterior wall and building entry. The two existing doors on that wall would be retained to provide access to a new paved driveway and loading area. The remaining wall and its doors would be painted to match the exterior paint on the existing building. Additionally, an existing exterior stairway and retaining wall south of the building would be retained. The western portion the building would continue to serve as storage. Figure 3-6 (Chapter 3, Project Description) shows the remaining western portion of the building, new driveway and loading area, and proposed new landscaping.

After building demolition, a new paved driveway to the building and loading area would be constructed to allow for vehicle access and loading for the western portion of the building that would be retained for storage. The paved driveway and loading area would provide vehicle access to the adjacent parking lot on Eastway Drive. Limited access to this loading area would be provided via removable bollards. No trees would be removed for the partial demolition of Building 21. New landscape trees and shrubs would be planted on either side of the new paved driveway and decorative gravel mulch and rocks would also be installed.

This proposed modifications and related construction to the site has the potential to directly impact the site through demolition, construction related damage, including but not limited to removal of over 9,000 square feet of the building and potential vibration damage to the remaining portion of the building. Furthermore, potential indirect impacts to the integrity of the overall setting and feeling of the Historic District through the introduction of some new elements or features that are potentially incompatible with the original design, architectural style, materials, massing, and scale of the Historic District are anticipated by the proposed project. The introduction of some new elements or features can detract from the overall cohesive quality of the buildings and landscapes associated with the Historic District. Where a project has been determined to conform with the Secretary of the Interior's Standards for the Treatment of Historic Properties (SOIS), the project's impact on historical resources would be considered mitigated to below a level of significance and, thus, would not be significant (14 CCR 15126.4(b)(1)). However, the proposed project does not appear to meet the SOIS criteria.

The proposed partial demolition of the Wilkinson Lodge (Building 21) will demolish some of the physical characteristics that support the building's eligibility as a Historic District contributor under NRHP and CRHR designation criteria. The building contributes to the Historic District as a Spanish Colonial Revival-style building with PWA Moderne elements designed in 1928 by architect Alfred Eichler and is one of eight original buildings designed to serve as the School for the Blind. Of these eight original buildings, only six presently survive: B-1, Administration, Assembly & Library building; B-2, Vista Del Mar Girls Residence; B-3, Superintendent's Residence; B-4, Monroe Hall; B-11, Wilkinson Lodge; and B-12, Wilkinson Lodge Annex. The Wilkinson Lodge demonstrates many characteristics of the Spanish Colonial Revival style as seen in other Historic District buildings, including an asymmetrical façade, a low-pitched roof fitted with clay tiles, stucco exterior walls, irregularly placed, recessed fenestration, and a clear relationship to the landscape. The building also retains several details related to the PWA Moderne style including horizontal massing with rounded bays, smooth exterior surfaces, squat columns and use of exterior relief sculpture. The qualities that make the Wilkinson Lodge distinctive in the context of the larger Historic District include the following:

- The Wilkinson Lodge is among the earliest buildings designed by Eichler specifically to serve as the School for the Blind sub-section of the campus. This area of the campus only contains six of the eight original buildings as designed, including the Wilkinson Lodge.
- The sprawling layout and multi-story composition of the Wilkinson Lodge suggests that it was designed to conform to the specific topography of the steep hillside site where it is presently sited.
- Unlike the inter-connected complex of buildings designed for the School for the Deaf, the School for the Blind buildings were designed as separate units that were unified through the use of open, landscaped areas. The scale of the Wilkinson Lodge in comparison with other buildings designed for the School for the Blind, and the placement of the building on the site suggests that it was an important, visually dominant building on the campus. It maintains clear stylistic continuity with other School for the Blind buildings, including B-1, the Administration, Assembly, Library building. As the two most dominant buildings on the School for the Blind campus, the importance of the interplay and continuity between these buildings is aesthetically important to the overall Historic District.

Due to these factors, the Wilkinson Lodge continues to be considered a contributing building that displays numerous character-defining features exhibited throughout the Historic District and specifically in the School for the Blind buildings even though the western wing was previously demolished and other large-scale alterations have been made to the building. The partial demolition of the Wilkinson Lodge will irreversibly alter one of the few remaining original contributing buildings associated with this specific zone of the NRHP Historic District. Despite changes to the building overtime, as it currently stands, the building provides a sense of scope of scale, cohesion of architectural details, and building massing in this area of the Historic District. The reduction of the building as proposed by the Project will result in a loss that will materially detract from the Historic District overall. Although the Historic District as a whole will still be eligible for the NRHP following construction, the Wilkinson Lodge will no longer retain enough of its own integrity to be considered a contributing building to the NRHP Historic District. Due to the magnitude of this loss of a contributing building, general cohesion, stylistic unity, arrangement of buildings, circulation patterns, and use, the partial demolition of the Wilkinson Lodge (Building 21) would result in a substantial adverse change to the NRHP-listed Historic District and the impact would be considered *significant.*

Significance without Mitigation: Significant.

MITIGATION MEASURES

MM CUL-1a: UC Berkeley shall have Historic American Building Survey Level II documentation completed for the Wilkinson Lodge (NRHP B-11/ UC Berkeley Building 21) and its immediate surrounding setting. To ensure public access, UC Berkeley shall submit digital copies of the documentation to an appropriate historical repository, including the UC Berkeley Bancroft Library, the UC Berkeley Environmental Design Archives, and/or the California Historical Resources Information System Northwest Information Center. This documentation shall include drawings, photographs, and a historical narrative:

- Drawings: Existing historic drawings of the historical resource, if available, will be photographed with large-format negatives or photographically reproduced on Mylar. In the absence of existing drawings, full-measured drawings of the building's plan and exterior elevations shall be prepared prior to demolition.
- Photographs: Photo-documentation of the historical resource will be prepared to Historic American Building Survey standards for archival photography, prior to demolition. Historic American Building Survey standards require large-format black-and-white photography, with the original negatives having a minimum size of four inches by five inches. Digital photography, roll film, film packs, and electronic manipulation of images are not acceptable. All film prints, a minimum of four inches by five inches, must be hand-processed according to the manufacturer's specifications and printed on fiber-base, single-weight paper and dried to a full gloss finish. A minimum of 12 photographs shall be taken, detailing the site, building exterior, building interior, and character- defining features. Photographs must be identified and labeled using Historic American Building Survey standards.
- Historical Overview: A professional meeting the Secretary of the Interior's Professional Qualification Standards in Architectural History or History shall assemble historical background information relevant to the historical resource.

All photographic documentation must be complete and fully processed prior to any project related construction or demolition. The Campus Architect shall verify compliance with this mitigation measure prior to the initiation of any site or building demolition or construction activities.

MM CUL-1b: Prior to demolition of the Wilkinson Lodge (NRHP B-11/ UC Berkeley Building 21), the UC Berkeley Campus Architect shall oversee planning, preparation, fabrication, and construction of an interpretive display providing an overview of the historical development of the California Schools for the Deaf and the Blind, and Wilkinson Lodge. Much of the research and text for the display can be derived from information prepared under MM-CUL-1a. The interpretive display or kiosk must be installed in a prominent location on the Clark Kerr Campus, within the Historic District boundary, preferably along a pedestrian walking path near Wilkinson Lodge. The interpretive display text must be compiled by a qualified historic preservation professional who meets the SOIS Professional Qualifications Standards for history or architectural history. The display shall include historical photographs, maps, and plans, and include a written narrative that includes both the history and a high-level overview of the architectural description of the CKC and Wilkinson Lodge that highlights why the Historic District is listed on the NRHP. The planning, site designation, text, imagery, and display design must be included as part of the project construction planning. The display must be fabricated and placed in its designated location within 3 months following completion of the partial demolition of Wilkinson Lodge.

Significance with Mitigation: Significant and unavoidable. The implementation of MM CUL-1a and MM CUL-1b would provide for completion of Historic American Building Survey Level II documentation, and construction and installation of an interpretive display. While these measures would somewhat reduce the significance of the impact, Wilkinson Lodge (Building 21) would no longer be considered a contributing building to the NRHP Historic District and therefore the impact would remain *significant and unavoidable*.

Impact CUL-2 Archaeological Resources (Significance Standards A and B). The proposed project may cause a substantial adverse change in the significance of unique archaeological resources or historical resources of an archaeological nature. *(Potentially Significant)*

No archaeological sites have been previously recorded within the study area. A previous NWIC records search (Archeo-Tec 2021) and archaeological survey did not result in the identification of known archaeological resources within areas that would be affected by the proposed project. The area appears to have a moderate potential for supporting the presence of buried and/or unanticipated archaeological resources. Archaeological resources that meet the definition of a historical resource under CEQA Section 21084.1 or CEQA Guidelines Section 15064.5 could be present within the study area and could be damaged or destroyed by ground-disturbing construction activities, such as site preparation, grading, excavation, or trenching for utilities for the proposed project. Should this occur, the ability of the deposits to convey their significance, either as containing information about prehistory or history, or as possessing traditional or cultural significance to Native American or other descendant communities, would be materially impaired.

Implementation of the UC Berkeley Campus Design Standards, described in Section 4.3.2, Regulatory Framework, indicate that in the event that artifacts are discovered during construction activities, the project contractor shall protect the discovered items, cease work within a 35-foot radius, and notify the Owner's representative in writing. The Owner may retain an archaeological consultant to evaluate findings in accordance with standard practice and applicable regulations. Artifact recovery, if deemed appropriate, would be conducted. However, given that the proposed project is located in an area with moderate potential for supporting the presence of buried and/or unanticipated archaeological resources and that the project will include substantial ground-disturbing activities, impacts would be considered *potentially significant*.

Significance without Mitigation: Potentially significant.

MITIGATION MEASURES

MM CUL-2: For construction projects that include substantial ground-disturbing activities (including, but not limited to, soil removal, parcel grading, new utility trenching, and foundation-related excavation), UC Berkeley shall implement the following steps to ensure impacts to archaeological resources will be less than significant:

- Prior to soil disturbance, UC Berkeley shall confirm that contractors have been notified of the procedures for the identification of federal- or State-eligible cultural resources, and that the construction crews are aware of the potential for previously undiscovered archaeological resources or tribal cultural resources on site, of the laws protecting these resources and associated penalties, and of the procedures to follow should they discover cultural resources during project-related work.
- If a resource is discovered during construction (whether or not an archaeologist is present), the following measures shall be implemented:
  - 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.
  - Any previously undiscovered resources found during construction activities shall be recorded on appropriate California Department of Parks and Recreation forms and evaluated for significance in terms of the California Environmental Quality Act (CEQA) criteria by a qualified archaeologist.
  - If the resource is a tribal cultural resource, the consulting archaeologist shall consult with the appropriate tribe to evaluate the significance of the resource and to recommend appropriate and feasible avoidance, testing, preservation or mitigation measures, in light of factors such as the significance of the find, proposed project design, costs, and other considerations.
  - If avoidance is infeasible, other appropriate measures (e.g., data recovery) may be implemented.
  - If the resource is a non-tribal resource determined significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant.
  - The archaeologist shall also perform appropriate technical analyses; prepare a comprehensive report complete with methods, results, and recommendations; and provide for the permanent curation of the recovered resources if appropriate.
  - The report shall be submitted to the lead agency for regulatory compliance, California Historic Resources Information System Northwest Information Center, and the State Historic Preservation Office, if required.

Significance with Mitigation: Less than significant. Implementation of MM CUL-2 would avoid a substantial adverse change in the significance of unique archaeological resources, or historical resources of an archaeological nature by requiring: notification of contractors regarding the procedures to implement if previously undiscovered cultural resources are discovered during construction; cessation of soil disturbing work if a resource is discovered during construction; determination by a qualified archaeologist about whether the

resource qualifies as an unique archaeological resource or a historical resource of an archaeological nature; consultation with the appropriate tribe if the resource is a tribal cultural resource; avoidance, if feasible, if resources are determined to be significant; and appropriate data recovery and permanent curation of recovered materials if avoidance is not feasible. Therefore, implementation of MM CUL-2 would reduce the potentially significant impact of the proposed project on unique archaeological resources or historical resources of an archaeological nature to *less than significant*.

Impact CUL-3 Human Remains (Significance Standard C). The proposed project may disturb human remains interred outside of dedicated cemeteries. *(Less Than Significant)*

Human remains associated with precontact archaeological deposits could exist in the study area and could be encountered during ground-disturbing activities, such as site grading and trenching for utilities. Such activities have the potential to disturb human remains interred outside of formal cemeteries. Any human remains encountered during ground-disturbing activities would be required to be treated in accordance with California Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98, and the California Code of Regulations Section 15064.5(e) (CEQA), which state the mandated procedures of conduct following the discovery of human remains.

Additionally, as part of the proposed project, UC Berkeley would implement the cultural (CUL) CBP listed here (see also Appendix D):

- **CBP CUL-1:** UC Berkeley will follow the procedures of conduct following the discovery of human remains that have been mandated by Health and Safety Code Section 7050.5, Public Resources Code Section 5097.98 and the California Code of Regulations Section 15064.5(e) (California Environmental Quality Act (CEQA)). According to the provisions in CEQA, if human remains are encountered at the site, all work in the immediate vicinity of the discovery shall cease and necessary steps to ensure the integrity of the immediate area shall be taken. The County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the California Native American Heritage Commission (NAHC) within 24 hours, who will, in turn, notify the person the NAHC identifies as the Most Likely Descendant (MLD) of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the NAHC is unable to identify an MLD, the MLD fails to make a recommendation within 48 hours after being notified, or the landowner rejects the recommendation of the MLD, and mediation by the NAHC fails to provide measures acceptable to the landowner, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance.

Because CBP CUL-1 would follow established procedures for minimizing impacts to human remains, the proposed project would not result in impacts to human remains. The ongoing implementation of CBP CUL-1, and the CBPs discussed throughout this Draft EIR and listed in Appendix D, UC Berkeley Continuing Best Practices, would not create additional impacts associated with human remains. The activities associated with these CBPs would not involve physical effects that would have the potential to create significant environmental impacts.

In addition, the UC Berkeley Campus Design Standards indicate that in the event human remains are discovered during construction activities, the project contractor shall protect the discovered items, cease work within a 35-foot radius, and notify the Owner's Representative in writing. The Owner may retain an archaeological consultant to evaluate findings in accordance with standard practice and applicable regulations. While descendant communities may ascribe religious or cultural significance to such remains and may view their disturbance as an immitigable

impact, implementation of CBP CUL-1 and the UC Berkeley Campus Design Standards would ensure impacts to human remains would be *less than significant*.

Significance without Mitigation: Less than significant.

MITGATION MEASURES

As described above, the proposed project would not result in significant impacts related to human remains, and therefore, no mitigation measures are required.

Impact CUL-4 Tribal Cultural Resources (Significance Standard D). The proposed project may result in a substantial adverse change to a tribal cultural resource. *(Potentially Significant)*

As previously described in Section 4.3.2, Regulatory Setting, a TCR is defined under AB 52 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register or included in a local register of historical resources, or if UC Berkeley, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR (PRC Section 21074(a)(1) and (2)).

As indicated in Section 4.3.3.2, Analytical Methods, UC Berkeley notified all applicable tribes on August 11, 2020 informing them of the proposed project, providing a project description and background, and requesting consultation pursuant to AB 52. Contacts included representatives of the Karuk Tribe; the Northern Valley Yokuts Tribe; and the Ohlone Indian Tribe. No tribes responded to UC Berkeley with a request to consult on the project or with information about a known tribal cultural resource. However, it is possible that undisturbed and unknown tribal cultural resources, including Native American human remains and artifacts, could exist below the ground surface on the project sites and therefore such resources could be disturbed during ground disturbing activities associated with project construction.

Compliance with existing federal and State laws and regulations pertaining to tribal cultural resources, such as those described under Section 4.3.2, Regulatory Setting, would protect unrecorded tribal cultural resources in the study area by providing for the early detection of potential resources during construction, and by preventing or minimizing the material impairment of the archaeological deposits to convey their significance. As part of the proposed project, UC Berkeley would implement the CBP CUL-1 listed above. CBP CUL-1 would ensure that appropriate procedures are followed in order to minimize potential impacts to human remains during ground disturbing activities of the proposed project to the extent practicable. The ongoing implementation of CBP CUL-1 would not create additional impacts to tribal cultural resources, as described above for Impact CUL-3.

Pursuant to the UC Berkeley Campus Design Standards described in Section 4.3.2, Regulatory Setting, in the event that artifacts are discovered during construction activities, the project contractor shall protect the discovered items, cease work within a 35-foot radius, and notify the Owner's representative in writing. The Owner may retain an archaeological consultant to evaluate findings in accordance with standard practice and applicable regulations. Artifact recovery, if deemed appropriate, would be conducted.

While CBP-1 and Campus Design Standards would ensure impacts to Native American human remains and discovery of unearthed artifacts would be reduced, unknown artifacts or other tribal cultural resources that are not Native American human remains could exist in the study area and could be disturbed by ground disturbing activities such as excavation. Such impacts would be *potentially significant*.

Significance without Mitigation: Potentially significant.

MITGATION MEASURES

MM CUL-2 See Impact CUL-2 above for a description of this measure.

Significance with Mitigation: Less than significant. Implementation of MM CUL-2 would avoid a substantial adverse change to a tribal cultural resource by requiring: notification of contractors regarding the procedures to implement if previously undiscovered cultural resources are discovered during construction; cessation of soil disturbing work if a resource is discovered during construction; determination by a qualified archaeologist in consultation with the appropriate tribe about whether the resource qualifies as a tribal cultural resource; avoidance, if feasible, if resources are determined to be significant; and appropriate data recovery and permanent curation of recovered materials if avoidance is not feasible. Therefore, implementation of MM CUL-2 would reduce the potentially significant impact of proposed project on tribal cultural resources to *less than significant*.

Impact CUL-5 Cumulative Cultural Resource and Tribal Cultural Resource Impacts (Significance Standards A through D). The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in a cumulative impact related to cultural resources and tribal cultural resources. *(Significant)*

This section provides an evaluation of cumulative cultural and tribal cultural resources impacts associated with the proposed project and past, present, and reasonably foreseeable future projects, as identified in Table 4.1-1 in Section 4.1, Introduction to Analysis, and as relevant to this topic.

The impacts of potential future development on cultural and tribal cultural resources tend to be site specific, and cumulative impacts would occur when a series of actions leads to the loss of a substantial type of site, building, or resource. For example, though the loss of a single historic building may not be significant to the character of a neighborhood or streetscape, continued loss of such resources on a project-by-project basis could constitute a significant cumulative effect. This is most obvious in historic districts, where destruction or alteration of a percentage of the contributing elements may lead to a loss of integrity for the district overall. Destruction or relocation of historic buildings would significantly impact the setting. While impacts are typically site specific, the geographic area potentially affected by cultural and tribal cultural resource impacts of the proposed project would generally be the area within the CKC, given the existence of the NRHP Historic District.

Existing policies and regulations described throughout this chapter serve to protect cultural resources in the CKC and beyond. For example, as described in Section 4.3.2, Regulatory Framework, PRC Section 21083.2(b)-(c) and CEQA Guidelines Section 15126.4 serve to protect archaeological and historical resources from removal or destruction; and the California Historic Building Code regulates how repairs, alterations, and other physical changes should be handled in order to preserve the significance of historic buildings. In addition, the UC Berkeley Campus Design Standards discussed under Section 4.3.2, Regulatory Framework, would ensure that potential future development considers and protects where possible the UC Berkeley campus's historic buildings and resources. Implementation of CBP CUL-1 would also minimize impacts to human remains. Continued compliance with these regulations and practices would decrease potential impacts to cultural resources.

As previously described in Impact CUL-1, significant impacts related to the partial demolition of Wilkinson Lodge (Building 21), a contributing building to the NRHP Historic District, would be somewhat reduced through the implementation of MM CUL-1a and MM CUL-1b. While implementation of these measures would somewhat reduce

impacts overall, the proposed project would still result in a significant and unavoidable impact to historic built environment resources, as Building 21 would no longer be considered a contributing building to the NRHP Historic District.

Project impacts to unique archaeological resources, historical resources of an archaeological nature, human remains, and tribal cultural resources (Impact CUL-2, Impact CUL-3, and Impact CUL-4) potentially present on the project sites would be mitigated to less than significant with the implementation of MM CUL-2 (archaeological and tribal cultural resources). This mitigation measure would reduce impacts to individual resources on the project sites if discovered during construction. In addition, since the proposed project is located on existing developed sites, this reduces the likelihood of encountering potential archaeological and tribal cultural resources or human remains on-site unless ground disturbance activities excavate to a greater extent than occurred during prior construction on the project sites. However, the potential exists for previously unknown cultural resources to be encountered during ground disturbing activities on the project sites.

Table 4.1-1 identifies development that may result during the implementation of the 2021 LRDP EIR, including development on the CKC, and projects in the City of Berkeley (and potentially the City of Oakland). Development from these projects could result in impacts to known or unknown cultural and/or tribal cultural resources, or human remains that may be on-site. The construction from cumulative development could involve partial or complete demolition of historical resources or involve ground disturbance below the level of previous ground disturbance that could result in the discovery of archaeological resources or human remains. While the regulations and practices described above for the protection of cultural resources and mitigation measures similar to those for the proposed project would be implemented with cumulative development, such development has the potential to result in significant cumulative impacts related to cultural and tribal cultural resources.

With the implementation of MM CUL-1a and MM CUL-1b, the proposed project would have a considerable contribution to significant cumulative impacts related to historic built environment resources, given that the partial demolition of Building 21 with the proposed project would result in the loss of a contributing building to the NRHP Historic District, as described previously. As such, the cumulative impact of the proposed project related to historic built environment resources would be *significant and unavoidable*.

With the implementation of MM CUL-2, the proposed project would not have a considerable contribution to significant cumulative impacts related to unique archaeological resources, historical resources of an archaeological nature, and tribal cultural resources. As such, the cumulative impact of the proposed project related to archaeological resources and tribal cultural resources would be *less than significant*.

4.3.4 REFERENCES

Archeo-Tec. 2021. Archaeological Resources Evaluation for the University of California Berkeley Long Range Development Program (LRDP) Draft Environmental Impact Report 2020.

City of Berkeley. 2021. Municipal Code Section 13.40.070, Prohibited acts. December 15, 2020. Accessed June 7, 2021 at https://www.codepublishing.com/CA/Berkeley/?Berkeley03/Berkeley0324/Berkeley0324.html

CSA (California State Archives). 2000. “Alfred Eichler Collection – About.” Accessed February 19, 2021. http://exhibits.sos.ca.gov/collections/show/7

CSA. 2020. “Alfred Eichler Collection – About.” Accessed February 19, 2021. http://exhibits.sos.ca.gov/collections/show/7

CSLF (California State Library Foundation). 2020. “Alfred Eichler.” Accessed February 19, 2021. https://cslf.medium.com/alfred-eichler-d868978e342d

Gebhard, D. and Bricker. 1979. The Architectural/Historical Aspects of the California School for the Blind and California School for the Deaf, Berkeley (1867 -1979).

Gebhard, D. 1985. The Guide to Architecture in San Francisco and Northern California. Peregrine Smith Books: Salt Lake City, Utah.

History.com. 2021. “G.I. Bill.” https://www.history.com/topics/world-war-ii/gi-bill. Access February 19, 2021.

Hort Science. 2018. University of California Berkeley, Clark Kerr Ball Field, Tree Assessment. Prepared by Hort Science. May 2018.

Hattori, Eugene M. 1982. The Archaeology of Falcon Hill, Winnemucca Lake, Washoe County, Nevada, Washington State University.

Kennard, June A. "The History of Physical Education." Signs 2, no. 4 (1977): 835-42. Accessed February 19, 2021. http://www.jstor.org/stable/3173213.

Kroeber, A. L. 1925. Handbook of California Indians, Smithsonian Institution, Washington D.C

Marter, Joan. 2011. *The Grove Encyclopedia of American Art.* Editor. Oxford Community Press: New York, New York.

Moratto, Michael J. 1984. California Archaeology. Academic Press, Inc., Orlando. Morris Adjmi Architects.

Mundstock, David. 1984-85. “Berkeley in the 70s: A History of Progressive Electoral Politics.” Chapter 24 – The School for the Deaf and Blind Site. Accessed February 9, 2021. https://berkeleyinthe70s1.homesteadcloud.com/.

NETR 2021; Nationwide Environmental Title Research LLC (NETR) maps for the years 1946, 1958, 1968, 1980, 1982, 1987, 1993, 2002, 2005, 2009, 2010, 2012, 2014, and 2016.

NPS (National Park Service). 1995. “Guidelines for Rehabilitating Cultural Landscapes: Vegetation.” *The Secretary of the Interior’s Standards for the Treatment of Historic Properties: Guidelines for the Treatment of Cultural Landscapes*. Accessed December 15, 2021. https://www.nps.gov/tps/standards/four-treatments/landscape-guidelines/rehab/vegetation.htm

O’Toole, Mary. 1982. National Register of Historic Places Inventory Nomination Form for the State Asylum for the Deaf, Dumb and Blind. Prepared by Mary O’Toole, Berkeley Architectural Heritage Association. Available online through: https://npgallery.nps.gov/NRHP/GetAsset/dfeababe-92be-4c35-9e6e-c368e0842229.

Page and Turnbull, Inc. 2020. Long Range Development Plan and Campus Master Plan Physical Campus Analysis: Historic Resources Assessment.

PGAdesign. 2018. *Specimen Tree Review*. Specimen Tree Review of the Clark Kerr Campus. On file with University of California, Berkeley.

Preservation Architecture. 2019. Buildings 21 and 22 Clark Kerr Campus, UC Berkeley Historical Documentation. June 12, 2019.

Sacramento Bee (The Sacramento Bee). 1963. "Designer of State Buildings Will Retire." Newspapers.com. The Sacramento Bee (Sacramento, California). November 5, 1963: 38. Accessed February 19, 2021.

San Francisco Chronicle. 1868. "Local Intelligence." Newspapers.com. *San Francisco Chronicle* (San Francisco, California). December 31, 1868: 3. Accessed February 16, 2021.

University of California, Berkeley. 1979. *Dwight Derby Site Plan (Schools for the Deaf and Blind) and Final Environmental Impact Report*. May 1979. (Contains the 1978 Draft Environmental Impact Report Dwight – Derby Site Reuse Study.)

UC Berkeley. 2021a. *2021 Long Range Development Plan*. July.

UC Berkeley. 2021b. *UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Draft Environmental Impact Report (State Clearinghouse Number: 2020040078).* March 2021.

UC Berkeley. 2021c. *UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Final Environmental Impact Report (State Clearinghouse Number: 2020040078).* July 2021.

4.4 LAND USE AND PLANNING

This section describes the existing land use and planning setting of the project sites and vicinity, identifies associated regulatory requirements, evaluates potential project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the of the Clark Kerr Campus (CKC) Beach Volleyball Courts Project (project or proposed project). The analysis is based on a review of the proposed project's consistency with applicable plans, policies, and regulations.

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 EXISTING LAND USES

The 50-acre CKC contains student and faculty housing, recreational facilities, conference facilities, childcare facilities, and maintenance and storage for the University of California, Berkeley (UC Berkeley or university). The CKC was acquired by the university in 1982 and is primarily within the City of Berkeley; a portion of the easternmost panhandle of the CKC is within the City of Oakland. The CKC has approximately 452,500 square feet of building space, of which 68 percent is dedicated to housing, 17 percent to academic space, and 16 percent to campus life space (e.g., recreational uses) (UC Berkeley 2021a).

The project includes two separate project sites on CKC. The project site for the proposed beach volleyball courts is the existing recreational softball field at the intersection of Dwight Way and Sports Lane, along the northern boundary of the CKC. This site is surrounded by Dwight Way and residential uses beyond Dwight Way to the north; residential uses to the west in CKC Buildings 2, 3, and 4; office and storage uses in CKC Buildings 23 and 24 to the south; and Sports Lane and the CKC Golden Bear Recreation Center and pool to the east. The second site is CKC Building 21, which is located near the eastern boundary of CKC, east of Eastway Drive and north of Derby Street. The site is surrounded by the existing sand courts to the north; Eastway Drive and residential uses in the Redwood Gardens Apartments beyond to the west; residential uses in CKC Buildings 19 and 20 to the south; and open space to the east. The CKC is surrounded by residential neighborhoods to the north, south, and west, and by Claremont Canyon Regional Preserve to the east.

As discussed in Chapter 3, Project Description, the university is constitutionally exempt from local land use regulations, such as city and county general plans, land use policies, and zoning regulations when using its property in furtherance of its educational mission. Pursuant to UC's constitutional autonomy, UC Berkeley is the only agency with land use jurisdiction over campus projects, including projects on the CKC. The proposed project is located within the CKC land use zone and immediately east of the City Environs land use zone, as identified in the 2021 LRDP (UC Berkeley 2021a). Land use types in the CKC land use zone include residential, academic life, and campus life uses, including recreational uses. The City Environs consist of a grid of city blocks developed with a dense but almost entirely low-rise mix of residential, commercial, and institutional buildings. See Chapter 3, Project Description, Figures 3-1 and 3-2, for project site locations, LRDP land use zones, and surrounding uses.

The CKC is surrounded by residential development to the north, south, and west; these surrounding parcels are zoned by the City of Berkeley. To the north, parcels are zoned Multiple-family Residential (R-3), Two-family Residential (R-2), and Environmental Safety Residential (ES-R); to the south, parcels are zoned Single-family Residential (R-1); and, to the west, parcels are zoned Restricted Multiple-family Residential (R-2A). Claremont Canyon Regional Preserve to the east has no City of Berkeley zoning or land use designation and is maintained and

operated by the East Bay Regional Park District. The small portion of the CKC within the City of Oakland boundaries is undeveloped and zoned by the City of Oakland as Hillside Residential-1 (RH-1).

4.4.2 REGULATORY FRAMEWORK

4.4.2.1 FEDERAL

There are no federal plans, policies, regulations, or laws related to land use or planning that are applicable to the proposed project.

4.4.2.2 STATE

There are no state plans, policies, regulations, or laws related to land use or planning that are applicable to the proposed project.

4.4.2.3 UNIVERSITY OF CALIFORNIA

LONG RANGE DEVELOPMENT PLAN

Each campus in the UC system periodically prepares an LRDP, which provides a high-level planning framework to guide land use and capital investment in line with its mission, priorities, strategic goals, and enrollment projections. The purpose of an LRDP is to provide adequate planning capacity for potential population growth and physical infrastructure that may be needed to support future population levels on each UC campus. The LRDP does not mandate growth or the provision of new facilities. The current LRDP for UC Berkeley is the recently prepared and adopted 2021 LRDP (adopted in July 2021) that includes projected development needs through the academic year 2036-37. The relevant principles and goals of the 2021 LRDP include the following:

Principle 1: Foster a vibrant and inclusive campus experience for all.

- Goal 1.1: Provide accessible and inclusive indoor and outdoor campus life spaces to create a shared sense of community, interaction, and wellness.
- Goal 1.4: Maintain and enhance the image and experience of the physical campus, and support the continuing evolution of the UC Berkeley campus's notable and historic landscapes and architecture.

Principle 3: Improve campus wayfinding and connectivity.

- Goal 3.3: Minimize private vehicle access within the Campus Park and the CKC.

Principle 4: Enhance the sustainability and resilience of the UC Berkeley Campus.

- Goal 4.2: Upgrade and modernize buildings and infrastructure to address deferred maintenance and support new development. Meet and strive to exceed UC system and UC Berkeley policies and goals for sustainability, resilience, and seismic safety.
- Goal 4.3: Implement strategies that enhance campus resilience, to protect human health and safety, maintain essential infrastructure services and operational continuity, preserve investment in the physical campus, and cultivate adaptable natural systems.

Principle 5: Optimize campus resources.

- Goal 5.1: Ensure the highest and best use of campus land to serve UC Berkeley's mission.

- **Goal 5.2:** Plan every new project – including renovations, additions, and new construction – to support optimal investment of resources, meet space needs, address deferred maintenance, and reduce seismic risk.
- **Goal 5.3:** Balance new investments with the renewal of existing facilities to ensure that all campus spaces are functional and well maintained, and to improve space utilization and efficiency in existing facilities to meet program needs.

The land use element of the 2021 LRDP identifies potential areas of new development and redevelopment in the CKC land use zone. The 2021 LRDP indicates that the CKC, added to the National Register of Historic Places in 1982 as a historic district, contains a complex of Spanish Colonial Revival-style buildings. Uses include student and faculty housing, a conference center, childcare facilities, and indoor and outdoor athletics and recreation facilities. Covenants and restrictions that apply to the CKC, and a memorandum of understanding with the City of Berkeley, generally limit significant changes in either the use or physical character of the CKC through the year 2032, absent a change in circumstance (see further discussion in the section below). Land use objectives for the CKC include the following:

- Maintain and enhance the residential and historic character of the existing CKC. Consider strategic renovation and seismic improvement projects that address existing buildings' space needs and life-safety requirements.
- Through strategic development on infill sites, make the highest and best use of the CKC to meet UC Berkeley's housing objectives. Prioritize infill development and mobility improvements on existing surface parking or underutilized open spaces.
- Consider and evaluate demolition, redevelopment, or renovation of existing buildings that no longer meet programmatic needs, or that have significant seismic or other physical deficiencies that cannot feasibly be corrected. Additional uses should contribute to the CKC's residential community.
- Maintain, improve, and expand indoor and outdoor athletics and recreation facilities and open space resources on the CKC as amenities for the campus community, and to provide broader community access where capacity is available.

CLARK KERR CAMPUS MEMORANDUM OF UNDERSTANDING AND DECLARATION OF COVENANTS AND RESTRICTIONS

In 1982, the university executed a Memorandum of Understanding (MOU) with the City of Berkeley and a Declaration of Covenants and Restrictions (Covenants) with neighboring property owners to restrict development at the CKC for a period of 50 years through the year 2032. These agreements generally restrict significant change in use or increase in density at CKC with certain exceptions and generally limit future use of the CKC to the program described in the Dwight-Derby Site Plan approved by the Regents of the University of California in March 1982. New buildings are allowed to be constructed to replace existing buildings destroyed by fire, earthquake, or other disasters, removed due to hazards, or determined to be infeasible to rehabilitate; replacement buildings must have a similar size and scope to the removed buildings.

PHYSICAL DESIGN FRAMEWORK

UC requires every campus to have a Physical Design Framework. The UC Berkeley Physical Design Framework (Framework), accepted by the Regents in November 2009, includes principles for both land use and architecture, and was built on the policies and guidelines in the 2020 LRDP (UC Berkeley 2009). The Physical Design Framework was updated concurrently with the 2021 LRDP and was approved in July 2021 (UC Berkeley 2021b). The Framework is an advisory guidance document intended to convey a set of design intentions, rather than prescriptive regulations or mandates, and is used by the UC Berkeley Design Review Committee when reviewing a project's

design. While campuses are required to consider the Framework's guidelines and principles in developing their projects, a project is not required to be consistent with every guideline in the Framework. The following are applicable guidelines to the proposed project, which is in the CKC and adjacent to the City Environs as defined in the 2021 LRDP and reflected in the Physical Design Framework:

- Strategy CKC-1: Respect and respond to existing development patterns and enhance the campus's visual appearance.
  - Complement how the Clark Kerr Campus's buildings frame and enclose landscape spaces, and the emphasis on human-scaled environments.
  - Strive to reduce impervious surface area and incorporate stormwater management strategies in new and existing open spaces.
- Strategy CKC-2: Plan new facilities to foster a dynamic and active community that is connected to the campus as a whole.
  - Enhance connectivity between the Campus Park and the Clark Kerr Campus through the addition of new pedestrian pathways and gateways, and other site and mobility improvements.
  - Strengthen pedestrian and programmatic connectivity within the Clark Kerr Campus, and prioritize pedestrian and bicycle circulation.
  - Renew and complement housing and athletics and recreation facilities, in support of the campus community, the residential community, and the public.

UC BERKELEY CAMPUS DESIGN STANDARDS

UC Berkeley created the Campus Design Standards to guide design and construction professionals to complete lasting, high-quality additions to the UC Berkeley built environment. The Campus Design Standards, along with applicable codes such as the California Building Code (CBC), ensure that new construction and renovation projects at UC Berkeley integrate industry best practices and experience with existing campus buildings, infrastructure, grounds, and maintenance issues. UC Berkeley's Campus Design Standards contain construction specifications to guide design and ensure that new construction and renovation projects at UC Berkeley utilize continuing best practices (CBPs) (see below) and are integrated with the existing campus. They are administered by the Campus Building Department and apply to all construction projects sponsored by the UC. The Campus Design Standards include requirements for building materials, lighting, glass and glazing, screening, planting, and more. They largely adapt and build from other applicable regulations, such as the CBC. The Campus Design Standards are updated every three years to incorporate updates to the CBC.

UC BERKELEY CONTINUING BEST PRACTICES

UC Berkeley applies CBPs relevant to land use and planning as part of the project approval process. Applicable CBPs would be implemented as part of the proposed project. Applicable CBPs are provided in Appendix D, UC Berkeley Continuing Best Practices, of this Draft EIR. CBPs applicable to land use and planning are identified and assessed for their potential to reduce adverse physical impacts below in Section 4.4.3, Impacts and Mitigation Measures.

UNIVERSITY OF CALIFORNIA SEISMIC SAFETY POLICY

The UC system, including UC Berkeley, follows its adopted Seismic Safety Policy (Seismic Policy), most recently updated in March 2021, with review from its Seismic Advisory Board. The Seismic Policy also sets the standards

for new construction and renovation and whether an independent seismic peer reviewer is necessary for a given project. The 2021 Seismic Policy is consistent with and supportive of UC Berkeley's long-standing proactive approach to seismic issues by its requirement that every building with significant seismic performance deficiencies must be retrofitted, replaced, or evacuated no later than the year 2030.

The UC Berkeley Seismic Review Committee provides input to project developers and advice to the Campus Architect regarding the structural design of UC Berkeley facilities, with particular regard to seismic performance. Committee membership, appointed by the Chancellor, consists of faculty and emeriti from the disciplines of structural and civil engineering, with an additional faculty member from the College of Environmental Design.

The Seismic Review Committee is specific to UC Berkeley, and the Seismic Advisory Board is for the UC system. They are two different groups of engineers—the Seismic Review Committee reviews all relevant UC Berkeley projects, and the Seismic Advisory Board provides guidance to University of California Office of the President (UCOP) on seismic design, performance ratings, and rehabilitation, and assists in developing UCOP Seismic Safety policy and guidelines.

The beach volleyball courts project was reviewed by UC Berkeley's Seismic Review Committee on January 22, 2019 and recommendations for utility design were provided (UC Berkeley 2019). Due to seismic concerns, Building 21 has been vacant except for storage use since 1979. Preliminary seismic evaluation rated Building 21's seismic performance as "poor," and identified a number of serious seismic hazards on the building interior, such as brittle clay walls that are prone to cracking and even potential 'explosion' under sufficient deflection in addition to risk of roof collapse. A subsequent 2020 seismic evaluation concurred with the preliminary seismic performance evaluation, with deficiencies found in the wood roof diaphragm and non-critical deficiencies in concrete wall reinforcing steel offset by the length of concrete wall and floor structure (Degenkolb 2020). Nonstructural interior hollow clay tile partitions found in some partitions were noted as a falling hazard.

4.4.2.4 LOCAL

As discussed in Chapter 3, Project Description, UC Berkeley is constitutionally exempt from local governments' regulations, such as city and county general plans, land use policies, and zoning regulations, whenever using property under its control in furtherance of its educational purposes. As such, the proposed project is generally exempt from local policies and regulations. However, UC Berkeley may consider, for coordination purposes, aspects of local policies and regulations for the communities surrounding the UC Berkeley campus when it is appropriate and feasible, although it is not bound by those policies and regulations. Therefore, this section outlines the policies and regulations of the City of Berkeley and City of Oakland related to land use and planning that UC Berkeley may consider in the evaluation of the proposed project.

CITY OF BERKELEY GENERAL PLAN

The City of Berkeley General Plan Land Use Element provides general direction and guidance for the growth and development of the city. The Land Use Element is coordinated with other general plan elements to ensure future development is beneficial to the greater Berkeley community. The General Plan Open Space & Recreation Element establishes a policy framework for the maintenance, improvement, and expansion of the City's open space and recreational facilities. Both of the Land Use and Open Space & Recreation Elements contain policies related to the project, which involves the redevelopment of a recreation site on CKC. The following policies within the Berkeley

General Plan Land Use and Open Space & Recreation Elements are relevant to the project and are further analyzed in Section 4.4.3, Impacts and Mitigation Measures:

- **Policy LU-11: Pedestrian- and Bicycle-Friendly Neighborhoods.** Ensure that neighborhoods are pedestrian- and bicycle-friendly with well maintained streets, street trees, sidewalks, and pathways.
- **Policy LU-14: Community Service Centers.** Work with the Berkeley Unified School District and the University of California to establish a network of community centers including school sites, neighborhood resource centers, and City facilities that offer community services such as childcare, health care, and recreational programs.
- **Policy LU-35: Mutually Beneficial Land Use Decisions.** Develop and foster close working relationships with the University of California to ensure and facilitate land use decisions that are mutually beneficial to the institution and adjoining neighborhoods.
- **Policy LU-40: Public Use of University Facilities and Grounds.** Continue to support maximum opportunities for citizen use of university libraries and recreational facilities, the maintenance of the hill lands as open space, the adoption of campus development standards and policies to conserve and enhance present open space resources.
- **Policy OS-4: Working with Other Agencies.** Work with the Berkeley Unified School District, the University of California, the East Bay Municipal Utility District, and the East Bay Regional Park District to improve, preserve, maintain, and renovate their open space and recreation facilities.

