Appendix D

Cultural Resources

Los Angeles International Airport
Proposed Runway 6R-24L
Runway Safety Area Improvements Project

Cultural Resources Technical Report

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SECTION ES
SUMMARY OF FINDINGS

This Cultural Resources Technical Report (CRTR) documents the results of a cultural resources assessment for the Proposed Runway Safety Area (RSA) Improvements to Runway 6R-24L (proposed undertaking) at the Los Angeles International Airport (LAX), in Los Angeles County, California. The record search identified 11 previously recorded cultural resources within 0.5 mile of the area of potential effects (APE). Intensive pedestrian surveys were conducted on May 8, 2013; June 14, 2013; July 27, 2013; December 18, 2013; and July 16, 2014, and resulted in the identification of two historic period (greater than 50 years old) cultural resources (one built environment and one archaeological): Runway 6R-24L and LAX Supplemental Site 1H (structural debris scatter from the Surfridge community). Both resources lack integrity and do not meet any of the criteria for listing on the National Register of Historic Places (NRHP), and are therefore recommended not eligible for listing on the NRHP.

The results of records search and archival research suggest a potential for the unanticipated discovery of buried cultural deposits if construction activities extend into native or undisturbed soil. Construction activities associated with the proposed undertaking are not anticipated to extend beyond 3 feet below ground surface, which is reported to consist of fill material. However, if plans for the proposed undertaking are modified so that ground disturbances occur in areas or at depths that do not consist of redeposited fill or have not previously been disturbed, unanticipated discoveries of archaeological resources may occur. The disturbance or destruction of potentially significant undiscovered resources by construction-related activities would be considered a significant effect unless mitigated. It is recommended that procedures outlined in the Archaeological Treatment Plan[1] completed pursuant to Mitigation Measure HA-4 of the LAX Master Plan Mitigation Monitoring and Reporting Program (MMRP) be followed to ensure the long-term protection and proper treatment of those unexpected archaeological discoveries of federal, state, and/or local significance found within the APE.

[1] Los Angeles World Airports. June 2005. *Archaeological Treatment Plan*. Prepared by: Brian F. Smith and Associates, San Diego, CA.

SECTION 1.0
INTRODUCTION

The Los Angeles World Airports (LAWA) is planning Runway Safety Area (RSA) improvements to Runway 6R-24L at the Los Angeles International Airport (LAX). Sapphos Environmental, Inc. previously prepared a Cultural Resources Technical Report (CRTR) documenting the results of a cultural resources assessment in support of improvements to Runway 6R-24L and 6L-24R. However, improvements identified in that project did not bring the Runway 6R-24L RSA into compliance with Federal Aviation Administration (FAA) design standards. The proposed Runway 6R-24L Runway Safety Area Improvements Project (proposed undertaking) is being undertaken by LAWA in response to the requirements of *The Transportation, Treasury, Housing and Urban Development, the Judiciary, The District of Columbia, and Independent Agencies Appropriations Act* (Public Law 109-115),[1] which states that all RSAs at 14 Code of Federal Regulations (CFR) Part 139 airports[2] must meet FAA design standards by December 31, 2015.

This CRTR consists of a brief description of the proposed undertaking, a summary of the regulatory frameworks that guide the decision-making process with respect to historic properties, a description of the methods employed to support the characterization and evaluation of cultural resources within the proposed undertaking area, the results for baseline conditions for cultural resources, the potential for the proposed undertaking to affect cultural resources, and, if appropriate, opportunities to avoid and minimize the potential effects of the proposed undertaking.

1.1 PURPOSE OF THE CULTURAL RESOURCES TECHNICAL REPORT

This CRTR was prepared to characterize the cultural resources that would potentially be affected by construction, operation, and maintenance of the proposed undertaking. As such, the document presents data and information to be used in making a determination of effects to cultural resources resulting from the proposed undertaking and will provide the substantial evidence required with respect to cultural resources for environmental documentation under the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA).

1.2 SOURCES OF RELEVANT INFORMATION

A literature review was conducted at the South Central Coastal Information Center (SCCIC), at California State University, Fullerton, and was the primary source of relevant information used in the preparation of this CRTR. Additional information was gathered through a Phase I survey, informal coordination with cooperating agencies, and spatial analysis based on geographic information system data. Sources of relevant information are cited in footnotes and compiled in Section 6, *References*.

1.3 WORKING DEFINITIONS

This section defines technical terms used in the characterization of baseline conditions and assessment of the potential for the proposed undertaking to affect cultural resources.

[1] *The Transportation, Treasury, Housing and Urban Development, the Judiciary, The District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), 30 November 2005.

[2] 14 Code of Federal Regulations (CFR) Part 139 airports are U.S. airports that are certified by FAA to allow commercial passenger aircraft operations.

Archaeological site is defined by the National Register of Historic Places (NRHP) as the place or places where the remnants of a past culture survive in a physical context that allows for the interpretation of these remains. Archaeological remains usually take the form of artifacts (e.g., fragments of tools, vestiges of utilitarian or non-utilitarian objects), features (e.g., remnants of walls, cooking hearths, or midden deposits), and ecological evidence (e.g., pollen remaining from plants that were in the area when the activities occurred).[3] Prehistoric archaeological sites represent the material remains of Native American groups and their activities. These sites are generally thought to date to the period before European contact but, in some cases, may contain evidence of trade contact with Europeans. Historic archaeological sites reflect the activities of nonnative populations during the historic period.

Area of potential effects (APE) consists of the portions of the proposed undertaking area that have the potential to be subjected to direct effects, such as ground disturbances associated with grading, leveling, and excavation. The APE also includes a 100-foot buffer area surrounding the loci of direct ground disturbance that accounts for indirect effects such as accidental vehicular and foot traffic.

Cultural resources study area is a 0.5-mile buffer placed around the APE from which the relevant sources of information are collected and reviewed in order to determine the potential cultural sensitivity of the APE.

Historic period is defined as the period that begins with the arrival of the first nonnative population and thus varies by area. Most Southern California archaeologists use AD 1542 as the date to mark the beginning of the historic period, following the beginning of the Spanish contact with coastal California.

Isolate is defined as an isolated artifact or small group of artifacts that appear to reflect a single event, loci, or activity. It may lack identifiable context but has the potential to add important information about a region, culture, or person. Isolates do not require avoidance or mitigation under NHPA because they lack contextual integrity and, therefore, are unlikely to meet the criteria for inclusion in the NRHP.

Native American sacred site is defined as an area that has been, and often continues to be, of religious significance to Native American peoples, such as an area where religious ceremonies are practiced or an area that is central to their origins as a people.

[3] U.S. Department of the Interior, National Park Service. 2000. *National Register Bulletin: Guidelines for Evaluating and Registering Archeological Properties*. Washington, DC. Available at: http://www.cr.nps.gov/nr/publications/bulletins/arch/

SECTION 2.0
DESCRIPTION OF THE PROPOSED UNDERTAKING

The description of the proposed undertaking includes its precise location and boundaries, the project elements that constitute the proposed undertaking, and a brief characterization of the existing conditions at the proposed undertaking area.

2.1 PROPOSED UNDERTAKING LOCATION

The proposed undertaking is located within the north airfield on LAX property within the City of Los Angeles, Los Angeles County (Figure 2.1-1, *Regional Vicinity Map*). The area around LAX is highly urbanized and consists of transportation infrastructure (airport and interstate highways), commercial, and residential uses. To the north of LAX is the community of Westchester in the City of Los Angeles, to the east is the City of Inglewood, to the south is the City of El Segundo, and to the west is the Pacific Ocean. Highway access to LAX is provided by the San Diego Freeway (Interstate 405), which is a north-south freeway east of LAX, and the Century Freeway (Interstate 105), which is an east-west freeway south of LAX. Major roadways that serve LAX include Sepulveda Boulevard, Century Boulevard, Imperial Highway, and Lincoln Boulevard.

The northern airfield complex at LAX includes Runway 6R-24L as well as a system of parallel and connecting taxiways (Figure 2.1-2, *Proposed Undertaking Location*). In addition, there are a number of airfield operations roadways located within the north airfield area. The undertaking properties are within the U.S. Geological Survey (USGS) 7.5-minute series, Venice, California, topographic quadrangle in unsectioned portions of Township 2, South, Range 15 West. The elevation ranges from 126 feet above mean sea level (MSL) to 86 feet above MSL.

2.2 EXISTING CONDITIONS

The proposed undertaking area consists of the paved Runway 6R-24L and shoulder areas, and includes taxiways and service roadways separated by unpaved sections of maintained grass and low scrub vegetation. The eastern portion of the proposed undertaking includes two on-airport parking areas utilized for the staging of construction vehicles and other equipment used at LAX, a partially graveled area, and a grassy area at the east end of Runway 24R (Figure 2.1-2). This area also includes the Air Operations Area (AOA) fence and a service road (El Manor Avenue, previously a residential street), both of which are now located on airport property and closed to the public. The western portion of the proposed undertaking includes Medium Intensity Approach Lighting System with Runway Alignment Indicator (MALSR) instrumentation associated with Runway 6R-24L positioned on coastal dunes west of the runway.