CITY OF BERKELEY SOUTHSIDE PLAN

The City of Berkeley Southside Plan was developed and adopted in 2011 as part of the General Plan as a long-range statement of policies for the development and preservation of the Berkeley Southside neighborhood, which encompasses approximately 28 city blocks south of Campus Park. The Southside Plan, while immediately adjacent to CKC, does not include CKC or the project sites.

CITY OF OAKLAND GENERAL PLAN

A parcel of land within the CKC is within the boundaries of the City of Oakland. This undeveloped hillside parcel, which is directly east of the CKC track, occupies approximately four acres of open space land. The City of Oakland General Plan Land Use and Transportation Element categorizes this parcel as part of the North Hills planning area. Land use planning in the North Hills area centers around limitations of the hill area topography and related safety issues, and maintenance and enhancement of open space and public institutions. Open space land use principles in the Oakland General Plan Open Space, Conservation, and Recreation Element center around managing the conservation of existing open space resources, enhancing underutilized resources, creating connections between regional parks and the hillside open spaces with the rest of the city, having no net loss of public open space, and generating public involvement in renewal and restoration of open space.

4.4.3 IMPACTS AND MITIGATION MEASURES

4.4.3.1 STANDARDS OF SIGNIFICANCE

The standards of significance used to evaluate the impacts of the proposed project related to land use and planning are based on Appendix G of the CEQA Guidelines, as listed below. The proposed project would result in a significant impact if it would:

A. Physically divide an established community.

B. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

C. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact related to land use and planning.

4.4.3.2 ANALYTICAL METHODS

The methodology applied to assess and evaluate impacts related to land use and planning is based on information obtained from review of existing and proposed land uses and development on the project sites, review of existing surrounding land uses and development, and review of the proposed project's potential for conflicts with the relevant portions of applicable land use and planning policies, regulations, and standards.

APPLICABILITY OF 1979 FINAL EIR MITIGATION MEASURES

The university adopted mitigation measures in its 1979 Final EIR for the Dwight-Derby Site Plan, which included the Draft EIR, when it acquired the CKC in 1982 ("1979 mitigation measures"). As applicable to the proposed project, the 1979 mitigation measures are either retained as is, or are revised and/or replaced based on a finding of infeasibility backed by substantial evidence. Appendix C contains a list of the 1979 mitigation measures, including their applicability to the proposed project, and where relevant, proposed revisions and/or replacement of several of these mitigation measures are provided to make them feasible[1] to implement through the inclusion of objective performance standards. Some of these measures do not provide objective performance standards, do not reflect CEQA best practices for mitigation, and are otherwise outdated and obsolete. For the 1979 mitigation measures that have been revised and/or replaced in this Draft EIR, Appendix C provides substantial evidence demonstrating the infeasibility of these 1979 mitigation measures, and the effectiveness of these revised mitigation measures in eliminating or reducing the applicable potentially significant environmental impact relative to the 1979 mitigation measures being modified or replaced.

Table 4.4-1 summarizes the applicable1979 mitigation measures pertaining to land use and planning, as well as any proposed revisions and/or replacements to those measures. The table is based on the numbered list of 1979 mitigation measures from 1979 Draft EIR Chapter XII. As indicated in the table, the applicable 1979 mitigation measures would be implemented as part of the proposed project, as indicated in Chapter 3, Project Description, and none of these measures is proposed for revision and/or replacement. Project-specific mitigation measures may be included in Section 4.4.3.3, Impact Analysis, where feasible and necessary to reduce potentially significant impacts.

[1] As indicated in CEQA Guidelines Section 15364, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

TABLE 4.4-1. APPLICABLE 1979 MITIGATION MEASURES FOR LAND USE AND PLANNING AND PROPOSED REVISIONS

1979 Mitigation Measure Applicable to Proposed Project	Applicable to the Proposed Project?	Substantial Evidence for Revised or New Mitigation Measure	Revised or New Mitigation Measure
7.a. Little change in land use is anticipated in Alternatives A, B, and C; therefore, mitigation measures to enhance the existing land use will involve maintenance of the existing appearance of the site, and retention of open spaces.	No This mitigation measure relates to alternatives involving housing development presented in the 1979 Dwight-Derby Site Plan EIR, which are not relevant to the proposed project.	NA	NA
7.b. Mitigation measures if there were a private housing development, Alternative D, would be under the jurisdiction of the City of Berkeley and are excluded from this report.	No This mitigation measure relates to Alternative D presented in the 1979 Dwight-Derby Site Plan EIR, which is not relevant to the proposed project, as it does not involve private housing development.	NA	NA

Source: UC Berkeley 1979 and Draft EIR Appendix C.

4.4.3.3 IMPACT ANALYSIS

AREAS OF NO IMPACT

The proposed project would not physically divide an established community (Significance Standard A). The project involves the conversion of an existing recreational field into Intercollegiate Athletic (IA) beach volleyball courts for IA and recreational use. The project also involves the partial demolition and reinforcement of an existing storage building (Building 21). Other project components involve landscaping and driveway and utility improvements. The new project would not introduce a new linear element within the landscape, such as a freeway or other type of barrier that could divide an existing community. Therefore, the project would have no impact related to physically dividing an established community and this standard is not further evaluated.

Impact LU-1: Conflict with Land Use Plan, Policy or Regulation (Significance Standard B). The proposed project would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. ***(Less than Significant)***

This impact discussion focuses on the applicable land use plans, policies, and regulations that relate to avoiding or mitigating environmental effects, and whether any conflict could create a significant physical impact on the environment. As indicated in Section 4.4.2, Regulatory Framework, the 2021 LRDP is the primary planning document and land use plan for the UC Berkeley campus. Pursuant to the UC's constitutional autonomy, UC Berkeley is the only agency with land use jurisdiction over campus projects, including projects on the CKC. The proposed project is located in the CKC land use zone of the LRDP land use plan. Land use types in this zone include residential, academic life, and campus life uses, including recreational uses.

The proposed beach volleyball courts project component is consistent with the existing recreational use of the site and the land use types allowed in the CKC under the 2021 LRDP. Further, this project component meets the 2021 LRDP land use objectives as it improves athletic facilities on the CKC, redevelops an existing recreational field (i.e., the softball field) that no longer fully meets programmatic needs, and contributes to the CKC's residential community, as well as the broader community. The proposed partial demolition of Building 21 is also consistent with the existing storage use in this building, as this use would be retained in the remaining portion of the building. Further, this project component meets the 2021 LRDP land use objective related to considering demolition of existing buildings that have significant seismic or other physical deficiencies that cannot feasibly be corrected.

UC Berkeley's planning guidelines, including the Physical Design Framework, described in Section 4.4.2, guide design of development throughout the campus, including the CKC. As indicated in Chapter 3, Project Description, the beach volleyball courts concept plan was reviewed by the UC Berkeley Design Review Committee in 2018 and 2019 (per CBP AES-2 below), during which the Physical Design Framework, Campus Design Standards and relevant CBPs were considered. Comments received were reviewed with the project design team. The Design Review Committee was primarily concerned with mass, scale, aesthetics, tree removal, natural lighting for the support structure and the historic context of the CKC. The proposed design was refined based on the feedback from the Design Review Committee to integrate it within the context of the CKC, and to reduce the scale and introduce clerestory lighting for the support structure. Additionally, as part of the proposed project, UC Berkeley would implement the land use (LU) and aesthetics (AES) CBPs listed here and shown in Appendix D:

- **CBP AES-1:** New projects will as a general rule conform to the Physical Design Framework. While the guidelines in the Physical Design Framework would not preclude alternate design concepts when such concepts present the best solution for a particular site, UC Berkeley will not depart from the Physical Design Framework except for solutions of extraordinary quality.
- **CBP AES-2:** Major new campus projects will continue to be reviewed at each stage of design by the UC Berkeley Design Review Committee. The provisions of the LRDP, as well as project-specific design guidelines prepared for each such project, will guide these reviews.
- **CBP AES-4:** UC Berkeley will make informational presentations of major projects in the city environs of the Cities of Berkeley and Oakland, and the Clark Kerr Campus, to the relevant city commission(s) and board(s). Relevant commissions and boards, to be determined jointly by the Campus Architect and appropriate City Planning Director, may include the Berkeley Zoning Adjustments Board and Berkeley Landmarks Preservation Commission. Major projects in the Hill Campus East within the city of Oakland may also be presented to relevant City of Oakland boards or commissions, after consultation and mutual agreement between those agencies and UC Berkeley. Major projects may include new construction or redevelopment projects with substantial community interest as determined by UC Berkeley. Whenever a major project in the city environs or Clark Kerr Campus is under consideration, the Campus Architect may invite the appropriate city planning director or their designee to attend and comment on the project at the UC Berkeley Design Review Committee.

  (In conformance with CBP AES-4, UC Berkeley completed an informational presentation to the Berkeley Landmarks Preservation Commission on November 4, 2021. The proposed project along with its components were presented, and the public as well as the commissioners provided comments on the proposed project.)

These CBPs would minimize land use impacts by providing for design review and conformance with the Physical Design Framework and Campus Design Standards. The CBPs would not create additional land use impacts.

As described in Section 4.4.2, Regulatory Framework, the MOU with the City of Berkeley and the Covenants with neighboring property owners exist and restrict development in the CKC through the year 2032. These agreements generally do not allow significant change in use or increase in density at the CKC, with certain exceptions. As described in Chapter 3, Project Description, development under the proposed project would not involve a change in use or increase in density at CKC. The new beach volleyball courts would be constructed at an existing recreational site designated for recreational use in the Dwight-Derby Site Plan and would not increase housing or the UC Berkeley student population, in compliance with the MOU and the Covenants. Additionally, the partial demolition of Building 21 would retain a portion of the existing building and address the seismic safety risk posed by the building pursuant to University of California Seismic Safety Policy, in compliance with both agreements. Pursuant to the MOU, UC Berkeley may replace CKC buildings, such as the portion of Building 21 included in the project, determined to be infeasible to rehabilitate, and replace the building with one of similar size and scope.

UC Berkeley is constitutionally exempt from local regulations whenever using property under its control in furtherance of its educational mission, as indicated in Section 4.4.2, Regulatory Framework. Implementation of the proposed project would improve athletic facilities on the CKC, redevelop an existing recreational field (i.e., the softball field) that no longer fully meets programmatic needs, contribute to the CKC's residential and broader community, as well as demolish a portion of an existing building that has significant seismic deficiencies, in support of the 2021 LRDP goals, as indicated previously.

Therefore, as the proposed project would help to implement the goals of the 2021 LRDP, would not conflict with the MOU with the City and the Covenants with the neighbors, and would not conflict with other UC Berkeley plans and policies adopted for the purpose of avoiding or mitigating an environmental effect, the land use impact would be *less than significant*.

Significance without Mitigation: Less than significant.

MITIGATION MEASURES

As described above, the proposed project would not result in significant impacts related to conflicts with plans and policies adopted for the purpose of avoiding or mitigating an environmental effect, and therefore, no mitigation measures are required.

Impact LU-2: Cumulative Impacts Related to Land Use (Significance Standard C). The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in a cumulative impact related to land use and planning. *(Less than Significant)*

This section provides an evaluation of cumulative land use and planning impacts associated with the proposed project and past, present, and reasonably foreseeable future projects within the CKC and beyond, as identified in Table 4.1-1 in Section 4.1, Introduction to Analysis, and as relevant to this topic. The proposed project would result in significant cumulative land use impacts with past, present, or reasonably foreseeable projects if it, in combination with these projects, resulted in physical division of an established community or conflicts with applicable land use plans, policies, or regulations. The proposed project and cumulative projects included in Table 4.1-1 do not include projects or elements that would result in division of an existing neighborhood or community, such as a highway or railroad, or remove a means of access, such as a road or bridge. Therefore, there would be *no impacts* related to physical division of an established community.

As indicated in Impact LU-1, the proposed project would not conflict with UC Berkeley plans and policies adopted for the purpose of avoiding or mitigating an environmental effect, and therefore the land use impact was determined to be less than significant. Individual cumulative development projects on the CKC associated with the 2021 LRDP would continue to be subject to UC Berkeley requirements related to land use and aesthetics, including project-level design review requirements and compliance with relevant CBPs to ensure that the development is compatible with adjoining land uses, where possible. Similarly, all other cumulative development in the City of Berkeley (and in Oakland if any cumulative projects were to occur in this jurisdiction near the project sites) would require review subject to those relevant local policies pertaining to land use compatibility, such as those described in Section 4.2.2, Regulatory Framework. Local plans and polices include general plan and municipal code policies and regulations for both cities that ensure compatibility between various developments. Because the proposed project would not, in combination with other projects, cause conflict with applicable land use plans, policies, or regulations adopted to avoid or mitigate environmental effects, cumulative land use and planning impacts would be *less than significant*.

4.4.4 REFERENCES

City of Berkeley, 2001. City of Berkeley General Plan Land Use Element. December 2001. Accessed June 1, 2021 at: https://www.cityofberkeley.info/Planning_and_Development/Home/General_Plan_-_Land_Use_Element_Introduction.aspx

City of Berkeley, 2001. City of Berkeley General Plan Open Space & Recreation Element. April 2001. Accessed June 1, 2021 at: https://www.cityofberkeley.info/Planning_and_Development/Home/General_Plan_-_Open_Space_and_Recreation_Element.aspx

City of Berkeley. 2021. City of Berkeley Community GIS Portal. Accessed May 27, 2021 at https://www.cityofberkeley.info/gisportal/

City of Oakland. 2021. Planning and Zoning Map. Accessed May 27, 2021 at https://oakgis.maps.arcgis.com/apps/webappviewer/index.html?id=3676148ea4924fc7b75e7350903c7224.

Degenkolb. 2020. ASCE 41-17 Tier 1 Seismic Evaluation for Clark Kerr Campus 21 – Storage. January.

UC Berkeley (University of California, Berkeley). 1979. *Dwight-Derby Site Plan (Schools for the Deaf and Blind). and Final Environmental Impact Report*. May 1979.

UC Berkeley. 2005. *2020 Long Range Development Plan*. January 2005.

UC Berkeley. 2009. *Physical Design Framework*. November.

UC Berkeley. 2019. Seismic Review Committee Meeting Notes. January 22, 2019.

UC Berkeley. 2021a. *UC Berkeley 2021 Long Range Development Plan.* July 2021.

UC Berkeley. 2021b. *UC Berkeley Physical Design Framework.* July 2021.

UC Berkeley. 2021c. *UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Draft Environmental Impact Report (State Clearinghouse Number: 2020040078).* March 2021.

UC Berkeley. 2021d. *UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Final Environmental Impact Report (State Clearinghouse Number: 2020040078).* July 2021.

This page intentionally left blank.

4.5 NOISE

This section describes the existing noise conditions of the project site and vicinity, identifies associated regulatory requirements, evaluates potential project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to implementation of the Clark Kerr Campus (CKC) Beach Volleyball Courts Project (project or proposed project). The analysis is based on noise modeling conducted for the proposed project as part of the preparation of this environmental impact report (EIR). The results of the noise modeling are summarized in this section and are included in Appendix F.

4.5.1 ENVIRONMENTAL SETTING

4.5.1.1 NOISE DESCRIPTORS

The following are brief definitions of terminology used in this section:

- **Sound**. A disturbance created by a vibrating object, which when transmitted by pressure waves through a medium such as air, is capable of being detected by the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Decibel (dB).** A measure of sound on a logarithmic scale.
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}).** The mean of the noise level, energy averaged over the measurement period.
- **L_{max}.** The maximum noise level during a measurement period.
- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period). This is also called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often called the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."
- **Day-Night Sound Level (Ldn or DNL).** The energy-average of the A-weighted sound levels during a 24-hour period, with 10 dB added from 10:00 p.m. to 7:00 a.m.
- **Community Noise Equivalent Level (CNEL).** The energy-average of the A-weighted sound levels during a 24-hour period, with 5 dB added from 7:00 p.m. to 10:00 p.m. and 10 dB added from 10:00 p.m. to 7:00 a.m. Note: For general community/environmental noise, CNEL and Ldn values rarely differ by more than 1 dB. As a matter of practice, Ldn and CNEL values are considered equivalent/interchangeable.
- **Peak Particle Velocity (PPV).** The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is one microinch per second ($1x10^{-6}$ in/sec).

4.5.1.2 ACOUSTIC FUNDAMENTALS

Vibrations, traveling as waves through air from a source, exert a force perceived by the human ear as sound. Sound pressure level (referred to as sound level) is measured on a logarithmic scale in decibels (dB) that represent the fluctuation of air pressure above and below atmospheric pressure. Frequency, or pitch, is a physical characteristic of sound and is expressed in units of cycles per second or hertz (Hz). The normal frequency range of hearing for most people extends from about 20 to 20,000 Hz. The human ear is more sensitive to middle and high frequencies, especially when the noise levels are quieter. As noise levels get louder, the human ear starts to hear the frequency spectrum more evenly. To accommodate for this phenomenon, a weighting system to evaluate how loud a noise level is to a human was developed. The frequency weighting called "A" weighting is typically used for quieter noise levels which de-emphasizes the low frequency components of the sound in a manner similar to the response of a human ear. This A-weighted sound level is called the "noise level" and is referenced in units of dBA. Table 4.5-1 provides references for the a-weighted sound level of typical sources in the home and environment.

Since sound is measured on a logarithmic scale, a doubling of sound energy results in a 3 dBA increase in the noise level. Changes in a community noise level of less than 3 dBA are not typically noticed by the human ear under normal, quiet outdoor conditions, and changes of 1 to 3 dBA are detectable only under quiet, controlled conditions (e.g., indoors with a limited number of sound sources). Changes from 3 to 5 dBA may be noticed by some individuals who are extremely sensitive to changes in noise. A 5 dBA increase is readily noticeable (Caltrans 2013). The human ear perceives a 10 dBA increase in sound level as a doubling of the sound level (i.e., 65 dBA sounds twice as loud as 55 dBA to a human ear).

An individual's noise exposure occurs over a period of time; however, noise level is a measure of noise at a given instant in time. Community noise sources vary continuously, being the product of many noise sources at various distances, all of which constitute a relatively stable background or ambient noise environment. The background, or ambient, noise level gradually changes throughout a typical day, corresponding to distant noise sources, such as traffic volume, as well as changes in atmospheric conditions.

Noise levels are generally higher during the daytime and early evening when traffic (including airplanes), commercial, and industrial activity is the greatest. However, noise sources experienced during nighttime hours when background levels are generally lower can be potentially more conspicuous and irritating to the receiver. In order to evaluate noise in a way that considers periodic fluctuations experienced throughout the day and night, a concept termed "community noise equivalent level" (CNEL) was developed, wherein noise measurements are weighted, added, and averaged over a 24-hour period to reflect magnitude, duration, frequency, and time of occurrence. A complete definition of CNEL and other terminology used to describe noise is provided in Section 4.5.1.1, Noise Descriptors.

TABLE 4.5-1. TYPICAL NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at 3 feet		
	90	
Diesel Truck at 50 feet, 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal Speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Area, Daytime	50	Dishwasher Next Room
Quiet Urban Area, Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Area, Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (Background)
	20	
		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation 2013.

EXTERIOR NOISE DISTANCE ATTENUATION

Noise sources are classified in two forms: (1) point sources, such as stationary equipment or a group of construction vehicles and equipment working within a spatially limited area at a given time, and (2) line sources, such as a roadway with a large number of pass-by sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6.0 dBA for each doubling of distance from the source to the receptor at acoustically "hard" sites and at a rate of 7.5 dBA for each doubling of distance from source to receptor at acoustically "soft" sites. Sound generated by a line source (i.e., a roadway) typically attenuates at a rate of 3 dBA and 4.5 dBA per doubling distance, for hard and soft sites, respectively. Sound levels can also be attenuated by man-made or natural barriers. For the purpose of a sound attenuation analysis, a "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt or concrete ground surfaces, as well as very hard-packed soils. An acoustically "soft" or absorptive site is characteristic of unpaved loose soil or vegetated ground.

4.5.1.3 NEGATIVE EFFECTS OF NOISE ON HUMANS

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases, and the acceptability of the environment for people decreases. This decrease in acceptability and the threat to public well-being is the basis for land use planning policies directed towards the prevention of exposure to excessive community noise levels. Hearing loss can occur at the highest noise intensity levels. Hearing loss, one of the more severe consequences of exposure to elevated noise, and annoyance which can result from exposure to various noise sources and levels, ae described in greater detail below.

Hearing Loss. While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter, or ear protection is prescribed.

Annoyance. Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The Ldn as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. A noise level of about 55 dBA Ldn is the threshold at which a substantial percentage of people begin to report annoyance (FICON 1992).

4.5.1.4 VIBRATION FUNDAMENTALS

Vibration is an oscillatory motion that can be described in terms of displacement, velocity, or acceleration. The response of humans to vibration is very complex. However, it is generally accepted that human response is best approximated by the vibration velocity level associated with the vibration occurrence.

Heavy equipment operation, including stationary equipment that produces substantial oscillation or construction equipment that causes percussive action against the ground surface, may be experienced by building occupants as perceptible vibration. It is also common for ground-borne vibration to cause windows, pictures on walls, or items on shelves to rattle. Although the perceived vibration from such equipment operation can be intrusive to building occupants, the vibration is seldom of sufficient magnitude to cause even minor cosmetic damage to buildings.

When evaluating human response, ground-borne vibration is usually expressed in terms of root mean square (RMS) vibration velocity. RMS is defined as the average of the squared amplitude of the vibration signal. As for sound, it is common to express vibration amplitudes in terms of decibels defined as:

$$L_v = 20 \log \left(\frac{v_{rms}}{v_{ref}} \right)$$

Where v_{rms} is the RMS vibration velocity amplitude in inches/second (in/sec) and v_{ref} is the decibel reference of $1x10^{-6}$ in/sec.

To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. The vibration threshold of perception for most people is around 65 VdB (equivalent to 0.0018 in/sec RMS). Vibration levels in the 70 to 75 VdB range are often noticeable, but generally deemed acceptable, and levels in excess of 80 VdB are often considered unacceptable (FTA 2018).

Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass, expressed as in/sec). Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving and soil compacting, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used. A conservative maximum vibration level standard is 0.2 in/sec PPV for the prevention of structural damage to typical residential buildings, while 0.12 in/sec PPV is applied to historic structures that are considered more fragile (FTA 2018).

4.5.1.5 EXISTING NOISE ENVIRONMENT

In order to characterize the existing ambient noise environment in the vicinity of the project, Dudek completed a series of long-term (i.e., 24-hour in duration) sound level measurements in the vicinity of existing noise-sensitive land uses that have the potential to be impacted by project-related noise. Dudek also completed short-term sound level measurements (i.e., less than one hour in duration) and manual traffic counts adjacent to roadways in the project vicinity that could receive project-related trips, in order to calibrate the traffic noise model. Noise sensitive uses are described below and shown in Figures 4.5-1 and 4.5-2, following a summary of the noise measurement survey.

AMBIENT NOISE SURVEY

Existing noise levels were measured at four representative locations in the project vicinity to establish baseline noise conditions to allow for the comparation to project operational noise levels; the four long-term noise measurement locations are designated LT1 – LT4 on Figure 4.5-3. Sound-level measurements were performed using SoftdB Piccolo II Models (ANSI Type II). ANSI Type II sound-level meters have sufficient accuracy to be used for environmental noise evaluation. The sound-level meters were calibrated before and after the 24-hour measurements using a Reed Instruments Model 8090 calibrator.

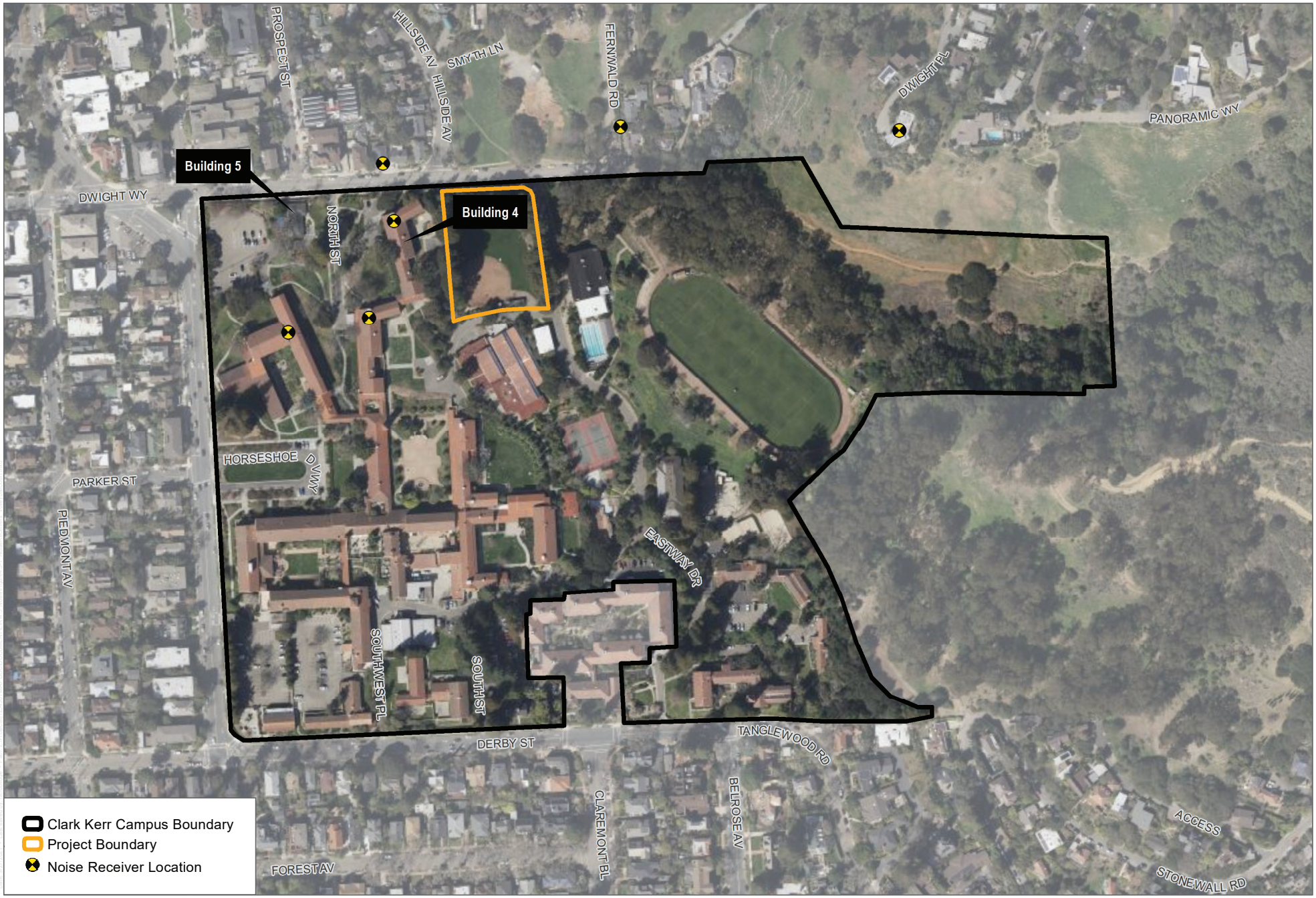
Table 4.5-2 summarizes the dates and start/stop times for each 24-hour measurement, the range of hourly average noise levels for the daytime and nighttime periods, as well as the calculated 24-hour weighted average noise level (CNEL). See Appendix F for data logs for each of the 24-hour measurement periods and the calculation of CNEL from the recorded hourly average values.

TABLE 4.5-2. EXISTING AMBIENT NOISE MEASUREMENT RESULTS

Location	Dates	Start / Stop	Daytime (7 a.m.–10 p.m.) Hourly L_{eq} Range (dBA)	Nightttime (10 p.m.-7 a.m.) Hourly L_{eq} Range (dBA)	CNEL dBA
LT1	5/12 - 5/13/21	1 PM – 1 PM	46 – 61	39 – 49	54
LT2	5/12 - 5/13/21	2 PM – 2 PM	39 – 54	35 – 45	49
LT3	5/13 - 5/14/21	2 PM – 2 PM	47 – 60	38 – 50	54
LT4	5/13 - 5/14/21	1 PM – 1 PM	45 – 56	40 – 47	53

LT1 – LT4 were located adjacent to existing residential or dormitory land uses. The existing CNEL values at the four long-term noise measurements locations have exterior noise exposure levels that are within the allowable limits for residences under both Berkeley and Oakland noise standards (see Section 4.5.2, Regulatory Framework, for information about these standards).

Due to the COVID-19 Pandemic existing noise measurements did not capture noise levels at the above locations during active use of the existing CKC softball field or sand courts. Typical use of the softball field involves the use of two public address (PA) speakers that are mounted to the poles behind home plate. At the existing sand courts there is no fixed PA equipment; however, a portable PA system is used if needed for matches.



SOURCE: Bing Maps 2020, Alameda County 2018

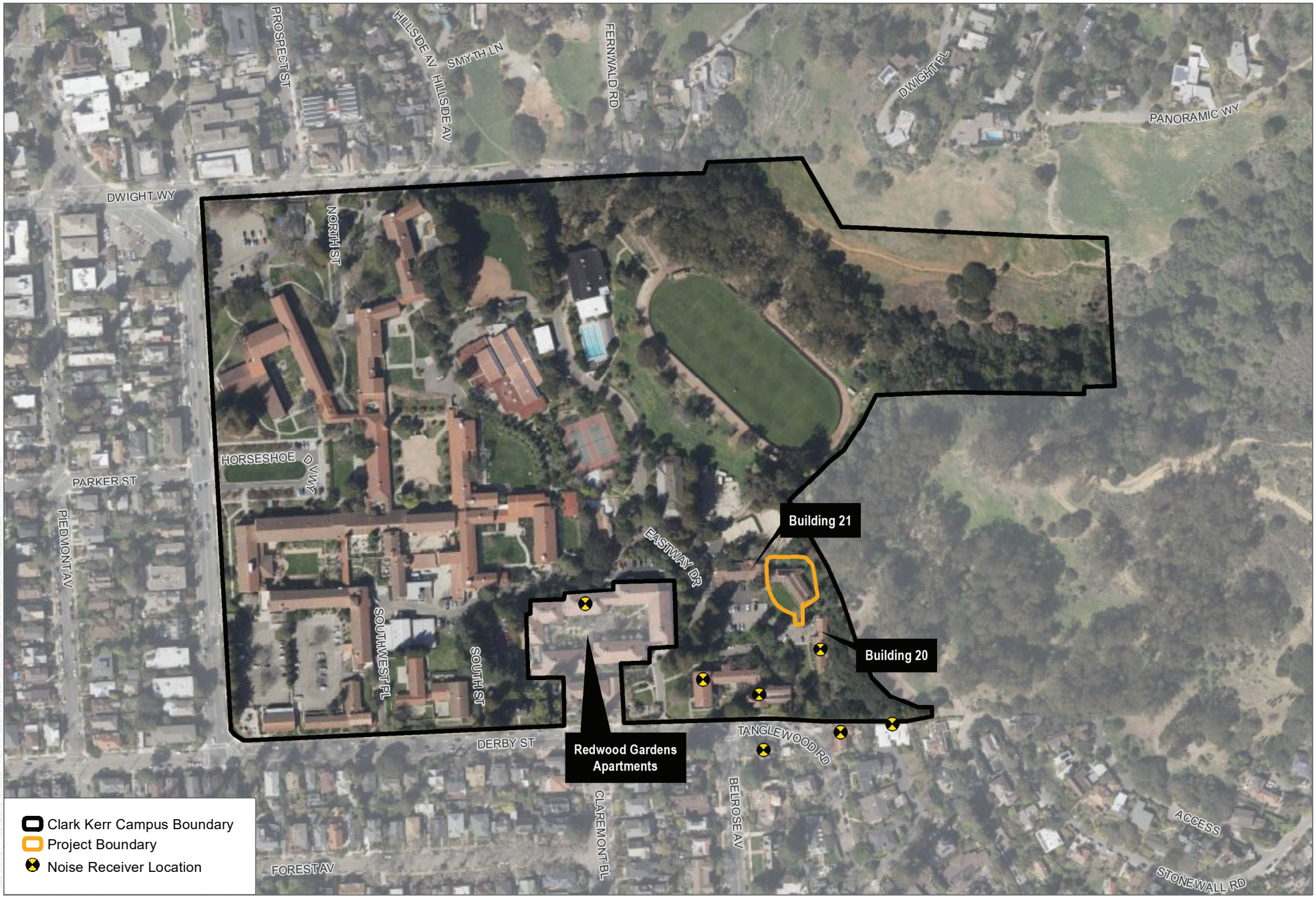
0 150 300 Feet

FIGURE 4.5-1

Noise Sensitive Receivers for Proposed Volleyball Courts Project

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.



SOURCE: Bing Maps 2020, Alameda County 2018

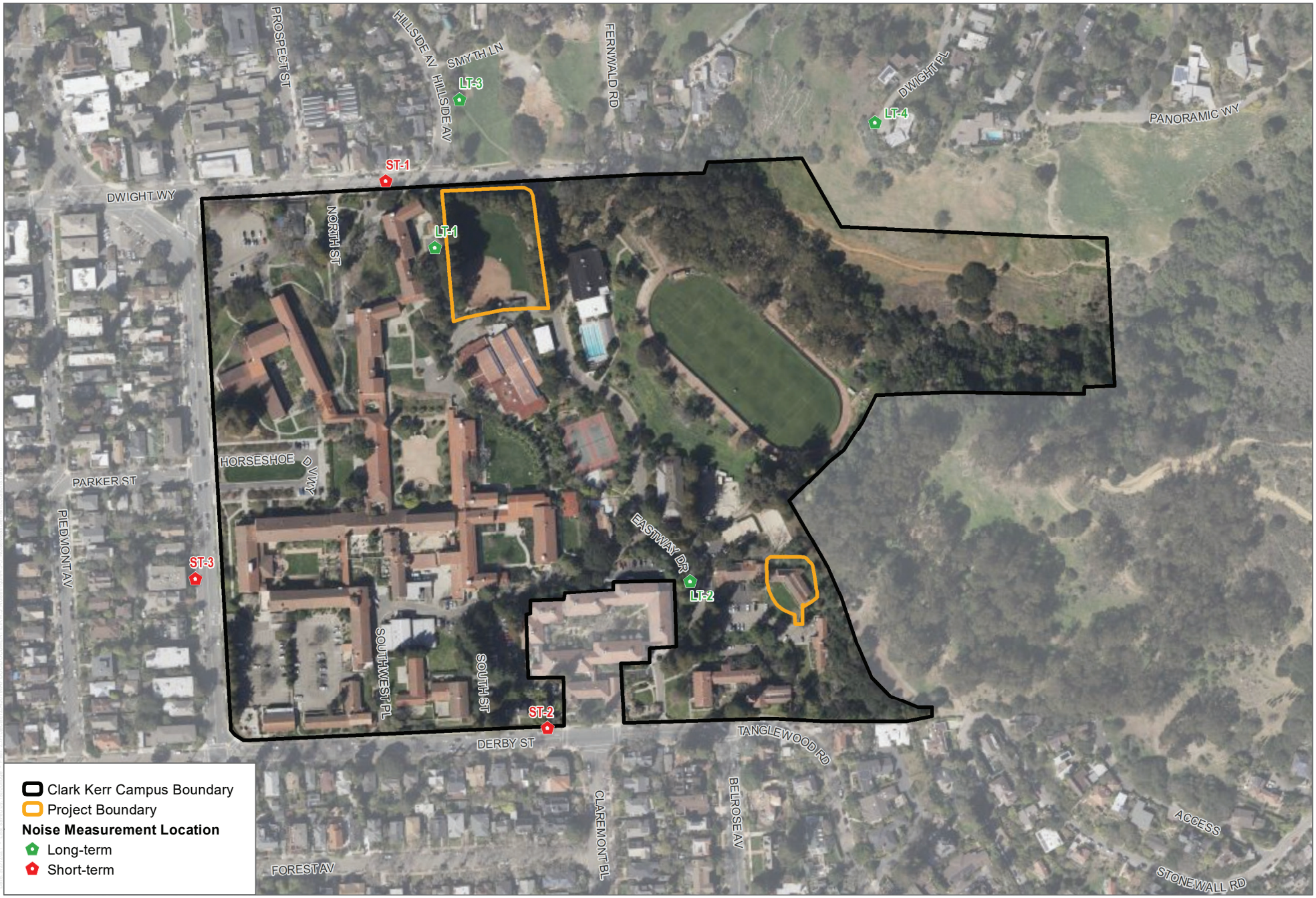
0 150 300 Feet

FIGURE 4.5-2

Noise Sensitive Receivers for Clark Kerr Campus Building 21

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.



SOURCE: Bing Maps 2020, Alameda County 2018

0 150 300 Feet

FIGURE 4.5-3

Noise Measurement Locations

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

TRAFFIC NOISE

To characterize existing noise levels along roadways adjacent to the project site, Dudek conducted short-term sound level measurements and simultaneous manual traffic counts for three roadways. The daytime, short-term (1 hour or less) attended sound level measurements were again conducted with a SoftdB Piccolo II sound-level meter. The calibration of the sound level meter was verified before and after the measurements were taken, and the measurements were conducted with the microphone positioned approximately five feet above the ground.

Dudek selected three noise measurement locations (ST1–ST3) along roadways adjacent to the project site to characterize noise levels from important transportation sources in the area, as well as to establish ambient noise levels for comparison against noise levels from construction or operation of the proposed project. The measurement locations are shown in Figure 4.5-3, and the measured average noise levels and manual traffic count data are presented in Table 4.5-3. Noise measurement data is also included in Appendix F. As shown in Table 4.5-3, the measured sound levels were approximately 58 dBA L_{eq} at ST1, approximately 66 dBA L_{eq} at ST2 and approximately 64 dBA L_{eq} at ST3.

TABLE 4.5-3. MEASURED AVERAGE TRAFFIC SOUND LEVEL AND MANUAL TRAFFIC COUNT RESULTS

Site	Traffic Noise Source	Date	Time	L_{EQ}[1]	Cars	MT[2]	HT[3]
ST1	Dwight Way	5/13/2021	2:20 – 2:50 pm	**58 dBA**	57	1	1
ST2	Derby Street		1:00 – 1:15 PM	**66 dBA**	259	4	0
ST3	Warring Street		12:30 – 12:45 AM	**64 dBA**	240	4	1

Notes: Temperature 68 degrees, sunny, 4 mph southwesterly wind.

1. Equivalent Continuous Sound Level
2. Medium Trucks
3. Heavy Trucks

The L_{eq} values illustrated in Table 4.5-3 are for the duration of each measurement but would also be representative of a daytime hourly L_{eq} level at each of the measurement points. The measurement points varied from 3 feet to 6 feet from the edge of pavement (approximately 15 to 18 feet from the roadway centerline). Based upon the existing roadway traffic volumes (UC Berkeley 2021a), Dudek modeled the existing CNEL sound levels at 50 feet from the center of the roadways to be 61 dBA CNEL for Dwight Way, and 62 dBA CNEL for Warring Street and Derby Street.

VIBRATION

Vibration sources in most communities are limited to railroad operations, truck routes, and industrial facilities that incorporate massive machinery with rotating or percussive elements. These sources do not exist in the vicinity of the project site, and therefore background vibration levels are expected to be less than 65 VdB.

NOISE-SENSITIVE LAND USES

Land uses designated as the most noise-sensitive typically include residences, motels and hotels, hospitals, and nursing homes, as spaces where relaxation and sleep are essential, which can be interrupted or prevented via elevated noise exposure. Land uses considered noise-sensitive in the vicinity of the project component sites are described below.

Building 21 Partial Demolition Site

The project includes demolition of the eastern wing of Building 21, and the construction of a new paved apron to extend vehicle access to the new eastern façade of the structure, which will continue to be used for storage. Building

20 houses faculty apartments and is located within approximately 45 feet south of the demolition area at Building 21. Building 19 also houses faculty apartments and is located within approximately 170 feet southwest of the demolition area at Building 21. The Redwood Gardens Apartments are located within 235 feet west of the demolition area at Building 21. The closest houses along Derby Street are located at distances of approximately 250 feet to 300 feet from the demolition area. Figure 4.5-2 illustrates the noise-sensitive land uses in the vicinity of Building 21.

Beach Volleyball Courts Site

The project includes construction and operation of new women's beach volleyball courts at generally the southwest corner of Dwight Way and Sports Lane. Building 4 houses student dormitory units and is immediately west of the beach volleyball courts site, within 40 feet of the construction limits. Buildings 3 and 2 are also residence halls, at further distances to the west of the volleyball courts site. To the north of the beach volleyball courts site, across Dwight Way, the closest residences are located approximately 95 feet away. Another cluster of residences is situated along Fernwald Road to the northeast of the beach volleyball courts site. Figure 4.5-1 illustrates the noise-sensitive land uses in the vicinity of the proposed beach volleyball courts site.

4.5.2 REGULATORY FRAMEWORK

Applicable federal, state, UC, and local regulations related to noise are provided in this section.

4.5.2.1 FEDERAL

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

The United States Environmental Protection Agency (USEPA) has determined that over a 24-hour period, exposure to an L_{eq} of 70 dBA will result in some hearing loss. Interference with activity and annoyance will not occur if exterior levels are maintained at a L_{eq} of 55 dBA and interior levels are maintained at or below 45 dBA L_{eq}. While these levels are relevant for planning and design and useful for informational purposes, they are not land use planning criteria because they do not consider economic cost, technical feasibility, or the needs of the community; therefore, they are not mandated.

In consideration of the difficulty of achieving a goal of 55 dBA L_{dn} as an exterior noise level exposure standard, most federal and California agencies have settled on 65 dBA L_{dn} level as their standard. At 65 dBA L_{dn}, activity interference is kept to a minimum, and annoyance levels are still low. 65 dBA L_{dn} as an exterior exposure standard has also been widely demonstrated as a level that can realistically be achieved in residential areas; this exposure level also supports the ability to achieve in interior standard of 45 dBA L_{dn} with standard residential construction techniques and materials.

4.5.2.2 STATE

CALIFORNIA NOISE CONTROL ACT OF 1973

Sections 46000 through 46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, declares that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also identifies a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise

Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

GENERAL PLAN GUIDELINES

The State of California, through its General Plan Guidelines, provides guidance on how ambient noise should influence land use and development decisions and includes a table of recommended maximum exterior noise levels by land use, expressed in CNEL. The General Plan Guidelines provide cities with recommended community noise and land use compatibility standards that can be adopted or modified at the local level based on conditions and types of land uses specific to that jurisdiction.

CALIFORNIA BUILDING CODE NOISE INSULATION STANDARDS

The California Building Code is Title 24 of the California Code of Regulations (CCR). In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for hotels, motels, dormitories, and multi-family residential buildings (CCR Title 24, Part 2). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a multi-family residential building or structure is proposed to be located in an area with CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of at least 45 dBA (CCR Title 24 Noise Standards, Chap. 2-35).

CALGREEN

The State of California's noise insulation standards for nonresidential uses are codified in CCR Title 24, Part 11, California Green Building Standards Code (CALGreen). CALGreen noise standards are applied to new or renovation construction projects in California to control interior noise levels resulting from exterior noise sources. Proposed projects may use either the prescriptive method (Section 5.507.4.1) or the performance method (Section 5.507.4.2) to show compliance. Under the prescriptive method, a project must demonstrate transmission loss ratings for the wall and roof-ceiling assemblies and exterior windows when located within a noise environment of 65 dBA CNEL or higher. Under the performance method, a project must demonstrate that interior noise levels do not exceed 50 dBA $L_{eq(1hr)}$.

4.5.2.3 UNIVERSITY OF CALIFORNIA

OFFICE OF ENVIRONMENT HEALTH AND SAFETY PROGRAMS

UC Berkeley's Office of Environment, Health & Safety works with UC Berkeley construction project teams to implement noise reduction measures, review noise monitoring reports prepared by third-party consultants, respond to noise complaints, and perform noise monitoring at specific sites upon request.

CAPITAL STRATEGIES COMMUNICATIONS

UC Berkeley has a construction project communication program to communicate with its affiliates, the public, and neighbors about forthcoming or ongoing construction projects. Under the program, Capital Strategies Communications (CSC) engages in a range of steps to ensure responsive communications.

CSC reviews site utilization and staging plans early on to reduce the impacts of construction equipment and circulation on UC Berkeley affiliates and neighbors. CSC then coordinates project goals, scope, and timeline for

effective communications, followed by the distribution of flyers and emails to those affected to communicate construction project specifics, e.g., hours of work, dates of construction, expected impacts, and contact information. During demolition, site preparation, and construction, CSC sends construction communications on a regular basis; sends special notices in advance when unusual episodes of noise are expected; provides project information for inclusion in UC Berkeley publications; and responds to, and maintains records of, all complaints.

CSC coordinates with city staff to communicate and lessen impacts, coordinates complaint responses with the Office of Environment, Health & Safety, and participates in campus-wide efforts to reduce instances of construction impacts on the UC Berkeley community and its neighbors.

ADVISORY COUNCIL ON STUDENT-NEIGHBOR RELATIONS

The Advisory Council on Student-Neighbor Relations (SNAC) first convened in 2005 and is dedicated to improving the quality of life in the neighborhoods adjacent to UC Berkeley properties. Focused on facilitating communication, mutual respect, and cooperation between UC Berkeley students and city of Berkeley residents, SNAC's primary aim is to build good student/neighbor relations.

Since its inception, SNAC has launched and supported good-neighbor initiatives, campaigns, and programs—such as Happy Neighbors and the CalGreeks Alcohol Taskforce—to engage and serve students and neighbors. Historically, SNAC members have represented students, neighborhood and merchant organizations, UC Berkeley and City of Berkeley staff, and other community groups. Noise reduction initiatives focus on but are not limited to parties, sports, and rental spaces. The CalGreeks Alcohol Taskforce provides noise data from CalGreeks events. Happy Neighbors educates students and their neighbors about community expectations, relevant policies and laws, and police and student conduct procedures for possible alcohol, party, and noise violations.

SNAC meets regularly. During those meetings, UC Berkeley and community stakeholders have an opportunity to hear updates of work conducted in partnership with UC Berkeley and city and community leaders and consider new opportunities for collaboration.

UC BERKELEY CAMPUS DESIGN STANDARDS

UC Berkeley created the Campus Design Standards to guide design and construction professionals to complete lasting, high-quality additions to the UC Berkeley built environment. The Campus Design Standards, along with applicable codes, ensure that new construction and renovation projects at UC Berkeley integrate industry best practices and experience with existing campus buildings, infrastructure, grounds, and maintenance issues. Relevant sections of the Campus Design Standards are listed below:

Section 01 14 00: Work Restrictions

a. The Work of this project shall be accomplished in accordance with the City of Berkeley's Construction Noise Standards (see Local regulations below).

b. No work shall be performed on Saturdays, Sundays or UC Berkeley holidays, unless otherwise approved by the Owner's Representative, in consultation with the Campus Building Department.

c. Work occurring during RRR[1] or Finals Week shall not start before 9:00 a.m. unless otherwise approved in advance.

d. All roto-hammering, chipping, doweling, pneumatic fastening, or any other activity that may cause excessive noise and or vibration in central campus environs or occurring near residences shall be performed in a manner that causes the least possible disturbance to campus activities or residents.

f. All crane work shall be scheduled to cause the least possible disruption to the campus and surrounding environs.

g. Alterations to the above contract requirements may be made in advance, with the written permission of the Campus Building Official or Campus Architect.

Section 01 56 19: Temporary Noise Barriers

1. The following noise control procedures shall be employed (these requirements may be modified for projects as required by Environmental Impact Report Mitigation Measures where needed):

    a. Maximum Noise: The Contractor shall use equipment and methods during the course of this work that are least disruptive to adjacent buildings, office, or residents. Note: Modify the following, as necessary for EIR Mitigation Measures (if any). Noise levels for trenchers, graders, trucks and pile drivers shall not exceed 90 dBA at 50 feet as measured under the noisiest operating conditions. For all other equipment, noise levels shall not exceed 85 dBA at 50 feet.

    b. Equipment: Jack hammers shall be equipped with exhaust mufflers and steel muffling sleeves. All diesel equipment shall have exhaust muffled. Air compressors shall be of a quiet type such as a "whisperized" compressor.

    c. Operations: Machines shall not be left idling. Electric power shall be used in lieu of internal combustion engine power wherever possible. Equipment shall be maintained to reduce noise from vibration, faulty mufflers, or other sources.

    d. Scheduling: Noisy operations shall be scheduled so as to minimize their disturbance to occupied adjacent areas and duration at any given location.

Section 01 71 33: Protection of Adjacent Construction

3. Noise and Dust Control[2]

    a. The Contractor shall note that the building and adjacent facilities shall remain in operation during the entire construction period, and shall take all reasonable precautions to eliminate dust and minimize noise.

    b. The Contractor shall erect temporary partitions to confine noise and dust as required.

UC BERKELEY CONTINUING BEST PRACTICES

UC Berkeley applies continuing best practices (CBPs) relevant to noise and vibration as part of the project approval process. CBPs applicable to the proposed project are provided in Appendix D, UC Berkeley Continuing Best

[1] Reading, Review, and Recitation (RRR) Week is the week following the end of formal class instruction and preceding the start of final exams.

[2] See Appendix B, Initial Study, for impacts related to fugitive dust from construction activities.

Practices, of this Draft EIR. Applicable CBPs are identified and assessed for their potential to reduce adverse physical impacts later in this section under Section 4.5.3, Impacts and Mitigation Measures.

4.5.2.4 LOCAL

As discussed in Chapter 3, Project Description, UC Berkeley is constitutionally exempt from local governments' regulations, such as city and county general plans, land use policies, and zoning regulations, whenever using property under its control in furtherance of its educational purposes. As such, the proposed project is not required to comply with local regulations and standards for noise. However, for the purposes of CEQA, UC Berkeley uses noise standards from the municipal code from the city where the noise-sensitive receptor is located. The City of Berkeley and the City of Oakland noise standards are described below and are used in this analysis as thresholds of significance to determine impact significance.

CITY OF BERKELEY

General Plan Environmental Management Element

The environmental management element contains noise-related objectives, policies, and actions. The following could be relevant to the project.

Objective 8: Protect the community from excessive noise levels.

- **Policy EM-43 Noise Reduction**: Reduce significant noise levels and minimize new sources of noise.

  Action: Increase enforcement of the Noise Ordinance to reduce noise impacts.

  Action: Promote increased public awareness concerning the negative effects of excessive noise on humans.

- **Policy EM-44 Noise Prevention and Elimination**: Protect public health and welfare by eliminating existing noise problems where feasible and by preventing significant future degradation of the acoustic environment.

  Action: Incorporate noise considerations into land use planning decisions.

  Action: Ensure the effective enforcement of City, State, and Federal noise levels by appropriate City departments.

- **Policy EM-45 Traffic Noise**: Work with local and regional agencies to reduce local and regional traffic, which is the single largest source of unacceptable noise in the city.

  Action: Encourage neighborhood traffic calming strategies that cause motorists to slow down and decrease noise levels in all residential areas.

  Action: Minimize potential transportation noise through proper design of street circulation, coordination of routing, and other traffic control measures.

  Action: Promote and encourage new vehicle technologies to reduce transportation noise levels.

  Action: Establish noise emission limits on City public works projects and vehicles, such as refuse collection trucks, and work with other large institutions in the city, such as Berkeley Unified School District, to reduce vehicle noise emissions.

- **Policy EM-46 Noise Mitigation**: Require operational limitations and all feasible noise buffering for new uses that generate significant noise impacts near residential, institutional, or recreational uses.

  Action: Promote use of noise insulation materials in new construction and major rehabilitation.

Action: Mitigate significant noise impacts on parks and public open space, whenever feasible. To include campus and City of Berkeley and City of Oakland applicable noise policies and any noise ordinance(s).

- **Policy EM-47 Noise Mitigation**: Ensure that noise-sensitive uses, including, but not limited to, residences, child-care centers, hospitals, and nursing homes, are protected from detrimental noise levels.

  Action: Noise-sensitive development proposals should be reviewed with respect to the Land Use Compatibility Guidelines below.

  If the noise level is within the "normally acceptable" level, noise exposure would be acceptable for the intended land use. Development may occur without requiring an evaluation of the noise environment unless the use could generate noise impacts on adjacent uses.

  If the noise level is within the "conditionally acceptable" level, noise exposure would be conditionally acceptable; a specified land use may be permitted only after detailed analysis of the noise environment and the project characteristics to determine whether noise insulation or protection features are required. Such noise insulation features may include measures to protect noise-sensitive outdoor activity areas (e.g., at residences, schools, or parks) or may include building sound insulation treatments such as sound-rated windows to protect interior spaces in sensitive receptors.

  If the noise level is within the "normally unacceptable" level, analysis and mitigation are required. Development should generally not be undertaken unless adequate noise mitigation options have been analyzed and appropriate mitigations incorporated into the project to reduce the exposure of people to unacceptable noise levels.

  If the noise level is within the "clearly unacceptable" level, new construction or development should not be undertaken unless all feasible noise mitigation options have been analyzed and appropriate mitigations incorporated into the project to reduce exposure of people to unacceptable noise levels.

Municipal Code

Stationary noise sources in Berkeley are regulated by Municipal Code Section 13.40.050, Exterior Noise Standards. The City of Berkeley's exterior noise limits are based on zoning and time of day and are summarized in Table 4.5-4.

TABLE 4.5-4. CITY OF BERKELEY – EXTERIOR NOISE LIMITS (DBA)

Zoning District	Time Period	Noise Level, dBA L_{50}
R-1, R-2, R-1A, R-2A, and ESR	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 p.m.	55 45
R-3 and above	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 p.m.	60 55
Commercial	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 p.m.	65 60
Industry	Anytime	70

Source: City of Berkeley 2020a.

Notes: If the measured ambient noise level is greater than the level permissible within any of the noise limit categories above, the sound level when measured on any other property shall not exceed:

a. The ambient noise level for a cumulative period of more than 30 minutes in any hour (L_{50}); or
b. The ambient noise level plus 5 dBA for a cumulative period of more than 15 minutes in any hour (L_{25}); or
c. The ambient noise level plus 10 dBA for a cumulative period of more than 5 minutes in any hour (L_8); or
d. The ambient noise level plus 15 dBA for a cumulative period of more than 1 minute in any hour (L_2); or
e. The ambient noise level plus 20 dBA for any period of time (L_{max}).

If the measurement location is on a boundary between two different zones, the noise limit applicable to the quieter zone shall apply.

Section 13.40.070 of the City of Berkeley Municipal Code regulates construction noise, by limiting construction noise levels by time of day, duration, and land use or receptor. Construction is prohibited on weekdays from 7:00 p.m. to 7:00 a.m. and on weekends and legal holidays from 8:00 p.m. to 9:00 a.m., except for emergency work of public service utilities or where a variance is issued. Table 4.5-5 summarizes these construction noise regulations.

TABLE 4.5-5. CITY OF BERKELEY – MAXIMUM CONSTRUCTION NOISE LEVELS (DBA L_{MAX})

Duration	Land Use	Weekdays 7:00 a.m. to 7:00 p.m.	Weekends and Legal Holidays 9:00 a.m. to 8:00 p.m.
Short term (less than 10 days)	Residential, R-1, R-2	75	60
	Multi-family Residential, R-3 and above	80	65
	Commercial/Industrial	85	70
Long term (10 days or more)	Residential, R-1, R-2	60	50
	Multi-family Residential, R-3 and above	65	55
	Commercial/Industrial	70	60

Source: City of Berkeley 2020b.

Vibration

Section 13.40.070.B.8 prohibits the operation of any equipment or device so as to cause vibration that annoys or disturbs at least two or more reasonable persons of normal sensitiveness who reside in separate residences (including apartments and condominiums) at or beyond the property boundary of the (vibration) source if on private property, or at least 150 feet from the (vibration) source if on a public space or public right-of-way.

Amplified Sound

Section 13.40.070, Prohibited Acts, restricts loudspeakers (Amplified Sound) not associated with an event. Using or operating for any purpose any loudspeaker, loudspeaker system, or similar device, such that the sound therefrom violates the provisions of Section 13.40.050, Exterior Noise Standards, or Section 13.40.060, Interior Noise Standards, is prohibited, except for sound levels for which a variance or permit has been issued by the City.

CITY OF OAKLAND

The City of Oakland Municipal Code Section 17.120.050(A) sets maximum allowable exterior noise limits per land use zone district, which are summarized in Table 4.5-6.

TABLE 4.5-6. CITY OF OAKLAND – MAXIMUM ALLOWABLE NOISE LEVEL STANDARDS (DBA)

Zoning District	Time Period	L_{33}	L_{17}	L_8	L_2	L_{max}
Residential and Civic	7:00 a.m. to 10:00 p.m.	60	65	70	75	80
	10:00 p.m. to 7:00 p.m.	45	50	55	60	65
Commercial	Anytime	65	70	75	80	85
Industrial	Anytime	70	75	80	85	90

Source: City of Oakland 2021.

Notes: In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the stated applicable noise level shall be adjusted so as to equal the ambient noise level. Each of the noise standards shall be reduced by 5 dBA for a simple tone noise such as whine, screech, hum, noise consisting primarily of speech or music, or for recurring impulse noise such as hammering or riveting.

Oakland Municipal Code also regulates construction noise, by limiting construction noise levels by time of day, duration, and land use or receptor. Construction noise is held to the normal exterior noise standards for each zone

district when such construction occurs on weekdays from 7:00 p.m. to 7:00 a.m. and on weekends and legal holidays from 8:00 p.m. to 9:00 a.m. Table 4.5-7 summarizes the Oakland construction noise regulations.

TABLE 4.5-7. CITY OF OAKLAND – MAXIMUM CONSTRUCTION NOISE LEVELS (DBA L_{MAX})

Duration	Land Use	Weekdays 7:00 a.m. to 7:00 p.m.	Weekends and Federal Holidays 9:00 a.m. to 8:00 p.m.
Short term (less than 10 days)	Residential	80	65
	Commercial, Industrial	85	70
Long term (10 days or more)	Residential	65	55
	Commercial, Industrial	70	60

Source: City of Oakland 2021.

Notes: The nighttime noise levels received by any land use and produced by any construction or demolition activity between weekday hour of 7:00 p.m. and 7:00 a.m. or between 8:00 p.m. and 9:00 a.m. on weekends and federal holidays shall not exceed the applicable nighttime noise levels standards.

4.5.3 IMPACTS AND MITIGATION MEASURES

4.5.3.1 STANDARDS OF SIGNIFICANCE

The standards of significance used to evaluate the impacts of the proposed project related to noise are based on Appendix G of the CEQA Guidelines, as listed below. The proposed project would result in a significant impact if it would:

A. Generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
B. Generate excessive groundborne vibration or groundborne noise levels.
C. Expose people residing or working in the project area to excessive noise levels if the project is located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.
D. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact related to noise.

In analyzing noise and vibration impacts associated with the proposed project, pertinent noise standards included in the City of Berkeley General Plan and the City of Oakland General Plan discussed above, as well as applicable noise ordinances have been considered and used to develop the following quantified significance criteria for Significance Standards A and B above.

CONSTRUCTION NOISE THRESHOLDS

Construction noise impacts are evaluated based on the limits set forth by both the City of Berkeley and City of Oakland. The City of Berkeley has established noise thresholds for construction noise (Section 13.40.070 of the City of Berkeley Municipal Code), which limits construction noise levels by time of day, duration, and land use or receptor. These thresholds, summarized in Tables 4.5-5 and 4.5-7, are used to determine impact significance for construction noise sources. Construction is prohibited on weekdays from 7:00 p.m. to 7:00 a.m. and on weekends

and legal holidays from 8:00 p.m. to 9:00 a.m., except for emergency work of public service utilities or where a variance is issued.

Potential impacts affecting residential land uses bordering the CKC in Oakland will be analyzed based on the construction noise standards established by the City of Oakland (Section 17.120.050 of the City of Oakland Municipal Code), which establishes maximum allowable construction noise levels by time of day, duration, and land use or receptor. Maximum allowable construction noise levels within Oakland are summarized in Table 4.5-7 and are used to determine impact significance for construction noise sources.

STATIONARY NOISE THRESHOLDS

Standards from City of Berkeley Municipal Code Section 13.40.050 (summarized in Table 4.5-4) and City of Oakland Municipal Code Section 17.120.050 (summarized in Table 4.5-6) represent the thresholds to be used to determine impact significance for stationary noise sources.

TRAFFIC NOISE THRESHOLDS

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels in the areas around the project. Most people can detect changes in sound levels of approximately 3 dBA under normal, quiet conditions, and changes of 1 to 3 dBA are detectable under quiet, controlled conditions. Changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is readily discernible to most people in an exterior environment.

This tiered system of thresholds is based on ambient noise levels on a sliding scale, where smaller increases in project-generated noise levels would have a greater impact on areas with higher ambient noise levels. These thresholds are related to those established by the Federal Aviation Administration for operational increases in ambient noise levels:

- Greater than 1.5 dBA increase for ambient noise environments of 65 dBA L_{dn} and higher;
- Greater than 3 dBA increase for ambient noise environments of 60-64 L_{dn}; and
- Greater than 5 dBA increase for ambient noise environments of less than 60 dBA L_{dn}.

A significant cumulative traffic noise increase would occur if project traffic were calculated to contribute 1 dBA or more to a significant noise impact identified for the resulting noise levels from all projects on the cumulative list (i.e., a traffic noise level increase greater than the above criteria when considering the combined contributions from all cumulative list projects).

VIBRATION THRESHOLDS

Neither the City of Berkeley nor the City of Oakland have quantified limits for vibration. The City of Oakland exempts vibration caused by temporary construction or demolition work. The City of Berkeley prohibits vibration which annoys or disturbs people of "normal sensitiveness." The Federal Transit Administration (FTA) provides criteria for acceptable levels of groundborne vibration based on typical human response. For the purposes of this EIR, 72 vibration velocity (VdB) will be used as a threshold for potentially annoying groundborne vibration based on FTA criteria (FTA 2018), as shown in Table 4.5-8.

TABLE 4.5-8. GROUNDBORNE VIBRATION CRITERIA: POTENTIAL ANNOYANCE

Land Use Category	VdB re 1 micro in/sec
I. Residences and buildings where people normally sleep	72[a]

Source: FTA 2018.

Notes:
VdB = vibration decibel.
a. Frequent events = more than 70 events per day.

In addition to potential annoyance, the FTA has criteria for various types of buildings susceptible to architectural damage, shown in Table 4.5-9. For example, the Category III, non-engineered timber and masonry buildings threshold of 0.2 inches per second peak particle velocity (in/sec PPV) would apply to typical residential structures. For historic structures that are considered more fragile, the 0.12 in/sec PPV threshold will be applied.

TABLE 4.5-9. GROUNDBORNE VIBRATION CRITERIA: ARCHITECTURAL DAMAGE

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

Source: FTA 2018.

Note: PPV = peak particle velocity.

4.5.3.2 ANALYTICAL METHODS

ANALYSIS AND MODELING

The analysis of existing and future noise environments is based on observations, noise level measurements, and computer modeling. Existing noise levels were monitored at selected on-site and off-site locations using ANSI Type II sound level meters for general environmental noise measurement instrumentation. Traffic noise modeling involved the calculation of existing and future traffic noise levels along roadway sections where the proposed project would contribute additional vehicle trips, as identified in the transportation analysis (see Section 4.6, Transportation), using the Federal Highway Administration (FHWA) model. Vibration from transportation sources was not evaluated in detail because it is not common for vibration from motor vehicles traveling on paved roads to cause disturbance or substantial annoyance in these areas. Noise from activities/operation of the beach volleyball courts project was evaluated using the commercial noise prediction software model SoundPlan. Inputs for crowd noise and sound amplification systems were based upon applicable research papers presented at the 2021 Institute of Noise Control Engineers (INCE) national conference. Due to the variety and concentration of some events and activities, it is expected that the proposed project would have a varying degree of use throughout the year and throughout any given day. Therefore, to provide a conservative analysis, on-site operational noise from the beach volleyball courts considers typical weekday use, as well as typical and maximum event use for matches, as further described in Impact NOI-1.

Construction noise levels were determined using the FHWA RCNM construction noise prediction model. For construction vibration, this analysis used FTA thresholds for structural damage (vibration-peak-particle velocities greater than 0.2 in/sec for residential structures and greater than 0.12 in/sec for historic-age structures) and FTA's threshold for human annoyance within residences (80 vibration decibels [VdB] at residences where people normally

sleep). The construction noise/vibration analysis was conducted separately for: 1) the partial demolition and building and site renovations (i.e., retaining and reinforcing the connecting wall on the western portion of the building to be retained, painting to match existing paint, constructing a new paved driveway and loading area, and landscaping in the area of the new driveway) of Building 21; and 2) the new women's beach volleyball courts. The two construction sites are approximately 900 feet apart, and multiple existing structures exist between the two sites that would block the propagation of sound and vibration. Therefore, construction activity at either site would not be additive to construction noise or vibration levels in the vicinity of the other site.

Construction scenario assumptions, including phasing, equipment mix, and vehicle trips, were based on CalEEMod generated default values. Complete detailed construction assumptions are included in Appendix B. The construction equipment mix used for estimating the construction noise emissions of the partial demolition of CKC Building 21 are presented in Table 4.5-10. The construction equipment list for the beach volleyball courts project is shown in Table 4.5-11.

TABLE 4.5-10. CONSTRUCTION EQUIPMENT LIST BY PHASE – BUILDING 21 PARTIAL DEMOLITION

Construction Phase	Equipment	Quantity
Demolition	Excavators	1
	Front-End Loaders	1
	Backhoes	2
Grading	Front-End Loader	1
	Excavator	2
Patch & Reinforce	Concrete Truck	1
	Compressor (air)	1
	Welders	1
Paving	Paver	1

Notes: See Appendix B for details.

TABLE 4.5-11. CONSTRUCTION EQUIPMENT LIST BY PHASE – VOLLEYBALL COURTS

Construction Phase	Equipment	Quantity
Demolition	Front-End Loader	1
	Backhoe	1
Site Preparation	Excavator	1
Grading	Excavators	2
	Front-End Loader	1
Trenching	Excavator	1
	Front-End Loader	1
	Tractor	1
Building Construction	Cranes	1
	Forklifts	2
	Concrete Truck	1
	Welders	1
Paving	Pavers	2
Architectural Coating	Air Compressors	2

Notes: See Appendix B for details.

APPLICABILITY OF 1979 FINAL EIR MITIGATION MEASURES

The university adopted mitigation measures in its 1979 Final EIR for the Dwight-Derby Site Plan, which included the Draft EIR, when it acquired the CKC in 1982 ("1979 mitigation measures"). As applicable to the proposed project, the 1979 mitigation measures are either retained as is, or are revised and/or replaced based on a finding of

infeasibility backed by substantial evidence. Appendix C contains a list of the 1979 mitigation measures, including their applicability to the proposed project, and where relevant, proposed revisions and/or replacement of several of these mitigation measures are provided to make them feasible[3] to implement through the inclusion of objective performance standards. Some of these measures do not provide objective performance standards, do not reflect CEQA best practices for mitigation, and are otherwise outdated and obsolete. For the 1979 mitigation measures that have been revised and/or replaced in this Draft EIR, Appendix C provides substantial evidence demonstrating the infeasibility of these 1979 mitigation measures, and the effectiveness of these revised mitigation measures in eliminating or reducing the applicable potentially significant environmental impact relative to the 1979 mitigation measures being modified or replaced.

Table 4.5-12 summarizes applicable 1979 mitigation measures pertaining to noise, as well as any proposed revisions and/or replacements to those measures. The table is based on the numbered list of mitigation measures from 1979 Draft EIR Chapter XII. The applicable and revised and/or replaced 1979 mitigation measures are applied to identified project impacts presented in Section 4.5.3.3, Impact Analysis. Additional project-specific mitigation measures are also included in Section 4.5.3.3, where feasible and necessary to reduce potentially significant impacts.

TABLE 4.5-12. APPLICABLE 1979 MITIGATION MEASURES FOR NOISE AND PROPOSED REVISIONS

1979 Mitigation Measure Applicable to Proposed Project	Applicable to the Proposed Project?	Substantial Evidence for Revised or New Mitigation Measure	Revised or New Mitigation Measure
25.a. If the new diagonal road connecting Belrose to Piedmont were built, noise barriers should be erected to mitigate the impact. The barriers must be sufficiently high to break the line-of-sight between the traffic and the receptor.	No The cross-campus road was never constructed; the proposed project does not involve or require a new road.	NA	NA
25.b. The University will consider specifying certain residential buildings along Dwight Way and Derby Street as "quiet houses", where students can choose to live without stereos and other noisy activities.	No The proposed project does not involve residential uses or buildings.	NA	NA
25.c. To mitigate the noise impact of students' stereo music upon the surrounding neighborhoods, the University will develop rules for site residents and site uses to avoid excess noise and will make the persons in charge of the apartments available to respond to complaints from the community and responsible for controlling the noise.	No The proposed project does not involve residential uses or buildings.	NA	NA
25.d. Consideration will be given to limiting the use of the playing field on Dwight Way for	Yes	The first sentence of this measure is not feasible to implement as it does not provide a clear performance standard to achieve to avoid	No recreation or volleyball activities shall be scheduled to

[3] As indicated in CEQA Guidelines Section 15364, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

TABLE 4.5-12. APPLICABLE 1979 MITIGATION MEASURES FOR NOISE AND PROPOSED REVISIONS

1979 Mitigation Measure Applicable to Proposed Project	Applicable to the Proposed Project?	Substantial Evidence for Revised or New Mitigation Measure	Revised or New Mitigation Measure
team sports to the hours of 8 a.m. to sunset. No recreation activities will be scheduled to take place on the outdoor facilities after 10 p.m.; recreation will be scheduled only in the indoor facilities in the large gymnasium after 10 p.m.		significant noise impacts. Namely, "consideration will be given to limiting the use of the playing field…" does not contain an objective performance standard to achieve. Therefore, this type of language is no longer used in CEQA mitigation measures. Without objective performance standards, it is not possible to successfully implement the measure, as written. Therefore, the mitigation measure is revised to make it feasible to successfully implement, such that outdoor recreational and volleyball activities are eliminated after 10 p.m.	take place within the outdoor facilities after 10 p.m. on any day; recreation and volleyball activities shall be scheduled in the indoor facilities in the large gymnasium after 10 p.m.
25.e. No rock concerts or other noisy activities will be scheduled in the recreation facilities.	Yes	This measure is not feasible to implement as it does not provide an objective performance standard to achieve to avoid significant noise impacts. While rock concerts with amplified music have a typical noise level of 110 dBA (see Table 4.5-1); the measure does not include exterior noise standards to achieve. Additionally, the reference to "other noisy activities" is too subjective and vague, is not enforceable, and does not meet current requirements and best practices for noise mitigation measures under CEQA. Without objective performance standards, it is not possible to successfully implement the measure, as written. Therefore, the mitigation measure is replaced with a measure that has objective performance standards in compliance with the City of Berkeley and City of Oakland noise ordinances. In accordance with Section 4.5.3.1, Standards of Significance, these ordinances are the basis for identified noise thresholds, which are used to determine noise impact significance. Therefore, compliance with the City of Berkeley and City of Oakland noise ordinances, as described in the revised mitigation measure, will ensure noise impacts are less than significant.	No University activities, including beach volleyball, involving spectators shall be scheduled in the recreational facilities unless the activities meet exterior noise standards specified in Section 13.40.050 of the City of Berkeley Municipal Code and Section 17.120.050 of the City of Oakland Municipal Code, as applied at off-campus receivers located within these respective jurisdictions.
25.f. No University activities involving spectators will be scheduled.	Yes	This measure is not feasible to implement as it does not provide an objective performance standard to achieve to avoid significant noise impacts. Additionally, the term "spectators" is too vague and can include a wide range of viewer types and numbers that may watch different types of activities and events (e.g., recreational games, club sports events, youth sporting events, summer camp activities, and IA volleyball). Without objective performance standards, it is not possible to successfully implement the measure, as written. Therefore, this mitigation measure is replaced by revised measure 25.e above to reflect the objective noise standards of the City of Berkeley and City of Oakland.	Replaced by revised measure 25.e above.

Source: UC Berkeley 1979 and Draft EIR Appendix C.

4.5.3.3 IMPACT ANALYSIS

AREAS OF NO IMPACT

The proposed project would not expose people to excessive aircraft noise (Significance Standard C). The nearest airstrip to the proposed project is the Alameda Point Naval Air Station, which is a military use airport located approximately 6 miles southwest. The nearest public or public-use airport is Oakland Airport, which is located approximately 9 miles south of the project site. The project site is not located within the airport influence area for Alameda Point or Oakland International Airport. Therefore, the proposed project would have no impact related to exposure of people in the project area to excessive airport-related noise, and this standard is not further evaluated.

IMPACTS

Impact NOI-1 Temporary or Permanent Increase in Ambient Noise (Significance Standard A). The proposed project could generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. ***(Potentially Significant)***

CONSTRUCTION

Construction of the proposed project would generate noise that could expose nearby receptors (residences) to elevated noise levels that may disrupt communication and routine activities during the combined 8-month construction period. Specifically, construction of the new beach volley courts would occur over approximately 6 months and the demolition and related work on Building 21 would occur over approximately 8 months. Construction on the two sites would be concurrent with work on the Building 21 site extending beyond completion of the new beach volleyball courts. As indicated previously, the two construction sites are approximately 900 feet apart, and multiple existing structures exist between the two sites that would block the propagation of sound. Therefore, construction activity at either site would not be additive to construction noise levels in the vicinity of the other site.

The magnitude of the impact would depend on the type of construction activity, equipment, duration of the construction phase, distance between the noise source and receiver, and intervening structures. Noise from construction equipment generally exhibits point source acoustical characteristics. A point source sound is attenuated (or reduced) at a rate of 6 decibels per doubling of distance from the source for “hard site” conditions and at 7.5 decibels per doubling of distance for “soft site” conditions. These rules apply to the propagation of sound waves with no obstacles between source and receivers, such as topography (ridges or berms) or structures. The range of maximum noise levels for various types of construction equipment is provided in Table 4.5-13. Typical operating cycles may involve two minutes of full power, followed by three or four minutes at lower levels.

TABLE 4.5-13. CONSTRUCTION EQUIPMENT NOISE EMISSION LEVELS

Equipment	Typical Sound Level (dB) - 50 feet from Source
Air Compressor	81
Backhoe	80
Compactor	82
Concrete Mixer	85
Crane, Mobile	83
Dozer	85
Generator	81

TABLE 4.5-13. CONSTRUCTION EQUIPMENT NOISE EMISSION LEVELS

Equipment	Typical Sound Level (dB) - 50 feet from Source
Grader	85
Loader	85
Paver	89
Pneumatic Tool	85
Pump	76
Roller	74
Saw	76
Scraper	89
Truck	88

Source: FTA 2018.

For construction sites, equipment use moves around the site to accomplish the work on that portion of the site. For construction noise, a concept called the acoustic center is useful in determining the average noise levels at an off-site location across an entire construction phase, with equipment moving closer and further away. The acoustic center is the idealized point from which the energy sum of all construction activity noise near and far would be positioned. Using this acoustic center distance provides an average noise level exposure over the construction phase period, as compared to noise levels based simply on the distance from the construction zone boundary.

As part of the proposed project, UC Berkeley would implement the noise (NOI) CBPs listed here (see also Appendix D):

- **CBP NOI-2:** UC Berkeley will require the following measures for 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 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.
  - Stationary equipment such as generators and air compressors will be located as far as feasible from nearby noise-sensitive uses.
  - At least 10 days prior to the start of construction activities, a sign will be posted at the entrance(s) to the job site, clearly visible to the public, that includes contact information for UC Berkeley's authorized representative in the event of a noise or vibration complaint. If the authorized contractor's representative receives a complaint, they will investigate, take appropriate corrective action, and report the action to UC Berkeley.
  - During the entire active construction period and to the extent feasible, the use of noise-producing signals, including horns, whistles, alarms, and bells, will be for safety warning purposes only. The construction manager will use smart back-up alarms, which automatically adjust the alarm level based on the background noise level, or switch off back-up alarms and replace with human spotters in compliance with all safety requirements and laws.

  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 feasible.

- **CBP NOI-3:** UC Berkeley will precede all new construction projects that are outside of the Campus Park, the Clark Kerr Campus, or adjacent to a non-UC Berkeley property with community 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.

These CBPs would minimize construction noise impacts and would not create additional noise impacts. The construction noise impacts of the project components are evaluated below.

Building 21 Partial Demolition

The nearest point of construction activities to the closest noise-sensitive receivers (Building 20 faculty apartments) would be approximately 45 feet, while the distance from the acoustic center of construction activities to Building 20 would be 80 feet. Building 19 faculty apartments would be approximately 170 feet from the closest point of construction and would be 185 feet from the acoustic center of construction activities. Finally, Redwood Gardens Apartments, private residential apartments, would be approximately 235 feet from the closest point of construction and would be 265 feet from the acoustic center of construction activities. Whereas Table 4.5-13 shows the noise level of individual pieces of equipment, the noise levels shown in Table 4.5-14 take into account operation of multiple pieces of construction equipment simultaneously, and lists the typical overall noise levels that would be expected for each phase of construction involved in the partial demolition and building and site renovations (i.e., retaining and reinforcing the connecting wall on the western portion of the building to be retained, painting to match existing paint, constructing a new paved driveway and loading area, and landscaping in the area of the new driveway) of Building 21. These noise levels are based on surveys conducted by the United States Environmental Protection Agency in 1971. In the time since 1971, regulations have been enforced to improve noise generated by certain types of construction equipment to meet worker noise exposure standards. Also, because of stringent air quality emissions standards, newer, cleaner, and quieter heavy equipment is used on most construction projects in California. Thus, construction phase noise levels indicated in Table 4.5-14 represent “worst-case” conditions. As the table shows, the highest noise levels are expected to occur during the demolition and grading/excavation phases of construction.

TABLE 4.5-14. OUTDOOR CONSTRUCTION NOISE LEVELS (DBA L_{EQ}) BY PHASE – BUILDING 21 PARTIAL DEMOLITION

Construction Phase	CKC Building 20 Faculty Apartments		CKC Building 19 Faculty Apartments		Redwood Gardens Apartments	
	Noise Levels at Nearest Point (45 Feet)	Noise Levels at Acoustic Center (80 Feet)	Noise Levels at Nearest Point (170 Feet)	Noise Levels at Acoustic Center (185 Feet)	Noise Levels at Nearest Point (235 Feet)	Noise Levels at Acoustic Center (265 Feet)
Demolition	**82**	**77**	**70**	**70**	**67**	**66**
Grading/Excavation	**82**	**77**	**70**	**70**	**67**	**66**
Patch/Reinforce	**78**	**73**	**67**	**66**	64	63
Paving	**75**	**70**	64	63	61	60

Source: RCNM (see Appendix F).

Bold values indicate predicted construction noise levels that would exceed the City of Berkeley applicable construction noise standards.

As shown in Table 4.5-14, construction-related noise levels could reach up to 82 dBA L_{eq} at Building 20, when equipment is operating along the edge of the construction boundary. Average construction noise levels across the entire demolition phase would be represented by the acoustic center value, or 77 dBA $L_{eq;}$ this value represents the average level of noise from construction equipment working at locations all across the site. Similarly, construction noise could reach as high as 70 dBA L_{eq} at Building 19 and 67 dBA L_{eq} at Redwood Gardens Apartments. While these residential structures are part of the CKC, comparison to the City of Berkeley construction noise standards is discussed in the paragraph below.

Section 13.40.070 of the City of Berkeley Municipal Code regulates construction noise, by limiting construction noise levels by time of day, duration, and land use or receptor. Construction is prohibited on weekdays from 7:00 p.m. to 7:00 a.m. and on weekends and legal holidays from 8:00 p.m. to 9:00 a.m. This ensures that sensitive receptors are not disturbed by early morning or late-night activities. For construction lasting more than 10 days, which would be applicable to the Project, the exterior exposure construction noise limit during the day for multifamily residences is 65 dBA $L_{eq.}$ While UC Berkeley is not subject to these code requirements, UC Berkeley uses them as thresholds of significance to determine impact significance. Bolded values in Table 4.5-14 indicate predicted construction noise levels that would exceed the City of Berkeley applicable construction noise standards. Due to the proximity of residences to the project site and the predicted exceedance of construction noise standards, construction noise impacts for Building 21, even with adherence to CBP NOI-2 and CBP NOI-3, would be *potentially significant.*

Beach Volleyball Courts

The nearest point of construction activities to the closest noise-sensitive receivers (Building 4 residence hall) would be approximately 40 feet, while the distance from the acoustic center of construction activities to Building 4 would be 110 feet. Residences north of the construction site, at Dwight Way/Hillside Avenue would be approximately 95 feet from the closest point of construction but would be 195 feet from the acoustic center of construction activities. Finally, residences northeast of the construction site, at Dwight Way/Fernwald Road would be approximately 240 feet from the closest point of construction but would be 365 feet from the acoustic center of construction activities. Whereas Table 4.5-13 shows the noise level of individual pieces of equipment, the noise levels shown in Table 4.5-15 take into account operation of multiple pieces of construction equipment simultaneously, and lists the typical overall noise levels that would be expected for each phase of construction involved in the construction of the beach volleyball courts. As explained above, due to the prevalence of quieter construction equipment now used in the industry, construction phase noise levels indicated in Table 4.5-15 represent "worst-case" conditions. As the table shows, the highest noise levels are expected to occur during the demolition and grading/excavation phases of construction.