2.3 PROPOSED UNDERTAKING ELEMENTS

LAWA is proposing to improve the RSA of Runway 6R-24L at LAX in response to *The Transportation, Treasury, Housing and Urban Development, the Judiciary, the District of Columbia, and Independent Agencies Appropriations Act* (Public Law 109-115).[1] This act requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, CFR, Part 139, Certification and Operations: Land Airports Serving Certain Air Carriers, to comply with FAA design standards by December 31, 2015.

[1] *The Transportation, Treasury, Housing and Urban Development, the Judiciary, the District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), 30 November 2005.

RICONDO & ASSOCIATES

FIGURE 2.1-1

Regional Vicinity Map

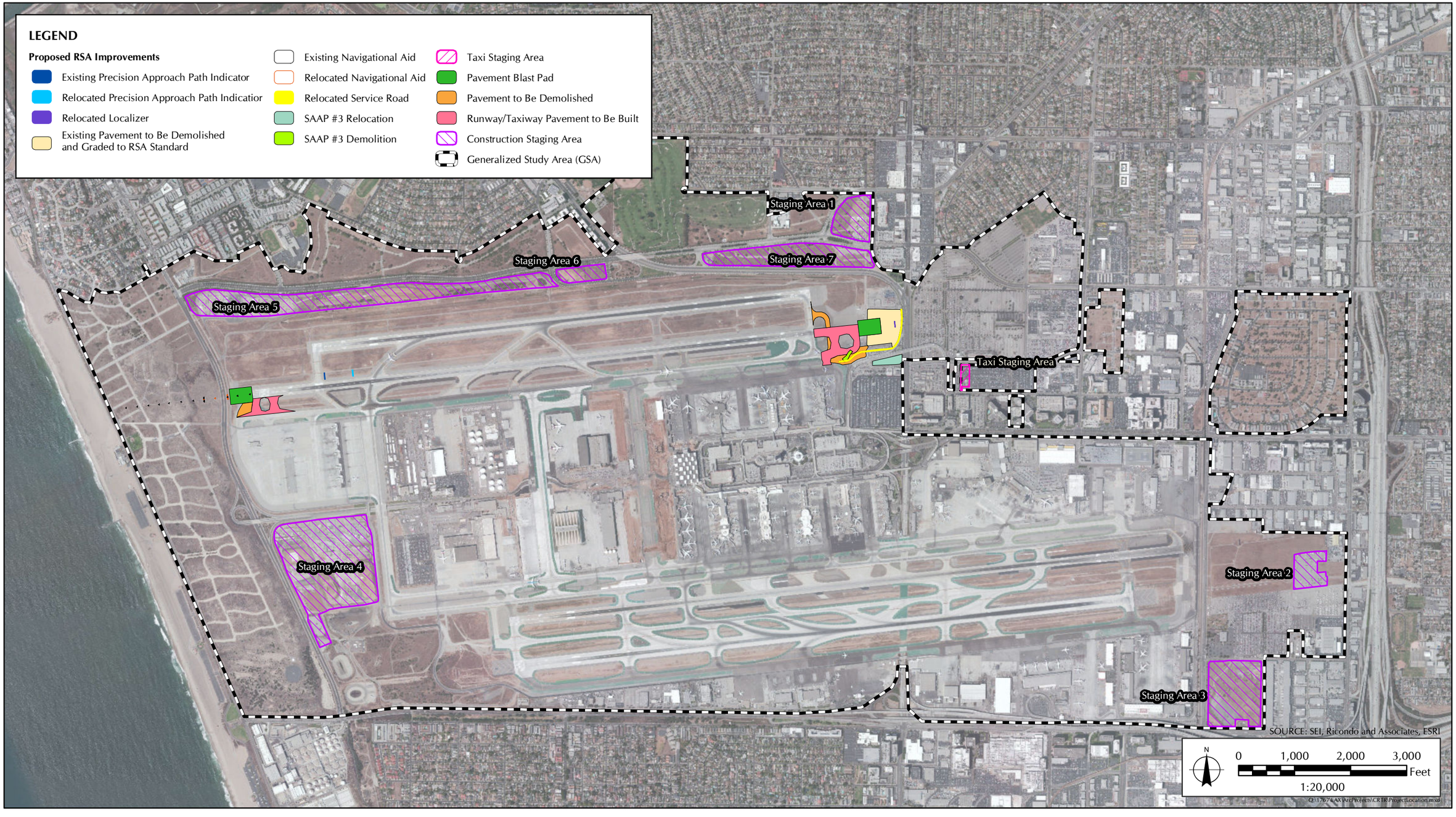

FIGURE 2.1-2

Proposed Undertaking Location

The components of the proposed undertaking related to Runway 6R-24L RSAs improvements are:

Runway 6R

- Shift Runway 6R endpoint approximately 200 feet to the east; existing landing threshold would be shifted 420 feet to the east, resulting in an approximately 550-foot displaced threshold:
  - Construct a blast pad 400 feet long and 280 feet wide
  - Construct retaining wall and add fill graded to RSA standards
  - Shift existing connector Taxiways E16 and E17 to the east
  - Construct new and rehabilitate existing runway and taxiway pavement, modify airfield signage, lighting and markings
  - Relocate navigational aids, including the glide slope antenna, and precision approach path indicators (PAPI)
  - Abandon two approach light system (MALSR) station and shift light stations to the east to coincide with existing light station locations

Runway 24L

- Shift Runway 24L endpoint by constructing approximately 800 feet of new runway pavement to the east; landing threshold will remain in current location; pavement will be marked as a displaced threshold:
  - Shift Taxiway E endpoint approximately 500 feet to the east with 400-foot separation from the runway;
  - Remove existing Taxiway E7 including the existing loop westbound that joins Taxiway V between Runways 24L and 24R;
  - Construct new connector Taxiways E7 and E6;
  - Construct new and rehabilitate existing runway and taxiway pavement, modify airfield signage, lighting and markings;
  - Relocate the existing ILS localizer antenna to the east;
  - Demolish and relocate existing Secure Area Access Post (SAAP) #3;
  - Protect in place existing storm sewer;
  - Relocate Air Operations Area (AOA) fence;
  - Construct 400-foot long jet blast pad; and
  - Relocate taxicab holding/staging area and associated buildings;
- Implement declared distances
- Extend and realign existing vehicle service road(s) south of Taxiway E, which will require closure of Alverstone Avenue and Davidson Drive, as well as adjacent parking lot; remove and grade pavement within RSA

Shift Runway 6R End. Construction of the proposed project will require a shift of the Runway 6R end by approximately 200 feet to the east. The shift of the runway also requires shifts to taxiways allowing aircraft to enter and exit the runway, and shifts to aircraft navigational aids that are fixed by function in relation to the runway threshold. LAWA proposes to remove existing Taxiways E16 and E17 that provide access to the existing end of Runway 6R and construct new taxiway connectors E16 and E17 to provide access to the shifted end of Runway 6R (Figure 2.1-2). The runway and taxiway lightings and markings associated with the end of Runway 6R will need to be modified to reflect the shift in the Runway 6R threshold. The shift in the Runway 6R threshold will require the relocation of portions of the instrument landing system (ILS) and approach lighting system, namely the glide slope antenna, PAPI, and MALSR.

MALSR. Construction activities for the proposed improvements, mainly modifications of the MALSR system, would occur in areas west of the runway, within the Los Angeles Airport/El Segundo Dunes, and north of the El Segundo blue butterfly occupied habitat. The required improvements would be designed to minimize disturbance of the Los Angeles Airport/El Segundo Dunes and are anticipated to include the following:

- Abandon the two (western-most) light stations – remove light poles for flashing lights; existing conduit and light pole foundations would remain in place.

- Replace existing light poles with new poles on existing foundations, if practicable.

- Replace lights on existing foundations on light stations where necessary. Existing foundations would remain, but may require minor modification and new conduit to be installed (see details below). Seven of the light stations would be located within the Los Angeles Airport/El Segundo Dunes.

- Two light stations would be modified to accommodate flashing lights:

    - The two proposed flasher stations would require construction of new concrete maintenance pads adjacent to existing foundations for a flasher control cabinet and junction box. Each pad is approximately 4 feet by 4 feet.

    - The proposed two flasher stations would require that underground conduit be installed. Two segments of 2-inch conduit are required with each being approximately 200 feet long. Conduit would be installed approximately 24 inches underground using a trenchless method thereby limiting disturbance of the Los Angeles Airport/El Segundo Dunes. It is anticipated that the installation of this conduit would require digging four small holes for the underground drilling/boring operation. These holes would be no larger than 3 feet by 3 feet and would be hand dug.

- Existing conduit for the other relocated light stations would be used where practicable.

    - In the event that the existing conduit is found to be unusable, it would be necessary to install approximately 1,400 feet of 2-inch underground conduit. This conduit would also be installed approximately 24 inches underground using a trenchless method thereby limiting disturbance of the Los Angeles Airport/El Segundo Dunes. This could involve digging eight small holes for the underground drilling/boring operation; however, it may be possible to use existing hand holes for this purpose.

Shift Runway 24L End. To maintain the existing runway length for departures (10,285 feet), LAWA proposes to shift the Runway 24L end by approximately 800 feet to the east, but in order to maintain the existing touchdown point on Runway 24R in the existing location, LAWA will also implement a displaced threshold of approximately 800 feet. The shift of the runway end results in the requirement to shift taxiways, allowing aircraft to enter and exit the runway, and to shift aircraft navigational aids that are fixed by function in relation to the runway threshold. The endpoint of

Taxiway E will also be shifted 500 feet to the east. LAWA proposes to remove existing Taxiway E7 located east of the existing end of Runway 24L and construct new taxiway E7 and E6 (Figure 1.2-2). The taxiway lightings and markings associated with the end of Runway 24L will need to be modified to reflect the shift in the Runway 24L threshold. The shift in Taxiway E would impact the existing SAAP #3, which would fall within the Taxiway Object Free Area (TOFA). This will require the relocation of SAAP #3 which will remain in the general area, but details of the ultimate SAAP #3 site are dependent on the final design (Figure 1.2-2). With the eastern shift in the Runway 24L end and associated RSA, the Runway 6R ILS localizer also needs to be shifted to the east. The approach light system for Runway 24L will require modification and will be a combination of in-pavement fixtures and elevated fixtures.

Declared Distances. Declared distances are "the distances the airport operator declares available and suitable for satisfying an aircraft's takeoff run, take-off distance, accelerate-stop distance, and landing distance requirements."[3] The FAA defines four types of declared distances: the Take-Off Run Available (TORA), the Take-Off Distance Available (TODA), the Accelerate-Stop Distance Available (ASDA), and the Landing Distance Available (LDA).[4] Aircraft operators use these declared distances, along with weather data, aircraft performance characteristics, and market segments for flight planning, including the determination of payload and range restrictions. Pilots and airplane operators' performance engineers need this information for calculating their allowable takeoff and landing weights and speeds.[5] Essentially, declared distances represent the maximum runway distances available to safely takeoff or reject a takeoff (TORA, TODA, and ASDA), or to land (LDA). Shortening the usable runway length would allow for the full RSA dimensions to be available in the event of an aircraft's excursion from the runway during an overrun, undershoot, or veer-off.

Service Roads. Portions of service roads currently located within the 6R-24L RSA would be relocated or realigned in order to meet RSA standards and to ensure that service vehicles operate outside of the RSA. An existing vehicle service road located southeast of Taxiway E would be relocated and realigned east around the shifted RSA. This would require closure of LAWA-owned Alverstone Avenue and Davidson Drive (which are closed to the public), as well as the taxicab staging lot. Existing pavement located within the shifted RSA may need to be removed and the area graded if it does not meet RSA grade standards. The AOA fence would need to be relocated along the southeastern portion of the north runway complex in order to accommodate the realigned service roads described above. The AOA fence realignment is depicted on Figure 2.1-2.

The realignment of service roads and the AOA fence outside the RSA along the eastern side of the north runway complex, along with the relocated Runway 6R Localizer, would make it necessary to close the taxi and shuttle staging area, located east of Runway 6R-24L. This parking area is located inside the LAX property boundary, east of Alverstone Avenue, and is used for taxi and shuttle staging; it is not open to the public. This parking area totals approximately 95,500 square feet in area and contains paved surface parking; the pavement would be demolished and graded to RSA standards (Figure 2.1-2). The taxicab holding lot would be relocated to an existing LAWA-owned parking lot located between West 96th Street and West 98th Street, approximately 200 feet east of Vicksburg Avenue.

[3] U.S. Department of Transportation, Federal Aviation Administration. 26 February 2014. Advisory Circular 150/5300-13A, Airport Design. Washington, DC.

[4] U.S. Department of Transportation, Federal Aviation Administration. 26 February 2014. Advisory Circular 150/5300-13A, Airport Design. Washington, DC.

[5] U.S. Department of Transportation, Federal Aviation Administration. 6 March 2009. CERTALERT, Reporting Declared Distances to Aeronautical Information Services. Washington, DC.

Construction Staging Areas. Construction staging areas would be necessary due to the limited space available for storage of materials and equipment within the airfield area. Locations of the potential construction staging areas for this project are illustrated in Figure 2.1-2. Only a portion of these construction staging areas would be used during construction of the proposed undertaking. However, specific construction staging areas for this proposed undertaking have not been determined at the present time; therefore, all potential staging areas are being considered in this analysis. Construction staging areas would be located in previously disturbed areas and would result in minimal ground disturbance.

2.4 AREA OF POTENTIAL EFFECTS

The Area of Potential Effects (APE) for archaeology and historic architecture for the proposed undertaking includes boundaries of the entire area that will have physical disturbance, including construction staging areas. The APE includes the various construction work described in the previous section, such as relocating and constructing service roads, pavement rehabilitation, and construction staging areas. LAWA delineated the APE boundaries through consultation with FAA. As the proposed undertaking would not increase the operational capacity of LAX, increase aircraft operations, or change the fleet mix or flight paths of aircraft operating at LAX, delineation of an indirect APE is not required.

The cultural resources study area, which includes the APE, is located within the U.S. Geological Survey (USGS) 7.5-minute series, Venice, California, topographic quadrangle in unsectioned portions of Township 2, South, Range 15 West. The APE is approximately the width of runway 6R-24L and is roughly bounded by Sepulveda Boulevard on the east and Vista del Mar on the west (Figure 2.4-1, *Area of Potential Effects and the Cultural Resources Study Area*). Direct impacts from earth-moving activities in these areas could include minor grading and leveling in order to prepare the roadbed for paving. It is anticipated that more extensive ground disturbance will occur in the construction staging areas. The APE is primarily covered with maintained grasses, pavement, and graded spaces surrounding the construction staging areas; airfield pavement; graded, maintained grassed areas surrounding the airfield pavement; and paved areas to the east.