TABLE 4.5-15. OUTDOOR CONSTRUCTION NOISE LEVELS (DBA L_{EQ}) BY PHASE – WOMEN'S BEACH VOLLEYBALL COURTS

Construction Phase	Noise Levels at Building 4 Dorm (40 Feet)	Noise Levels at Acoustic Center Buildng 4 (110 Feet)	Noise Levels at Dwight / Hillside Res. (95 Feet)	Noise Levels at Acoustic Center Dwight / Hillside (195 Feet)	Noise Levels at Dwight / Fernwald Res. (240 Feet)	Noise Levels at Acoustic Center Dwight / Fernwald (365 Feet)
Demolition	**79**	**71**	**72**	**66**	64	60
Site Preparation	**79**	**70**	**71**	65	63	59
Grading/ Excavation	**83**	**74**	**75**	**69**	**67**	64
Trenching	**84**	**76**	**77**	**71**	**69**	65
Bld. Construction	**80**	**72**	**73**	**67**	65	61
Paving	**76**	**70**	**71**	65	63	59
Architectural Coating	**79**	**71**	**72**	**66**	64	60

Source: RCNM (see Appendix F).

Bold values indicate predicted construction noise levels that would exceed the City of Berkeley applicable construction noise standards.

As shown in Table 4.5-15, construction-related noise levels could reach up to 84 dBA L_{eq} at Building 4, when equipment is operating along the edge of the construction boundary. Average construction noise levels across the entire trenching phase would be represented by the acoustic center value, or 76 dBA $L_{eq;}$ this value represents the average level of noise from construction equipment working at locations all across the site. Similarly, construction noise could reach as high as 77 dBA L_{eq} at Dwight Way/Hillside Avenue residences and 67 dBA L_{eq} at Dwight Way/Fernwald Road. While Building 4 is part of the CKC, comparison to the City of Berkeley construction noise standards is discussed in the paragraph below. Residences slightly further away on Dwight Place and Panoramic Way are located within the City of Oakland; comparison of construction noise levels to Oakland standards is also presented in the paragraph below.

Section 13.40.070 of the City of Berkeley Municipal Code and Section 17.120.050 of the City of Oakland Municipal Code regulate construction noise, by limiting construction noise levels by time of day, duration, and land use or receptor. Within both Berkeley and Oakland, for construction lasting more than 10 days, which would be applicable to the proposed project, the exterior exposure construction noise limit during the day for multifamily residences is 65 dBA $L_{eq.}$ While UC Berkeley is not subject to these code requirements, UC Berkeley uses them as thresholds of significance to determine impact significance. Bolded values in Table 4.5-15 indicate predicted construction noise levels that would exceed the City of Berkeley or City of Oakland applicable construction noise standards. In Berkeley, construction is prohibited on weekdays from 7:00 p.m. to 7:00 a.m. and on weekends and legal holidays from 8:00 p.m. to 9:00 a.m. Oakland enforces the normal exterior noise standards for each zone district when such construction occurs on weekdays from 7:00 a.m. to 7:00 p.m. and on weekends and legal holidays from 8:00 a.m. to 9:00 p.m. These ordinances ensure that sensitive receptors are not disturbed by early morning or late-night activities. Due to the proximity of residences to the project site and predicted exceedance of construction noise standards, construction noise impacts for the beach volleyball courts, even with adherence to CBP NOI-2 and CBP NOI-3, would be *potentially significant*.

Significance without Mitigation: Potentially significant.

OPERATION

On-Site Stationary Sources and Activities

Building 21 Partial Demolition

The continued use of the remainder of Building 21 for storage of materials and supplies would not alter any existing (baseline) noise levels associated with current storage activities in the building, or with trucks used to deliver and remove stored materials from the building, as such uses would not change with the proposed project. Operational noise impacts associated with the remaining preserved portion of Building 21 would therefore be *less than significant*.

Significance without Mitigation: Less than significant.

Beach Volleyball Courts

Due to the variety and concentration of some events and activities, it is expected that the proposed project would have varying degree of use throughout the year and throughout any given day. Therefore, to provide a conservative analysis, on-site operational noise from the beach volleyball courts considers typical weekday use, as well as typical and maximum event use for matches (see Table 4.5-16).

TABLE 4.5-16. NOISE ANALYSIS PARTICIPANT AND SPECTATOR USE SCENARIOS

Participants and Spectators	Existing Conditions (Softball Field)	Proposed Project[1]		
		Typical Weekday Use	Typical Event	Maximum Event
Participants (Athletes, Coaches and Staff)	50-100	100	70	70
Spectators		0	75	330
Total Participants and Spectators	**50-100**	**100**	**145**	**400**

Notes:

1. Noise analysis assumes use of the new PA system during all use types.

Additionally, as part of the proposed project, UC Berkeley would implement CBP NOI-1 listed here (see also Appendix D):

- **CBP NOI-1:** Mechanical equipment selection and building design shielding will 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 LRDP. Controls typically 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.

Typical Weekday Use. During a typical weekday, the proposed new beach volleyball courts would be used for practices involving the women's beach volleyball team, with no spectators. Noise from this activity would be no greater than periodic use of the existing softball diamond based on the number of participants, as shown in Table 4.5-16. Additionally, typical weekday use of the new beach volleyball courts could include the use of two PA speakers, of the four new PA speakers proposed as part of the proposed project, which is similar to the existing softball field that has two existing speakers. The new building containing coaching offices and locker-rooms would be equipped with one Mitsubishi split air conditioning system (necessary to maintain electrical equipment room temperatures within tolerances), which is rated at 44 dBA at a distance of 23 feet (Mitsubishi 2021). With the closest receiver at a distance of 40 feet (Building 4 occupants), noise from the Mitsubishi unit would be no greater

than 39 dBA L_{eq}, which would be well below standards for residential uses for the City of Berkeley (even though this structure is within the CKC, and not subject to Berkeley standards). While UC Berkeley would implement the CBP NOI-1 (see Appendix D) listed above as part of the proposed project, given the noise levels at the closest receiver, shielding or an enclosure would not be required for the proposed air conditioning system.

For routine, daily, activities and equipment use at the beach volleyball courts, noise levels would not be anticipated to be greater than those of the existing use of the project site. Further, as demonstrated below, noise associated with a typical competitive match event involving more participants and spectators than for typical weekday use, as well as use of all four of the new PA speakers would not represent a substantial permanent increase over ambient noise levels and the impact from such events would be less than significant. Therefore, the operational noise impact associated with the routine use of the new beach volleyball courts not involving competitive matches would also be *less than significant*.

Typical Event. For a typical competitive match event held at the beach volleyball courts, a spectator crowd of up to 75 persons and 70 game participants (including players, coaches, and staff) is anticipated given the typical size of existing beach volleyball matches (see Chapter 3, Project Description) and accounting for the increase in the number of sand courts with the proposed project (four new courts) (see Table 4.5-16). The PA system that includes 4 speakers would also be used for commentary during the match. Electrical equipment in the building could be in use, and therefore the equipment room air conditioner is assumed to be in operation. However, the air conditioner sound source would be less than the crowd noise or PA speaker noise by a minimum of 10 dBA. Therefore, operation of the air conditioner during a typical match would not contribute to the overall noise generation levels from the operation of the new beach volleyball courts.

Table 4.5-17 presents the modeled noise levels at each of the long-term measurement locations and at selected existing noise-sensitive receivers and compares these modeled noise levels to applicable standards. The locations for the receptors listed in Table 4.5-17 are illustrated in Figure 4.5-4. Figure 4.5-4 also illustrates the average noise level (L_{eq}) contours resulting from a typical beach volleyball match with 145 spectators and participants and use of the new PA system for game commentary.

As illustrated in Table 4.5-17, noise levels from a typical match would be no greater than the upper range of recorded average hourly noise levels at each of the receivers and would not represent a substantial permanent increase over ambient noise levels. Therefore, the on-site operational noise impact associated with a typical match at the new beach volleyball courts would be *less than significant*.

TABLE 4.5-17. PREDICTED NOISE LEVELS FROM A TYPICAL MATCH WITH 145 SPECTATORS/PARTICIPANTS

Location	Modeled Hourly L_{eq}	Existing Ambient Range ($L_{eq\ hour}$)	Daytime Standard dBA	Threshold Exceeded?
LT1	62	41 – 61	N/A – Campus	**NO**
LT2	47	39 - 54	60	**NO**
LT3	57	47 - 60	60	**NO**
LT4	46	46 - 56	60	**NO**
P01	60	47 - 60	60	**NO**
P02	58	47 - 60	60	**NO**
P03	46	46 - 56	60	**NO**
P04	63	41 - 61	N/A - Campus	**NO**

TABLE 4.5-17. PREDICTED NOISE LEVELS FROM A TYPICAL MATCH WITH 145 SPECTATORS/PARTICIPANTS

Location	Modeled Hourly L_{eq}	Existing Ambient Range ($L_{eq\ hour}$)	Daytime Standard dBA	Threshold Exceeded?
P05	54	41 - 61	N/A - Campus	**NO**
P06	53	41 - 61	N/A - Campus	**NO**
P07	51	46 - 56	60	**NO**

Source: SoundPlan (see Appendix F).

Maximum Event. For a maximum event competitive volleyball match (or maximum spectator attendance match) held at the new beach volleyball courts, a spectator crowd of up to 330 persons and 70 game participants (including players, coaches, and staff) is estimated, based on the actual capacity of the site to accommodate spectators (see Table 4.5-16). It should be noted that women's beach volleyball match events typically draw 50 to 75 participants and spectators at the existing courts, but to provide for a conservative analysis the actual capacity of the project site to accommodate participants and spectators was used in this analysis. No more than 14 such events would be hosted at the beach volleyball courts on an annual basis. The new PA system that includes 4 speakers would also be used for commentary during the match. These matches may include championship matches that are televised on network television, for which a television van with satellite connection would be present; the television van could include an electrical generator, also in use during the match. The television van would be situated in one of the existing vehicle parking spaces for Building 4, within approximately 50 feet of Building 4. An example electrical generator from Honda (EU1000i) has a sound rating of 42 dBA at a distance of 23 feet (Honda 2019). At Building 4, the sound level from the TV van generator would be reduced to approximately 36 dBA L_{eq} which is 20 dBA lower than crowd and speaker noise at this location. Electrical equipment in the building could be in use and therefore the equipment room air conditioner is assumed to be in operation. However, the air conditioner sound source would be less than the crowd noise or PA system noise by a minimum of 10 dBA. Therefore, operation of the air conditioner and a generator for the television van during a maximum attendance match would not contribute to the overall noise generation levels from the operation of the new beach volleyball courts.

Table 4.5-18 presents the modeled noise levels during a maximum event volleyball match, at each of the long-term measurement locations and at selected existing noise-sensitive receivers and compares these modeled noise levels to applicable standards. The locations for the receptors listed in Table 4.5-18 are illustrated in Figure 4.5-5. Figure 4.5-5 also illustrates the average noise level (L_{eq}) contours resulting from a maximum event beach volleyball match involving 400 persons (including spectators, participants, coaching staff, and network television crew), use of the PA system for game commentary, and the presence of a network television van for broadcast coverage of the match.

TABLE 4.5-18. PREDICTED NOISE LEVELS FROM A "MAXIMUM EVENT" MATCH WITH 400 SPECTATORS/PARTICIPANTS

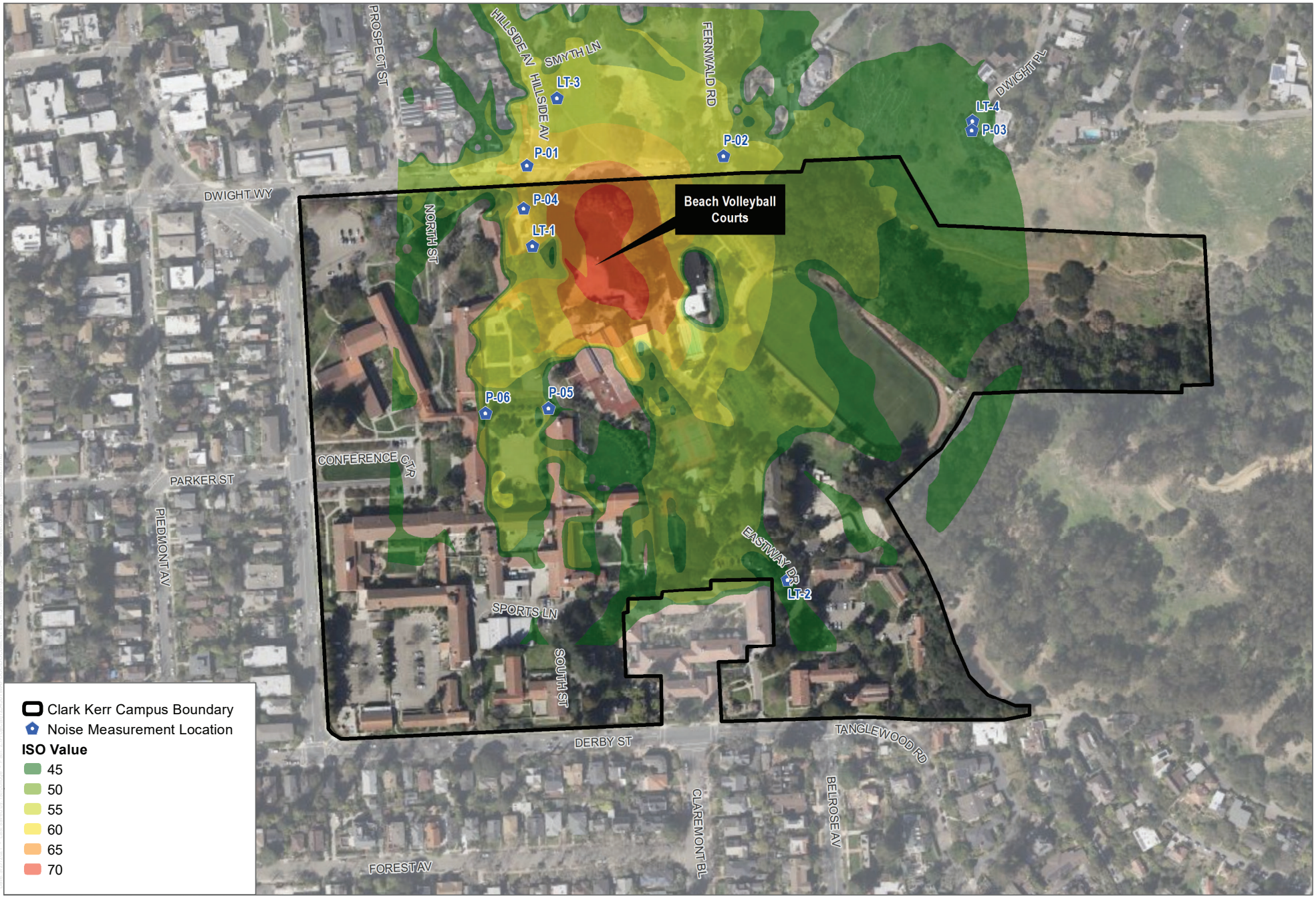
Location	Modeled Hourly L_{eq}	Existing Ambient Range ($L_{eq\ hour}$)	Daytime Standard dBA	Threshold Exceeded?
LT1	71	41 – 61	N/A – Campus	**NO**
LT2	56	39 - 54	60	**NO**
LT3	66	47 - 60	60	**YES**
LT4	55	46 - 56	60	**NO**
P01	70	47 - 60	60	**YES**
P02	67	47 - 60	60	**YES**

TABLE 4.5-18. PREDICTED NOISE LEVELS FROM A "MAXIMUM EVENT" MATCH WITH 400 SPECTATORS/PARTICIPANTS

Location	Modeled Hourly L_{eq}	Existing Ambient Range ($L_{eq\ hour}$)	Daytime Standard dBA	Threshold Exceeded?
P03	55	46 - 56	60	NO
P04	72	41 - 61	N/A - Campus	NO
P05	63	41 - 61	N/A - Campus	NO
P06	62	41 - 61	N/A - Campus	NO
P07	60	46 - 56	60	NO

Source: SoundPlan (see Appendix F).

This page intentionally left blank.



SOURCE: Bing Maps 2020, Alameda County 2018

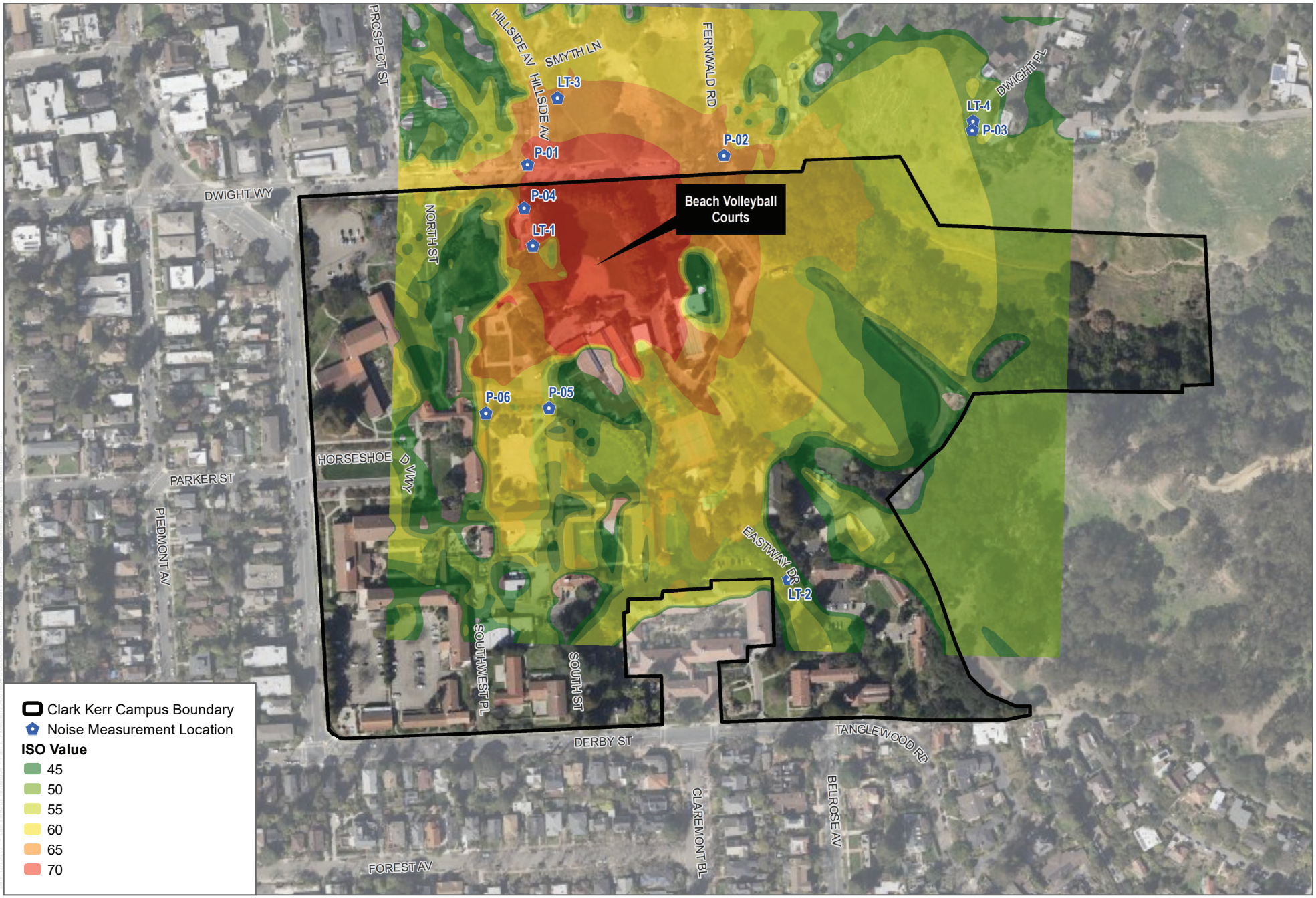
0 150 300 Feet

FIGURE 4.5-4

Noise Level Contours for Typical Match at Women's Beach Volleyball Courts

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.



SOURCE: Bing Maps 2020, Alameda County 2018

FIGURE 4.5-5

Noise Level Contours for Maximum Event Match at Women's Beach Volleyball Courts

Clark Kerr Campus Beach Voleyball Courts Project EIR

This page intentionally left blank.

As illustrated in Table 4.5-18, noise levels from a maximum event match would comply with applicable noise standards, except at LT3, P01 and P02. The primary source of elevated noise in the residential neighborhoods represented by LT3, P01, and P02 are proposed PA speakers to be mounted on the lighting poles at the southwest and southeast corners of the courts, with the speakers oriented directly toward these neighborhoods. Speaker output is normally adjusted to be approximately 10 dBA above crowd noise so that announcements can be heard. With the maximum event attendance population of 400 people, louder crowd noise would require greater speaker volumes, and the speakers at the southwest and southeast corners would project this elevated noise directly toward the northern residential neighborhoods. As designed, noise levels from a maximum event match held at the women's beach volleyball courts would exceed the applicable City of Berkeley noise standard at residences along the north side of Dwight Way near Hillside Avenue and Fernwald Road, and the on-site operational noise impact would be *potentially significant*.

Significance without Mitigation: Potentially significant (maximum event only).

Off-Site Traffic Noise

The primary noise-related effect of the proposed project off site would result from an increase in traffic, which is the main source of noise in most urban areas. Project-related traffic noise levels were examined along roadways, where the project would principally contribute vehicle trips. Beach volleyball courts trip generation for everyday activities ("typical weekday"), for an average size competitive match ("typical event"), and for a maximum attendance match (or "maximum event") are identified in Section 4.6, Transportation.

Typical weekday trip generation would be approximately 14 average daily trips (ADT), which would not be a noticeable addition to area roadways. A typical event is projected to produce no more than 70 ADT, while a maximum event is predicted to generate approximately 224 ADT (see Section 4.6). For a typical event, participants and spectators would be anticipated to park in the CKC northwest and southwest parking lots, which are both accessible from Warring Street. The direction of travel by participants and spectators to the parking lots would be anticipated to be split evenly from the north and south directions, with half the trips using Dwight Way to Warring Street, and the other using Derby Street to Warring Street. For the maximum event, it is anticipated that participants and spectators would park in the Underhill parking garage; again the routing for such users to reach the parking garage is assumed to be 50 percent from the south along Derby/Warring/Dwight, and 50 percent from the west along Dwight Way.

Existing traffic volumes for the principal roadways evaluated for traffic noise increases are based upon the UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Draft EIR (2021 LRDP EIR) (UC Berkeley 2021a). Acoustical calculations using standard noise modeling equations adapted from the FHWA noise prediction model were performed for the following scenarios: Existing, Existing Plus Typical Event, Existing Plus Maximum Event. The modeling calculations take into account the posted vehicle speed, average daily traffic volumes for each scenario, and the estimated vehicle mix (i.e., automobiles, medium and heavy trucks). The model assumed "pavement" propagation conditions, or a hard site surface.

Noise levels in Table 4.5-19 are indicated at 50 feet from the centerline of the road, consistent with the methodology employed for the 2021 LRDP EIR. Noise levels at greater distances from the roadway centerline would be lower due to attenuation provided by increased distance from the noise source. Generally, noise from heavily traveled roadways would experience a decrease of approximately 3 dBA for every doubling of distance from the roadway. The noise model does not take into account the sound-attenuating effect of intervening structures, barriers, vegetation, or topography. Therefore, the noise levels predicted by the model are conservative with respect

to potential exterior exposure levels at noise-sensitive uses located along these roadways. Future increases in traffic noise levels, with and without the proposed project, are provided in Table 4.5-19.

TABLE 4.5-19. PROJECT-RELATED TRAFFIC NOISE LEVELS

Roadway Segment	Existing dBA CNEL	Exist + Typical Event dBA CNEL	Exist + Maximum Event dBA CNEL	Maximum Increase (dBA)
Dwight Way West of Warring Street	60.9	60.9	61.0	0.1
Warring Street North of Derby Street	61.8	61.8	61.9	0.1
Derby Street East of Warring Street	61.8	61.8	61.9	0.1

Source: Appendix F.

Proposed project-related traffic noise increases along roadways to which the project would contribute trips would in all cases be 0.1 dBA or less. Such increases would therefore be well below the most stringent significance threshold (i.e., a 1.5 dBA CNEL increase), and would not be perceptible to the human ear. Therefore, off-site operational noise impacts of the proposed project from roadway traffic would be *less than significant*.

Significance without Mitigation: Less than significant.

MITIGATION MEASURES

MM NOI-1: **Construction Noise.** The proposed project shall implement the following measures related to construction noise:

- Restrict demolition/construction activities and use of equipment that have the potential to generate significant noise levels (e.g., use of concrete saw, mounted impact hammer, jackhammer, rock drill, etc.) to between the hours of 8:00 a.m. and 5:00 p.m.
- Construction equipment and vehicles shall be fitted with efficient, well-maintained mufflers that reduce equipment noise emission levels at the project site. Internal-combustion-powered equipment shall be equipped with properly operating noise suppression devices (e.g., mufflers, silencers, wraps) that meet or exceed the manufacturer's specifications. Mufflers and noise suppressors shall be properly maintained and tuned to ensure proper fit, function, and minimization of noise.
- Pumps that are not submerged and aboveground conveyor systems shall be located within acoustically treated enclosures, shrouded, or shielded to prevent the propagation of sound into the surrounding areas.
- Portable and stationary site support equipment (e.g., generators, compressors, rock crushers, and cement mixers) shall be located as far as possible from nearby noise-sensitive receptors.
- Impact tools shall have the working area/impact area shrouded or shielded whenever possible, with intake and exhaust ports on power equipment muffled or suppressed. This may necessitate the use of temporary or portable, application-specific noise shields or barriers.
- Construction equipment shall not be idled for extended periods (i.e., 5 minutes or longer) of time in the immediate vicinity of noise-sensitive receptors.
- A temporary noise barrier shall be erected along the construction site perimeter, of a minimum height as determined to be effective via the preliminary construction noise analysis in achieving

compliance with construction noise limits contained in Section 13.40.070 of the City of Berkeley Municipal Code and Section 17.120.050 of the City of Oakland Municipal Code.

MM NOI-2 **Public Address (PA) Speaker Orientation.** In order to prevent elevated noise levels that could exceed applicable noise standards of the City of Berkeley at residences along the north side of Dwight Way in the vicinity of Hillside Avenue and Fernwald Road, the PA system at the women's beach volleyball courts shall be designed such that speakers on the northern speaker pole shall be oriented with speaker cone only in the range of 170 to 260 degrees (basis of cardinal north compass direction); speakers on the southern speaker pole shall be oriented with speaker cone oriented only in the range of 260 to 320 degrees. Final speaker design and installation shall include varying quantities of attenuation (amplitude shading[4]), as needed, to ensure sound exposure at nearby residences in Berkeley complies with applicable standards, based on the relative proximity of the speaker to the receptors (i.e., speakers on northern speaker pole should have more attenuation applied in comparison to speakers on the southern pole).

MM NOI-3 **Nighttime Activities.** No recreation or volleyball activities shall be scheduled to take place within the outdoor facilities after 10 p.m. on any day; recreation and volleyball activities shall be scheduled in the indoor facilities in the large gymnasium after 10 p.m. *(Revised 1979 Mitigation Measure 25.d.; see Table 4.5-12 and Appendix C).*

MM NOI-4 **Compliance with Exterior Noise Standards.** No University activities, including beach volleyball, involving spectators shall be scheduled in the outdoor recreational facilities unless the activities meet exterior noise standards specified in Section 13.40.050 of the City of Berkeley Municipal Code and Section 17.120.050 of the City of Oakland Municipal Code, as applied at off-campus receivers located within these respective jurisdictions. *(Revised 1979 Mitigation Measure 25.e.; see Table 4.5-12 and Appendix C).*

Significance with Mitigation: Less than significant. Implementation of MM NOI-1 would reduce potentially significant construction noise impacts by: restricting noise construction activities to daytime hours, equipping construction equipment with mufflers and noise suppressors, siting support equipment as far away as possible from sensitive receptors, limiting idling of equipment, and using a temporary noise barrier as needed to achieve compliance with construction noise limits. Therefore, with the implementation of MM NOI-1, potentially significant construction noise impacts would be reduced to less than significant.

Implementation of MM NOI-2, NOI-3 and NOI-4 would reduce potentially significant operational noise impacts associated with the maximum event by: restricting speaker cone orientations, prohibiting outdoor activities at the new courts after 10 p.m., and complying with applicable noise standards. To assess the effectiveness of MM NOI-2 involving the orientation of speakers, additional noise modeling of the maximum event was completed with speakers oriented only within the cardinal directions allowed under MM NOI-2. Table 4.5-20 presents the mitigated noise levels during a maximum event volleyball match, at each of the long-term measurement locations and at selected existing noise-sensitive receivers and compares these modeled noise levels to applicable standards. The locations for the receptors listed in Table 4.5-20 are illustrated in Figure 4.5-5.

[4] In the audio-visual world, "amplitude shading" is a configuration technique where when you have a series of speakers setup together, the volume (amplitude) setting for each speaker is gradually reduced (attenuated) across the speakers.

TABLE 4.5-20. MITIGATED NOISE LEVELS FROM A "MAXIMUM EVENT" MATCH WITH 400 SPECTATORS/PARTICIPANTS

Location	Modeled Hourly L_{eq}	Existing Ambient Range ($L_{eq\ hour}$)	Daytime Standard dBA	Threshold Exceeded?
LT1	64	41 – 61	N/A – Campus	**NO**
LT2	44	39 - 54	60	**NO**
LT3	55	47 - 60	60	**NO**
LT4	41	46 - 56	60	**NO**
P01	60	47 - 60	60	**NO**
P02	53	47 - 60	60	**NO**
P03	41	46 - 56	60	**NO**
P04	63	41 - 61	N/A - Campus	**NO**
P05	54	41 - 61	N/A - Campus	**NO**
P06	52	41 - 61	N/A - Campus	**NO**
P07	48	46 - 56	60	**NO**

Source: SoundPlan (see Appendix F).

As illustrated in Table 4.5-20, with proposed mitigation, noise levels even from a maximum event match would comply with applicable noise standards. Therefore, with the implementation of MM NOI-2, MM NOI-3, and MM NOI-4 potentially significant operational noise impacts associated with the maximum event would be reduced to *less than significant*.

Impact NOI-2 Excessive Vibration (Significance Standard B). The proposed project would not result in excessive groundborne vibration or groundborne noise levels. *(Less than Significant)*

CONSTRUCTION

The main concern associated with ground-borne vibration is annoyance; however, in extreme cases, vibration can cause damage to buildings, particularly those that are old or otherwise fragile. Some common sources of ground-borne vibration are construction activities such as blasting, pile-driving, and heavy earth-moving equipment activities. The proposed project would include neither blasting nor pile driving, thus avoiding the most substantial sources for construction related vibration, but heavy equipment including small bulldozers, excavators, loaders, and loaded trucks are anticipated to be employed during project construction. Table 4.5-21 lists typical vibration levels for common construction equipment.

TABLE 4.5-21. REFERENCE VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Vibration Level at 25 feet PPV in/sec	Approximate Vibration Level at 25 feet, VdB re 1 micro-in/sec
Pile Driver, Impact (Typical)	0.644	104
Pile Driver, Sonic (Typical)	0.170	93
Vibratory Roller	0.210	94
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: FTA 2018.

Ground vibrations from construction activities do not often reach the levels that can damage structures or affect activities that are not vibration-sensitive, although the vibrations may be felt by nearby persons in proximity and result in annoyance (FTA 2018). With regard to human annoyance, 72 vibration velocity (VdB) is used as a threshold for potentially annoying groundborne vibration inside structures proximate to construction activities, based on FTA 2018. In addition, the analysis employs the FTA structural damage significance criterion of 0.12 inches/sec PPV for fragile historic buildings and 0.2 inches/sec PPV for standard construction buildings and reinforced masonry (brick or block) construction.

Building 21 Partial Demolition

The project includes the engineered demolition of a portion of the existing Building 21, using techniques specifically designed to preserve the remainder of the building. An excavator, backhoe, and front-end loader would be used to remove foundation elements and prepare the former footprint for paving, each of which have limited potential to generate groundborne vibration. Since the remainder of Building 21 is intended to be retained, demolition and construction involving a portion of the building is expected to be carried out with adequate care, and vibration damage to Building 21 is not anticipated.

Potentially vibration-sensitive structures adjacent to the project site that could be affected by construction-related vibration include Building 20, at a distance as close as 40 feet from construction activities, and Building 19, as close as 170 feet from the construction activities. Each of these structures are older than 50 years and are therefore considered "potentially fragile." The FTA damage threshold of 0.12 inches/sec PPV is applicable to these structures. The buildings are also residential in nature, and therefore the interior threshold of 72 VdB for vibration annoyance to humans is applicable. Since Building 20 is much closer than any other adjacent buildings, a quantitative analysis was conducted for Building 20, which serves as a screening analysis for other buildings located at greater distances.

An evaluation was conducted of vibration generation for equipment that would be used during project demolition and construction, focusing on areas proximate to the adjacent potentially fragile building. The existing parking lot for Building 20, which would provide paved access for haul trucks used for demolition waste is no closer than 150 feet from Building 20. The portion of Building 21 to be demolished is within 40 feet of Building 20, and a front-end loader or backhoe could be operated within 40 feet of Building 20.

Table 4.5-22 shows a construction vibration impact summary for the project based on the FTA's 2018 Noise and Vibration Manual data and methodology. The equipment is shown along with the reference data (PPV_{ref} and VdB_{ref}) from the Manual. Calculations were conducted to assess the vibration PPV and VdB at the closest separation distance from equipment operation to Building 20.

TABLE 4.5-22. CONSTRUCTION VIBRATION LEVELS AT BUILDING 20 FROM BUILDING 21 PARTIAL DEMOLITION

Equipment	Construction Setback Distance to Sensitive Buildings (ft)	Reference PPV for Equipment (at 25 ft)	At Minimum Setback Distance PPV (in/s)	Reference VdB for Equipment (at 25 ft)	At Minimum Setback Distance VdB
Loaded Trucks	150	0.076	0.005	86	64
Small Bulldozer / Front-End Loader	40	0.003	0.0015	58	52

Based on the above analysis, none of the anticipated vibration levels from Building 21 construction would exceed the 0.12 inches/sec significance threshold at the closest potentially fragile building (Building 20). Vibration levels would

also be well below the human annoyance vibration significance threshold of 72 VdB for the adjacent residential structure. Other existing structures would be considerably further from the Building 21 construction equipment operations and would experience vibration levels less than reported in Table 4.5-22. Therefore, Building 21 construction-related vibration impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

Beach Volleyball Courts

Potentially vibration-sensitive structures adjacent to the project site that could be affected by construction-related vibration include Building 4, at a distance as close as 45 feet from construction activities, and a residential structure on the north side of Dwight Way, as close as 95 feet from the construction activities. Each of these structures is presumed to be older than 50 years and are therefore assumed to be "potentially fragile." The FTA damage threshold of 0.12 inches/sec PPV is applicable to these structures. The buildings are also residential in nature, and therefore the interior threshold of 72 VdB for vibration annoyance to humans is applicable. Since Building 4 is much closer than any other adjacent buildings, a quantitative analysis was conducted for Building 4, which serves as a screening analysis for other buildings located at greater distances.

An evaluation was conducted of vibration generation for equipment that would be used during project demolition and construction, focusing on areas proximate to the adjacent potentially fragile building. The existing vehicle access to the project site for the beach volleyball courts, which would provide paved access for haul trucks used for soil export and building material delivery, is actually no closer than 240 feet from Building 4. The construction zone for the beach volleyball courts is within 45 feet of Building 4, and a front-end loader or backhoe could be operated within 45 feet of Building 4.

Table 4.5-23 shows a construction vibration impact summary for the project based on the FTA's 2018 Noise and Vibration Manual data and methodology. The equipment is shown along with the reference data (PPV_{ref} and VdB_{ref}) from the Manual. Calculations were conducted to assess the vibration PPV and VdB at the closest separation distance from equipment operation to Building 4.

TABLE 4.5-23. CONSTRUCTION VIBRATION LEVELS AT BUILDING 4 FROM VOLLEYBALL COURTS CONSTRUCTION

Equipment	Construction Setback Distance to Sensitive Buildings (ft)	Reference PPV for Equipment (at 25 ft)	At Minimum Setback Distance PPV (in/s)	Reference VdB for Equipment (at 25 ft)	At Minimum Setback Distance VdB
Loaded Trucks	240	0.076	0.003	86	58
Small Bulldozer / Front-End Loader	45	0.003	0.0012	58	51

Based on the above analysis, none of the anticipated vibration levels would exceed the 0.12 inches/sec significance threshold at the closest potentially fragile building. Vibration levels would also be well below the human annoyance vibration significance threshold of 72 VdB for the adjacent residential structure. Other existing structures would be considerably further from the beach volleyball courts construction equipment operations and would experience vibration levels less than reported in Table 4.5-23. Therefore, the beach volleyball courts construction-related vibration impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

OPERATION

The continued use of the remainder of Building 21 for storage of materials and supplies would not alter any existing (baseline) minimal vibration levels that could be associated with use of trucks for the delivery or removal of stored materials. The operation of the beach volleyball courts would not involve stationary equipment with rotating or percussive elements, nor on-going use of heavy equipment for maintenance purposes. Therefore, on-going operation of the project would not have the potential to generate substantial vibration. Operational vibration impacts of the project would be *less than significant*.

Significance without Mitigation: Less than significant.

MITIGATION MEASURES

As described above, the proposed project would not result in significant impacts related to vibration, and therefore, no mitigation measures are required.

Impact NOI-3 Cumulative Noise Impacts (Significance Standard D). The proposed project, in combination with past, present, and reasonably foreseeable projects, would not result in a significant cumulative impact related to noise. *(Less than Significant)*

This section provides an evaluation of cumulative noise impacts associated with the proposed project and past, present, and reasonably foreseeable future projects, as identified in Table 4.1-1 in Section 4.1, Introduction to Analysis, and as relevant to this topic. The geographic area potentially affected by construction-related noise and vibration in the vicinity of the proposed project would be limited to the area within approximately 250 feet of Building 21 and within approximately 500 feet of the new beach volleyball courts site. This is due to the limited scale of the construction effort for each component, and the existence of major structures on each side of the project sites that would generally provide shielding from noise and vibration propagation at further distances. There is one project in Table 4.1-1 within this distance of the new beach volleyball courts and no projects within this distance of the Building 21 site. The project near the new beach volleyball courts site is the East Bay Municipal Utilities District (EBMUD), Summit Pressure Zone South Pipeline Replacement Phase 1 project. EBMUD will be installing a new pipeline in a segment of Dwight Way between Prospect Street and Piedmont Avenue, which is northwest of the beach volleyball site, and will also replace an existing pipe in the CKC east of the Golden Bear Field, which is east of the beach volleyball site. Other new pipe will be installed west and south of the CKC and at a greater distance from the project sites. It is possible that there could be overlap in the construction periods for the proposed project and the EBMUD project, given the construction schedule for that project (Fall 2021 to Spring 2023). The EBMUD project would be constructed in linear segments, with approximately 80 feet of pipeline construction being completed per day. With that, construction west of the Dwight Way and Prospect Street intersection would be within the 500-foot distance for less than one day, and less than approximately 4 days for the pipeline segment east of Golden Bear Field.

With the incorporation of CBP NOI-2, CBP NOI-3, MM NOI-1 (see Impact NOI-1), and compliance with the Berkeley Municipal Code construction noise requirements, noise generated by the proposed project and the EBMUD project is not anticipated to combine and result in combined noise levels exceeding the City of Berkeley or City of Oakland construction noise level thresholds at nearby noise-sensitive receptors. Therefore, the project would not contribute to potentially significant cumulative construction-related noise impacts that may arise from implementation of the cumulative projects. As such, the cumulative construction noise impact of the project would be *less than significant*.

For operational noise impacts, the beach volleyball courts operational noise levels would comply with applicable standards in the City of Oakland and City of Berkeley with regard to the exterior noise exposure level for residences located in these jurisdictions, with the implementation of identified mitigation measures (MM NOI-2, MM NOI-3, and MM NOI-4) (see Impact NOI-1). There are no other major stationary noise sources in the vicinity of the beach volleyball courts site associated with cumulative projects that could affect off-site residences, and to which project noise levels would need to be evaluated on a cumulative noise basis. With regard to traffic noise, the project would result in traffic noise contributions of 0.1 dBA or less along roadways to which it would add trips. This is not a considerable contribution to potentially significant traffic noise impacts that may arise from implementation of the cumulative projects. Therefore, the cumulative operational noise impact of the project would be *less than significant*.