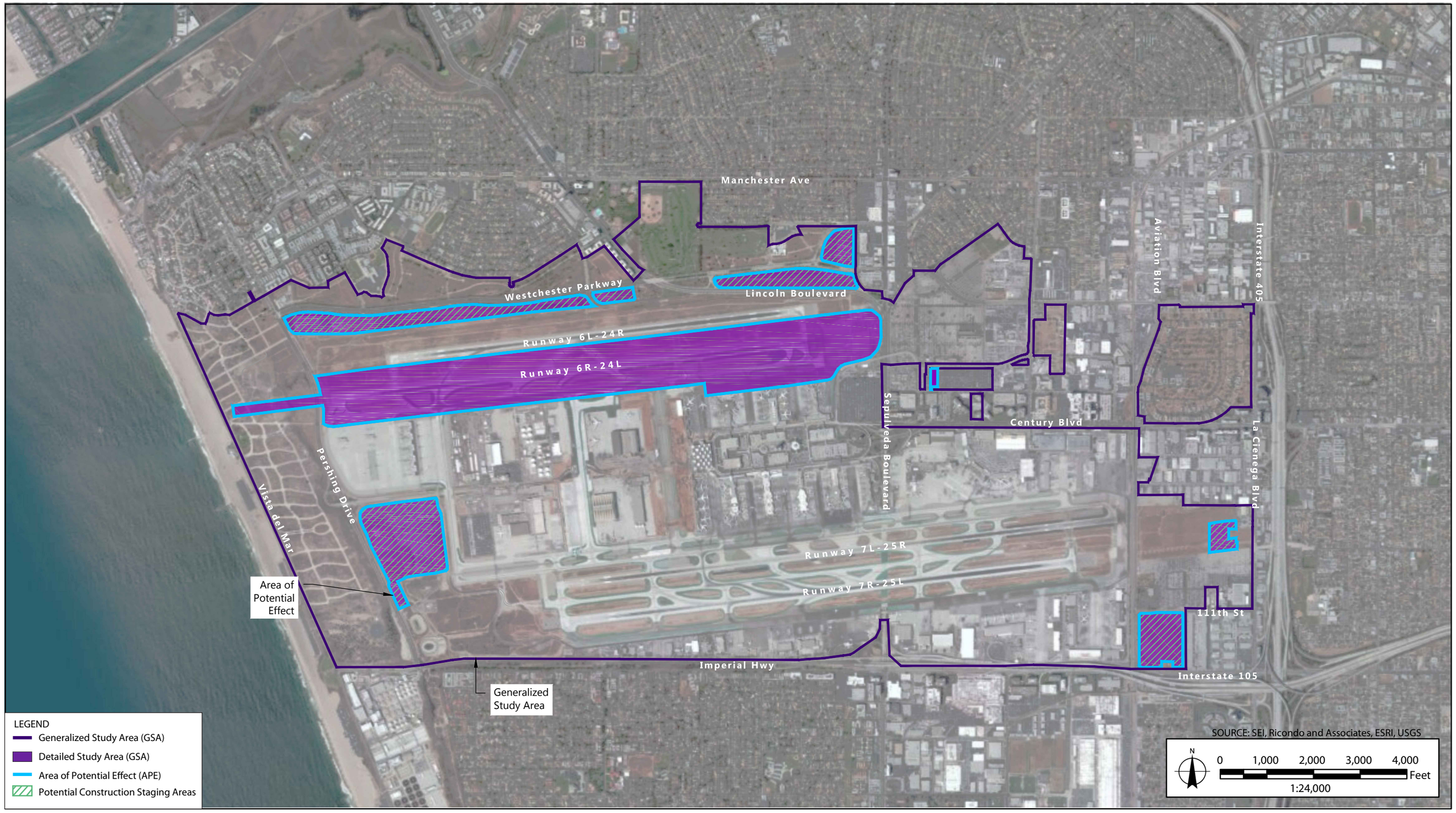

FIGURE 2.4-1

Area of Potential Effects and the Cultural Resources Study Area

SECTION 3.0
REGULATORY FRAMEWORK

This section identifies the federal statutes, ordinances, or policies that govern the conservation and protection of cultural resources that must be considered during the decision-making process for projects that have the potential to affect cultural resources.

3.1 FEDERAL

3.1.1 National Historic Preservation Act of 1966[1]

Enacted in 1966, the National Historic Preservation Act (NHPA) declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of the undertaking on any historic property that is included in, or eligible for inclusion in, the NRHP and that the ACHP must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 CFR Part 800, on such undertakings.

3.1.1.1 National Register of Historic Places

The NRHP was established by the NHPA of 1966 as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment."[2] The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:[3]

Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: It is associated with the lives of persons who are significant in our past.

[1] *United States Code*, 16 USC 470.

[2] *Code of Federal Regulations*, 36 CFR 60.2.

[3] *Code of Federal Regulations*, 36 CFR 60.4.

Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.

Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance.

3.1.2 Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 sets provisions for the intentional removal and inadvertent discovery of human remains and other cultural items from federal and tribal lands. It clarifies the ownership of human remains and sets forth a process for repatriation of human remains and associated funerary objects and sacred religious objects to the Native American groups claiming to be lineal descendants or culturally affiliated with the remains or objects. It requires any federally funded institution housing Native American remains or artifacts to compile an inventory of all cultural items within the museum or with its agency and to provide a summary to any Native American tribe claiming affiliation.

SECTION 4.0
METHODS

This section of the CRTR describes the methods employed in the characterization and evaluation of historic properties within the APE for the proposed undertaking. This report describes the results of records searches and field investigations conducted for the proposed undertaking at LAX.

4.1 CULTURAL RESOURCES

4.1.1 Records Search and Literature Review

A cultural resources records search was conducted at the South Coastal Information Center (SCIC), which is the repository for the California Historical Resources Information System (CHRIS) for this area. The SCIC CHRIS information is housed at California State University, Fullerton. The initial record search was conducted on November 20, 2012, and as a result of refinements to the APE, a supplemental record search was conducted on December 16, 2013. These searches included reviews of all known relevant cultural resources survey reports to ascertain the presence of previously recorded prehistoric and historic archaeological resources within a 0.5-mile radius of the APE (Figure 2.4-1).

4.1.2 Phase I Cultural Resources Survey

The Phase I cultural resources surveys of the APE were conducted on May 8, 2013; June 14, 2013; July 27, 2013; December 18, 2013; and July 16, 2014, by Sapphos Environmental, Inc. staff archaeologists (Dr. Tiffany Clark, Mr. Clarus Backes, Mr. Christopher Purtell, and Mr. Adam White) and architectural historian (Ms. Marilyn Novell) (Appendix A, *Resumes*; Figure 4.1.2-1, *Cultural Survey Area Map*). LAWA personnel accompanied the archaeologists and architectural historian during the duration of the field visits. The goal of the pedestrian survey was to identify prehistoric and historic period sites and isolates within the APE. An Ashtech handheld global positioning system (GPS) unit was used to locate the APE boundary and to record the location of identified cultural resources. Sites and built-environment resources were documented on State of California Department of Parks and Recreation (DPR) 523 series forms with preliminary sketch maps and photographs providing supplemental documentation. No artifacts were collected during pedestrian survey.

4.1.2.1 Runway 6R-24L Safety Area Improvements

To inspect Runway 6R-24L, the archaeologists walked a total of four parallel transects spaced approximately 15 meters apart, including two on either side of each road segment. The MALSR approach lighting located at the western extent of the APE was surveyed by four transects spaced approximately 10 meters apart at each lighting location. The Phase I surveys showed that large portions of the APE are graded dirt roads, paved roads, airport runway and managed (mowed) vegetation consisting of non-native grasses and low-growing scrub habitats; these areas exhibited good to excellent ground visibility. The area surrounding the MALSR approach lighting located at the western extent of the APE exhibited moderate ground visibility resulting from moderate to dense dune vegetation cover.

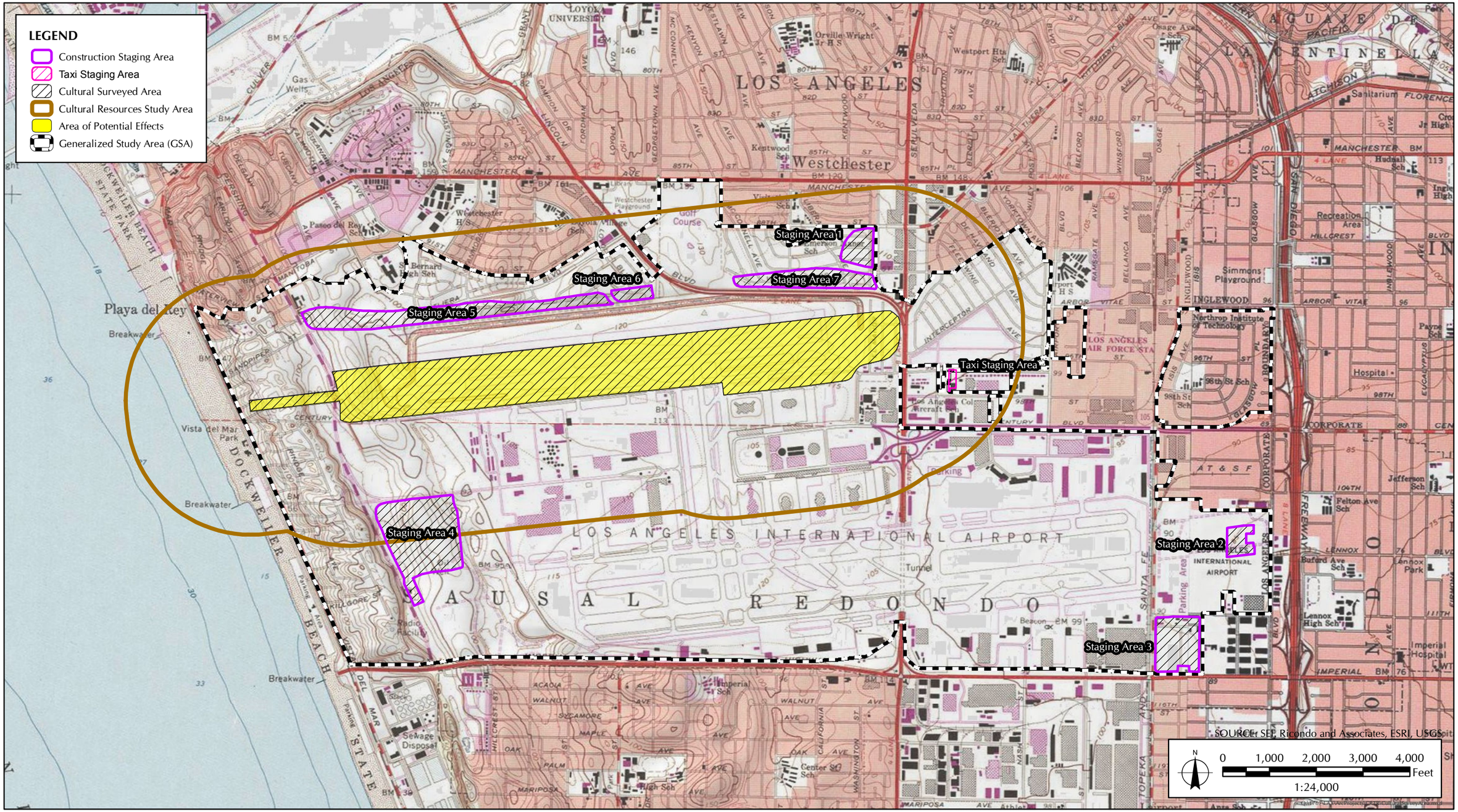

FIGURE 4.1.2-1

Cultural Survey Area Map

5.1 CULTURAL RESOURCES

5.1.1 Cultural Resources Setting

5.1.1.1 Prehistoric Context

Several prehistoric cultural chronologies have been proposed for the Southern California coast with two of the most frequently cited sequences developed by William Wallace[1] and Claude Warren.[2] The chronological sequence presented herein represents an updated synthesis of these schemes as compiled by Glassow and others[3] for the Northern California Bight. This geographic area consists of the coastal area from Vandenberg Air Force Base south to Palos Verdes, as well as the Channel Islands and adjacent inland areas, including the Los Angeles Basin.[4] The prehistoric sequence of the Los Angeles Basin can be divided into four broad temporal categories (Table 5.1.1.1-1, *California Coastal Regional Chronology*). It should be noted that the prehistoric chronology for the region is being refined on a continuing basis, with new discoveries and improvements in the accuracy of dating techniques.

TABLE 5.1.1.1-1
CALIFORNIA COASTAL REGIONAL CHRONOLOGY

Epoch	Coastal Region	Dates
Late Pleistocene / Early Holocene	Paleo-Coastal Period	Circa 9500 to 7000/6500 BC
Middle Holocene	Millingstone Period	Circa 7000/6500 to 1500/1000 BC
Late Holocene	Intermediate Period	1500/1000 BC to AD 750
Late Holocene	Late Period	AD 750 to Spanish contact

Terminal Pleistocene and Early Holocene: Paleo-Coastal Period (Circa 9500 to 7000/6500 BC)

Although data on early human occupation for the Southern California coast are limited, archaeological evidence from the northern Channel Islands suggests initial settlement within the region occurred at least 12,000 years before present (BP). At Daisy Cave (CA-SMI-261) on San Miguel Island, radiocarbon dates indicate an early period of use in the terminal Pleistocene,

[1] Wallace, William J. 1955 "A Suggested Chronology for Southern California Coastal Archaeology." *Southwestern Journal of Anthropology*, *11*: 214–230.

[2] Warren, Claude M. 1968 "Cultural Tradition and Ecological Adaptation on the Southern California Coast." In *Archaic Prehistory in the Western United States*, edited by Cynthia Irwin-Williams, pp. 1–14. Eastern New Mexico University Contributions in Anthropology No. 1. Portales.

[3] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. "Prehistory of the Northern California Bight and the Adjacent Transverse Ranges." In *California Prehistory, Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 191–213. New York, NY: Altamira Press.

[4] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. "Prehistory of the Northern California Bight and the Adjacent Transverse Ranges." In *California Prehistory, Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 191–213. New York, NY: Altamira Press.

sometime between 9600 and 9000 calibrated (cal) BC.[5] Evidence of early human occupation in the Northern California Bight has also been found on nearby Santa Rosa Island, where human remains from the Arlington Springs Site (CA-SRI-1730) have been dated between 11,000 and 10,000 cal BC.[6] Archaeological data recovered from these and other coastal Paleoindian sites indicate a distinctively maritime cultural adaptation, termed the "Paleo-Coastal Tradition,"[7] which involved the use of seafaring technology and a subsistence regime focused on shellfish gathering and fishing.[8]

Relatively few sites have been identified in the Los Angeles Basin that date to the terminal Pleistocene and early Holocene. Currently, the earliest reliable date for human occupation in the area derives from the La Brea Tar Pits (CA-LAN-159), where human bone has been dated to 8520 cal BC.[9] Evidence of possible early human occupation has also been found at the sand dune bluff site of Malaga Cove (CA-LAN-138), located between Redondo Beach and Palos Verdes.[10] Researchers have proposed that archaeological remains recovered from the lowermost cultural stratum at the site, which include shell, animal bone, and chipped stone tools, may date as early as 8000 cal BC.[11,12]

Middle Holocene: Millingstone Period (Circa 7000/6500 to 1500/1000 BC)

The Millingstone Period or Horizon, also referred to as the "Encinitas Tradition,"[13,14] is the earliest well-established cultural occupation of the coastal areas of the region. The onset of this period, which began sometime between 7000 and 6500 cal BC, is marked by the expansion of populations throughout the Northern California Bight. Regional variations in technology, settlement patterns, and mortuary practices among Millingstone sites have led researchers to define several local manifestations or "patterns" of the tradition.[15] In coastal Los Angeles and Orange Counties, the Encinitas Tradition is represented by the "Topanga Pattern." Topanga groups are thought to have been relatively small and highly mobile, with a general subsistence economy

[5] Erlandson, J.M., D.J. Kennett, B.L. Ingram, D.A. Guthrie, D.P. Morris, M.A. Tveshov, G.J. West, and P.L. Walker. 1996. "An Archaeological and Paleontological Chronology for Daisy Cave (CA-SMI-261), San Miguel Island, California." *Radiocarbon*, *38*: 355–373.

[6] Johnson, J.R., T.W. Stafford, Jr., H.O. Ajie, and D.P. Morris. 2002. "Arlington Springs Revisited." In *Proceedings of the Fifth California Islands Symposium*, edited by D. Browne, K. Mitchell, and H. Chaney, pp. 541–545. Santa Barbara, CA: USDI Minerals Management Service, and The Santa Barbara Museum of Natural History.

[7] Moratto, M.J. 1984. *California Archaeology*, pp. 103–113. New York, NY: Academic Press.

[8] Rick, T.C., J.M. Erlandson, and R.L. Vellanoweth. 2001. "Paleocoastal Fishing along the Pacific Coast of the Americas: Evidence from Daisy Cave, San Miguel Island, California." *American Antiquity*, *66*: 595–614.

[9] Berger, R., R. Protsch, R. Reynolds, C. Rozaire, and J.R. Sackett. 1971. *New Radiocarbon Dates Based on Bone Collagen of California Indians*, pp. 43–49. Contributions to the University of California Archaeological Survey, Los Angeles.

[10] Walker, Edwin Francis. 1951. *Five Prehistoric Archaeological Sites in Los Angeles County, California*. Southwest Museum, F.W. Hodge Anniversary Publication Fund VI, Los Angeles.

[11] Moratto, M.J. 1984. *California Archaeology*, pp. 132. New York, NY: Academic Press.

[12] Wallace, W.J. 1986. "Archaeological Research at Malaga Cove." In *Symposium: A New Look at Some Old Sites*, edited by G.S. Breschini and T. Haversat, pp. 21–27. Salinas, CA: Coyote Press.

[13] Sutton, Mark Q. 2010. "The Del Rey Tradition and Its Place in the Prehistory of Southern California." *Pacific Coast Archaeological Society Quarterly*, *44*(2): 1–54.

[14] Sutton, Mark Q., and Jill K. Gardner. 2010. "Reconceptualizing the Encinitas Tradition of Southern California." *Pacific Coast Archaeological Society Quarterly*, *42*(4): 1–64.

[15] Sutton, Mark Q., and Jill K. Gardner. 2010. "Reconceptualizing the Encinitas Tradition of Southern California." *Pacific Coast Archaeological Society Quarterly*, *42*(4): 1–64.

focused on the gathering of shellfish and plant foods, particularly hard seeds, with hunting being of less importance.[16]

Two temporal subdivisions have been defined for the portion of the Topanga Pattern falling within the Millingstone Period: Topanga I (circa 6500 to 3000 BC) and Topanga II (circa 3000 to 1000 BC).[17] Topanga I assemblages are characterized by abundant manos and metates, core tools and scrapers, charmstones, cogged stone, and discoidals; projectile points are quite rare with those present resembling earlier, large, leaf-shaped forms.[18] Secondary inhumations with associated cairns are the most common burial form at Millingstone sites with small numbers of extended inhumations also identified. The subsequent Topanga II phase largely represents a continuation of the Topanga pattern with site assemblages characterized by numerous manos and metates, charmstones, cogged stones, discoidals, and some stone balls. A significant technological change in ground stone occurs at this time with the appearance of mortars and pestles at Topanga II sites, suggesting the adoption of balanophagy by coastal populations.[19] The quantity of projectile points also notably increases in Topanga II site deposits indicating that the hunting of large game may have played a greater role in the subsistence economy than in earlier times. Although secondary burials continue to be quite common, a few flexed inhumations have also been recovered from archaeological contexts dating to the Topanga II phase.