4.5.4 REFERENCES

California Department of Transportation (Caltrans). 2013. Technical Noise Supplement ("TeNS") to the Traffic Noise Protocol. September 2013

Caltrans. 2020. Transportation and Construction Vibration Guidance Manual. April 2020.

City of Berkeley. 2020a. Municipal Code Section 13.40.050, Exterior noise standards. December 15, 2020.

City of Berkeley. 2020b. Municipal Code Section 13.40.070, Prohibited acts. December 15, 2020.

City of Oakland. 2021. Municipal Code Section 17.120.050, Noise. January 22, 2021.

Federal Interagency Committee on Noise (FICON). 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. August 1992.

FTA (Federal Transit Administration). 2018. *Transit Noise and Vibration Impact Assessment.* September.

Honda. 2019. Owner's Manual, Generator EU1000i.

Mitsubishi Electric. 2021. Split-Type Air Conditioners, Outdoor Unit Service Manual, No. OBH502.

UC Berkeley (University of California, Berkeley). 1979. *Dwight-Derby Site Reuse Study (Schools for the Deaf and Blind).* Final Environmental Impact Report. May 1979.

UC Berkeley. 2021a. *UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Draft Environmental Impact Report (State Clearinghouse Number: 2020040078).* March 2021.

UC Berkeley. 2021b. *Long Range Development Plan and Housing Projects #1 and #2 Final Environmental Impact Report (State Clearinghouse Number: 2020040078*). July 2021.

4.6 TRANSPORTATION

This section describes the existing transportation setting of the project sites and vicinity, identifies associated regulatory requirements, evaluates potential project and cumulative impacts, and identifies mitigation measures for any significant or potentially significant impacts related to the implementation of the Clark Kerr Campus (CKC) Beach Volleyball Courts Project (project or proposed project). The analysis is based on the typical weekday operation of the proposed project, as well as during a typical and a maximum capacity event occurring at the proposed beach volleyball courts project site.

4.6.1 ENVIRONMENTAL SETTING

As described in Chapter 3, Project Description, the proposed project is located in the 50-acre CKC of the University of California, Berkeley (UC Berkeley or university). CKC is southeast of the main UC Berkeley campus (Campus Park) and south of the Hill Campus. CKC is primarily within the City of Berkeley, with a portion of the easternmost panhandle of the CKC within the City of Oakland.

This section describes key roadways, as well as transit, pedestrian, bicycle and parking facilities within the vicinity of the beach volleyball courts and the Building 21 partial demolition project sites. The extent of these facilities constitutes the study area evaluated in this analysis. Regional and site access is also described. Figure 3-2 (see Chapter 3, Project Description) shows the key roadways and Figures 4.6-1 and 4.6-2 show the existing transit and bicycle facilities.

4.6.1.1 ROADWAYS

DWIGHT WAY

Dwight Way is an east-west, two-lane, undivided roadway located immediately to the north of the CKC and the beach volleyball courts project site. Dwight Way serves as a connector roadway from the project site to major corridors, including Piedmont Avenue and Sacramento Street. The roadway is a two-way roadway to the east of Piedmont Avenue and a one-way eastbound roadway to the west of Piedmont Avenue. Pedestrian facilities and parking are generally available on both sides of the road. Bus stops for UC Berkeley Bear Transit's (Bear Transit) Night Safety South Side and Reverse Perimeter (R-Line) buses, as well as Alameda-Contra Costa Transit District's (AC Transit) 79, 6, 18, 800, and F buses, are located along the roadway within the vicinity of the project site. The speed limit for the roadway is 25 miles per hour (MPH).

SPORTS LANE

Sports Lane is a north-south, two-lane, undivided roadway located immediately to the east of the beach volleyball courts project site. Sports Lane connects to Dwight Way to the north and serves as an access point to CKC. Pedestrian facilities are located intermittently throughout the roadway. Some parking is available towards the southern end of the roadway along the western portion of the street.

PIEDMONT AVENUE

Piedmont Avenue is a north-south, two-lane roadway located to the west of the CKC and the project sites. The roadway is generally divided north of Dwight Way and is undivided to the south. Piedmont Avenue serves as a major corridor for UC Berkeley and the adjacent community. To the north of Stadium Rim Way, Piedmont Avenue transitions into Gayley Road and terminates to the south at Russel Street. Pedestrian facilities are located throughout the roadway on both sides of the street. The roadway is segmented by barriers towards the street's southern end, redirecting traffic flows onto neighboring streets. Parking is generally available on both sides of the street. Bus stops for Bear Transit's Night Safety South Side, Perimeter Line (P-Line), and R-Line buses, as well as AC Transit's 79, 52, and F buses, are located along the roadway. UC Berkeley classifies Piedmont Avenue as a Designated Secondary Bicycle Route south of Bancroft Way and a Designated Primary Bicycle Route to the north (UC Berkeley 2014). The speed limit for the roadway is 25 MPH.

DERBY STREET

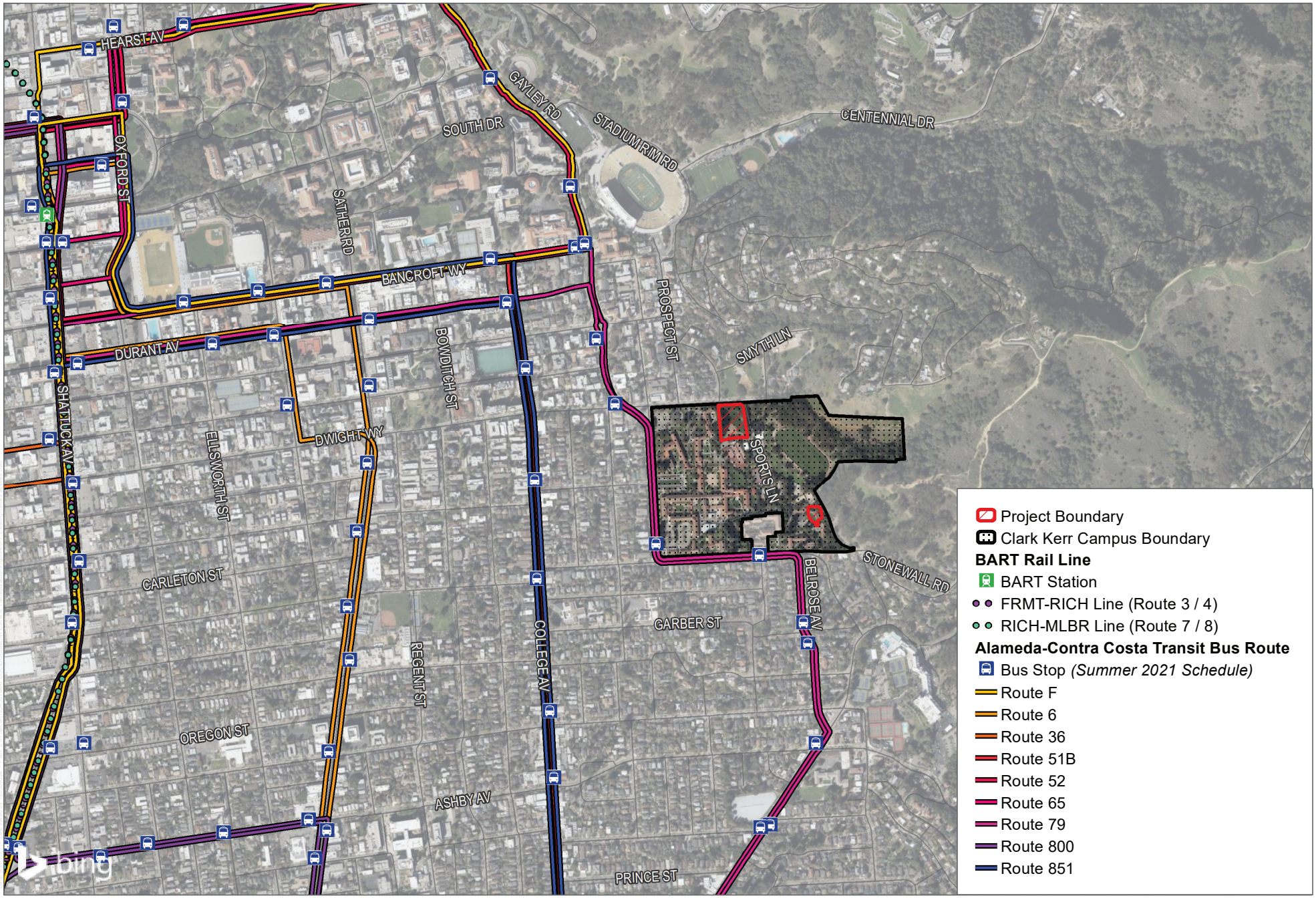
Derby Street is an east-west, two-lane, undivided roadway located to the south of the CKC and the project sites. Derby Street serves as a connector street from the project sites to major corridors, such as College Avenue, where the road terminates. The roadway is segmented by barriers, which redirect traffic flows onto neighboring streets. Pedestrian and Bicycle facilities are located throughout the roadway on both sides of the street. Bus stops for AC Transit's 79 bus are located along the roadway. The speed limit for the roadway is 25 MPH.

TELEGRAPH AVENUE

Telegraph Avenue is a north-south, two to four-lane, generally undivided roadway located to the west of the CKC and project sites. Telegraph Avenue serves as a major corridor for UC Berkeley and the surrounding communities. North of Blake Street, Telegraph Avenue transitions from a four-lane roadway to a two-lane northbound one-way street. Pedestrian facilities and parking are available throughout the roadway on both sides of the road. Bus stops for AC Transit's 6, 60, and 800 buses are located along the roadway. Bay Wheels bicycle sharing stations are also present throughout the street. According to the City of Berkeley Bicycle Plan, Class III bicycle lanes are present on the roadway from Ashby Avenue to Dwight Way, and Class II lanes are present from Dwight Way to Sather Road (City of Berkeley 2017). UC Berkeley also classifies Telegraph Avenue as a Designated Primary Bicycle Route south of Bancroft Way (UC Berkeley 2014). The speed limit for the roadway is 25 MPH.

SHATTUCK AVENUE

Shattuck Avenue is a north-south, four-lane, generally divided roadway located to the west of the CKC and the project sites. Shattuck Avenue serves as a major corridor for UC Berkeley and the surrounding community. Pedestrian and Bicycle facilities are located throughout the roadway on both sides of the street. AC Transit's 18, 800, 36, and F buses are located along the roadway. In addition, Bay Wheels bicycle sharing stations are also present throughout the street. According to the City of Berkeley Bicycle Plan, Class III bicycle lanes are present along portions of the roadway south of Derby Street (City of Berkeley 2017). The speed limit for the roadway is 25 MPH.



SOURCE: Bing Maps 2021, Alameda County 2018

0 550 1,100 Feet

FIGURE 4.6-1

Existing Transit Facilities

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

SOURCE: Bing Maps 2020, Alameda County 2018

0 550 1,100 Feet

FIGURE 4.6-2

Existing Bicycle Facilities

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

COLLEGE AVENUE

College Avenue is a north-south, two-lane, undivided roadway located to the west of the CKC and the project sites. College Avenue serves as a major corridor for UC Berkeley and the surrounding community. Pedestrian facilities and parking are generally located throughout the roadway on both sides of the road. Bus stops for Bear Transit's Night Safety South Side, R-line, and P-line buses and AC Transit's 36, 51B, 79, and 851 buses are located along the roadway. UC Berkeley classifies College Avenue as a Designated Secondary Bicycle Route (UC Berkeley 2014). The speed limit for the roadway is 25 MPH.

ASHBY AVENUE

Ashby Avenue (California State Route 13) is an east-west, two to four-lane, undivided roadway located to the south of CKC and the project sites. Ashby Avenue is a major corridor that connects Interstate 80 to the southern portion of the City of Berkeley and the surrounding community. Pedestrian and bicycle facilities are located along most of the roadway on both sides. Bus stops for AC Transit's 604, 51B, 851, and F buses are located along the roadway. The speed limit for the roadway is 25 MPH.

4.6.1.2 TRANSIT

The beach volleyball courts project site is served by passenger rail and bus services. The San Francisco Bay Area Rapid Transit (BART) serves the Downtown Berkeley Station, which is located at 2160 Shattuck Avenue, approximately 1.2 miles to the west of this project site. The beach volleyball courts project site is also served by Bear Transit's shuttle system and AC Transit's bus service, which collectively provide local and regional public transit within the project area.

SAN FRANCISCO BAY AREA RAPID TRANSIT DISTRICT (BART)

BART is a public rail transit system that connects the San Francisco Peninsula with communities in the East Bay and South Bay, including the City of Berkeley. BART operates in five counties (San Francisco, San Mateo, Alameda, Contra Costa, and Santa Clara) with 131 miles of track and 50 stations, carrying approximately 405,000 trips on an average weekday (BART 2021).

As noted above, the proposed project would be served by BART's Downtown Berkeley Station, which is located approximately 1.2 miles to the northwest of the project site. Weekday headways for northbound and southbound trains at this station range between 10 to 45 minutes; however, headways are typically 15 minutes during a majority of the day.

UC BERKELEY BEAR TRANSIT

Bear Transit is UC Berkeley's shuttle system, servicing the campus and vicinity. Bear Transit provides transportation between Downtown Berkeley BART, parking lots, and various UC Berkeley facilities, including the CKC (UC Berkeley 2021a). Service includes five daytime routes and three nighttime safety routes. The project site would predominately be served by Night Safety Transit Service, P-Line, and R-Line. A brief summary of these buses is provided below.

Night Safety Transit Service

The Night Safety Shuttle service is an extension of the Bear Transit daytime service and provides safe nighttime transit to and from the UC Berkeley campus. Bear Transit Night Safety Shuttles are free to all and operate year-round. From 7:30 p.m. to 3:00 a.m., shuttles run on one of two set routes between the UC Berkeley campus, BART, CKC, and residence halls. The closest Night Safety Shuttle stop to the beach volleyball courts project site is located at the main CKC driveway. Headways for Night Safety Transit Service range from 15 to 30 minutes (UC Berkeley 2021b).

P-Line

The P-Line shuttle service is one of four Bear Transit daytime shuttle services that provide transportation between UC Berkeley's campus and the neighboring community. The P-line runs from 7:00 a.m. to 7:30 p.m., Monday to Friday, and services roadways near the project sites, including but not limited to College Avenue, Piedmont Avenue, University Avenue, and Shattuck Avenue. The closest P-Line shuttle stop to the project sites is located along College Avenue and Haste Street. Headways for the P-Line are 30 minutes (see Figure 4.6-1) (UC Berkeley 2021a).

R-Line

Similar to the P-Line shuttle service, the R-Line shuttle service is one of four Bear Transit daytime shuttle services that provide transportation between UC Berkeley's campus and the neighboring community. This is a new route, the R-Line (Reverse Perimeter via Southside) that was instituted in September 2020. The R-line runs from 7:15 a.m. to 6:45 p.m., Monday to Friday, and services roadways near the project site, including but not limited to Shattuck Avenue, Piedmont Avenue, Channing Way, Hearst Avenue, and Dwight Way. The closest R-Line shuttle stop to the project site is located along the corner of Dwight Way and Piedmont Avenue. Headways for the R-line are 30 minutes (UC Berkley 2021a).

AC TRANSIT

AC Transit is the third-largest public bus-only transit system in California, serving 13 cities and nine adjacent unincorporated areas in Alameda and Contra Costa counties. AC Transit serves about 1.5 million East Bay passengers within a 364-square mile service area. AC Transit carries about 200,000 riders on an average weekday, along 152 service lines while generating over 20 million annual miles on its bus fleet (AC Transit 2020).

The beach volleyball courts project site would predominately be served by AC Transit's Lines E, 6, 51B, and 79. A brief description of each of the lines is provided below.

Line E

Line E bus provides commuter service between Oakland and San Francisco during the morning and afternoon peak hours. The Line E route extends from Caldecott Lane and the Parkwood Community to the Salesforce Transit Center in San Francisco. The nearest bus stop is located at the Ashby Avenue and Domingo Avenue intersection, approximately 0.6 miles southeast from the beach volleyball courts project site. Peak frequency for Line E is 20 minutes, however headways may reach up to an hour during off-peak hours, and Line E does not run during weekends or holidays (AC Transit 2021).

Line 6

Line 6 bus provides service between downtown Berkeley and downtown Oakland, with stops connecting the 12th Street/Oakland City Center, 19th Street Oakland, and MacArthur BART stations. The nearest bus stops for Line 6 are located along Telegraph Avenue, with the nearest bus stop to the proposed project located at the intersection of Telegraph Avenue and Dwight Way, approximately 0.5 miles west of the beach volleyball courts project site. Peak frequency for Line 6 is on average every 10 to 20 minutes, and up to 30 minutes during weekends and holidays (AC Transit 2021).

Line 51B

Line 51B provides service between the Berkeley marina and Rockridge BART station, with additional stops located at the Berkeley Amtrak station and Berkeley BART station. The nearest bus stop for Line 51B is located at the intersection of College Avenue and Haste Street, approximately 0.3 miles west of the beach volleyball courts project site. The frequency of Line 51B is approximately 12 minutes during weekdays, and up to 30 minutes during weekends and holidays (AC Transit 2021).

Line 79

Line 79 bus services 42 bus stops and three BART Stations, including the Rockridge, Berkeley, and El Cerrito Plaza BART Stations. The Line 79 route extends from Claremont Middle School in Oakland to the El Cerrito Plaza BART Station in El Cerrito. Within the vicinity of the beach volleyball courts project site, the closest Line 79 bus stop is located at the corner of Dwight Way and Piedmont Avenue. Headways for the Line 79 bus are approximately 30 minutes, and there is no weekend or holiday service provided (AC Transit 2021).

4.6.1.3 PEDESTRIAN AND BICYCLE FACILITIES

PEDESTRIAN FACILITIES

Walking to, from, and within the UC Berkeley campus is a common travel mode option for many UC Berkeley faculty, staff, and students. Based on the 2019 UC Berkeley Transportation Survey, approximately 50% of UC Berkeley affiliates commute to and from the UC Berkeley campus by walking (UC Berkeley 2021c).

Pedestrian access to the CKC and the project sites is via several locations along Warring Street, Derby Street, Dwight Way, and Sports Lane. The Warring Street access includes high-visibility continental crosswalks at the Parker Street all-way stop control intersection. There are two pedestrian connections along Derby Street at Southwest Place and at Eastway Drive; neither is located at an intersecting street. The pedestrian connections on Dwight Way at North Street and at Sports Lane do not have marked crosswalks, and the curb ramps provided are not American Disability Act (ADA) compliant. In addition, the sidewalk facilities are discontinuous on Dwight Way east of Sports Lane (UC Berkeley 2021c).

BICYCLE FACILITIES

Based on the 2017 City of Berkeley Bicycle Plan, bicycle facilities have the following classifications:

- **Class I Multi-use Paths** provide completely separated, exclusive right-of-way for bicycling, walking, and other non-motorized uses.

- **Class II Bicycle Lanes** are striped, preferential lanes for one-way bicycle travel on roadways and may include buffer striping to add separation between vehicle lanes or parking lanes.
- **Class III Bicycle Routes** have sharrow striping and are often signed bicycle routes where people riding bicycles share a travel lane with people driving motor vehicles.
- **Class IV Cycle Track**, or separated/protected bikeway, is an on-street bicycle lane that is physically separated from motor vehicle traffic by a vertical element (raised island, bollards, or on-street parking).

Within UC Berkeley's campus, bicycle circulation is divided into primary and secondary routes. The UC Berkeley's internal roadways designated as primary bicycle routes are a mix of routes where cyclists share the roadway with vehicular traffic and routes where cyclists share paths with pedestrians. Secondary routes within the campus are provided via a network of pathways that bicyclists most often share with pedestrians (UC Berkeley 2021c).

As shown on Figure 4.6-2, Existing Bicycle Facilities, the closest designated bicycle facility is a Designated Secondary Bicycle Route along Piedmont Avenue, to the west of the project sites. A Designated Secondary Bicycle Routes is also present along College Avenue, and a Designated Primary Bicycle Route is present on Telegraph Avenue. Telegraph Avenue is also considered to be a Class III bicycle lane from Ashby Avenue to Dwight Way and a Class II lane from Dwight Way to Sather Road. A Class III bicycle lane is also present on portions of Shattuck Avenue, south of Derby Street.

4.6.1.4 PARKING

The CKC has approximately 330 marked parking spaces. Parking occupancy data collected in September 2019 show that the CKC parking lots are approximately 30 percent full at the peak times of the week and day. Therefore, approximately 231 parking spaces are open during a typical weekday (UC Berkeley 2019). Parking is also available on other nearby roadways such as Dwight Way, Derby Street, and Warring Street, which allow for non-permitted two-hour parking (subject to special zones, gamedays, and street cleaning). The Underhill Parking Garage is also located approximately 0.3 miles northwest of the proposed beach volleyball courts project site.

4.6.1.5 TRANSPORTATION DEMAND MANAGEMENT AND MODE SHARE

A transportation demand management (TDM) program is a set of policies and programs that include incentives, information, and education to encourage employees to commute to work by modes other than driving alone. The existing UC Berkeley TDM Strategic Plan is designed to address faculty, staff, and student travel to the UC Berkeley campus and includes strategies that emphasize alternative commuting options such as public transit, biking, walking, carpooling, and car sharing. The key elements of the existing UC Berkeley TDM Strategic Plan include transit pass subsidies, shuttle services including night safety shuttle service, permit parking priced to influence demand, pre-tax commuter benefits program, bike share program, carpool program, online commute planning tool, bicycle parking, carshare opportunities, and a designated TDM administer that manages the TDM program (UC Berkeley 2021c). According to a 2019 UC Berkeley Transportation Survey, which assessed the commute modes of different UC Berkeley population groups (i.e., students, faculty and staff), approximately 5 percent of students, 44 percent of staff, and 46 percent of faculty drive to campus (UC Berkeley 2021c).

4.6.2 REGULATORY FRAMEWORK

4.6.2.1 FEDERAL

There are no federal plans, policies, regulations, or laws related to transportation applicable to the proposed project.

4.6.2.2 STATE

CALIFORNIA SENATE BILL 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law, which creates a process to change the way that transportation impacts are analyzed under the California Environmental Quality Act (CEQA). SB 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) for evaluating transportation impacts. Under the new transportation guidelines, LOS, or vehicle delay, will no longer be considered an environmental impact under CEQA. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. These guidelines identify vehicle miles traveled (VMT) as the most appropriate measure of transportation impacts under CEQA and were fully implemented as of July 1, 2020.

SB 743 requires California to reduce greenhouse gas emissions by 40% below 1990 levels by 2030. The California Air Resources Board has determined that it is not possible to achieve this goal without reducing VMT growth and specifically California needs to reduce per capita VMT across all economic sectors. SB 743 is primarily focused on passenger-cars and the reduction in per capita VMT as it relates to individual trips. The OPR Technical Advisory (OPR 2018) provides guidance and tools to properly carry out the principles within SB 743 and how to evaluate transportation impacts under CEQA.

VMT Screening

Screening Threshold for Small Projects

Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day[1] generally may be assumed to cause a less-than-significant transportation impact.

Map-Based Screening for Residential and Office Projects

Residential and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Maps created with VMT data, for example from a travel survey or a travel demand model, can illustrate areas that are currently below threshold VMT. Because

[1] The CEQA Guidelines provide a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area (CEQA Guidelines Section 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis.

Presumption of Less Than Significant Impact Near Transit Stations

CEQA Guideline Section 15064.3, Subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop[2] or an existing stop along a high quality transit corridor[3] will have a less-than-significant impact on VMT. These specific regions are also called Transit Priority Areas (TPA). This presumption would not apply, however, if project specific or location-specific information indicates that the project will still generate significant levels of VMT. For example, the presumption might not be appropriate if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75.
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking).
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization).
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

If any of these exceptions to the presumption might apply, the lead agency should conduct a detailed VMT analysis to determine whether the project would exceed VMT thresholds. Additionally, there is also a presumption of less than significant impact for affordable residential developments.

4.6.2.3 UNIVERSITY OF CALIFORNIA

UNIVERSITY OF CALIFORNIA SUSTAINABLE PRACTICES POLICY

The UC Sustainable Practices Policy lays out sustainability goals and strategies for all UC system campuses and medical centers and covers climate and energy, transportation, water, green building, waste, food, and operations. The UC has a goal to reach operational carbon neutrality by 2025 for Scope 1 and Scope 2 emissions. As a part of that goal, the UC recognizes that single-occupant-vehicle (SOV) commuting is a primary contributor to commute GHG emissions and localized transportation impacts, and has set the following goals related to transportation:

- By 2025, each location shall strive to reduce its percentage of employees and students commuting by SOV by 10% relative to its 2015 SOV commute rates.
- By 2050, each location shall strive to have no more than 40% of its employees and no more than 30% of all employees and students commuting to the location by SOV.
- Each location (university) will develop a business-case analysis for any proposed parking structures serving University affiliates or visitors to campus to document how a capital investment in parking aligns with each university's Climate Action Plans and/or sustainable transportation policies.

[2] Public Resources Code Section 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

[3] Public Resources Code Section 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").

UC BERKELEY SUSTAINABILITY PLAN

UC Berkeley created the Sustainability Plan to provide more detail on goals and strategies that will be implemented to meet the UC Sustainable Practices Policy. The UC Berkeley Sustainability Plan includes the following goal:

- Reduce employee drive-alone rate to 36% by 2025.

The UC Berkeley Sustainability Plan provides the following key strategies to meet this goal:

- Expand and market a comprehensive, environmentally sustainable, safe, accessible, and equitable multimodal transportation program to reduce parking demand and carbon emissions and increase sustainable commute and intra-campus travel.
- Support campus housing initiative that includes new student and other campus housing within walking distance and transit to campus.
- Update the Campus Bicycle Plan.
- Participate in efforts to evaluate expansion of telework options for employees.
- Promote AC Transit route planning, services, and amenities to increase campus ridership.
- Support continuing activities to strengthen active transportation options.
- Implement strategies identified in the new campus Long Range Development Plan/Environmental Impact Report and Campus Master Plan.

UC BERKELEY CAMPUS DESIGN STANDARDS

UC Berkeley created the Campus Design Standards to guide design and construction professionals to complete lasting, high-quality additions to the UC Berkeley built environment. The Campus Design Standards, along with applicable codes, ensure that new construction and renovation projects at UC Berkeley integrate industry best practices and experience with existing campus buildings, infrastructure, grounds, and maintenance issues. Key sections of the Campus Design Standards relevant to transportation include bicycle infrastructure and standards for bus stops.

UC BERKELEY CONTINUING BEST PRACTICES

UC Berkeley applies continuing best practices (CBPs) relevant to transportation as part of the project approval process. CBPs applicable to the proposed project are provided in Appendix D, UC Berkeley Continuing Best Practices, of this Draft EIR. Applicable CBPs are identified and assessed for their potential to reduce adverse physical impacts later in this section under Section 4.6.3, Impacts and Mitigation Measures.

4.6.2.4 REGIONAL

PLAN BAY AREA 2040

California's 2008 Senate Bill (SB) 375 requires each of the state's 18 metropolitan areas to develop a Sustainable Communities Strategy (SCS), which is an integrated transportation, land use, and housing plan that addresses ways to accommodate future population growth and reduce greenhouse gas emissions from cars and light trucks. The Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC) jointly approved *Plan Bay Area* on July 18, 2013, with an update, *Plan Bay Area 2040*, adopted on July 26, 2017. *Plan Bay Area 2040* is the SCS for the nine-county San Francisco Bay Area. *Plan Bay Area 2040* identifies Priority

Development Areas (PDAs) in existing urban areas near existing or planned transit service to accommodate the majority of the expected growth across the nine-county San Francisco Bay Area.

While Plan Bay Area 2040 concluded that the Bay Area region consistently ranks as one of the most congested metropolitan areas of the nation, additional roadway capacity would not solve the problem and recommendations focused on strategies to improve efficiency on existing highways and transit networks. Plan Bay Area 2040 recommends increasing non-automobile travel, in comparison to all other mode shares, and reducing VMT per capita and per employee. Recommendations include promoting transit-oriented development, transit improvements, and active transportation modes such as bicycling and walking, and the overall strategy would seek to reduce regional and state emissions, as well as improve mobility in the Bay Area.

4.6.2.5 LOCAL

As discussed in Chapter 3, Project Description, UC Berkeley is constitutionally exempt from local governments' regulations, such as city and county general plans, land use policies, and zoning regulations, whenever using property under its control in furtherance of its educational purposes. As such, the proposed project is generally exempt from local policies and regulations. However, UC Berkeley may consider, for coordination purposes, aspects of local policies and regulations for the communities surrounding the UC Berkeley campus when it is appropriate and feasible, although it is not bound by those policies and regulations. Therefore, this section outlines the policies and regulations of the City of Berkeley related to transportation that UC Berkeley may consider in the evaluation of the proposed project.

CITY OF BERKELEY VMT CRITERIA AND THRESHOLDS

In order to implement SB 743, the City of Berkeley has developed an approach to address VMT impacts under CEQA. The methodology, criteria, and significance thresholds are contained in the City of Berkeley VMT Criteria and Thresholds Guidelines (City of Berkeley, 2020). The City's VMT criteria is based on the framework of the OPR Technical Advisory, released by the State of California to guide the implementation of SB 743.

VMT Metrics

VMT analysis in Berkeley is measured by the metrics of household VMT per capita (which applies to residential uses), and home-work VMT per worker (which applies to employment generating uses). The VMT metrics are produced within the Alameda County Transportation Commission model for direct comparison. The Alameda County Transportation Commission model is utilized for large projects unable to be screened out from VMT analysis.

VMT Screening

Analysis of smaller, less complex projects can be simplified by using a screening process. OPR suggests that screening criteria may be applied to identify when land use projects can be expected to cause a less-than-significant impact, without needing to conduct a detailed study. Screening is an option but is not mandatory. In the City of Berkeley, land use projects that meet at least one of the following screening criteria are presumed to cause a less-than-significant VMT impact and would not require VMT analysis:

- **TPA:** Projects located within a ½-mile walkshed around major transit stops (i.e., the BART stations and the Amtrak station) or within a ¼-mile walkshed around high quality transit corridor. This TPA screening would not apply if the proposed project has any of the following characteristics:
  - Has a Floor Area Ratio (FAR) of less than 0.75 for office uses; or

- Includes more than 200,000 square feet of office or commercial space; or
- Includes more parking supply than the project's estimated demand; or
- Is inconsistent with the City's General Plan, an applicable Specific Plan, or an applicable Sustainable Communities Strategy (as determined by the City, with input from MTC); or
- Replaces affordable residential units with market-rate residential units; or
- Has project-specific or location-specific information that indicates that the project will generate significant levels of VMT.

- **Low-Income Housing**: Low-income housing units typically generate less VMT than market-rate units of similar sizes and can contribute to improving jobs-housing balance. As such, projects that contain 100% restricted units affordable to Low-Income Households and Very Low-Income Households, as defined in Berkeley Municipal Code 22.20.065, are presumed not to require transportation VMT analysis for CEQA, as long as the projects do not include more parking supply than the project's estimated demand.
- **Small Projects:** Projects defined as generating 836 daily VMT or less. Based on recent data from the California Household Travel Survey, this level of VMT would equate to 20 units of residential use or up to 10,000 square feet of non-residential use.[4]
- **Locally Serving Public Facility:** Locally serving public facilities generally encompass government, civic, cultural, health, and infrastructure uses which contribute to and support community needs and mostly generate trips within the local area. Locally serving public facilities include, but are not limited to, public schools, passive parks (parks designed for use in an informal way and typically less developed), libraries, community centers, police stations, fire stations, and public utilities.
- **Projects in Low VMT Areas:** Projects that are located in low-VMT areas and that have characteristics similar to other uses already located in those areas can be presumed to generate VMT at similar rates. The low-VMT areas in Berkeley are defined based on the results of the Alameda County Transportation Commission model, and maps of these areas are attached to the guidelines:
  - Residential projects will be screened out if located in an area that has household VMT per capita that is 15% lower than the baseline regional average.
  - Office and industrial projects will be screened out if located in an area that has home-work VMT per worker that is 15% lower than the baseline regional average.

VMT Significance Thresholds

The OPR recommendations suggest that a VMT reduction target of 15% below baseline levels is consistent with the achievement of the state's climate goals. The City of Berkeley is relying upon the evidence and data presented by OPR in its recommendations for VMT thresholds, and is applying the following significance thresholds within Berkeley:

- A residential project's VMT impact is considered less than significant if its household VMT per capita is at least 15% below the regional average household VMT per capita.

[4] This threshold ties directly to the OPR Technical Advisory which notes that CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines Section 15301, subd. (e)(2).) Using statewide average data from the California Household Travel Survey (CHTS), the amount of daily VMT associated with 10,000 square feet of nonresidential space is 836 VMT. Also using statewide average CHTS data, this level of VMT is associated with 20 housing units. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 20 housing units or 10,000 square feet of non-residential space could be considered not to lead to a significant impact.

- An employment-generating project's VMT impact is considered less than significant if its home-work VMT per worker is at least 15% below the regional average home-work VMT per worker.

CITY OF BERKELEY GENERAL PLAN

The City of Berkeley General Plan Transportation Element contains maps of the citywide transit network, vehicular circulation network, bicycle circulation network, and emergency access and evacuation network. It also contains 53 policies to achieve the following six objectives:

1. Maintain and improve public transportation services throughout the city.
2. Reduce automobile use and VMT in Berkeley, and the related impacts by providing and advocating for transportation alternatives and subsidies that facilitate voluntary decisions to drive less.
3. Improve quality of life in Berkeley neighborhoods by calming and slowing traffic on all residential streets.
4. Maintain and improve the existing infrastructure and facilities for the movement of people, goods, and vehicles within and through the city.
5. Improve management of public parking to better serve needs of residents, businesses, and visitors.
6. Create a model bicycle- and pedestrian-friendly city where bicycling and walking are safe, attractive, easy, and convenient forms of transportation and recreation for people of all ages and abilities.

Most of the City of Berkeley General Plan transportation policies have a bearing on UC Berkeley faculty, staff, students, and visitors, due to UC Berkeley's central location within the city. However, policies listed below directly address issues related to the proposed project:

- **Policy T-6 Transportation Services Fee.** Ensure that new development does not impact existing transportation services and facilities.
- **Policy T-10 Trip Reduction.** To reduce automobile traffic and congestion and increase transit use and alternative modes in Berkeley, support, and when appropriate require, programs to encourage Berkeley citizens and commuters to reduce automobile trips, such as:
    1. Participation in a citywide Eco-Pass Program.
    2. Participation in the Commuter Check Program.
    3. Carpooling and provision of carpool parking and other necessary facilities.
    4. Telecommuting programs.
    5. "Free bicycle" programs and electric bicycle programs.
    6. "Car-sharing" programs.
    7. Use of pedal-cab, bicycle delivery services, and other delivery services.
    8. Programs to encourage neighborhood-level initiatives to reduce traffic by encouraging residents to combine trips, carpool, telecommute, reduce the number of cars owned, shop locally, and use alternative modes.
    9. Programs to reward Berkeley citizens and neighborhoods that can document reduced car use.
    10. Limitations on the supply of long-term commuter parking and elimination of subsidies for commuter parking.
    11. No-fare shopper shuttles connecting all shopping districts throughout the City.

- **Policy T-12 Education and Enforcement.** Support, and when possible require, education and enforcement programs to encourage carpooling and alternatives to single-occupant automobile use, reduce speeding, and increase pedestrian, bicyclist, and automobile safety.
- **Policy T-13 Major Public Institutions.** Work with other agencies and institutions, such as the University of California, the Berkeley Unified School District, Lawrence Berkeley Laboratory, Vista Community College, the Alameda County Court, and neighboring cities to promote Eco-Pass and to pursue other efforts to reduce automobile trips.
- **Policy T-17 Transportation Planning.** Involve local residents, businesses, and institutions in all stages of transportation planning.
- **Policy T-18 Transportation Impact Analysis and Vehicle Miles Traveled (policy adopted by the City of Berkeley on November 19, 2020 to replace the previous Level of Service policy).** When considering transportation impacts under the California Environmental Quality Act, the City shall consider how a plan or project affects all modes of transportation, including transit riders, bicyclists, pedestrians, and motorists, to determine the transportation impacts of a plan or project. Plans and projects shall be designed to deliver significant benefits to travel by pedestrians, bicycle, or transit, and/or reduced impacts on air quality, greenhouse gas emissions, and safety. For the purposes of CEQA, Vehicle Miles Traveled (VMT) shall be the metric used to analyze the transportation impacts of a plan or project.
- **Policy T-23 Truck Routes and Truck Traffic.** To the greatest extent possible, protect residential streets from hazardous or heavy traffic.
- **Policy T-28 Emergency Access.** Provide for emergency access to all parts of the city and safe evacuation routes.
- **Policy T-37 University of California and Large Employer Parking.** Encourage large employers, such as the University of California and Berkeley Unified School District, to allocate existing employee parking on the basis of a) need for a vehicle on the job, b) number of passengers carried, c) disability, and d) lack of alternative public transportation.
- **Policy T-38 Inter-Jurisdictional Coordination.** Establish partnerships with adjacent jurisdictions and agencies, such as the University of California and the Berkeley Unified School District, to reduce parking demand and encourage alternative modes of transportation.
- **Policy T-42 Bicycle Planning.** Integrate the consideration of bicycle travel into City planning activities and capital improvement projects, and coordinate with other agencies to improve bicycle facilities and access within and connecting to Berkeley.
- **Policy T-43 Bicycle Network.** Develop a safe, convenient, and continuous network of bikeways that serves the needs of all types of bicyclists and provide bicycle-parking facilities to promote cycling.
- **Policy T-50 Sidewalks.** Maintain and improve sidewalks in residential and commercial pedestrian areas throughout Berkeley and in the vicinity of public transportation facilities so that they are safe, accessible, clean, attractive, and appropriately lighted.
- **Policy T-51 Pedestrian Priority.** When addressing competing demands for sidewalk space, the needs of the pedestrian shall be the highest priority.
- **Policy T-52 Pedestrian Safety and Accessibility.** Provide safe and convenient pedestrian crossings throughout the City.

4.6.3 IMPACTS AND MITIGATION MEASURES

4.6.3.1 STANDARDS OF SIGNIFICANCE

The standards of significance used to evaluate the impacts of the proposed project related to transportation are based on Appendix G of the CEQA Guidelines, as listed below. The proposed project would result in a significant impact if it would:

A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
B. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b).
C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
D. Result in inadequate emergency access.
E. In combination with past, present, and reasonably foreseeable projects, result in a cumulative impact.

4.6.3.2 ANALYTICAL METHODS

ANALYTICAL METHODS/APPROACH

Construction

As detailed in Chapter 3, Project Description, the proposed project would include the construction of the beach volleyball courts and the partial demolition of Building 21. Project construction would occur during weekdays, Monday to Friday, from 7:00 a.m. to 7:00 p.m., with limited weekend hours if needed. The proposed project would result in the temporary addition of various construction vehicles to the project sites and vicinity of the proposed project. Construction vehicles would include haul trucks, vendor trucks, and worker vehicles over the course of the combined 8-month construction period. Specifically, construction of the new beach volley courts would occur over approximately 6 months and the demolition and related work on Building 21 would occur over approximately 8 months. Construction on the two sites would be concurrent with work on the Building 21 site extending beyond completion of the new beach volleyball courts.

The existing recreational softball field would be converted into the courts. The beach volleyball courts project component would include four beach volleyball courts and a 3,710-square-foot support building, a scoreboard, a public address system, and a lawn area for spectators to watch matches. The construction phasing schedule and construction vehicle trip assumptions are provided in Appendix B, Initial Study. As the number of vehicles traveling to and from the project site is expected to fluctuate over the combined 8-month construction period and would consist of temporary vehicles that would be eliminated from the roadway network upon completion of the proposed project, this analysis provides a qualitative assessment of project traffic and evaluates the relative effect of temporary construction traffic on the existing circulation system.

All construction would adhere to and comply with City of Berkeley and UC Berkeley guidelines including the UC Berkeley Campus Design Standards, as well as relevant CBP's as described in Section 4.6.3.3, Impact Analysis. Specifically, UC Berkeley will require contractors to implement a Construction Traffic Management Plan in order to reduce potential impacts to roadway circulation and parking near the project sites (see CBP TRAN-5 in Impact TRA-1). The Construction

Traffic Management Plan will address job-site access, vehicle circulation, bicycle, and pedestrian safety, and be coordinated with the City of Berkeley Public Works Department if City streets would be affected.