A number of Millingstone sites have been identified in the Los Angeles Basin. Within the vicinity of the current proposed undertaking, evidence of long-term Topanga occupation has been found in the Ballona Lagoon near Marina del Rey. Data obtained from survey and excavation projects in the Ballona Lagoon indicate that during the Topanga I phase, the bluff tops overlooking the lagoon were used as temporary campsite locales by coastal groups who exploited marine and lagoon fish and shellfish resources.[20] During the Topanga II phase, use of the area intensified with small, limited-use settlements established along the edges of the lagoon. Faunal remains from these latter sites suggest Topanga II groups practiced a more generalized subsistence strategy that emphasized the exploitation of small terrestrial mammals, in addition to fish and shellfish resources.[21]

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[16] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. "Prehistory of the Northern California Bight and the Adjacent Transverse Ranges." In *California Prehistory, Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 191–213. New York, NY: Altamira Press.

[17] Sutton, Mark Q., and Jill K. Gardner. 2010. "Reconceptualizing the Encinitas Tradition of Southern California." *Pacific Coast Archaeological Society Quarterly*, *42*(4): 1–64.

[18] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. "Prehistory of the Northern California Bight and the Adjacent Transverse Ranges." In *California Prehistory, Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 191–213. New York, NY: Altamira Press.

[19] Sutton, Mark Q., and Jill K. Gardner. 2010. "Reconceptualizing the Encinitas Tradition of Southern California." *Pacific Coast Archaeological Society Quarterly*, *42*(4): 1–64.

[20] Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manual Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell. 2007. "Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles." *Proceedings for the Society for California Archaeology*, *20*: 34–42.

[21] Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manual Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell. 2007. "Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles." *Proceedings for the Society for California Archaeology*, *20*: 34–42.

Late Holocene: Intermediate Period (1500/1000 BC to AD 750)

The Intermediate Period, which encompasses the early portion of the "Del Rey Tradition" as defined by Sutton,[22] begins around 3500 BP. At this time, significant changes are seen throughout the coastal areas of Southern California in material culture, settlement systems, subsistence strategies, and mortuary practices. These new cultural traits have been attributed to the arrival of Takic-speaking people from the southern San Joaquin Valley.[23] Biological, archaeological, and linguistic data indicate that the Takic groups who settled in the Los Angeles Basin were ethnically distinct from the preexisting Hokan-speaking Topanga populations and are believed to be ancestral to ethnographic Gabrielino groups.[24] Although archaeological evidence indicates that "relic" Topanga III populations continued to survive in isolation in the Santa Monica Mountains, these indigenous groups appear to have been largely replaced or absorbed by the Gabrielino or Chumash by 2000 BP.[25]

Intermediate Period sites within the Los Angeles Basin are represented by the "Angeles Pattern" of the Del Rey Tradition.[26] Three temporal subdivisions have been defined for the portion of the Angeles Pattern that falls within the Intermediate Period: Angeles I (1500 to 600 BC), Angeles II (600 BC to AD 400), and Angeles III (AD 400 to 750).[27] The onset of the Angeles I phase is characterized by the increase and aggregation of regional populations and the appearance of the first village settlements. The prevalence of projectile points, single-piece shell fishhooks, and bone harpoon points at Angeles I sites suggests a subsistence shift in the Intermediate Period with an increased emphasis on fishing and terrestrial hunting and less reliance on the gathering of shellfish resources. Regional trade or interaction networks also appeared to develop at this time, with coastal populations in the Los Angeles Basin obtaining small steatite artifacts and *Olivella* shell beads from the southern Channel Islands and obsidian from the Coso Volcanic Field.[28] Finally, marked changes are seen in mortuary practices during the Angeles I phase, with flexed primary inhumations and cremations replacing extended inhumations and cairns.

The Angeles II phase largely represents a continuation and elaboration of the Angeles I technology, settlement, and subsistence systems. One exception to this pattern is the introduction of a new funerary complex around 2600 BP consisting of large rock cairns or platforms that contain abundant broken tools, faunal remains, and cremated human bone. These mortuary features have generally been thought to represent the predecessor of the Southern California Mourning

[22] Sutton, Mark Q. 2010. "The Del Rey Tradition and Its Place in the Prehistory of Southern California." *Pacific Coast Archaeological Society Quarterly*, *44*(2): 1–54.

[23] Sutton, Mark Q. 2009. "People and Language: Defining the Takic Expansion in Southern California." *Pacific Coast Archaeological Society Quarterly*, *41*(2 and 3): 31–93.

[24] Sutton, Mark Q. 2009. "People and Language: Defining the Takic Expansion in Southern California." *Pacific Coast Archaeological Society Quarterly*, *41*(2 and 3): 31–93.

[25] Sutton, Mark Q., and Jill K. Gardner. 2010. "Reconceptualizing the Encinitas Tradition of Southern California." *Pacific Coast Archaeological Society Quarterly*, *42*(4): 17.

[26] Sutton, Mark Q. 2010. "The Del Rey Tradition and Its Place in the Prehistory of Southern California." *Pacific Coast Archaeological Society Quarterly*, *44*(2): 1–54.

[27] Sutton, Mark Q., and Jill K. Gardner. 2010. "Reconceptualizing the Encinitas Tradition of Southern California." *Pacific Coast Archaeological Society Quarterly*, *42*(4): 8.

[28] Koerper, Henry C., Roger D. Mason, and Mark L. Peterson. 2002. "Complexity, Demography, and Change in Late Holocene Orange County." In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by M. Erlandson and Terry L. Jones, pp. 63–81. University of California, Los Angeles, Institute of Archaeology, Perspectives in California Archaeology, Vol. 6. Los Angeles.

Ceremony.[29] Several important changes in the archaeological record mark the beginning of the Angeles III phase. At this time, larger seasonal villages characterized by well-developed middens and cemeteries were established along the coast or inland areas. Archaeological data from Angeles III sites indicate that residents of these settlements practiced a fairly diverse subsistence strategy, which included the exploitation of both marine and terrestrial resources.[30] Notable technological changes occurred at this time with the introduction of the plank canoe and bow and arrow.[31] The appearance of new *Olivella* bead types at Angeles III sites indicates a reconfiguration of existing regional exchange networks with increased interaction with populations in the Gulf of California.[32] Finally, cremations increase slightly in frequency at this time with inhumations no longer placed in an extended position.[33]

In the Ballona Lagoon near Marina del Rey, several large residential sites (CA-LAN-63, CA-LAN-64, and CA-LAN-206A) were established within the wetlands and surrounding bluffs at the beginning of the Intermediate Period.[34] These sites contained a diversity of features, including hearths, burials, and houses. Faunal remains indicate a broad-spectrum collecting strategy that included the exploitation of terrestrial mammals and birds, as well as fish and shellfish. The presence of particular species of migratory waterfowl in the faunal assemblage indicates that primary occupation of these sites may have occurred in the late fall to early spring. These data suggest that although residential mobility in the Intermediate Period was greatly reduced from previous times, a fully sedentary occupation of the Ballona Lagoon locale is still not indicated.[35]

Late Holocene: Late Period (AD 750 to Spanish Contact)

The Late Period dates from approximately AD 750 until Spanish contact at AD 1542. Sutton[36] has divided this period, which falls within the larger Del Rey Tradition, into two phases: Angeles IV (AD 750–1200) and Angeles V (AD 1200–1550). The Angeles IV phase is characterized by the continued growth of regional populations and the development of large, sedentary villages. Recent archaeological research indicates that Late Period habitation sites within the Los Angeles Basin may

[29] Sutton, Mark Q. 2010. "The Del Rey Tradition and Its Place in the Prehistory of Southern California." *Pacific Coast Archaeological Society Quarterly*, *44*(2): 14–16.

[30] Sutton, Mark Q. 2010. "The Del Rey Tradition and Its Place in the Prehistory of Southern California." *Pacific Coast Archaeological Society Quarterly*, *44*(2): 18–20.

[31] Glassow, Michael A., Lynn H. Gamble, Jennifer E. Perry, and Glenn S. Russell. 2007. "Prehistory of the Northern California Bight and the Adjacent Transverse Ranges." In *California Prehistory, Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 203–204. New York, NY: Altamira Press.

[32] Koerper, Henry C., Roger D. Mason, and Mark L. Peterson. 2002. "Complexity, Demography, and Change in Late Holocene Orange County." In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by M. Erlandson and Terry L. Jones, pp. 63–81. University of California, Los Angeles, Institute of Archaeology, Perspectives in California Archaeology, Vol. 6. Los Angeles.

[33] Sutton, Mark Q. 2010. "The Del Rey Tradition and Its Place in the Prehistory of Southern California." *Pacific Coast Archaeological Society Quarterly*, *44*(2): 18.

[34] Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manual Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell. 2007. "Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles." *Proceedings for the Society for California Archaeology*, *20*: 37–38.

[35] Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manual Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell. 2007. "Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles." *Proceedings for the Society for California Archaeology*, *20*: 38.

[36] Sutton, Mark Q. 2010. "The Del Rey Tradition and Its Place in the Prehistory of Southern California." *Pacific Coast Archaeological Society Quarterly*, *44*(2): 26.

have been hierarchically organized around estuarine locales with more productive locales supporting large residential populations.[37] Although chiefdoms appear to have developed in the northern Channel Islands and Santa Barbara region after 850 BP,[38,39] little direct evidence has been found to suggest this level of social complexity existed in the Los Angeles Basin during the late prehistoric period.[40]

Several new types of material culture appear during the Angeles IV phase, including Cottonwood series points, birdstone and "spike" effigies, *Olivella* cupped beads, and *Mytilus* shell disk beads. The presence of Southwestern pottery, Patayan ceramic figurines, and Hohokam shell bracelets at Angeles IV sites suggests some interaction between groups in the Los Angeles Basin and the Southwest. Notable changes are seen in regional exchange networks after 800 BP with an increase in the number and size of steatite artifacts, including large vessels, elaborate effigies, and comals, recovered from Angeles V sites. The presence of these artifacts suggests a strengthening of trade ties between populations in the Los Angeles Basin and the southern Channel Islands.[41] Finally, Late Period mortuary practices remain largely unchanged from the Intermediate Period with flexed primary inhumations continuing to be the preferred burial method.

Marked changes occurred in the occupation of the Ballona Lagoon during the Late Period. Paleoenvironmental reconstructions indicate that by 1000 BP, much of the lagoon had silted in and become a sediment-choked estuary.[42] At this time, most of the Intermediate Period settlements in the area were abandoned as the local population aggregated into a few large settlements along lower Centinela Creek and at the edge of the lagoon.[43] Faunal remains recovered from these Late Period sites indicate a generalized subsistence strategy focused on a broad mix of terrestrial and marine resources with a shift from lagoon to sandy shoreline shellfish species as the estuary silted in.[44,45]

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[37] Grenda, D.R., and J.A. Altschul. 2002. "Complex Cultures, Complex Arguments: Sociopolitical Organization in the Blight." In *Islanders and Mainlanders, Prehistoric Context for the Southern California Blight*, edited by J.H. Altschul and D.R. Grenda, pp. 147–178. Tucson, AZ: SRI Press.

[38] Arnold, Jeanne E. 1992. "Complex Hunter-Gatherer-Fishers of Prehistoric California: Chiefs, Specialists, and Maritime Adaptations of the Channel Islands." *American Antiquity*, *57*(1): 60–84.

[39] Gamble, Lynn H. 2005. "Culture and Climate: Reconsidering the Effect of Palaeoclimatic Variability Among Southern California Hunter-Gatherer Societies." *World Archaeology*, *37*(1): 92–108.

[40] Sutton, Mark Q. 2010. "The Del Rey Tradition and Its Place in the Prehistory of Southern California." *Pacific Coast Archaeological Society Quarterly*, *44*(2): 26.

[41] Koerper, Henry C., Roger D. Mason, and Mark L. Peterson. 2002. "Complexity, Demography, and Change in Late Holocene Orange County." In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by M. Erlandson and Terry L. Jones, pp. 69. University of California, Los Angeles, Institute of Archaeology, Perspectives in California Archaeology, Vol. 6. Los Angeles.

[42] Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manual Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell. 2007. "Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles." *Proceedings for the Society for California Archaeology*, *20*: 39.

[43] Altschul, Jeffrey H., John G. Douglass, Richard Ciolek-Torrello, Sarah Van Galder, Benjamin R. Vargas, Kathleen L. Hull, Donn R. Grenda, Jeffrey Homburg, Manual Palacios-Fest, Steven Shelley, Angela Keller, and David Maxwell. 2007. "Life at the Nexus of the Wetlands and Coastal Prairie, West Los Angeles." *Proceedings for the Society for California Archaeology*, *20*: 39.

[44] Maxwell, D. 2003. "Vertebrate Faunal Remains." In *At the Base of the Bluff, Archaeological Inventory and Evaluation along Lower Centinela Creek, Marina del Rey, California*, edited by J.H. Altschul, A.Q. Stoll, D.R. Grenda, and R. Ciolek-Torrello, pp. 145–177. Playa Vista Monograph Series, Test Excavation Report 4. Tucson, AZ: Statistical Research.

5.1.1.2 Regional Ethnography

At the time of contact, the Native Americans subsequently known as the Gabrielino Indians occupied lands around the Los Angeles International Airport and whose territories comprised nearly the entire basin comprising the Counties of Los Angeles and Orange. They belonged to the Takic family of the Uto-Aztecan linguistic stock. Named after the Mission San Gabriel, the Gabrielino are considered to have been one of the two wealthiest and largest ethnic groups in aboriginal Southern California,[46] the other being the Chumash. This was largely due to the many natural resources within the land base they controlled, primarily the rich coastal section from Topanga Canyon to Aliso Creek, and the offshore Channel Islands of San Clemente, San Nicholas, and Santa Catalina.

The Takic-speaking ancestors of the Gabrielino arrived in the Los Angeles Basin around 1500 BC and spread throughout the area, displacing a preexisting Hokan-speaking population.[47] The first Spanish contact with the Gabrielino took place in 1520, when Juan Rodriguez Cabrillo arrived in Santa Catalina Island. In 1602, the Spanish returned to Santa Catalina under Sebastián Vizcaíno, and in 1769, Gaspar de Portolá made the first attempt to colonize Gabrielino territory. By 1771, the Spanish had built four missions, and the decimation of the Gabrielino had already begun.[48] European diseases and conflicts among the Gabrielino population, as well as conversion to Christianity, carried a toll in their numbers, traditions, and beliefs.

Although determining an accurate account of the population numbers is difficult, Bean and Smith[49] state that by AD 500, the Gabrielino established permanent settlements and their population continued to grow. Early Spanish accounts indicate that the Gabrielino lived in permanent villages with a population ranging from 50 to 200 individuals. The Gabrielino population surpassed 5,000 people by around 1770.

Several types of structures characterized the Gabrielino villages. They lived in domed circular structures covered with tule, ferm, or carrizo. Communal structures measured over 60 feet in diameter and could house three or four families. Sweathouses, menstrual huts, and a ceremonial enclosure were also part of the village arrangements.[50]

The Gabrielino practiced different subsistence strategies that included hunting, fishing, and gathering. Hunting activities in land were carried out with the use of bow and arrow, deadfalls, snares, and traps. Smoke and throwing clubs also were used to assist with the hunt of burrowing animals. Aquatic animals were hunted with harpoons, spear-throwers, and clubs. Although most

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[45] Becker, K.M. 2003. "Invertebrate Faunal Remains." In *At the Base of the Bluff, Archaeological Inventory and Evaluation along Lower Centinela Creek, Marina del Rey, California*, edited by J.H. Altschul, A.Q. Stoll, D.R. Grenda, and R. Ciolek-Torrello, pp. 179–200. Playa Vista Monograph Series, Test Excavation Report 4. Tucson, AZ: Statistical Research.

[46] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, edited by R.F. Heizer, p. 538. Washington, DC: Smithsonian Institution.

[47] Sutton, Mark Q. 2009. "People and Language: Defining the Takic Expansion in Southern California." *Pacific Coast Archaeological Society Quarterly*, *41*(2 and 3): 31–93.

[48] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, edited by R.F. Heizer, pp. 540–541. Washington, DC: Smithsonian Institution.

[49] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, edited by R.F. Heizer, p. 540. Washington, DC: Smithsonian Institution.

[50] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, edited by R.F. Heizer, p. 542. Washington, DC: Smithsonian Institution.

fishing activities took place along rivers and from shore, open water fishing trips between mainland and the islands also took place using boats made from wood planks and asphaltum. The Gabrielino fishing equipment included fishhooks made of shells, nets, basketry traps, and poison substances obtained from plants.[51]

The Gabrielino diet included a large number of animals, such as deer, rabbit, squirrel, snake, and rats, as well as a wide variety of insects. However, some meat taboos also existed. The meat of bears, rattlesnakes, stingrays, and ravens were not consumed; these animals were believed to be messengers of the god Chengiichngech. Aquatic animals such as fish, whales, seals, sea otters, and shellfish were also an important part of the diet, mainly among the coastal population.[52]

A variety of plant foods were consumed by the Gabrielino, the main one being acorns. These nuts are rich in nutrients and have a high content of fiber and fat. Other plants used for consumption by the Gabrielino include the seeds of the Islay (*Prunus ilicifolia*), which were ground into a meal, and the seeds and shoots of the Chía (*Salvia columbariae*), which were eaten raw, made into loaves, or mixed with water to make a beverage. Roots and bulbs were also part of the diet among the mainland and island groups, as well as clover, wild sunflower seeds, and cholla seeds. Wild tobacco was used for medicinal purposes and as a sedative and narcotic.[53]

The Gabrielinos were involved in trade among themselves and with other groups. Coastal Gabrielinos exchanged steatite, shell and shell beads, dried fish, sea otter pelts, and salt with inland groups for acorns, seeds, obsidian, and deerskins.[54] During the late prehistoric period, the principal trade item, both among the Gabrielino and for export to other groups, was steatite. Also known as soapstone or soaprock, major outcroppings of steatite are found on Santa Catalina Island. Steatite was widely used among the Gabrielino to make arrow straighteners and artistic or ritualistic objects. In addition, this rock was used in the making of functional objects for food preparation such as bowls, mortars, pestles, and comals.[55] Archaeological data indicate that a steatite "industry" developed prehistorically on the island that involved the large-scale trade of both raw materials and finished artifacts to mainland communities.[56]

[51] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, edited by R.F. Heizer, p. 546. Washington, DC: Smithsonian Institution.