Operation

Trip Generation

As described in Chapter 3, Project Description, the proposed project would not modify the current use of Building 21 for storage or otherwise increase vehicle and truck trips to that site. The proposed beach volleyball courts would operate from 7:00 a.m. to 10:00 p.m., 7 days a week. During the academic school year, the courts would be used for IA beach volleyball practice, training, and youth camps (managed by IA), Recreational Sports programming (managed by the Recreational Sports Department), archery, occasional youth programs, and reservation-based community recreation. In addition, IA beach volleyball competitions would be held in the spring semester.

During the summer (June to August), the beach volleyball courts would also be used for IA training and recreational summer youth camps operated by Recreational Sports and/or IA, archery, and other recreational sports programming. All of these programs, aside from the special beach volleyball match events, currently operate at the project site or other sites within the CKC and such programs and participants would not change with the proposed project. In addition, the new beach volleyball courts would also be open to the broader community on a reservation basis, consistent with IA's current reservation practices.

Due to the variety and concentration of some events and activities, it is expected that the proposed project would have a varying degree of use throughout the year and throughout any given day. Therefore, in order to provide a conservative assessment of the potential impact of the proposed project, three different scenarios are analyzed for the number of persons, number of vehicles, and vehicle trips generated daily: typical weekday use, and typical and maximum event use for matches. Table 4.6-1 describes these scenarios and each scenario is further described below.

TABLE 4.6-1. TRANSPORTATION ANALYSIS PARTICIPANT AND SPECTATOR USE SCENARIOS

Participants and Spectators	Existing Conditions (Softball Field)	Proposed Project		
		Typical Weekday Use	Typical Event	Maximum Event
Participants (Athletes, Coaches and Staff)	50-100	100	70	70
Spectators		0	75	330
Total Participants and Spectators	**50-100**	**100**	**145**	**400**

As indicated above, these use scenarios and the associated net increase in participants and spectators with the proposed project provide for a conservative analysis of project operations with the new beach volleyball courts. Specifically, the existing participants and spectators of the existing sand courts are not subtracted from the participants and spectators that would occur with the proposed project to arrive at a net increase in participants and spectators with the project. For example, the existing sand courts, which are currently being used for IA women's beach volleyball, can operate with a maximum of 200 participants and spectators when portable seats are brought in for major matches. With the new beach volleyball courts, IA women's volleyball would move to the new courts. However, the maximum use scenario assumes that the same level of use could continue at the existing sand courts by other users, even though that level of use is highly unlikely by Recreation Sports or other possible users of the existing sand courts to remain.

Typical Weekday Use. During a typical weekday, and what would be considered the most frequently occurring scenario, the proposed project is expected to draw UC Berkeley student athletes, staff, and recreational student participants throughout the day. Trip Generation estimates and data is based on information provided by UC Berkeley for the average participants during typical use of the facilities, as presented in Chapter 3, Project Description. Due to the proximity to the larger UC Berkeley campus as well as student residences in the area, many of the participants during the typical weekday use scenario would arrive and depart the beach volleyball courts project site using non-vehicle modes of transportation (such as pedestrian, bicycle, and transit modes). A relatively small number of participants, proportional to the total number of participants, would drive to and from the proposed project site (approximately 5 percent of athletes and students, consisting of 10 daily vehicle trips, and 44 percent of staff, consisting of 4 daily vehicle trips), based on a 2019 UC Berkeley Transportation Survey (see Section 4.6.1.5, Transportation Demand Management and Mode Share). While it is highly unlikely that UC athletes and staff drive to the CKC once they arrive on the UC Berkeley campus, the 2019 UC Berkeley Transportation Survey that assesses commute travel modes was used to provide a conservative estimate of vehicle trip generation for students and staff. For a conservative assessment, it was estimated that all vehicle trips would be single occupancy. Table 4.6-2 shows the estimated beach volleyball courts project trip generation for the typical weekday use of the proposed project.

As shown in Table 4.6-2, during the typical weekday use of the proposed beach volleyball courts project, out of the approximately 100 daily participants (see Table 4.6-1), and after accounting for the proportion of participants that would drive to the site, there would be 7 total vehicles that would drive to the project site, resulting in 14 total daily vehicle trips.

TABLE 4.6-2. PROJECT TRIP GENERATION FROM TYPICAL WEEKDAY USE

Participant Type	Daily No. of Persons	Non-Vehicle Travel	Vehicle Travel	AVO[1]	Daily No. of Vehicles	Daily Vehicle Trips
New Beach Volleyball Courts[2,3]						
UCB Student Athletes[4]	20	19	1	1.0	1	2
UCB Staff[5]	5	3	2	1.0	2	4
UCB Students[4]	75	71	4	1.0	4	8
Total New Participants	*100*					*14*
Proposed Project Total					**7**	**14**

Notes:

1. Total vehicles based on an Average Vehicle Occupancy (AVO).
2. While the beach volleyball courts would accommodate an increase in athletics participants, it would not increase the UC Berkeley student, faculty, and staff population.
3. Trip generation estimates and data based on information provided by UC Berkeley for the average participants during typical use of the facilities.
4. Approximately 5 percent of UC Berkeley students (and athletes) drive alone (AVO = 1.0). UC Berkeley 2019 Transportation Survey data, reflecting only the population that commutes; summarized by Fehr & Peers, 2020 within the UC Berkeley 2021 LRDP and Housing Projects #1 and #2 DEIR, 2021.
5. Approximately 44 percent of UC Berkeley employees drive alone (AVO = 1.0). UC Berkeley 2019 Transportation Survey data, reflecting only the population that commutes; summarized by Fehr & Peers, 2020 within the UC Berkeley 2021 LRDP and Housing Projects #1 and #2 DEIR, 2021.

Typical Event. For a typical competitive match event held at the beach volleyball courts, a spectator crowd of up to 75 persons and 70 game participants (including players, coaches, and staff) for a total of 145 persons was assessed (see Table 4.6-1). This is based on the typical size of existing beach volleyball matches (see Chapter 3, Project Description) but also accounts for the increase in the number of sand courts with the proposed project (four new courts). For the typical match event, the beach volleyball courts would be utilized for women's volleyball matches only, and therefore would include UC Berkeley student athletes and staff, visiting student athletes and

staff, and spectators only. Trip generation estimates, and data is based on information provided by UC Berkeley for the typical event during normal gameday use of the facilities, as described in Chapter 3, Project Description.

Using data from prior travel surveys for similar uses, specifically surveys conducted for the Softball Field Project at the Hill Campus West, it was determined that a large number of spectators could drive to the proposed beach volleyball courts project site during sporting events (approximately 94 percent of spectators could drive, with approximately 3.1 persons per vehicle) (UC Berkeley 2020). It is important to note that the survey was conducted for a women's softball game and included an opponent from a large university local to the Bay Area. Additionally, the location of the softball field at the Hill Campus along Centennial Drive is further away from dedicated transit routes and walkability would be estimated to be less when compared to the CKC and the location of the proposed project. However, the survey was utilized to provide a conservative assessment of the typical weekday event for the proposed project and for the maximum event below but likely overestimates trip generation for the proposed beach volleyball courts. UC Berkeley is interested in obtaining project-specific travel survey information for IA beach volleyball matches so that the trip generation for game day events can be refined; however, representative conditions have not been in place since the onset of the COVID-19 Pandemic in 2020. Table 4.6-3 shows the estimated project trip generation for a typical gameday event.

TABLE 4.6-3. PROJECT TRIP GENERATION FROM TYPICAL EVENT

Participant Type	Daily No. of Persons	Non-Vehicle Travel	Vehicle Travel	AVO[1]	Daily No. of Vehicles	Daily Vehicle Trips
New Beach Volleyball Courts[2,3]						
UCB Student Athletes[4]	20	19	1	1.0	1	2
Visiting Student Athletes[5]	20	0	20	10.0	2	4
UCB Staff[6]	15	8	7	1.0	7	14
Visiting Staff[5]	15	0	15	10.0	2	4
Spectators[7]	75	5	71	3.1	23	46
Total New Participants and Spectators	*145*					*70*
Proposed Project Total					**35**	**70**

Notes:

1. Total vehicles based on an Average Vehicle Occupancy (AVO).
2. While the beach volleyball courts would accommodate an increase in athletics participants, it would not increase the UC Berkeley student, faculty and staff population.
3. Trip generation estimates and data based on information provided by UC Berkeley for the typical number of participants during standard use of the facilities.
4. Approximately 5 percent of UC Berkeley students (athletes) drive alone (AVO = 1.0). UC Berkeley 2019 Transportation Survey data, reflecting only the population that commutes; summarized by Fehr & Peers, 2020 within the UC Berkeley 2021 LRDP and Housing Projects #1 and #2 DEIR, 2021.
5. Visiting student athletes and staff would be expected to arrive to the site by either bus or van. In order to provide a conservative estimate, an AVO of 10.0 was utilized.
6. Approximately 44 percent of UC Berkeley employees drive alone (AVO = 1.0). UC Berkeley 2019 Transportation Survey data, reflecting only the population that commutes; summarized by Fehr & Peers, 2020 within the UC Berkeley 2021 LRDP and Housing Projects #1 and #2 DEIR, 2021.
7. Approximately 94 percent of spectators drive, with AVO of 3.1. This is based on trip data provided in Addendum to the UC Berkeley 2020 LRDP EIR for Levine-Fricke Softball Field Improvements Project, 2020.

As shown in Table 4.6-3, during the occurrence of a typical gameday event, out of the approximately 145 daily participants and spectators (see Table 4.6-1) and after accounting for the proportion of participants and spectators that would drive to the site, there would be 35 total vehicles that would drive to the project site, resulting in 70 total daily vehicle trips.

Maximum Event. During collegiate competitions, the maximum capacity that the proposed beach volleyball courts project site would be able to accommodate is approximately 400 participants and spectators (see Table 4.6-1). Women's beach volleyball match events typically draw 50 to 75 spectators and participants at the existing courts, but to provide for a conservative analysis the actual physical capacity of the site to accommodate participants and spectators was used in this analysis. The frequency of such events is expected to occur up to 14 times per year and is intended to provide a conservative assessment of the maximum potential impact of the proposed project based on the type of uses described. For a maximum event day, the beach volleyball courts would be utilized for women's volleyball matches, and therefore would include UC Berkeley student athletes and staff, visiting student athletes and staff, and spectators. Trip generation estimates and data is based on information provided by UC Berkeley for the maximum event during greatest use of the facilities (see Chapter 3, Project Description). Prior travel survey data as described above, was also used in the trip generation estimates below. Table 4.6-4 shows the estimated project trip generation for a maximum event.

TABLE 4.6-4. PROJECT TRIP GENERATION FROM MAXIMUM EVENT

Participant Type	Daily No. of Persons	Non-Vehicle Travel	Vehicle Travel	AVO[1]	Daily No. of Vehicles	Daily Vehicle Trips
New Beach Volleyball Courts[2,3]						
UCB Student Athletes[4]	20	19	1	1.0	1	2
Visiting Student Athletes[5]	20	0	20	10.0	2	4
UCB Staff[6]	15	8	7	1.0	7	14
Visiting Staff[5]	15	0	15	10.0	2	4
Spectators[7]	330	20	310	3.1	100	200
Total New Participants and Spectators	*400*					*224*
Proposed Project Total					**112**	**224**

Notes:

1. Total vehicles based on an Average Vehicle Occupancy (AVO).
2. While the beach volleyball courts would accommodate an increase in athletics participants, it would not increase the UC Berkeley student, faculty and staff population.
3. Trip generation estimates and data based on information provided by UC Berkeley for the maximum number of participants during peak use of the facilities.
4. Approximately 5 percent of UC Berkeley students (athletes) drive alone (AVO = 1.0). UC Berkeley 2019 Transportation Survey data, reflecting only the population that commutes; summarized by Fehr & Peers, 2020 within the UC Berkeley 2021 LRDP and Housing Projects #1 and #2 DEIR, 2021.
5. Visiting student athletes and staff would be expected to arrive to the site by either bus or van. In order to provide a conservative estimate, an AVO of 10.0 was utilized.
6. Approximately 44 percent of UC Berkeley employees drive alone (AVO = 1.0). UC Berkeley 2019 Transportation Survey data, reflecting only the population that commutes; summarized by Fehr & Peers, 2020 within the UC Berkeley 2021 LRDP and Housing Projects #1 and #2 DEIR, 2021.
7. Approximately 94 percent of spectators drive, with AVO of 3.1. This is based on trip data provided in Addendum to the UC Berkeley 2020 LRDP EIR for Levine-Fricke Softball Field Improvements Project, 2020.

As shown in Table 4.6-4, during the occurrence of a maximum event, out of the approximately 400 daily participants and spectators, and after accounting for the proportion of participants and spectators that would drive to the site, there would be 112 total vehicles that would drive to the project site, resulting in 224 total daily vehicle trips.

Project Transportation Demand Management Measures

As indicated in Chapter 3, Project Description, the project includes game-day transportation demand management (TDM) measures that would reduce trip generation and associated automobile congestion, increase pedestrian and bicycle use, and encourage transit with the implementation of the proposed beach volleyball courts (see Impact TRA-1 for details). However, it is not possible to accurately assess the trip reduction associated with these TDM

measures and therefore they were not considered in the trip generation estimates presented in Tables 4.6-2 through 4.6-4.

VMT Screening and Analysis

The OPR guidelines and applicable VMT screening criteria are used in the analysis in Section 4.6.3.3, Impact Analysis, to determine whether the proposed project could have a potentially significant VMT impact. As indicated in Section 4.6.2, Regulatory Framework, City of Berkeley VMT guidelines are described and provided so that UC Berkeley may consider the policies related to VMT in the evaluation of the proposed project. As indicated in the same section, analysis of smaller, less complex projects can be simplified by using a VMT screening process identified in the OPR Technical Advisory. OPR suggests that screening criteria may be applied to identify when land use projects can be expected to cause a less-than-significant VMT impact, without needing to conduct a detailed VMT analysis. Screening is an option but is not mandatory. Land use projects that meet at least one of the screening criteria presented previously are presumed to cause a less-than-significant VMT impact and would not require further VMT analysis. Since the proposed project is not either a residential or office project, the only applicable OPR screening criteria are those related to small projects and proximity to transit stations. Therefore, these criteria are used in the analysis of the proposed project. See Section 4.6.2, Regulatory Framework, for all VMT screening criteria.

APPLICABILITY OF 1979 FINAL EIR MITIGATION MEASURES

The university adopted mitigation measures in its 1979 Final EIR for the Dwight-Derby Site Plan, which included the Draft EIR, when it acquired the CKC in 1982 ("1979 mitigation measures"). As applicable to the proposed project, the 1979 mitigation measures are either retained as is, or are revised and/or replaced based on a finding of infeasibility backed by substantial evidence. Appendix C contains a list of the 1979 mitigation measures, including their applicability to the proposed project, and where relevant, proposed revisions and/or replacement of several of these mitigation measures are provided to make them feasible[5] to implement through the inclusion of objective performance standards. Some of these measures do not provide objective performance standards, do not reflect CEQA best practices for mitigation, and are otherwise outdated and obsolete. For the 1979 mitigation measures that have been revised and/or replaced in this Draft EIR, Appendix C provides substantial evidence demonstrating the infeasibility of these 1979 mitigation measures, and the effectiveness of these revised mitigation measures in eliminating or reducing the applicable potentially significant environmental impact relative to the 1979 mitigation measures being modified or replaced.

Table 4.6-5 summarizes the 1979 mitigation measures pertaining to transportation, as well as any proposed revisions and/or replacements to those measures. The table is based on the numbered list of 1979 mitigation measures from 1979 Draft EIR Chapter XII. As indicated in the table, most of the 1979 mitigation measures are not applicable to the proposed project. While mitigation measure 24.f is applicable, it is being implemented as part of the proposed project, as described in Chapter 3, Project Description. Project-specific mitigation measures may be included in Section 4.6.3.3, Impact Analysis, where feasible and necessary to reduce potentially significant impacts.

[5] As indicated in CEQA Guidelines Section 15364, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

TABLE 4.6-5. APPLICABLE 1979 MITIGATION MEASURES FOR TRANSPORTATION AND PROPOSED REVISIONS

1979 Mitigation Measure Applicable to Proposed Project	Applicable to the Proposed Project?	Substantial Evidence for Revised or New Mitigation Measure	Revised or New Mitigation Measure
24.a. Approximately 19,000 vehicles per day would be shifted from Derby and Warring Streets if a new road across the site is constructed; traffic conditions on Belrose would remain unchanged. Consideration would have to be given to traffic signals at the Belrose-Derby-New Road-Tanglewood intersection, and at the intersection of Warring and the new road if such a road was constructed.	No The cross-campus road was never constructed; the proposed project does not involve a new road. As such, no traffic signals or intersections would be constructed.	NA	NA
24.b. The University will consider controlling through traffic on Gayley Road and on Centennial Drive on the campus to reduce the use of the Belrose-Derby corridor.	No This mitigation measure applies outside of the CKC and not to the project site. Considering the size and scope of the proposed project, University control on Galey Road and Centennial Drive would not be needed since alternative routes for traffic currently exist.	NA	NA
24.c. The university will ask the City of Berkeley to consider providing left turn lanes into the Schools' site from Derby Street and will consider widening the driveways on the site to provide for two-way traffic.	No This mitigation measure is not needed for the proposed project, and two-way traffic is presently available for many driveways and internal roadways of the CKC.	NA	NA
24.d. If a diagonal road is constructed across the site, consideration would be given to providing curb parking. This would require that the road be wider than necessary only for moving traffic.	No The cross-campus road was never constructed; the proposed project does not involve or require a new road.	NA	NA
24.e. The supply of parking on the site will be increased to meet the total possible parking demand. This would require approximately 100 new spaces for Alternative A, 200 for Alternative B and 400 for Alternative C – Alternative C would probably require the construction of a parking structure.	No This mitigation measure is no longer applicable. The CEQA Guidelines no longer considers parking demand in excess of supply a significant environmental impact. Additionally, although the University never built additional parking spaces at the CKC, recent parking surveys indicate that existing parking spaces at the CKC are only approximately 30 percent occupied during peak hours (see Section 4.6.1.4, Parking).	NA	NA
24.f. Staff members will be encouraged to take alternative means of transportation other than the auto.	Yes The proposed project would not result in the hiring of new staff. However, the mitigation measure would be implemented as part of the proposed project as it would implement project-specific Transportation Demand Management (TDM) measures, as described in Chapter 3, Project Description. Additionally, UC Berkeley is already implementing a comprehensive TDM program and recent surveys indicate that 44 percent of UC Berkeley staff drive alone, given the existing university-wide TDM measures that are in place on the campus	NA	NA

TABLE 4.6-5. APPLICABLE 1979 MITIGATION MEASURES FOR TRANSPORTATION AND PROPOSED REVISIONS

1979 Mitigation Measure Applicable to Proposed Project	Applicable to the Proposed Project?	Substantial Evidence for Revised or New Mitigation Measure	Revised or New Mitigation Measure
	(see Section 4.6.1.5, Transportation Demand Management and Mode Share).		
24.g. Shorter transit headway will likely increase use of transit to the Schools' site. The University will request AC transit to extend Route E to the site, shift Route 65 from Haste and Dwight Way to Bancroft and Durant Streets and shift Route 37 from Ashby and Adeline to the project site and then via Bancroft and Durant Streets.	No Transit routes and associated number and letter references have changed substantially since the 1979 Dwight-Derby Site Plan EIR was prepared and certified. The CKC is currently serviced by Route 79 and UC Berkeley Bear Transit Routes. The proposed project would be expected to marginally increase transit use in the vicinity of the proposed project but would not require adjustments or alternations to existing transit routes (see Impact TRA-1 in Section 4.6.3.3, Impact Analysis).	NA	NA
24.h. If AC Transit will not implement the above service changes, the University will consider providing a shuttle service between the Schools, the campus, and public transit.	No The CKC is currently served by Route 79 and UC Berkeley Bear Transit Routes. No additional shuttle service is required (see Impact TRA-1 in Section 4.6.3.3, Impact Analysis).	NA	NA

Source: UC Berkeley 1979 and Appendix C.

4.6.3.3 IMPACT ANALYSIS

Impact TRA-1 Conflict with a Program, Plan, Ordinance, or Policy Addressing the Circulation System (Significance Standard A). The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. ***(Less than Significant)***

CONSTRUCTION

Project construction at both projects sites is expected to occur during weekdays, Monday to Friday, from 7:00 a.m. to 7:00 p.m., with limited weekend hours if needed, consistent with the City of Berkeley noise ordinance. Construction would occur over a combined 8-month period starting in the 2022. Specifically, construction of the new beach volley courts would occur over approximately 6 months and the demolition and related work on Building 21 would occur over approximately 8 months. Construction on the two sites would be concurrent with work on the Building 21 site extending beyond completion of the new beach volleyball courts.

Construction traffic is expected to minimally impact the existing roadways and would not require full or partial roadway closures. Regional construction traffic is expected to travel to the project sites by utilizing California State Highway 24, Interstates 80, 580, 880 and 980, while local construction traffic would utilize designated City of Berkeley truck routes, along Shattuck Avenue, Ashby Avenue, Piedmont Avenue, Warring Street, Derby Street, and Belrose Avenue (City of Berkeley – Transportation Division, 2017). All construction traffic staging would be located as close to the project sites as possible and would not create any roadway closures along any of the internal roadways within the CKC such as Sports Lane, Eastway Drive, and Southwest Place.

It should be noted that all construction traffic would be temporary and would not create any permanent changes to the circulation system within the vicinity of the project sites. Construction would adhere and comply with all applicable City and UC Berkeley guidelines including the UC Berkeley Campus Design Standards, as described in Chapter 4.6.2, Regulatory Framework. Additionally, as part of the proposed project, UC Berkeley would implement the transportation (TRAN) CBPs listed here (see Appendix D):

- **CBP TRAN-5:** UC Berkeley will require contractors working on major new construction or major renovation projects to develop and implement a Construction Traffic Management Plan that reduces construction-period impacts on circulation and parking within the vicinity of the project site. The Construction Traffic Management Plan will address job-site access, vehicle circulation, bicycle and pedestrian safety, and be coordinated with the City of Berkeley Public Works Department when projects require temporary modifications to city streets.
- **CBP TRAN-6:** 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 morning (AM) and evening (PM) peak traffic periods (7:00 to 9:00 a.m. and 4:00 to 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.
  - Identifying bicycle and pedestrian detours and safety plan, including solutions to address impacts to accessible routes.
- **CBP TRAN-7:** 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.
- **CBP TRAN-8:** UC Berkeley will reimburse the City of Berkeley for its fair share of costs associated with damage to City streets from UC Berkeley construction activities, provided that the City adopts a policy for such reimbursements applicable to all development projects within Berkeley.

These CBPs would minimize construction transportation impacts and would not create additional impacts. Therefore, the construction of the proposed project would not result in a conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

OPERATION

Building 21 Partial Demolition

The continued use of the remainder of Building 21 for storage of materials and supplies would not alter the existing (baseline) transportation system associated with current storage activities in the building, or with trucks used to deliver and remove stored materials from the building, as such uses would not change with the proposed project.

Therefore, the Building 21 partial demolition would not conflict with any of the existing or future programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, described in Section 4.6.2, Regulatory Framework, and the impact would be *less than significant.*

Beach Volleyball Courts

The proposed project supports the UC Sustainable Practice Policy and the UC Berkeley Sustainability Plan as it provides gameday TDM measures that continue to encourage a shift away from drive-alone vehicle trips, which are a primary contributor to GHG emissions and localized transportation impacts. In coordination with the UC Berkeley Parking and Transportation Department, IA has developed gameday TDM measures for the proposed project (see Chapter 3, Project Description). The TDM measures include the following:

- Visiting team's athletes and associated staff will arrive via bus or vans to the courts, where they will be dropped off. The bus or van will then be routed to the Underhill parking lot. Each school is responsible for its own travel.
- Publicize and continue communication on game day transportation related information:
  - IA will advertise transit and parking information for game day events on their website.
  - UC Berkeley Parking and Transportation lists all parking and transit options on their website, pt.berkeley.edu. Visitors will find details on getting from the BART station through this website.

Additionally, as part of the proposed project, UC Berkeley would implement CBP TRAN-1 listed here (see Appendix D):

- **CBP TRAN-1:** UC Berkeley will implement bicycle, pedestrian, and transit access and circulation improvements as part of new building projects, major renovations, and landscape projects. Improvements will address the goal of increasing non-vehicular commuting and safety; improving access from adjacent campus or city streets and public transit; reducing multi-modal conflict; providing bicycle parking; and providing commuter amenities.

As part of this CBP, the proposed project provides adequate pedestrian, bicycle and emergency access from surrounding streets and internal pathways to allow for access on the beach volleyball courts site (see Figure 3-3, Chapter 3, Project Description). Additionally, the proposed project includes the installation of eight bike racks and eight bicycle lockers at the beach volleyball courts site.

The analysis of potential conflicts with programs, plans, ordinances, and policies addressing the circulation system, considers typical weekday use, and typical and maximum event matches.

Typical Weekday Use

As shown in Table 4.6-2, the relatively small number of vehicles (approximately 7 vehicles, consisting of 14 total vehicle trips during the course of the day) that would be generated during the typical weekday use of the proposed project would not substantially change or alter the existing roadway network. Specifically, the number of vehicle trips estimated would add a nominal amount of congestion to local roadways near the campus.

Vehicles would use existing parking on the CKC, or other nearby roadways such as Dwight Way, Derby Street, and Warring Street, which allow for non-permitted two-hour parking (subject to special zones, gamedays, and street cleaning). Vehicle parking available in the CKC visitor parking lots totals approximately 330 marked parking spaces (see Section 4.6.1.4, Parking). The northwest lot is indirectly accessible from Dwight Way (to access the North Street driveway entrance) and the southwest lot is directly accessible from Warring Street. Existing parking spaces

throughout the CKC would be available for visitor use on a pay-per-spot basis (existing metered parking). The existing parking lots on the CKC are approximately 30 percent full at peak times of the week and day and therefore provide an adequate supply for parking to limit unnecessary roadway congestion surrounding the project site. The approximately 100 expected participants on a typical weekday (see Table 4.6-1) would be spread out throughout the operational hours of the proposed project and any conflicts with existing policies or programs concerning circulation system improvements or changes, would be nominal. Existing transit, bicycle, and pedestrian facilities would also be sufficient and would not require additional capacity or improvements due to the proposed project. Therefore, for typical weekday use, the operation of the proposed beach volleyball courts project would not conflict with any of the existing UC or local programs, plans, ordinances, policies, or practices addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, described in Section 4.6.2, Regulatory Framework and the impact would be *less than significant*.

Typical and Maximum Events

For typical match events approximately 35 vehicles, consisting of 70 total vehicle trips during the day would be generated (see Table 4.6-3). For maximum capacity gameday events approximately 112 vehicles, consisting of 224 total vehicle trips during the day would be generated (see Table 4.6-4). As indicated above, gameday parking for both typical and maximum events would be provided on the CKC and at the Underhill Parking Garage, located approximately 0.3 miles northwest of the proposed project site. Gameday TDM measures described above would be implemented.

The number of pedestrians and bicyclists accessing the beach volleyball courts are expected to fluctuate depending on the type of gameday event. However, the current pedestrian and bicycle infrastructure is sufficient for the estimated number of pedestrians and bicyclists expected with the operation of the proposed project. Spectators that park at the Underhill Parking Garage, may choose to walk to the project site. All sidewalks along Haste Street, College Avenue, and Dwight Way are adequate and uninterrupted, and crosswalks at intersections are clearly marked. Participants and spectators would be expected to use existing and new bicycle parking available on the CKC. The proposed project includes the installation of eight bike racks and eight bicycle lockers at the beach volleyball courts site. Transit users would be expected to remain at levels that would not cause constraints on the existing local and regional transit system. Therefore, during typical events and maximum capacity events, the operation of the proposed beach volleyball courts project would not conflict with any of the existing UC or local programs, plans, ordinances, policies or practices addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, described in Chapter 4.6.2, Regulatory Framework and the impact would be *less than significant*.

Significance without Mitigation: Less than significant.

MITIGATION MEASURES

As described above, the proposed project would not result in significant impacts related to conflicts with existing programs, plans, ordinances, or policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities, and therefore, no mitigation measures are required.

Impact TRA-2 Vehicle Miles Traveled (Significance Standard B). The proposed project could conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b). *(Potentially Significant)*

CONSTRUCTION

CEQA Guidelines Section 15064.3(b) focuses on VMT for determining the significance of transportation impacts. It is further divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology. This EIR provides a qualitative analysis of proposed project construction under this Subdivision (b)(3), which recognizes that lead agencies may not be able to quantitatively estimate VMT for every project type. In these situations, lead agencies are directed to evaluate factors such as the availability of transit, proximity to other destinations, and other factors that may affect the amount of driving required by the project. Additionally, Subdivision (b)(3) indicates that a qualitative analysis of construction traffic is often appropriate. A qualitative analysis of VMT is provided in this analysis as the proposed project consists of elements that would generate temporary construction-related traffic.

The CEQA Guidelines do not establish significance thresholds outright, however, the OPR Technical Advisory (OPR 2018) does recommend a VMT threshold of significance for land use development (including residential, office, and other land uses) as well as for transportation projects. However, there is no VMT significance threshold for construction projects. The proposed project would involve construction that would generate temporary construction-related traffic during the combined 8-month project construction period and would consist of construction activities that would be temporary in nature. All construction worker and vendor trips would generate VMT, however, once construction is completed, the construction-related traffic would cease and VMT would return to pre-construction conditions. The VMT generated by the construction of the proposed project would be short-term and temporary and would not require a detailed VMT analysis. Therefore, as the construction of the proposed project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b), construction VMT impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

OPERATION

Building 21 Partial Demolition

The continued use of the remainder of Building 21 for storage of materials and supplies would not alter the existing (baseline) transportation system associated with current storage activities in the building, or with trucks used to deliver and remove stored materials from the building, as such uses would not change with the proposed project. VMT impacts associated with the remaining preserved portion of Building 21 would therefore be *less than significant*.

Significance without Mitigation: Less than significant.

Beach Volleyball Courts

VMT Screening

According to the OPR Technical Advisory, the VMT screening criteria listed in Table 4.6-6 are applicable to the proposed project and are evaluated in the table and analysis below. If one or more of the project scenarios (e.g., typical weekday, typical event, and maximum event) meet at least one of the screening criteria the VMT impact would be presumed to be less than significant and would not require VMT analysis.

While there is abundant transit within the area of the proposed beach volleyball project, and portions of the CKC are partially located within an existing TPA, the exact location of the proposed project within the CKC is not located within a TPA. Therefore, the proposed project would not meet the proximity to transit screening criteria based on its location in relation to a TPA.

The screening criteria for small projects states that projects that generate 110 daily trips or less may be considered small projects. During a typical weekday the proposed project would generate 14 daily vehicle trips (see Table 4.6-2), and during a typical event the proposed project would generate 70 daily vehicle trips (see Table 4.6-3). Therefore, under these two scenarios the proposed project would be considered a small project meeting the small project screening criteria and VMT impacts related to those scenarios can be presumed to be less than significant. However, under a maximum event condition with a match at full capacity, the proposed project would generate approximately 224 daily vehicle trips (see Table 4.6-4). Therefore, with a maximum event, the proposed project cannot be screened out under the small projects screening criteria.

Since the proposed project is located on the CKC and the new beach volleyball courts would be available for use by the broader community on a reservation basis, consistent with the current reservation practices of IA, the project can be considered a locally serving public facility during typical weekday use and typical events and this use would meet the screening criteria. However, during larger events (i.e., maximum events), the proposed project would likely draw traffic from outside of the local area and could generate vehicle trips from a wider regional area. Therefore, with the maximum events, the proposed project cannot be screened out under the local serving screening criteria.

TABLE 4.6-6. VMT SCREENING FOR PROPOSED BEACH VOLLEYBALL COURTS

Applicable VMT Screening Criteria	Would Beach Volleyball Courts Meet VMT Screening Criteria?		
	Typical Weekday Use (100 Participants)	Typical Event (145 Spectators and Participants)	Maximum Event (400 Spectators and Participants)
Small Projects: Projects that generate or attract fewer than 110 trips per day.	Yes	Yes	No
Locally Serving Public Facility: Projects that consist of public facilities that service the local community.	Yes	Yes	No
Proximity to Transit: Projects located within ½-mile within an existing major transit stop or an existing stop along a high-quality transit corridor (within a TPA). If confirmed, additional project characteristics must apply.	No	No	No

Source: OPR 2018.

Typical Weekday Use and Typical Event

As described above and shown in Table 4.6-6, the proposed project would provide locally serving uses during typical weekday use and typical events consistent with the local serving screening criteria and would generate a low level of vehicular traffic consistent with the small project screening criteria. Therefore, additional VMT analysis would not be required for both typical weekday use and typical events given that these screening criteria would be met and the VMT impact for these uses would be *less than significant*.

Maximum Event

Maximum events, which could occur infrequently (up to 14 or fewer instances per year), cannot be screened out from VMT analysis since the number of vehicle trips could be higher than that of the small project screening criteria and would have the potential to draw both local and regional traffic. As indicated in Section 4.6.3.2, Analytical Methods, the trip generation estimates for both a typical and maximum event for spectators was based on a survey conducted for the Softball Field Project at the Hill Campus West. Applying the results of that survey indicates that a large number of spectators could drive to the proposed beach volleyball courts project site during sporting events (approximately 94 percent of spectators could drive, with approximately 3.1 persons per vehicle) (UC Berkeley 2020). However, it cannot be stated with certainty that the proposed project would also result in 94 percent of spectators driving to the beach volleyball courts project site, given that the project site is closer to dedicated transit routes than the softball field at the Hill Campus West. If the proposed project were to yield 40 percent or fewer spectators driving to the site, instead of 94 percent per the 2020 Softball Field Project survey (UC Berkeley 2020), then the number of daily vehicle trips with the proposed project would qualify as a small project (generating 110 or fewer daily trips) and could be screened out from further VMT analysis. Regardless, the survey conducted for the Softball Field Project was used to provide a conservative assessment of both typical events and maximum events but likely overestimates trip generation for the proposed beach volleyball courts.

As indicated in Impact TRA-1, the proposed project includes gameday TDM measures that would be implemented to reduce automobile congestion, increase pedestrian and bicycle use, encourage transit and promote the fact that the CKC is partially within a TPA and has many transit options in proximity. However, as indicated in Section 4.6.3.2, Analytical Methods, it is not possible to accurately assess the reduction in trip generation that the TDM measures may have during a maximum event and therefore the trip generation estimates for the maximum event do not include reductions for TDM.

The OPR Technical Advisory does not have a process or methodology to analyze VMT associated with infrequent sporting events that may generate regional traffic. Additionally, the Alameda County Transportation Commission model would not be capable of analyzing a sporting event that would vary in intensity and provide a relatively small number of daily regional vehicle trips. As a result, a quantitative VMT analysis cannot be conducted for the proposed beach volleyball courts and a qualitative analysis must be performed under this Subdivision (b)(3), which recognizes that lead agencies may not be able to quantitatively estimate VMT for every project type. While the beach volleyball courts would be located near some transit services, the site is not within a TPA and associated high-quality transit corridor that would function to minimize VMT. Additionally, it is unclear whether and to what extent the project could result in VMT associated with regional vehicle trips that may be drawn to the site on maximum event days. Therefore, to be conservative a, maximum events associated with the proposed project could conflict or be inconsistent with CEQA Guidelines Section 150645.3, Subdivision (b), even with the implementation of the proposed gameday TDM measures (see Impact TRA-1), and the VMT impact would be *potentially significant*.

Significance without Mitigation: Potentially significant (maximum event only).

MITIGATION MEASURES

MM TRA-1: UC Berkeley shall monitor spectator attendance during representative maximum event beach volleyball matches (e.g., one night match and one day match per season) at the new beach volleyball courts to estimate average and maximum participants and spectators to determine whether the maximum event described above with up to 400 participants and spectators occurs on the project site and to determine travel mode used by participants and spectators. Such

monitoring shall take place on the beach volleyball courts site, at the entrance(s) as spectators arrive, and shall take place over a two-year period after the courts are in operation. UC Berkeley shall also monitor the implementation of the gameday TDM measures over the same two-year period and will refine such measures where warranted and feasible to improve gameday access, minimize vehicle congestion on surrounding roadways, and maximize use of alternative modes of transportation to the project site on game days.

Significance with Mitigation: Significant and unavoidable (maximum event only). The proposed project would not cause a significant impact related to VMT as a result of the typical weekday use and the typical event as such use would generate a low level of vehicular traffic consistent with the small project screening criteria (fewer than 110 vehicle trips per day). These use scenarios are representative of typical use of the new volleyball courts, based on the typical size of existing beach volleyball matches, but also accounting for the increase in the number of sand courts with the proposed project (four new courts). However, to be conservative, maximum events were determined to have a potentially significant VMT impact.

The implementation of MM TRA-1 would provide information to UC Berkeley about the average and maximum participants and spectators to determine whether the maximum event occurs on the project site. It would also establish the travel mode used by participants and spectators. As indicated previously, UC Berkeley is interested in obtaining project-specific travel survey information for IA beach volleyball matches so that the trip generation for game day events can be refined; however, representative conditions have not been in place since the onset of the COVID-19 Pandemic in 2020. Obtaining the average and maximum number of participants and spectators, along with travel mode used, would allow UC Berkeley to determine if the number of daily vehicle trips associated with a representative maximum event for the proposed project would qualify as a small project (generating 110 or fewer daily trips), resulting in a VMT impact that would be less than significant. As indicated above, if the proposed project were to yield 40 percent or fewer spectators driving to the site, instead of 94 percent per the Softball Field Project survey, then the number of daily vehicle trips with the proposed project would qualify as a small project and the VMT impact would be less than significant. However, such a result cannot be presumed. The mitigation measure also provides for monitoring of the gameday TDM measures and will refine such measures where warranted and feasible to improve gameday access, minimize vehicle congestion on surrounding roadways, and maximize use of alternative modes of transportation to the project site on game days. However, if maximum events with 94 percent drive rate for spectators occur on the site the mitigation measure would not ensure that trip generation and associated VMT would be reduced to less than significant. Therefore, the impact associated with maximum events would be *significant and unavoidable*.

Impact TRA-3 Geometric Design Hazards (Significance Standard C). The proposed project would not substantially increase hazards due to a geometric design feature or incompatible use. *(Less than Significant)*

CONSTRUCTION

As described previously, construction of the proposed project would result in a temporary increase in local traffic as a result of construction-related workforce traffic, material deliveries, and construction activities. Construction of the proposed project would occur over a combined 8-month period and would not require full or partial roadway closures. Any hazards related to construction would be minimized as described below and construction staging would be confined to the project sites, or immediately adjacent to the project sites. All construction of the proposed project would comply with all relevant City of Berkeley and UC Berkeley policies related to construction, and transportation CBPs related to construction would be implemented as part of the proposed project, as described in

Impact TRA-1. Therefore, a Construction Traffic Management Plan would be required to manage hazards arising from construction equipment and construction vehicles. The Construction Traffic Management Plan will address job-site access, vehicle circulation, bicycle, and pedestrian safety, and be coordinated with the City of Berkeley Public Works Department if City streets would be affected. The locations of all internal CKC roadways would remain unchanged and there would not be any new sharp curves or hazardous conditions as a result of construction. The proposed project would not entail the introduction of incompatible uses along any of the roadways adjacent to the project sites. Therefore, as construction of the proposed project would not introduce hazardous design features or incompatible land uses, impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

OPERATION

Building 21 Partial Demolition

The continued use of the remainder of Building 21 for storage of materials and supplies would not alter the existing (baseline) transportation system associated with current storage activities in the building, or with trucks used to deliver and remove stored materials from the building, as such uses would not change with the proposed project. While the proposed project would include a new driveway and loading area, based on review of the site plan (see Figure 3-6 in Chapter 3, Project Description), these facilities would not substantially increase hazards due to a geometric design feature or incompatible use. Therefore, the impacts associated with hazards due to a geometric design feature or incompatible use would be *less than significant*.

Significance without Mitigation: Less than significant.

Beach Volleyball Courts

The beach volleyball courts would replace the existing softball field at the CKC and would not be considered an incompatible use of the existing site. This component of the project would not result in any physical changes to existing roadways surrounding the site. Upon review of the site plan (see Figure 3-3 in Chapter 3, Project Description), the project would include a series of publicly accessible routes to and from the project site, as well as a new vehicle access driveway. All publicly accessible routes would be reachable from the main points of arrival, such as along Dwight Way, and the main pedestrian gate west of Sports Lane. The new driveway component of the proposed project would be for service and emergency vehicle access only and would not create roadway hazards to adjacent roadways and sidewalks.

Overall, the proposed project site would not introduce any new geometric designs or hazardous roadway conditions on or adjacent to the project site, or along the internal roadways of the CKC. Therefore, the operation of the proposed beach volleyball courts would not introduce hazardous design features or incompatible land uses, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

MITIGATION MEASURES

As described above, the proposed project would not result in significant impacts related to hazardous design features or incompatible land uses, and therefore, no mitigation measures are required.

Impact TRA-4 Emergency Access (Significance Standard D). The proposed project would not result in inadequate emergency access. ***(Less than Significant)***

CONSTRUCTION

Project construction is expected to minimally impact existing roadways near the project sites and would not require partial or full closures of existing roads. All project construction traffic is expected to provide staging located on or as close to the project sites as possible and would not create any roadway closures along any of the internal roadways within the CKC such as Sports Lane, Eastway Drive, and Southwest Place. Construction activities would be temporary and would be completely eliminated from the roadway network upon completion of the combined 8-month construction period. Most traffic signals in the vicinity of the UC Berkeley campus area have emergency vehicle preemption, to allow for emergency vehicles to have priority over other vehicles at signalized intersections (UC Berkeley 2021c). Additionally, there are three Berkeley Fire Department stations serving the UC Berkeley campus (Berkeley Fire Stations 2, 3, and 5). The nearest Berkeley Fire Department station to the CKC is Fire Station 3, located at 2710 Russell Street, approximately one-half mile southwest of the project sites.

Existing emergency access to the surrounding neighborhood would be preserved and impacts to emergency access minimized through adherence to all UC Berkeley and City of Berkeley policies relating to access for emergency vehicles. All exiting emergency access routes to and from the project sites would be minimally impeded by construction traffic, and construction traffic would be required to utilize existing truck routes. Additionally, the transportation CBPs related to construction would be implemented as part of the proposed project, as described in Impact TRA-1, which would require a Construction Traffic Management Plan to maintain adequate emergency access. Therefore, construction of the proposed project would not obstruct emergency access and impacts associated with inadequate emergency access would be *less than significant*.

Significance without Mitigation: Less than significant.

OPERATION

Building 21 Partial Demolition

The continued use of the remainder of Building 21 for storage of materials and supplies would not alter the existing (baseline) transportation system associated with current storage activities in the building, or with trucks used to deliver and remove stored materials from the building, as such uses would not change with the proposed project. Therefore, the impacts associated with emergency access would be *less than significant*.

Significance without Mitigation: Less than significant.

Beach Volleyball Courts

This component of the project would not result in any physical changes to existing roadways surrounding the site that would adversely affect emergency access. While this project component includes a new vehicle access driveway, this driveway would be for service and emergency vehicle access only and would not cause roadway hazards to adjacent roadways and sidewalks that would affect emergency access.

As discussed previously, the operation of the proposed project would vary based on the type of event occurring and the day of the week. Typical weekday uses associated with the proposed project would generate a nominal amount of daily traffic and would, therefore, have a nominal impact on emergency access for the surrounding area and at the

location of the beach volleyball courts site. A typical event would generate approximately 70 total daily vehicle trips and a maximum event would generate approximately 224 total daily vehicle trips (see Tables 4.6-3 and 4.6-4, respectively). Participants and spectators that drive to events could park at the existing CKC parking lots or at the Underhill Parking Garage, as indicated previously. Periods directly prior to and post events would generate the highest concentration of traffic along Dwight Way, Warring Street, and the surrounding roadway network. However, gameday TDM measures would continue to encourage a shift away from drive-alone vehicle trips and associated congestion that can cause emergency access issues. Due to the expected number of vehicles generated, and the ability to park in multiple locations, emergency vehicle access would be expected to be minimally impacted. Since emergency vehicle access would be minimally impacted, the proposed project would adhere to existing UC Berkeley and City of Berkeley policies, and would implement CBP TRAN-1, the operation of the beach volleyball courts would not obstruct emergency access and impacts associated with inadequate emergency access would be *less than significant*.

Significance without Mitigation: Less than significant.

MITIGATION MEASURES

As described above, the proposed project would not result in significant impacts related to emergency access, and therefore, no mitigation measures are required.

Impact TRA-5 Cumulative Transportation Impacts (Significance Standard E). The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in a significant cumulative impact related to transportation. *(Potentially Significant)*

This section provides an evaluation of cumulative transportation impacts associated with the proposed project and past, present, and reasonably foreseeable future projects, as identified in Table 4.1-1 in Section 4.1, Introduction to Analysis, and as relevant to this topic.

CONSTRUCTION

The geographic area potentially affected by construction-related transportation impacts of the proposed project would be limited to the area near Building 21 and the beach volleyball courts project sites within the CKC. This is due to the limited scale of the construction effort required for each component. There is one cumulative project in Table 4.1-1 in the immediate vicinity of the new beach volleyball courts and the Building 21 site. The cumulative project near the two project sites is the East Bay Municipal Utilities District (EBMUD), Summit Pressure Zone South Pipeline Replacement Phase 1 project. EBMUD will be installing a new pipeline in a segment of Dwight Way between Prospect Street and Piedmont Avenue, which is northwest of the beach volleyball site, and will also replace an existing pipe in the CKC east of the Golden Bear Field, which is east of the beach volleyball site and northeast of Building 21. Other new pipe will be installed west and south of the CKC and at a greater distance from the project sites. It is possible that there could be overlap in the construction periods for the proposed project and the EBMUD project, given the construction schedule for the EBMUD project (Fall 2021 to Spring 2023). However, implementation of CBPs TRAN-5 through TRAN-7 as part of the proposed project require the preparation of Construction Traffic Management Plan (see Impact TRA-1 and Appendix D). Per these CBPs, the Construction Traffic Management Plan would account for potential overlap and associated conflicts with circulation patterns on surrounding roadways.

Therefore, the project would not contribute to potentially significant cumulative construction-related transportation impacts that may arise from implementation of the cumulative projects. As such, the cumulative construction transportation impact of the project would be *less than significant*.

OPERATIONS

The analysis of cumulative transportation impacts related to project operations focuses on VMT and Significance Standard B, which is based on whether the proposed beach volleyball courts would conflict with or be inconsistent with CEQA Guidelines 15064.3, Subdivision (b). As the typical weekday use and typical event would meet VMT screening criteria, cumulative VMT impacts for these activities would also be less than significant, as described in Impact TRA-2.

Both the OPR Technical Advisory and the City of Berkeley VMT guidelines do not have a process or methodology to evaluate cumulative VMT associated with infrequent sporting events that may generate regional traffic. Additionally, the Alameda County Transportation Commission model would not be capable of analyzing a sporting event that would vary in intensity and provide a relatively small number of daily regional vehicle trips. As a result, a quantitative cumulative VMT analysis cannot be conducted for the proposed beach volleyball courts. Therefore, to be conservative, maximum events associated with the proposed project could conflict or be inconsistent with CEQA Guidelines Section 150645.3, Subdivision (b), even with the implementation of the proposed gameday TDM measures (see Impact TRA-1), and the cumulative VMT impact would be potentially significant. With the implementation of MM TRA-1 (see Impact TRA-2), the proposed project would have a considerable contribution to this potentially significant VMT impact. As such, the cumulative impact of the proposed project related to VMT for the maximum event would be *significant and unavoidable*.

4.6.4 REFERENCES

AC Transit (Alameda-Contra Costa Transit District). 2020. *Alameda-Contra Costa Transit District Transit Asset Management Plan.* Accessed July 8, 2021. https://www.actransit.org/sites/default/files/2021-03/AC%20Transit%20Transit%20Asset%20Management%20Plan%20%28Ver%20E%29.pdf

AC Transit. 2021a. “Line E – Tunnel Rd. – Claremont Transbay”. Accessed on August 25, 2021. https://www.actransit.org/sites/default/files/timetable_files/E-2021_08_08.pdf

AC Transit. 2021b. “Line 6 – Berkeley – Telegraph – Oakland”. Accessed on July 8, 2021. https://www.actransit.org/sites/default/files/timetable_files/6-2020_12_20.pdf

AC Transit. 2021c. “Line 51B – University – College – Rockridge”. Accessed on July 8, 2021. https://www.actransit.org/sites/default/files/timetable_files/51B-2020_12_20.pdf

AC Transit. 2021d. “Line 79 – Colusa – The Alameda – Claremont”. Accessed on July 8, 2021. https://www.actransit.org/sites/default/files/timetable_files/79-2020_08_09.pdf

BART (Bay Area Rapid Transit). 2021. “About.” Accessed on June 23, 2021. https://www.bart.gov/about

City of Berkeley. 2001. General Plan Transportation Element. Accessed on August 31, 2021 https://www.cityofberkeley.info/Planning_and_Development/Home/General_Plan_-_Transportation_Element.aspx

City of Berkeley. 2017. *Berkeley Bicycle Plan.* Accessed on July 8, 2021. https://www.cityofberkeley.info/berkeleybikeplan/

City of Berkeley – Department of Public Works Transportation Division. 2017. Restricted Movement of Trucks. Accessed on August 12, 2021. https://www.cityofberkeley.info/uploadedFiles/Public_Works/Level_3_-_Transportation/mapoftruckroutesystem.pdf

City of Berkeley. 2020. City of Berkeley VMT Criteria and Thresholds. Accessed on August 31, 2021. https://www.cityofberkeley.info/uploadedFiles/Planning_and_Development/Level_3_-_Commissions/Commission_for_Planning/2020-09-02_PC_ITEM%2011%20with%20ATTACHMENTS.pdf

MTC (Metropolitan Transportation Commission), Association of Bay Area Governments. 2017. Plan Bay Area 2040. Accessed September 22, 2021. http://2040.planbayarea.org/files/2020-02/Final_Plan_Bay_Area_2040.pdf

OPR (Office of Planning and Research). 2018. *Technical Advisory on Evaluating Transportation Impacts in CEQA*. Accessed August 2021. http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

UC Berkeley (University of California, Berkeley). 1979. Dwight-Derby Site Plan and Final Environmental Impact Report. May 1979.

UC Berkeley. 2004. *2020 University of California Berkeley Long Range Development Plan*. January.

UC Berkeley. 2014. *UC Berkeley Bike Map.* Accessed on July 8, 2021. https://pt.berkeley.edu/sites/default/files/parking-pds-2/parking-pds 2/Campus%20Bike%20Map_2014.pdf

UC Berkeley. 2019. Parking Study. Prepared by National Data & Surveying Services. 9/17/2019-9/18/2019.

UC Berkeley. 2020. *Addendum to the University of California Berkeley Long Range Development Plan Environmental Impact Report for Levine-Fricke Softball Field Improvements Project*. July 2020.

UC Berkeley. 2021a. "Berkeley Parking and Transportation." Accessed on June 23, 2021. https://pt.berkeley.edu/CampusShuttles

UC Berkeley. 2021b. "Berkeley Night Safety Services." Accessed on June 23, 2021. https://nightsafety.berkeley.edu/nightsafety/nightshuttles

UC Berkeley. 2021c. *UC Berkeley 2021 Long Range Development Plan and Housing Projects #1 and #2 Draft Environmental Impact Report (State Clearinghouse Number: 2020040078).* March 2021.

This page intentionally left blank.

5. Other CEQA Considerations

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. The environmental impact report (EIR) must discuss (1) significant environmental effects of the proposed project and mitigation measures proposed to minimize the significant effects, (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, (4) growth-inducing impacts of the proposed project, and (5) alternatives to the proposed project.

The topics covered in this chapter include impacts found to be significant and unavoidable, significant irreversible changes to the environment, and growth-inducing impacts that would occur if the Clark Kerr Campus (CKC) Beach Volleyball Courts Project (project or proposed project) is implemented. An evaluation of the significant environmental effects of the proposed project, applicable mitigation measures, the level of impact significance before and after mitigation, and evaluation of cumulative impacts, is provided in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. Chapter 6, Alternatives, addresses alternatives to the proposed project.

5.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

The CEQA Guidelines require a description of any significant impacts, including those that can be mitigated but not reduced to a level of insignificance (Section 15126.2[c]). Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described. Significant and unavoidable impacts resulting from the proposed project are summarized below.

5.1.1 CULTURAL AND TRIBAL CULTURAL RESOURCES

As indicated in Section 4.3, Cultural and Tribal Cultural Resources, this EIR identified a significant and unavoidable impact associated with built environment resources. As indicated in Impact CUL-1, the proposed project would cause a substantial adverse change in the significance of a historical built environment resource. The impact relates to the partial demolition of Building 21 as part of the proposed project. Specifically, the partial demolition of the Wilkinson Lodge (Building 21) will irreversibly alter one of the few remaining original contributing buildings associated with this specific zone of the NRHP Historic District. Despite changes to the building overtime, as it currently stands, the building provides a sense of scope of scale, cohesion of architectural details, and building massing in this area of the Historic District. The reduction of the building as proposed by the Project will result in a loss that will materially detract from the Historic District overall. Although the Historic District as a whole will still be eligible for the NRHP following construction, the Wilkinson Lodge will no longer retain enough of its own integrity to be considered a contributing building to the NRHP Historic District. Due to the magnitude of this loss of a contributing building, general cohesion, stylistic unity, arrangement of buildings, circulation patterns, and use, the partial demolition of the Wilkinson Lodge (Building 21) would result in a substantial adverse change to the NRHP-listed Historic District and the impact would be considered significant.

The implementation of MM CUL-1a and MM CUL-1b will provide for completion of Historic American Building Survey Level II documentation and construction and installation of an interpretive display. While these measures would

somewhat reduce the significance of the impact, it would remain significant and unavoidable as Wilkinson Lodge (Building 21) would no longer be considered a contributing building to the NRHP Historic District.

5.1.2 TRANSPORTATION

As indicated in Section 4.6, Transportation, this Draft EIR identified significant and unavoidable project and cumulative impacts associated with vehicle miles traveled (VMT) (see Impact TRA-2 and Impact TRA-5). As indicated in Impact TRA-2, the proposed project would not cause a significant impact related to VMT as a result of the typical weekday use and the typical event as such use would generate a low level of vehicular traffic consistent with the small project screening criteria (fewer than 110 vehicle trips per day). These use scenarios are representative of typical use of the new volleyball courts, based on the typical size of existing beach volleyball matches but also accounting for the increase in the number of sand courts with the proposed project (four new courts). However, to be conservative, maximum events (up to 400 participants and spectators) were determined to have a potentially significant VMT impact, as such events could potentially exceed the small project screening criteria.

The implementation of MM TRA-1 would provide information to UC Berkeley about the average and maximum participants and spectators to determine whether the maximum event occurs on the project site. It would also establish the travel mode used by participants and spectators. As indicated previously, UC Berkeley is interested in obtaining project-specific travel survey information for IA beach volleyball matches so that the trip generation for game day events can be refined; however, representative conditions have not been in place since the onset of the COVID-19 Pandemic in 2020. Obtaining the average and maximum number of participants and spectators, along with travel mode used, would allow UC Berkeley to determine if the number of daily vehicle trips associated with a representative maximum event for the proposed project would qualify as a small project (generating 110 or fewer daily trips), resulting in a VMT impact that would be less than significant. As indicated Section 4.6, Transportation, if the proposed project were to yield 40 percent or fewer spectators driving to the site, instead of 94 percent per the Softball Field Project survey, then the number of daily vehicle trips with the proposed project would qualify as a small project and the VMT impact would be less than significant. However, such a result cannot be presumed. The mitigation measure also provides for monitoring of the gameday TDM measures and will refine such measures where warranted and feasible to improve gameday access, minimize vehicle congestion on surrounding roadways, and maximize use of alternative modes of transportation to the project site on game days. However, if maximum events with 94 percent drive rate for spectators occur on the site the mitigation measure would not ensure that trip generation and associated VMT would be reduced to less than significant. Therefore, the project and cumulative impacts associated with maximum events would be significant and unavoidable.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The CEQA Guidelines require a discussion of significant irreversible environmental changes with project implementation, including uses of nonrenewable resources during the initial and continued phases of the project (Section 15126.2[d]). However, CEQA Guidelines Section 15127 indicates that information concerning irreversible changes needs to be included only in EIRs prepared in connection with:

(a) The adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency;

(b) The adoption by a Local Agency Formation Commission of a resolution making determinations; or

(c) A project which will be subject to the requirement for preparing an environmental impact statement pursuant to the requirements of the National Environmental Policy Act of 1969, 42 United States Code Sections 4321–4347.

As the proposed project is not one of the above project types, this EIR is not required to include an analysis of significant irreversible environmental changes.

5.3 GROWTH-INDUCING IMPACTS

Section 15126.2(e) of the CEQA Guidelines requires that an EIR discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing in the surrounding environment, either directly or indirectly. Typical growth-inducing factors might be the extension of urban services or transportation infrastructure to a previously unserved or underserved area, or the removal of major barriers to development.

This section evaluates the proposed project's potential to create such growth inducements. As Section 15126.2(e) requires, "It must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment." In other words, negative impacts associated with growth inducement occur only where the projected growth would cause significant adverse environmental impacts.

Growth-inducing impacts fall into two general categories: direct or indirect. Direct growth-inducing impacts are generally associated with providing urban services to an undeveloped area. Indirect, or secondary, growth-inducing impacts consist of growth induced in the region by additional demands for housing, goods, and services associated with the population increase caused by or attracted to a new project.

Implementation of the proposed project would not induce direct growth as it would not increase student enrollment or require the hiring of campus faculty or staff. The project does not provide urban services, housing, or new businesses. Additionally, the project would not induce indirect growth as it would not cause population growth that would require additional demands for housing, goods, and services. Although the project would require employees for construction, it is anticipated that this workforce would commute each day from within the region. It is also anticipated that this workforce would come from the existing labor pool of regional construction workers and would not require additional construction workers to move to the area. Therefore, the direct and indirect growth-inducing effects associated with the proposed project would not represent a significant impact.

This page intentionally left blank.

6. Alternatives

This chapter describes alternatives to the proposed Clark Kerr Campus (CKC) Beach Volleyball Courts Project (proposed project or project), consistent with California Environmental Quality Act (CEQA) Guidelines Section 15126.6. This chapter presents the objectives of the proposed project, a summary of its significant environmental impacts, and a description of the alternatives that were considered but eliminated from further consideration, followed by an analysis of the five alternatives evaluated, including the No Project Alternative. A comparison of five alternatives to the proposed project is provided and the environmentally superior alternative is identified.

According to CEQA Guidelines Section 15126.6, an environmental impact report (EIR) shall describe a range of reasonable alternatives to the project or to the location of the project, that would feasibly attain most of the basic objectives of the project and could avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. Section 15126.6 further requires that the discussion focus on alternatives capable of eliminating significant adverse impacts of the project or reducing them to a level of insignificance even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly. The alternatives analysis also should identify any significant effects that may result from a given alternative.

The lead agency is responsible for selecting a reasonable range of potentially feasible project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. The range of alternatives is governed by a "rule of reason" that requires the EIR to set forth only those potentially feasible alternatives necessary to permit a reasoned choice. The alternatives shall be limited to those that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only those that the lead agency determines could feasibly attain most of the basic objectives of the project while substantially lessening any of the significant effects of the project. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation.

An EIR is not required to consider alternatives which are infeasible. "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (CEQA Guidelines Section 15364). Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or already owns the alternative site). None of these factors establishes a fixed limit on the scope of reasonable alternatives. Under CEQA case law, the concept of feasibility also "encompasses 'desirability' to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors." (*City of Del Mar v. City of San Diego* [1982] 133 Cal.App.3d 410, 417; *California Native Plant Society v. City of Santa Cruz* [2009] 177 Cal.App.4th 957.) In assessing the feasibility of alternatives, agency decisionmakers may also take account of the extent to which the alternatives meet or further the agency's underlying purpose or objectives in considering a proposed project. (*Sierra Club v. County of Napa* [2004] 121 Cal.App.4th 1490, 1506-1509; *Citizens for Open Government v. City of Lodi* [2012] 296 Cal.App.4th 296, 314-315; *In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* [2008] 43 Cal.4th 1143, 1165, 1166.)

6.1 PROJECT OBJECTIVES

The university's objectives for the proposed project are to:

1. Support UC Berkeley's ongoing compliance with Title IX by improving the training and competition facilities provided to female student athletes who participate in the IA beach volleyball program;
2. Improve recreational facilities to meet the needs of the current student body and the community;
3. Advance seismic safety risk reduction pursuant to the University of California's Seismic Safety Policy; and
4. Meet siting criteria for IA beach volleyball courts:
    - Meet NCAA design criteria for beach volleyball courts, which include number of courts, type and depth of sand, distance between and around courts, referee platform at each court, space and location for team areas, team size, staff/coach numbers. Design criteria include:
        - Two sand play courts (minimum requirements), but at least three sand play courts are recommended. Having five courts allows all participants to compete at the same time thus significantly reducing the length of the competition.
        - If multiple courts are placed side-by side, the team areas shall be placed in the end zone free space unless there is at least 6 meters (approximately 20 feet) of free space between the courts.
    - Avoid displacement of existing uses that are challenging to relocate and serve a large number of students and the broader public (e.g., other IA sports, Recreational Sports);
    - Avoid siting new IA beach volleyball courts in or near the central campus as this limits the ability of the university to use these sites for other uses, such as housing, academic or research buildings; while ensuring that placement is close enough to provide the student athletes with walkable access to campus academic and athletic resources;
    - Avoid siting new IA beach volleyball courts on a site with topographical or physical constraints, making ADA access and site construction more challenging;
    - Provide adequate site capacity to accommodate new IA beach volleyball courts, including capacity for spectators;
    - Provide privacy for student athletes; and
    - Consider cost and other feasibility issues in the development of new IA beach volleyball courts.

6.2 OVERVIEW OF SIGNIFICANT PROJECT IMPACTS

The range of alternatives studied in the EIR must be broad enough to permit a reasoned choice by decision-makers when considering the merits of the project. The analysis should focus on alternatives that are potentially feasible. Under CEQA, alternatives that are remote or speculative should not be discussed in the analysis of alternative. Furthermore, alternatives should focus on reducing or avoiding significant environmental impacts associated with

the project as proposed. As described in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, the Proposed Project would result in the following significant or potentially significant environmental impacts:

- **Impact CUL-1: Historic Built Environment Resources**. The proposed project would cause a substantial adverse change in the significance of a historical built environment resource.
- **Impact CUL-2: Archaeological Resources.** The proposed project may cause a substantial adverse change in the significance of unique archaeological resources or historical resources of an archaeological nature.
- **Impact CUL-4: Tribal Cultural Resources.** The proposed project may result in a substantial adverse change to a tribal cultural resource.
- **Impact CUL-5: Cumulative Cultural Resource and Tribal Cultural Resource Impacts.** The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in a cumulative impact related to cultural resources and tribal cultural resources.
- **Impact NOI-1: Temporary or Permanent Increase in Ambient Noise.** The proposed project could generate substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- **Impact TRA-2: Vehicle Miles Traveled.** The proposed project could conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b).
- **Impact TRA-5: Cumulative Transportation Impacts**. The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in a significant cumulative impact related to transportation.

Most of the potentially significant impacts listed above can be reduced to less than significant through incorporation of mitigation measures identified in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. However, the Proposed Project would have significant and unavoidable impacts with respect to the following impacts.

- **Impact CUL-1: Historic Built Environment Resources**. The proposed project would cause a substantial adverse change in the significance of a historical built environment resource.
- **Impact CUL-5: Cumulative Cultural Resource and Tribal Cultural Resource Impacts.** The proposed project, in combination with past, present, and reasonably foreseeable projects, would result in a cumulative impact related to cultural resources and tribal cultural resources. *(Significant unavoidable impact finding is for built environment resources only.)*
- **Impact TRA-2: Vehicle Miles Traveled (VMT).** The proposed project could conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b). *(Significant unavoidable impact finding is for the maximum event only.)*
- **Impact TRA-5: Cumulative Transportation Impacts**. The proposed project, in combination with past, present, and reasonably foreseeable projects, could result in a significant cumulative impact related to transportation. *(Significant unavoidable VMT-related impact finding is for the maximum event only.)*

6.3 ALTERNATIVES CONSIDERED BUT ELIMINATED

This section discusses alternatives that were considered but were eliminated from detailed consideration because they did not meet most of the basic project objectives; were found to be infeasible for technical, environmental, or social reasons; or they did not avoid or substantially lessen significant environmental impacts of the proposed

project. Section 15126.6(c) of CEQA Guidelines indicates that the range of potential alternatives shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible, and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (1) failure to meet most of the basic project objectives, (2) infeasibility (see introduction to this Chapter), or (3) inability to avoid significant environmental impacts.

The university considered 10 alternatives, 6 of which were eliminated from further consideration as explained below. In developing the alternatives, the comments received in response to the EIR Notice of Preparation (NOP) were reviewed. As a result of the scoping comments received for the proposed project and UC Berkeley's ongoing project planning process, the university considered the following alternatives, which were eliminated from further consideration as alternatives to the proposed project, or as component alternatives for a portion of the proposed project, as explained below:

1. Beach Volleyball Courts Siting Alternatives
    - CKC Skate Deck/Tennis
    - CKC Golden Bear Field
    - Alameda Beach and Berkeley Marina Sites
    - Other Fields (Witter Field, Edwards Field, Hellman Tennis Center, and Evans Diamond)
2. Archery Uses Replacement Facility/Field
3. CKC Demolition of Building 24

6.3.1 BEACH VOLLEYBALL COURTS SITING ALTERNATIVES

6.3.1.1 CKC SKATE DECK/TENNIS

The CKC Skate Deck/Tennis Courts has community uses that are challenging to relocate. The site is relatively small to accommodate four volleyball courts, a support structure of restrooms, locker rooms, coach's office as well as space for spectators. Therefore, this site was eliminated from further consideration as an alternative site for the proposed project.

6.3.1.2 CKC GOLDEN BEAR FIELD

The existing Golden Bear field is currently used for IA soccer practice and revenue-generating public programs offered by the UC Berkeley Recreational Sports Department. The Golden Bear field site is flat, rectilinear and well suited for continued sport use, including for the beach volleyball courts; however, the site would have ADA accessibility challenges given that the site is located at the top of a hill. ADA accessibility review and accommodation would be required for the use of this site for the beach volleyball courts. Topography and site constraints will likely mean renovations would be more costly than at a flatter site. Additionally, use of the site for beach volleyball would require relocating Recreational Sports summer camp programs that provide a critical revenue stream for the department and relocating IA soccer practice to a different facility, potentially affecting other sports. IA soccer practice on Edwards Field, where soccer matches are held, may not be feasible due to grass maintenance issues. Therefore, this site was eliminated from further consideration as an alternative site for the proposed project.

6.3.1.3 ALAMEDA BEACH AND BERKELEY MARINA SITES

IA currently uses distant facilities for certain National Collegiate Athletic Association (NCAA) sports, such as rowing and golf. While use of distant sites is not unprecedented, relocating beach volleyball to an existing beach would require Title IX review to ensure IA remained compliant. Procedurally, the campus could approach East Bay Regional Parks District about using nearby beach lands. This would likely require negotiating some form of lease agreement with the District, which would likely put constraints on IA use and would be considered only an interim approach to providing for Title IX-compliant IA beach volleyball courts. Therefore, such a distant site was eliminated from further consideration as an alternative site for the proposed project.

6.3.1.4 OTHER FIELDS

IA could consider repurposing existing fields used for other sports to accommodate the beach volleyball program. In most cases, this may displace or result in inadequate facilities for the existing sports that use these fields, unless an alternative design strategy could be deployed to create a dual use field (e.g., sunken volleyball courts with a hard top cover – this design strategy has no known precedent and would likely be considerably expensive). This approach could also limit one or more UCB IA teams and would require re-prioritizing the IA sports program to achieve a desirable mix of competitive sports teams based on interest and legal requirements. The other fields include:

1. Witter Field is currently used for IA Men's Rugby and Women's Club Rugby. The campus does not have another rugby facility.
2. Edwards Field is currently used for IA Men's and Women's Soccer. These uses could potentially be relocated to Golden Bear Field but would result in similar program issues as siting beach volleyball there (see Section 6.3.1.2, above).
3. Hellman Tennis Center is the campus's only competitive tennis venue and the campus currently has very few alternative court sites. Using Hellman Tennis for beach volleyball would likely result in a reduction in tennis space for non-IA tennis players because existing courts, likely at Channing Ellsworth, would need to be repurposed for NCAA purposes.
4. Evans Diamond is used by IA Men's Baseball. Using the outfield for beach volleyball would require relocating the baseball program to another facility, which would be difficult to locate.

Given that the use of the above fields for the beach volleyball courts would displace or substantially interfere with other IA sports, the use of these fields was eliminated from further consideration as alternative sites for the proposed project.

6.3.2 ARCHERY USES REPLACEMENT FACILITY

Some comments received in response to the NOP for the proposed project indicated that a replacement archery facility/field should be provided for given that the softball field, used by existing archery program, would be removed with the proposed project. As indicated in Chapter 3, Project Description, UC Berkeley will continue to accommodate all existing archery and recreational sports that use the existing softball field. Therefore, a replacement archery facility/field was not considered as part of the proposed project, or as a component of an alternative to the proposed project.

6.3.3 CKC DEMOLITION OF BUILDING 24

CKC Building 24 is a former auto body garage and a non-contributing building to the National Register of Historic Places (NRHP) District No. 82000962 State Asylum for the Deaf, Dumb, and Blind (also known as the California Schools for the Deaf and Blind Historic District [referred to herein as Historic District]). The approximately 3,800-gross square foot (GSF) building houses an office, storage, and workshop for Recreational Sports. The building also houses the boiler for the Golden Bear Rec Center and Pool. While there are some roof leaks, the building is currently habitable and being used by Recreational Sports and does not warrant demolition under the University of California Seismic Safety Policy. Therefore, given that the building is currently habitable, demolition of Building 24 would not comply with the 1982 Declaration of Covenants and Restrictions (Covenants) that UC Berkeley entered into with neighbors, or the Memorandum of Understanding (MOU) between UC Berkeley and the City of Berkeley which was entered into at the same time as the Covenants.[1] Therefore, demolition of Building 24 was eliminated from further consideration as a demolition alternative for the proposed project.

6.4 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

This section describes the alternatives to the proposed project that were selected and analyzed according to CEQA Guidelines Section 15126.6(a) after elimination of some considered alternatives as explained in Section 6.3, Alternatives Considered but Eliminated. The analyzed alternatives, including the No Project Alternative, represent a range of reasonable alternatives to the proposed project that would feasibly attain most of the proposed project's basic objectives, and would avoid or substantially lessen the significant adverse environmental effects of the proposed project, as listed in Section 6.2, Overview of Significant Project Impacts, and described in detail in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures.

The following four alternatives, which are described in detail below, were selected for comparative analysis in this EIR (see also Table 6-1 and Figure 6-1):

- **Alternative 1: No Project Alternative –** The No Project Alternative consists of the circumstances under which the proposed project does not proceed.
- **Alternative 2: Reduced Project with Preservation Alternative –** Alternative 2 consists of the redevelopment of the existing CKC sand courts on the current site, including the use of temporary facilities for team use. A permanent support building for team use would not be included. As no buildings would be constructed in the CKC, no demolition or partial demolition of another CKC building would be required.
- **Alternative 3: Reduced Project with No Spectator Space Alternative –** Alternative 3 consists of the redevelopment of the existing CKC sand courts on the current site. A support building for team use would be provided on the adjacent parking lot; however, no spectator space would be provided. As a support building would be included, Alternative 3 includes partial demolition of CKC Building 23.

[1] In 1982, the university executed and recorded the Covenants with neighboring property owners within a defined area surrounding the CKC, and a MOU with the City of Berkeley, both of which commit the university generally to a site plan and land use program on the CKC for a period of 50 years through 2032. The Covenants limit the ability of the university to construct new buildings on the CKC, however, existing buildings destroyed by fire, earthquake, or other disasters, removed due to hazards, or determined to be infeasible to rehabilitate may be replaced by buildings of similar size and scope.

- **Alternative 4: Comprehensive Project Alternative** – Alternative 4 consists of the development of the proposed project on the Smyth-Fernwald site, outside of the CKC. A support building for team use, spectator space and all other components would be provided. As the site is outside of the CKC, no demolition or partial demolition of another CKC building would be required.

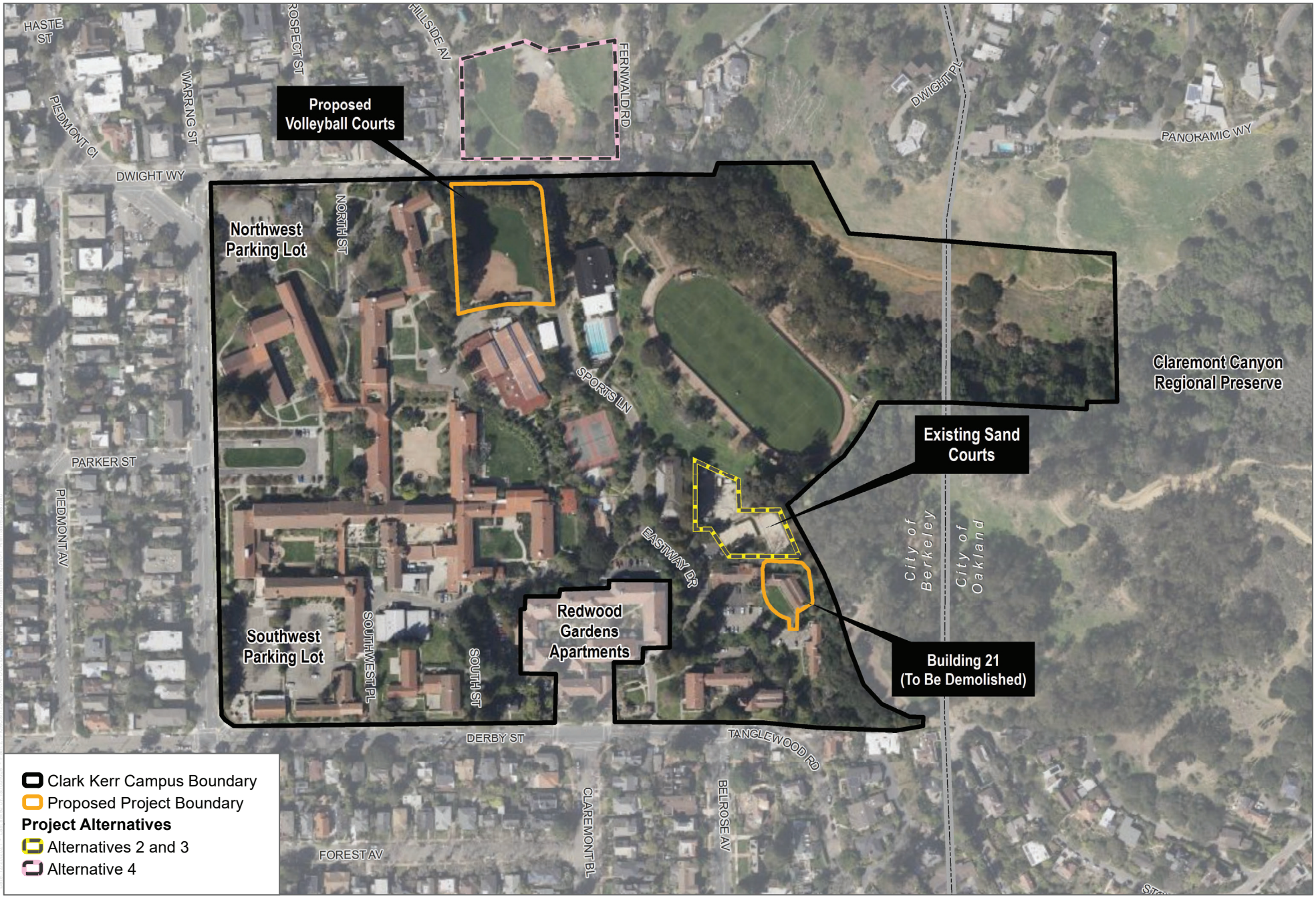
TABLE 6-1. SUMMARY OF ALTERNATIVES

Project Components	Proposed Project	Alternative 1 No Project Alternative	Alternative 2 Reduced Project with Preservation Alternative	Alternative 3 Reduced Project with No Spectator Space Alternative	Alternative 4 Comprehensive Project Alternative
New Sand Courts	Yes 4 Courts	No	Yes 3 Courts	Yes 3 Courts	Yes 4 Courts
Permanent Support Building	Yes	No	No	Yes	Yes
Spectator Space	Yes	No	Limited	No	Yes
New Lighting and Scoreboard	Yes	No	Yes	Yes	Yes
New Public Address (PA) System	Yes	No	Yes	No	Yes
Utilities Connections	Yes	No	Limited	Yes	Yes
Tree Replacement for Removed Trees	Yes	No	Yes	Yes	Yes
Partial Demolition of Building 21	Yes	No	No	No Alternative 3 includes Partial Demolition of Building 23	No
University Continuing Best Practices	Yes	No	Yes	Yes	Yes
Applicable 1979 Mitigation Measures	Yes	No	Yes	Yes	No

6.4.1 ASSUMPTIONS AND METHODOLOGY

The alternatives analysis is presented as a comparative analysis to the proposed project. The alternatives analysis assumes that all applicable mitigation measures (MM) recommended for the proposed project would also apply to potentially significant environmental impacts of each alternative, except for Alternative 1, No Project Alternative. The following analysis compares the potentially significant environmental impacts of the four alternatives with those of the proposed project for the environmental topics analyzed in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. The four alternatives are also reviewed for their ability to meet the project objectives provided in Section 6.1, Project Objectives. A summary of the alternatives analysis conclusions is provided in Section 6.5, Environmentally Superior Alternative and shown in Tables 6-2 and 6-3.

This page intentionally left blank.



SOURCE: Bing Maps 2020, Alameda County 2018

FIGURE 6-1

Proposed Project and Alternative Site Locations

Clark Kerr Campus Beach Volleyball Courts Project EIR

This page intentionally left blank.

6.4.2 ALTERNATIVE 1: NO PROJECT ALTERNATIVE

6.4.2.1 DESCRIPTION OF ALTERNATIVE 1

CEQA Guidelines Section 15126.6(e) generally provides that "[t]he 'no project' analysis shall discuss the existing conditions at the time the notice of preparation is published, … as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services." Section 15126(e)(3)(B) provides that, where, as here, a proposed project is something "other than a land use or regulatory plan," the "No Project" Alternative is "the circumstance under which the project does not proceed." The purpose of describing and analyzing a No Project Alternative is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the project (CEQA Guidelines Section 15126.6[e][1]). "[W]here failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment." (CEQA Guidelines Section 15126.6[e][3][B]).

Given the above, Alternative 1 would not result in the construction of IA beach volleyball courts on the proposed project site. All conditions are generally based on those existing in 2020 when the NOP was released. The existing uses at the project site on the existing softball field and sand volleyball courts would be retained and no site improvements would be pursued. Likewise, Building 21 would not be demolished. However, as IA beach volleyball courts would still be needed, the university would likely continue to pursue the development of such courts in the future at another site. Likewise, partial demolition of Building 21 may ultimately be pursued in the future to comply with the University of California Seismic Safety Policy.

6.4.2.2 IMPACT ANALYSIS

Under Alternative 1, the proposed project would not be implemented, and the project components would not be constructed. The existing sand courts at the CKC would continue to be used for IA beach volleyball. Therefore, the significant and potentially significant impacts associated with constructing and/or operating the proposed project identified in this Draft EIR would not occur (see Table 6-2), including those related to cultural resources (Impacts CUL-1, CUL-2, CUL-4, and CUL-5), noise (Impact NOI-1), and transportation (Impacts TRA-2 and TRA-5). In particular, the significant unavoidable project and cumulative historic built environment resource impacts (Impacts CUL-1 and CUL-5) associated with the partial demolition of CKC Building 21 would not occur with the Alternative 1, as no CKC building demolition would occur under this alternative. Likewise, the significant and unavoidable transportation project and cumulative impacts related to VMT (Impacts TRA -2 and TRA-5) would also not occur with this alternative, as Alternative 1 would not modify the use of the existing sand courts at the CKC. In addition, none of the other impacts related to the proposed project identified as less than significant would occur as shown in Table 6-2.

However, as indicated above, IA beach volleyball courts would still be needed, and the university would likely continue to pursue the development of such courts in the future at another site. Likewise, partial demolition of Building 21 may ultimately be pursued in the future to comply with the University of California Seismic Safety Policy. Therefore, the impacts associated with the proposed project may result in the future, even under the Alternative 1.

6.4.2.3 ABILITY TO MEET PROJECT OBJECTIVES

Alternative 1 would not meet any of the identified project objectives (see Table 6-3). Specifically, Alternative 1 would not support UC Berkeley's ongoing compliance with Title IX as it would not improve the training and competition

facilities provided to female student athletes who participate in the IA beach volleyball program (Objective #1). As the existing CKC sand courts would continue to be used, Alternative 1 would not improve recreational facilities to meet the needs of the current student body and the community (Objective #2) and would not meet the siting criteria for IA beach volleyball facilities (Objective #4). Regarding Objective #4, continued use of the existing sand courts for IA beach volleyball under this alternative would not meet the siting criteria as there are not enough sand play courts, the distance between and around courts is not adequate, there are no referee platforms, and there is limited space for spectators or a permanent support building for teams, staff and coaches.

Given that Alternative 1 would not provide for the partial demolition of Building 21 it would not address the seismic safety risk posed by a portion of the building pursuant to University of California Seismic Safety Policy (Objective #3). However, as indicated previously, partial demolition of Building 21 may ultimately be pursued in the future to comply with the University of California Seismic Safety Policy.

6.4.3 ALTERNATIVE 2: REDUCED PROJECT WITH PRESERVATION ALTERNATIVE

6.4.3.1 DESCRIPTION OF ALTERNATIVE 2

Alternative 2 consists of the redevelopment of the existing CKC sand courts on the current sand courts site and an adjacent parking lot (see Figure 6-1). The existing CKC sand courts features two play courts and minimal program support space. Alternative 2 would involve implementing the proposed project on the existing CKC sand courts by: re-grading the site and tree removal; reconstructing the two existing courts to meet current NCAA play standards to the extent feasible; adding one additional courts in the adjacent parking lot behind CKC Building 21; providing some limited space for spectators, temporary team tents, restrooms, and other support amenities; providing for new lighting, a scoreboard, a public address (PA) system; and providing for ADA accommodation. Given the size of the site, not all program elements would be fully accommodated on the site. Restrooms and team tents would need to be temporary and brought onto the site during matches. A permanent support building for team use would not be included. Spectator space would also be limited. Limited utility connections would be required. Tree replacement for removed trees would be provided, similar to the proposed project. Topography and site constraints would result in higher construction costs than at a flatter, rectilinear site. As no buildings would be constructed in the CKC, no demolition or partial demolition of another CKC building would be required to meet the Covenants and MOU. However, as indicated previously, partial demolition of Building 21 may ultimately be pursued in the future to comply with the University of California Seismic Safety Policy.

All applicable university continuing best practices (CBPs) would be implemented with Alternative 2, similar to the proposed project. Additionally, the same mitigation measures from the 1979 Dwight-Derby Site Plan EIR (UC Berkeley 1979) that would be implemented as part of the proposed project would also be implemented as part of Alternative 2 (see Chapter 3, Project Description). These 1979 mitigation measures would be implemented as part of Alternative 2, as the project characteristics and design of Alternative 2 implement the measures, similar to the proposed project. Other 1979 mitigation measures are either not applicable to Alternative 2, as for the proposed project, or are proposed for revision and/or replacement (see Appendix C).[2]

[2] The 1979 mitigation measures proposed for revision and/or replacement include several mitigation measures for noise. The revised measures are included as mitigation measures in the impact analysis for noise (see Section 4.5, Noise).

6.4.3.2 IMPACT ANALYSIS

AESTHETICS

As described in Section 4.2, Aesthetics, proposed project impacts related to scenic vistas, scenic quality, and light and glare would be less than significant (see Impacts AES-1 through AES-3).

Alternative 2 impacts related to scenic vistas, scenic quality, and light and glare would also be less than significant but would be reduced as compared to the proposed project given that the existing sand courts and adjacent parking lot site are located farther away from residential uses to the north and the site is smaller in size than the proposed beach volleyball project site and therefore some project components would be reduced or eliminated, as described above and shown in Table 6-1. However, while there would be three sand courts instead of four sand courts the same number of light poles with LED light arrays would likely be installed under Alternative 2 as compared to the proposed project. As for the proposed project, Alternative 2 would also be subject to UC Berkeley's Design Review, Physical Design Framework, Campus Design Standards, and relevant CBPs, as described in Section 4.2.2, Regulatory Framework (see Section 4.2, Aesthetics). These requirements would help reduce impacts to visual resources as part of the design review process. Overall, aesthetic impacts under Alternative 2 would be reduced, as compared to the proposed project.

CULTURAL RESOURCES

As described in Section 4.3, Cultural and Tribal Cultural Resources, proposed project impacts related to historic built environment resources would be significant and unavoidable even with the implementation of MM CUL-1a and MM CUL-1b (see Impacts CUL-1 and CUL-5). This impact is due to the partial demolition of Building 21, which is a contributing resource to the Historic District. Proposed project and cumulative impacts related to unique archaeological resources, historical resources of an archaeological nature, and tribal cultural resources would be potentially significant but these impacts would be reduced to less than significant with the implementation of MM CUL-2 (see Impacts CUL-2, CUL-4, and CUL-5). Proposed project impacts related to human remains would be less than significant (see Impact CUL-3).

Alternative 2 would avoid the significant unavoidable project and cumulative historic built environment resource impacts (Impacts CUL-1 and CUL-5) associated with the proposed project's partial demolition of CKC Building 21, as no CKC building demolition would occur under this alternative. Modification of the existing sand courts under Alternative 2 would not result in a historic built environment resource impact, as the existing courts were originally built in the late 1990s and are not old enough to be considered historic. The Impact of Alternative 2 on historic built environment resources would be less than significant and therefore identified mitigation measures would not need to be implemented. However, as indicated previously, partial demolition of Building 21 may ultimately be pursued in the future to comply with the University of California Seismic Safety Policy and therefore, this impact could still occur in the future.

Alternative 2 impacts related to archaeological resources, historical resources of an archaeological nature, and tribal cultural resources would also be potentially significant. However, the impacts would be somewhat reduced with Alternative 2 as compared to the proposed project given that the existing sand courts and adjacent parking lot site are smaller in size and therefore some project components would be reduced or eliminated, as described above and shown in Table 6-1. This would result in less overall grading and excavation on the Alternative 2 site, as compared to the proposed project, and therefore less potential for inadvertent discovery of such resources. As for the proposed project, Alternative 2 would be subject to UC Berkeley's Campus Design Standards, as described in

Section 4.3.2, Regulatory Framework (see Section 4.3, Cultural and Tribal Cultural Resources). Alternative 2 would also be required to implement MM CUL-2. These requirements address artifacts discovered during construction and would help reduce impacts to archaeological resources, historical resources of an archaeological nature, and tribal cultural resources. Alternative 2 impacts related to archaeological resources, historical resources of an archaeological nature, and tribal cultural resources would also be less than significant with mitigation measures; however, impacts would be somewhat reduced, as compared to the proposed project. Overall, cultural resource impacts under Alternative 2 would be reduced, as compared to the proposed project.

LAND USE AND PLANNING

As described in Section 4.4, Land Use and Planning, proposed project and cumulative impacts related to conflicts with applicable land use plans, policies or regulations would be less than significant (see Impacts LU-1 and LU-2).

Alternative 2 impacts related to conflicts with applicable land use plans, policies or regulations would also be less than significant, as for the proposed project. Redevelopment of the existing sand courts under Alternative 2 would be consistent with the existing recreational use of the site and the land use types allowed in the CKC under the 2021 LRDP. Further, similar to the proposed project, Alternative 2 meets the LRDP land use objectives as it improves athletic facilities on the CKC, redevelops an existing recreational field (i.e., the existing sand courts) that no longer fully meet programmatic needs, and contributes to the CKC's residential community, as well as the broader community. As for the proposed project, Alternative 2 would also be subject to UC Berkeley's Design Review, Physical Design Framework, Campus Design Standards, and relevant CBPs, as described in Section 4.4.2, Regulatory Framework (see Section 4.4, Land Use and Planning). These requirements would help reduce land use compatibility impacts as part of the design review process. Overall, land use impacts under Alternative 2 would be similar to the proposed project.

NOISE

As described in Section 4.5, Noise, proposed project impacts related to temporary and permanent increases in ambient noise levels would be potentially significant but these impacts would be reduced to less than significant with the implementation of MM NOI-1 through MM NOI-4 (see Impact NOI-1). This impact is associated with temporary construction of the beach volleyball courts and demolition of Building 21, as well as permanent operation of the courts during the maximum event with up to 400 participants and spectators. Typical weekday use involving practices with no spectators and a typical competitive match involving up to 145 participants and spectators would result in operational noise impacts that would be less than significant, not requiring mitigation measures. Proposed project impacts related to vibration would also be less than significant (see Impact NOI-2).

Alternative 2 impacts related to temporary increases in ambient noise levels during construction would also be potentially significant. However, the impacts would be reduced with Alternative 2 as compared to the proposed project given that the existing sand courts and adjacent parking lot site are smaller in size and therefore some project components would be reduced or eliminated, as described above and shown in Table 6-1. This would result in less overall grading and excavation on the Alternative 2 site and less construction, as compared to the proposed project, and therefore reduced construction noise. As for the proposed project, Alternative 2 would also be subject to UC Berkeley's CBPs related to construction activities (see Section 4.4, Noise) and would be required to implement MM NOI-1. These requirements would reduce potentially significant construction noise impacts to less than significant.

Given that spectator space would be limited under Alternative 2 it is assumed that the maximum event with up to 400 participants and spectators would not occur under Alternative 2. Rather, typical weekday use involving practices with

no spectators and a typical competitive match involving up to 145 participants and spectators would be expected with Alternative 2. Therefore, operational noise impacts would be less than significant, not requiring mitigation measures. Overall, all noise impacts under Alternative 2 would be reduced, as compared to the proposed project.

TRANSPORTATION

As described in Section 4.6, Transportation, proposed project and cumulative impacts related to VMT would be significant and unavoidable even with the implementation of MM TRA-1 (see Impacts TRA-2 and TRA-5). This impact is associated with permanent operation of the courts during the maximum event with up to 400 participants and spectators. VMT impacts associated with typical weekday use involving practices with no spectators and a typical competitive match involving up to 145 participants and spectators would be less than significant, not requiring mitigation measures. Other transportation impacts of the proposed project related to conflicts with transportation plans and policies, design hazards, and emergency access would also be less than significant (see Impacts TRA-1, TRA-3, and TRA-4).

Given that spectator space would be limited under Alternative 2 it is assumed that the maximum event with up to 400 participants and spectators would not occur under Alternative 2. Rather, typical weekday use involving practices with no spectators and a typical competitive match involving up to 145 participants and spectators would be expected with Alternative 2. Therefore, Alternative 2 would avoid the significant and unavoidable VMT impacts and such impacts would be less than significant, not requiring mitigation measures. Overall, all transportation impacts under Alternative 2 would be reduced, as compared to the proposed project.

6.4.3.3 ABILITY TO MEET PROJECT OBJECTIVES

Alternative 2 would only moderately meet the identified project objectives (see Table 6-3). Specifically, Alternative 2 would moderately support UC Berkeley's ongoing compliance with Title IX as it would somewhat improve the training and competition facilities provided to female student athletes who participate in the IA beach volleyball program (Objective #1). As the existing CKC sand courts would be reconstructed, Alternative 2 would somewhat improve recreational facilities but would not fully meet the needs of the current student body and the community (Objective #2). Alternative 2 would only moderately meet the siting criteria for IA beach volleyball facilities (Objective #4), given the size and characteristics of the site. All design criteria and siting criteria would not be feasible to meet, as the site: (1) would not avoid siting the courts on a site with topographical or physical constraints making ADA access more challenging and construction costs higher; and (2) would not provide privacy for student athletes in a permanent support building. Further, Alternative 2 would limit capacity for spectators.

Given that Alternative 2 would not provide for the partial demolition of Building 21 it would not address the seismic safety risk posed by a portion of the building pursuant to University of California Seismic Safety Policy (Objective #3). However, as indicated previously, partial demolition of Building 21 may ultimately be pursued in the future to comply with the University of California Seismic Safety Policy.

6.4.4 ALTERNATIVE 3: REDUCED PROJECT WITH NO SPECTATOR SPACE ALTERNATIVE

6.4.4.1 DESCRIPTION OF ALTERNATIVE 3

Alternative 3 also consists of the redevelopment of the existing CKC beach volleyball sand courts on the current sand court site and an adjacent parking lot (see Figure 6-1). The existing CKC sand courts features two play courts

and minimal program support space. Alternative 3 would involve implementing the proposed project on the existing CKC sand courts by: re-grading the site; reconstructing the two existing courts to meet current NCAA play standards to the extent feasible and to potentially provide for an additional court for a total of 3 courts; adding a support building in the adjacent parking lot behind CKC Building 21; providing for new lighting and a scoreboard; and providing for ADA accommodation. Similar to Alternative 2, given the size of the site, not all program elements would be fully accommodated on the site. Given the space required for the permanent support building and an additional sand court, no spectator space would be provided and as a result no new PA system would be installed. Utility connections would be required to serve the support building. Tree replacement for removed trees would be provided, similar to the proposed project. Topography and site constraints would result in higher construction costs than at a flatter, rectilinear site.

As a support building would be included in Alternative 3, demolition of another CKC building would be required to meet the Covenants and MOU. To meet these requirements, a partial demolition of CKC Building 23 would be implemented under this alternative. The partial demolition of Building 23 would also be approximately 9,230-square-foot portion of the 30,000-GSF building, similar to the partial demolition of Building 21 under the proposed project. Building 23 was built for the School of the Deaf sometime before 1929 and was originally a heating plant and maintenance building. CKC Building 23 is a non-contributing building to the Historic District (see Appendix C for additional information about Building 23). The building condition has been very poor, and the seismic evaluation has also been very poor according to the University of California's Seismic Safety Policy. There has been extensive interior vandalism and failure to the building envelope. However, the Residential and Student Services Program and Facilities Services have been improving the interior spaces and security and using the building for maintenance and storage. While a partial demolition of Building 23 is included in Alternative 3, a limited structural retrofit would address the existing remaining deficiencies and improve the seismic rating of Building 23. Overall, a partial demolition of Building 23 is not warranted under University of California's Seismic Safety Policy. While Alternative 3 includes partial demolition of Building 23, as indicated previously, partial demolition of Building 21 may also ultimately be pursued in the future to comply with the University of California Seismic Safety Policy.

All applicable university CBPs would be implemented with Alternative 3, similar to the proposed project. Additionally, the same mitigation measures from the 1979 Dwight-Derby Site Plan EIR (UC Berkeley 1979) that would be implemented as part of the proposed project would also be implemented as part of Alternative 3 (see Chapter 3, Project Description). These 1979 mitigation measures would be implemented as part of Alternative 3, as the project characteristics and design of Alternative 3 implement the measures, similar to the proposed project. Other 1979 mitigation measures are either not applicable to Alternative 3, as for the proposed project, or are proposed for revision or replacement (see Appendix C).

6.4.4.2 IMPACT ANALYSIS

AESTHETICS

As described in Section 4.2, Aesthetics, proposed project impacts related to scenic vistas, scenic quality, and light and glare would be less than significant (see Impacts AES-1 through AES-3).

Alternative 3 impacts related to scenic vistas, scenic quality, and light and glare would also be less than significant but would be reduced as compared to the proposed project given that the existing sand courts and adjacent parking lot site are located farther away from residential uses to the north and the site is smaller in size than the proposed beach volleyball project site and therefore some project components would be reduced or eliminated, as described above and shown in Table 6-1. However, while there would be three sand courts instead of four sand courts the

same number of light poles with LED light arrays would likely be installed under Alternative 3 as compared to the proposed project. As for the proposed project, Alternative 3 would also be subject to UC Berkeley's Design Review, Physical Design Framework, Campus Design Standards, and relevant CBPs, as described in Section 4.2.2, Regulatory Framework (see Section 4.2, Aesthetics). These requirements would help reduce impacts to visual resources as part of the design review process. Overall, aesthetic impacts under Alternative 3 would be reduced, as compared to the proposed project.

CULTURAL RESOURCES

As described in Section 4.3, Cultural and Tribal Cultural Resources, proposed project impacts related to historic built environment resources would be significant and unavoidable even with the implementation of MM CUL-1a and MM CUL-1b (see Impacts CUL-1 and CUL-5). This impact is due to the partial demolition of Building 21, which is a contributing resource to the Historic District. Proposed project and cumulative impacts related to unique archaeological resources, historical resources of an archaeological nature, and tribal cultural resources would be potentially significant but these impacts would be reduced to less than significant with the implementation of MM CUL-2 (see Impacts CUL-2, CUL-4, and CUL-5). Proposed project impacts related to human remains would be less than significant (see Impact CUL-3).

Alternative 3 would avoid the significant unavoidable project and cumulative historic built environment resource impacts (Impacts CUL-1 and CUL-5) associated with the proposed project's partial demolition of CKC Building 21. The partial demolition of CKC Building 23 that would occur under this alternative would not result in such significant impacts, as Building 23 is a non-contributing building to the Historic District, as previously described. Further, modification of the existing CKC sand courts under Alternative 3 would not result in a historic built environment resource impact, as the existing courts were originally built in the late 1990s and are not old enough to be considered historic. The impact of Alternative 3 on historic built environment resources would be less than significant and therefore identified mitigation measures would not need to be implemented. However, as indicated previously, partial demolition of Building 21 may also ultimately be pursued in the future to comply with the University of California Seismic Safety Policy and therefore, this impact could still occur in the future.

Alternative 3 impacts related to archaeological resources, historical resources of an archaeological nature, and tribal cultural resources would also be potentially significant. However, the impacts would be somewhat reduced with Alternative 3 as compared to the proposed project given that the existing sand courts and adjacent parking lot site are smaller in size and therefore some project components would be reduced or eliminated, as described above and shown in Table 6-1. This would result in less overall grading and excavation on the Alternative 3 site, as compared to the proposed project, and therefore less potential for inadvertent discovery of such resources. As for the proposed project, Alternative 3 would be subject to UC Berkeley's Campus Design Standards, as described in Section 4.3.2, Regulatory Framework (see Section 4.3, Cultural and Tribal Cultural Resources). Alternative 3 would also be required to implement MM CUL-2. These requirements address artifacts discovered during construction and would help reduce impacts to archaeological resources, historical resources of an archaeological nature, and tribal cultural resources. Alternative 3 impacts related to archaeological resources, historical resources of an archaeological nature, and tribal cultural resources would also be less than significant with mitigation measures*;* however, impacts would be somewhat reduced, as compared to the proposed project. Overall, cultural resource impacts under Alternative 3 would be reduced, as compared to the proposed project.

LAND USE AND PLANNING

As described in Section 4.4, Land Use and Planning, proposed project and cumulative impacts related to conflicts with applicable land use plans, policies or regulations would be less than significant (see Impacts LU-1 and LU-2).

Alternative 3 impacts related to conflicts with applicable land use plans, policies or regulations would also be less than significant, as for the proposed project. Redevelopment of the existing sand courts under Alternative 3 would be consistent with the existing recreational use of the site and the land use types allowed in the CKC under the 2021 LRDP. Further, similar to the proposed project, Alternative 3 meets the LRDP land use objectives as it improves athletic facilities on the CKC, redevelops an existing recreational field (i.e., the existing CKC sand courts) that no longer fully meet programmatic needs, and contributes to the CKC's residential community, as well as the broader community. As for the proposed project, Alternative 3 would also be subject to UC Berkeley's Design Review, Physical Design Framework, Campus Design Standards, and relevant CBPs, as described in Section 4.4.2, Regulatory Framework (see Section 4.4, Land Use and Planning). These requirements would help reduce land use compatibility impacts as part of the design review process. Overall, land use impacts under Alternative 3 would be similar to the proposed project.

NOISE

As described in Section 4.5, Noise, proposed project impacts related to temporary and permanent increases in ambient noise levels would be potentially significant but these impacts would be reduced to less than significant with the implementation of MM NOI-1 through MM NOI-4 (see Impact NOI-1). This impact is associated with temporary construction of the beach volleyball courts and demolition of Building 21, as well as permanent operation of the courts during the maximum event with up to 400 participants and spectators. Typical weekday use involving practices with no spectators and a typical competitive match involving up to 145 participants and spectators would result in operational noise impacts that would be less than significant, not requiring mitigation measures. Proposed project impacts related to vibration would also be less than significant (see Impact NOI-2).

Alternative 3 impacts related to temporary increases in ambient noise levels during construction would also be potentially significant. However, the impacts would be reduced with Alternative 3 as compared to the proposed project given that the existing sand courts and adjacent parking lot site are smaller in size and therefore some project components would be reduced or eliminated, as described above and shown in Table 6-1. This would result in less overall grading and excavation on the Alternative 3 site and less construction, as compared to the proposed project, and therefore reduced construction noise. As for the proposed project, Alternative 3 would also be subject to UC Berkeley's CBPs related to construction activities (see Section 4.4, Noise) and would be required to implement MM NOI-1. These requirements would reduce potentially significant construction noise impacts to less than significant.

Given that no spectator space would be provided under Alternative 3 it is assumed that the maximum event with up to 400 spectators and participants would not occur under Alternative 3. Rather, typical weekday use involving practices with no spectators and a typical competitive match involving no spectator crowd would be expected with Alternative 3. Given that no spectators would be accommodated under Alternative 3, a new PA system would not be installed and operated. Therefore, operational noise impacts would be less than significant, not requiring mitigation measures. Overall, all noise impacts under Alternative 3 would be reduced, as compared to the proposed project.

TRANSPORTATION

As described in Section 4.6, Transportation, proposed project and cumulative impacts related to VMT would be significant and unavoidable even with the implementation of MM TRA-1 (see Impacts TRA-2 and TRA-5). This impact is associated with permanent operation of the courts during the maximum event with up to 400 participants and spectators. VMT impacts associated with typical weekday use involving practices with no spectators and a typical competitive match involving up to 145 participants and spectators would be less than significant, not requiring mitigation measures. Other transportation impacts of the proposed project related to conflicts with transportation plans and policies, design hazards, and emergency access would also be less than significant (see Impacts TRA-1, TRA-3, and TRA-4).

Given that no spectator space would be provided under Alternative 3 it is assumed that the maximum event with up to 400 participants and spectators would not occur under Alternative 3. Rather, typical weekday use involving practices with no spectators and a typical competitive match involving no spectator crowd would be expected with Alternative 3. Therefore, Alternative 3 would avoid the significant and unavoidable VMT impacts and such impacts would be less than significant, not requiring mitigation measures. Overall, all transportation impacts under Alternative 3 would be reduced, as compared to the proposed project.

6.4.4.3 ABILITY TO MEET PROJECT OBJECTIVES

Alternative 3 would only moderately meet the identified project objectives (see Table 6-3). Specifically, Alternative 3 would moderately support UC Berkeley's ongoing compliance with Title IX as it would somewhat improve the training and competition facilities provided to female student athletes who participate in the IA beach volleyball program (Objective #1). As the existing CKC sand courts would be reconstructed, Alternative 3 would somewhat improve recreational facilities but would not fully meet the needs of the current student body and the community (Objective #2). Alternative 3 would only moderately meet the siting criteria for IA beach volleyball facilities (Objective #4), given the size and characteristics of the site. All design criteria and siting criteria would not be feasible to meet, as the site: (1) would not avoid siting the courts on a site with topographical or physical constraints making ADA access more challenging and construction costs higher; and (2) would not accommodate spectators.

Given that Alternative 3 would not provide for the partial demolition of Building 23 it would not address the seismic safety risk posed by a portion of the building pursuant to University of California Seismic Safety Policy (Objective #3). However, as indicated previously, partial demolition of Building 21 may ultimately be pursued in the future to comply with the University of California Seismic Safety Policy. Additionally, Alternative 3 would not conform with the University of California's Seismic Safety Policy as partial demolition of Building 23 is not warranted under the policy, as indicate Section 6.4.4.1, Description of Alternative 3.

6.4.5 ALTERNATIVE 4: COMPREHENSIVE PROJECT ALTERNATIVE

6.4.5.1 DESCRIPTION OF ALTERNATIVE 4

Alternative 4 consists of the development of the proposed project on the Smyth-Fernwald site, outside and directly north of the CKC. As shown in Figure 6-1, this site is bounded by Dwight Way on the south, Hillside Avenue on the west, Fernwald Road on the east, and Smyth Lane on the north. The Smyth-Fernwald site is currently a vacant, open space except for a small children's play structure at the northwest corner. The site is of sufficient size to accommodate all project components, including: four sand courts, a support building for team use, new lighting, a scoreboard, a PA system, and a lawn area for spectators to watch matches. Tree replacement for removed trees

would be provided, similar to the proposed project. The site has substantial grade changes, which would require re-grading the site to allow for the proposed project and to meet ADA requirements. Topography and site constraints would result in higher construction costs than at a flatter, rectilinear site. As the site is located outside the CKC, no demolition of another CKC building would be required to meet the Covenants and MOU. However, as indicated previously, partial demolition of Building 21 may be pursued in the future to comply with the University of California Seismic Safety Policy.

All applicable university CBPs would be implemented with Alternative 4, similar to the proposed project. As the Smyth-Fernwald site is located outside of the CKC, the mitigation measures from the 1979 Dwight-Derby Site Plan EIR (UC Berkeley 1979) that would be implemented as part of the proposed project would not be implemented as part of Alternative 3, as the 1979 mitigation measures do not apply outside of the CKC.

6.4.5.2 IMPACT ANALYSIS

AESTHETICS

As described in Section 4.2, Aesthetics, proposed project impacts related to scenic vistas, scenic quality, and light and glare would be less than significant (see Impacts AES-1 through AES-3).

Alternative 4 impacts related to scenic vistas and scenic quality would also be less than significant. However, these impacts would be somewhat greater, as compared to the proposed project, given that the site is surrounded on three sides by off-campus residential uses, which are more sensitive to visual changes. Additionally, light and glare impacts would be greater under Alternative 4, as compared to the proposed project. Specifically, light poles with LED light arrays would likely be closer to off-campus residences, as compared to the proposed project. Similar to the proposed project, fixtures would be directed downward onto the site and would be affixed with glare shields to limit the potential for glare to be received off site and unnecessary uplighting. However, it is possible that light spill onto adjacent residences would result with Alternative 4, resulting in a potentially significant impact. Potentially feasible mitigation measures could include the planting of mature trees to fully block lighting from spillover onto adjacent properties; however, it is unclear whether space is available on the site to dedicate to such tree planting and still allow for the siting of the various project components. Therefore, conservatively, the light and glare impact associated with Alternative 4 would be significant and unavoidable. As for the proposed project, Alternative 4 would also be subject to UC Berkeley's Design Review, Physical Design Framework, Campus Design Standards, and relevant CBPs, as described in Section 4.2.2, Regulatory Framework (see Section 4.2, Aesthetics). These requirements would help reduce impacts to visual resources as part of the design review process. Overall, aesthetic impacts under Alternative 4 would be greater, as compared to the proposed project.

CULTURAL RESOURCES

As described in Section 4.3, Cultural and Tribal Cultural Resources, proposed project impacts related to historic built environment resources would be significant and unavoidable even with the implementation of MM CUL-1a and MM CUL-1b (see Impacts CUL-1 and CUL-5). This impact is due to the partial demolition of Building 21, which is a contributing resource to the Historic District. Proposed project and cumulative impacts related to unique archaeological resources, historical resources of an archaeological nature, and tribal cultural resources would be potentially significant but these impacts would be reduced to less than significant with the implementation of MM CUL-2 (see Impacts CUL-2, CUL-4, and CUL-5). Proposed project impacts related to human remains would be less than significant (see Impact CUL-3).

Alternative 4 would avoid the significant unavoidable project and cumulative historic built environment resource impacts (Impacts CUL-1 and CUL-5) associated with the proposed project's partial demolition of CKC Building 21, as no CKC building demolition would occur under this alternative. Development on the Alternative 4 site would not result in a historic built environment resource impact, as the site does not contain historic built environment resources that would require demolition. While the historic status of the existing residence along the northern edge of the site is unknown, this building could be retained, which would still allow for development of all project components on this site. The impact of Alternative 4 on historic built environment resources would be less than significant and therefore identified mitigation measures would not need to be implemented. However, as indicated previously, partial demolition of Building 21 may ultimately be pursued in the future to comply with the University of California Seismic Safety Policy and therefore, this impact could still occur in the future.

Alternative 4 impacts related to archaeological resources, historical resources of an archaeological nature, and tribal cultural resources would also be potentially significant but somewhat greater than for the proposed project. The impacts would be somewhat greater as the same project components would be implemented on this site as the proposed project (see Table 6-1), but due to the substantial grade changes, re-grading of the site would need to be conducted to allow for the proposed project and to meet ADA requirements. Therefore, there would be a greater potential for inadvertent discovery of archaeological resources, historical resources of an archaeological nature, and tribal cultural resources, as compared to the proposed project. As for the proposed project, Alternative 4 would be subject to UC Berkeley's Campus Design Standards, as described in Section 4.3.2, Regulatory Framework (see Section 4.3, Cultural and Tribal Cultural Resources). Alternative 4 would also be required to implement MM CUL-2. These requirements address artifacts discovered during construction and would help reduce impacts to archaeological resources, historical resources of an archaeological nature, and tribal cultural resources. Alternative 4 impacts related to archaeological resources, historical resources of an archaeological nature, and tribal cultural resources would also be less than significant with mitigation measures*;* however, impacts would be somewhat greater, as compared to the proposed project. Overall, historic built environmental resource impacts of Alternative 4 would be reduced and archaeological resources, historical resources of an archaeological nature, and tribal cultural resources impacts would be greater, as compared to the proposed project.

LAND USE AND PLANNING

As described in Section 4.4, Land Use and Planning, proposed project and cumulative impacts related to conflicts with applicable land use plans, policies or regulations would be less than significant (see Impacts LU-1 and LU-2).

Alternative 4 impacts related to conflicts with applicable land use plans, policies or regulations would also be less than significant. However, impacts would be somewhat greater than for the proposed project. Development of project components on the Alternative 4 site would be generally consistent with the land use types allowed under the 2021 LRDP. Specifically, the LRDP identifies the Smyth-Fernwald site as being within the City Environ land use zone and shows the site as an infill site and "potential future building area." However, athletics and recreation are identified as a secondary use on this site with priority uses being for administrative, campus life, visitor-serving, housing, service facilities, and parking and mobility. This is reinforced by the objective that seeks to prioritize uses in the City Environs that support UC Berkeley's strategic goals for housing and research, as well as complementary uses including public-serving clinics, museums, and event spaces. Priority is also given to uses that support the surrounding neighborhood's land use goals, such as active ground floor spaces, and community-serving retail space. As for the proposed project, Alternative 4 would also be subject to UC Berkeley's Design Review, Physical Design Framework, Campus Design Standards, and relevant CBPs, as described in Section 4.4.2, Regulatory Framework (see Section 4.4, Land Use and Planning). These requirements would help reduce land use compatibility

impacts as part of the design review process. Overall, land use impacts under Alternative 4 would be greater, as compared to the proposed project.

NOISE

As described in Section 4.5, Noise, proposed project impacts related to temporary and permanent increases in ambient noise levels would be potentially significant but these impacts would be reduced to less than significant with the implementation of MM NOI-1 through MM NOI-4 (see Impact NOI-1). This impact is associated with temporary construction of the beach volleyball courts and demolition of Building 21, as well as permanent operation of the courts during the maximum event with up to 400 participants and spectators. Typical weekday use involving practices with no spectators and a typical competitive match involving up to 145 participants and spectators would result in operational noise impacts that would be less than significant, not requiring mitigation measures. Proposed project impacts related to vibration would also be less than significant (see Impact NOI-2).

Alternative 4 impacts related to temporary increases in ambient noise levels during construction would also be potentially significant. However, the impacts would be greater with Alternative 4 as compared to the proposed project given that the Alternative 4 site is closer to off-campus sensitive receptors than the proposed project would be. Specifically, off-campus sensitive receptors are located immediately adjacent to this site on Hillside Avenue, Fernwald Drive, and Smyth Lane. This proximity would result in greater temporary construction noise to off-campus sensitive receptors. As for the proposed project, Alternative 4 would also be subject to UC Berkeley's CBPs related to construction activities (see Section 4.4, Noise) and would be required to implement MM NOI-1. These requirements would reduce potentially significant construction noise impacts to less than significant.

Alternative 4 impacts related to permanent increase in ambient noise levels would also be potentially significant and somewhat greater, given the proximity of adjacent off-campus receptors, as compared to the proposed project. Given that the same spectator space would be provided under Alternative 4, as for the proposed project, the maximum event with up to 400 participants and spectators would also occur under Alternative 4, which would also result in a potentially significant noise impact. As for the proposed project, Alternative 4 would also be subject to UC Berkeley's CBPs related to shielding of mechanical equipment (see Section 4.4, Noise) and would be required to implement MM NOI-2 through MM NOI-4. It should be noted, however, that MM NOI-2 regarding PA speaker orientation would need to be refined to address site-specific conditions on the Smyth-Fernwald site and location of adjacent residences. These requirements would reduce potentially significant operational noise impacts to less than significant. Overall, noise impacts under Alternative 4 would be increased, as compared to the proposed project.

TRANSPORTATION

As described in Section 4.6, Transportation, proposed project and cumulative impacts related to VMT would be significant and unavoidable even with the implementation of MM TRA-1 (see Impacts TRA-2 and TRA-5). This impact is associated with permanent operation of the courts during the maximum event with up to 400 participants and spectators. VMT impacts associated with typical weekday use involving practices with no spectators and a typical competitive match involving up to 145 participants and spectators would be less than significant, not requiring mitigation measures. Other transportation impacts of the proposed project related to conflicts with transportation plans and policies, design hazards, and emergency access would also be less than significant (see Impacts TRA-1, TRA-3, and TRA-4).

Given that the same project components and spectator space would be provided under Alternative 4, this alternative would also result in significant and unavoidable proposed project and cumulative impacts related to VMT. This alternative would not change the characteristics of the maximum event, the typical event, and typical weekday use of the courts. Overall, all transportation impacts under Alternative 4 would the same, as compared to the proposed project.

6.4.5.3 ABILITY TO MEET PROJECT OBJECTIVES

Alternative 4 would meet most of the identified project objectives (see Table 6-3). Specifically, Alternative 4 would support UC Berkeley's ongoing compliance with Title IX as it would improve the training and competition facilities provided to female student athletes who participate in the IA beach volleyball program (Objective #1). Alternative 4 would improve recreational facilities to meet the needs of the current student body and the community (Objective #2). Alternative 4 would moderately meet the siting criteria for IA beach volleyball facilities (Objective #4). While the size and characteristics of the site are sufficient to meet most of the design and siting criteria, the site has topographical or physical constraints, which would make ADA access more challenging and construction costs higher.

Given that Alternative 4 would not provide for the partial demolition of Building 21 it would not address the seismic safety risk posed by a portion of the building pursuant to University of California Seismic Safety Policy (Objective #3). However, as indicated previously, partial demolition of Building 21 may ultimately be pursued in the future to comply with the University of California Seismic Safety Policy.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The CEQA Guidelines (Section 15126.6[a]) requires that an EIR's analysis of alternatives identify the "environmentally superior alternative" among all of those considered. In addition, Section 15126.6(e)(2) states that if the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative among the other alternatives. Furthermore, Public Resources Code Sections 21002 and 21081 require lead agencies to adopt feasible mitigation measures or feasible alternatives in order to substantially lessen or avoid otherwise significant adverse environmental effects, unless specific economic, legal, social, technological, or other conditions make such mitigation measures or alternatives infeasible.

Table 6-2 presents a comparison of project impacts between the Proposed Project and the alternatives. Alternative 1 would avoid all identified impacts of the proposed project but would not meet any of the project objectives. While Alternative 4 would avoid the significant and unavoidable historic built environment resource impacts (Impacts CUL-1 and CUL-5), it would result in increased impacts in many other categories such as aesthetics, land use, and noise. Alternatives 2 and 3 would both have the same number of reduced impacts and would avoid the significant unavoidable impacts of the proposed project, associated with historic built environment resources and transportation impacts related to VMT (Impacts TRA-2 and TRA-5). However, Alternative 3 would be the environmentally superior alternative given that it does not provide any spectator space and therefore a new PA system is not incorporated into this alternative, which reduces operational noise and VMT-related impacts.

TABLE 6-2. COMPARISON OF ENVIRONMENTAL IMPACTS FROM THE ALTERNATIVES

Section # and Topic	Proposed Project	Alternative 1	Alternative 2	Alternative 3	Alternative 4
4.2, Aesthetics (Scenic Vistas and Scenic Quality)	LS	NI	LS↓	LS↓	LS↑
4.2, Aesthetics (Light and Glare)	LS	NI	LS↓	LS↓	SU
4.3, Cultural Resources (Historic Built Environment Resources)	SU	NI	LS	LS	LS
4.3, Cultural Resources (Archaeological and Tribal Cultural Resources)	LSM	NI	LSM↓	LSM↓	LSM↑
4.4, Land Use and Planning	LS	NI	LS	LS	LS↑
4.5, Noise (Construction)	LSM	NI	LSM↓	LSM↓	LSM↑
4.5, Noise (Operations)	LSM	NI	LS	LS	LSM↑

TABLE 6-2. COMPARISON OF ENVIRONMENTAL IMPACTS FROM THE ALTERNATIVES

Section # and Topic	Proposed Project	Alternative 1	Alternative 2	Alternative 3	Alternative 4
4.6, Transportation (Vehicle Miles Travelled)	SU	NI	LS	LS	SU
4.6, Transportation (Other Impacts)	LS	NI	LS↓	LS↓	LS

Notes: NI = no impact; LS = less than significant; LSM = less than significant with mitigation; SU = significant and unavoidable; ↑ = greater; ↓ = lesser.

TABLE 6-3. ABILITY OF ALTERNATIVES TO MEET PROJECT OBJECTIVES

Project Objectives	Proposed Project	Alternative 1	Alternative 2	Alternative 3	Alternative 4
1. Support UC Berkeley's ongoing compliance with Title IX by improving the training and competition facilities provided to female student athletes who participate in the IA beach volleyball program.	Excellent	Poor	Moderate	Moderate	Excellent
2. Improve recreational facilities to meet the needs of the current student body and the community.	Excellent	Poor	Moderate	Moderate	Excellent
3. Advance seismic safety risk reduction pursuant to the University of California's Seismic Safety Policy.	Excellent	Poor	Poor	Poor	Poor
4. Meet siting criteria for IA beach volleyball courts.	Excellent	Poor	Moderate	Moderate	Moderate

6.6 REFERENCES

California Native Plant Society v. City of Santa Cruz [2009] 177 Cal.App.4th 957.

Citizens for Open Government v. City of Lodi [2012] 296 Cal.App.4th 296, 314-315.

City of Del Mar v. City of San Diego [1982] 133 Cal.App.3d 410, 417.

In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings [2008] 43 Cal.4th 1143, 1165, 1166.

Sierra Club v. County of Napa, 121 Cal.App.4th 1490.

UC Berkeley (University of California, Berkeley). 1979. *Dwight Derby Site Plan (Schools for the Deaf and Blind) and Final Environmental Impact Report*. May 1979.

7. List of Preparers

7.1 UNIVERSITY OF CALIFORNIA, BERKELEY

Capital Strategies

Shraddha Navalli Patil, PhD, Senior Planner, Physical and Environmental Planning

Mike Edwards, Project Manager, Capital Projects

Kyle Gibson, Director, Communications

Facilities Services

Diane Coppini, Director

Karen Bennett, Civil Engineer, Utilities Engineering

Intercollegiate Athletics

Joshua Hummel, Senior Associate Athletics Director, Facilities, Events and Capital Projects

Office of Community and Government Relations

Ruben Lizardo, Director

Office of Environment, Health and Safety

Alicia Bihler, Interim Environmental Programs Manager

Greg Haet, Environmental Project Manager

Tim Pine, Environmental Protection Specialist

Office of Sustainability

Kira Stoll, Chief Sustainability & Carbon Solutions Officer

Parking and Transportation

Seamus Wilmot, Assistant Vice Chancellor and Executive Director Business Operations

David Sorrell, Mobility/Alternative Transportation Manager

Recreational Sports

Katie F. Carlson, Director, Cal Sports Club

Nikita Kadam Sekhon, Supervisor - GBRC/SCRA

Michael Neuwald, Associate Director - Facilities & Maintenance

Residential & Student Support Programs

Tom Mucha, Director, Design & Projects, Sustainability

7.2 DUDEK

Project Manager	Ann Sansevero, AICP
Deputy Project Managers	Catherine Wade, PhD Daniel Hoffman
Aesthetics	Josh Saunders, AICP
Cultural Resources	Kathryn Haley, MA John Schlagheck, MA, RPA Fallin Steffen, MPS Adam Giacinto, MA, RPA William Burns, MSc, RPA
Land Use and Planning	Daniel Hoffman
Noise	Jonathan Leech, AICP, INCE
Transportation	Dennis Pascua Mladen Popovic, AICP
Initial Study	Catherine Wade, PhD Angela Zhang Matthew Morales
Graphics	Rachel Strobridge

Berkeley
UNIVERSITY OF CALIFORNIA

Capital Strategies provides a full suite of planning, design, real estate, construction, and development services to UC Berkeley. Capital Strategies is part of the Administrative Division and includes real estate professionals, architects, planners, engineers, construction managers, and administrative specialists, working together to serve the campus community.

DUDEK
1630 San Pablo Avenue, Suite 300
Oakland, CA 94612
510.601.2500 | HELLO@DUDEK.COM
DUDEK.COM