[52] McCawley, W. 1996. *The First Angelinos: The Gabrielino Indians of Los Angeles*, pp. 116–117, 121, 126. Banning, CA: Malki Museum Press.

[53] McCawley, W. 1996. *The First Angelinos: The Gabrielino Indians of Los Angeles*, pp. 128–131. Banning, CA: Malki Museum Press.

[54] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, edited by R.F. Heizer, p. 547. Washington, DC: Smithsonian Institution.

[55] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, edited by R.F. Heizer, p. 547. Washington, DC: Smithsonian Institution.

[56] Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *Handbook of North American Indians, Vol. 8*, edited by R.F. Heizer, p. 547. Washington, DC: Smithsonian Institution.

5.1.1.3 Historic Context[57]

Los Angeles International Airport

The land occupied by LAWA constituted part of Rancho Sausal Redondo, which had been granted to Antonio Ygnacio Avila by the Mexican government in 1837. The land was used for cattle ranching and sheep grazing. Later, when it was known as the Bennett Rancho, the land held fields of lima beans, barley, and wheat until the late 1920s. By the mid-1920s, pilots utilized the flat farmland of the Bennett Rancho near the current intersection of Imperial and Aviation Boulevards as a safe location for practice and emergency landings. Around this time, industrial and business leaders of Los Angeles recognized the need for a municipal airport with facilities that exceeded those of the existing airports in Burbank, Glendale, and Santa Monica. Meanwhile, the Bennett Rancho was promoted as a location for a Los Angeles municipal airport by realtor William W. Mines, earning the site the moniker "Mines Field." After Mines Field was selected as the location for the 1928 National Air Races, the City of Los Angeles (City) leased 640 acres of the field for the Los Angeles Municipal Airport in August 1928.

To administer the airport, the City created the Department of Airports on October 1, 1928. With little infrastructure and no office space at the airport, most employees worked at City Hall. Airport attendants stayed at the field working out of a small shed. Flagmen signaled to pilots with red and white cloth banners when it was safe for takeoff and landing. Air traffic was light.

The first permanent building at the airport, Hangar One,[58] opened in 1929 on the south side of the airfield. The City expanded the airport later that year with the construction of administrative offices, an all-weather runway, and additional hangars. Despite the city's hopes and intentions, the airport served private pilots and flying schools rather than commercial airlines. After a 1934 study of the aviation benefits of the Los Angeles Municipal Airport, the airport successively convinced Trans World Airways (TWA) and American Airlines to relocate their services if the facility was upgraded to accommodate passenger service. Subsequently, in 1935, under the direction of the Emergency Relief Administration, the airport was upgraded with grading, runway construction, and the installation of a new sewer line. In 1937, the Works Progress Administration approved major improvements to the north side of the airfield, including a new east-west runway and sewer, water line, grading, and drainage construction. Meanwhile, the City funded runway light and field light installation.

In the early 1940s, architects Sumner Spaulding and John Austin with city engineer Lloyd Aldrich prepared plans for the airport to attract modern commercial airline services. However, these plans were shelved with the onset of World War II. During the war, the airport served the military effort after the federal government took control of it in January 1942.

The Los Angeles City Department of Airports created a master plan for the airport in early 1943, including eastward expansion of the airfield and construction of new terminals and administration buildings. The plan garnered the commitment of United Airlines, TWA, Western Air, American Airlines, and Pan American Airways to relocate to the airport after the war and the completion of the proposed upgrades. A revised master plan, released in August 1944, proposed two phases of

[57] This section is drawn from the LAX Master Plan EIS/EIR: Los Angeles World Airports. January 2001. *Master Plan Final Environmental Impact Statement/Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements*. Appendix I, Section 106 Report, pp. 16–35. Prepared by: PCR Services Corporation.

[58] Hangar One is listed on the NRHP.

development: (1) immediate accommodations for commercial operations and (2) long-range westward expansion of the airfield. In 1945, Los Angeles voters approved a $12.5 million bond measure to fund these improvements. Soon after, construction began on temporary accommodations for the airlines called the Intermediate Facilities, including four buildings, three of which served as terminals. Airlines then constructed their own hangars. In December 1946, four of the five major airlines began operations at Los Angeles Municipal Airport and Pan American Airways followed in January 1947.

On October 11, 1949, the airport received a new name, Los Angeles International Airport, after the Civil Aeronautics Administration declared the facility sufficient for international, intercontinental, and long-haul nonstop domestic flights and classified it as an "international-express-class" port.

Meanwhile, the temporary Intermediate Facilities were overwhelmed by passenger and cargo traffic. In the first 5 years of operation, passenger traffic increased 80 percent and freight traffic increased nearly 400 percent. Although the completion of an air freight building in 1951 alleviated some of the constrained space and opened it to passenger services, the facilities were still cramped. In 1951, architects William L. Pereira and Charles Luckman developed a master plan for the airport in order to expand its facilities. The bond issue that would have paid for these improvements failed in May 1953. However, the airport continued with some upgrades with its own revenue and federal funds, including terminal expansions, parking facility expansion, construction of maintenance facilities, and runway expansions, including a tunnel for vehicle traffic in order to accommodate larger planes on expanded runways.

The innovation of long-range commercial jet planes, particularly the Boeing 707 and DC-8 in 1958 and 1959, dramatically shaped the national system of airports, ushering in the era of the Jet Age. These new larger, more efficient jets precipitated a rapid rise in air travel. Between 1960 and 1970, air travel nearly tripled and many airports were not equipped to handle the new jets or the amount of traffic they generated.

Recognizing the limitations of the existing infrastructure, airport officials again hired Pereira and Luckman to master plan its Jet Age facilities. Pereira and Luckman teamed with Welton Becket & Associates and Paul R. Williams for the proposed improvements funded by a $60 million bond approved by voters in June 1956. The innovative design distributed passengers through six ticketing buildings facing onto a U-shaped access road around a sunken 0.5-mile-long mall containing parking for 5,000 cars, a restaurant, an employee cafeteria, electrical and heating plants, and the airport administration building. The ticketing buildings connected via underground passageways to satellites—large concourses that housed waiting areas, cocktail lounges, dining facilities, gift shops, and newsstands. Each of the seven oval-shaped satellite concourses was larger than a football field and contained 10 gates with bridges to connect to planes.

The first phase of construction began in 1957, which included field improvements and runway extensions, and was followed by excavations for the underground components. The final phase included the construction of the terminal buildings and the Airport Traffic Control Tower (ATCT). Completed in 1961, the ATCT was the highest in the world at 172 feet and sat above the administration offices. On June 25, 1961, Vice President Lyndon B. Johnson dedicated the new airport facilities, although only the United Airlines ticketing terminal and its two satellites were open at the time. United Airlines began passenger service from the new facility in August, and American, Western, Continental, Delta, Pacific, and Pacific Southwest Airlines followed suit in the following months in their new buildings on the south side of the access road. Meanwhile, TWA and Bonanza Airlines began operating from new buildings on the north side of the access road.

The last passenger terminal and satellite complex completed was the $5 million international facility in 1962, which included the usual ticketing, boarding, and baggage areas, as well as customs, immigration, and agriculture and public health inspectors.

On January 13, 1962, the Theme Building, the centerpiece of the new airport design, opened to the public. Reminiscent of Pereira and Luckman's earlier schemes for the airport and reflecting the Jet Age mentality, the modern-styled parabolic arch's four legs rise 135 feet from the ground and 340 feet across the base in the center of the terminal area. At the top of the structure is an observation deck and restaurant with a view 70 feet above the parking lot. The central kitchen and commissary is at ground level. The Theme Building was designated City of Los Angeles Historic-Cultural Monument #570 in 1992 and is on the National Register of Historic Places (NRHP).

In response to the 1964 air freight boom where freight traffic increased nearly 400 percent, the airport built a new air cargo center. Cargo City was built on a 96-acre site that had been the Intermediate Facilities, which was demolished to make way for Flying Tigers Airlines, TWA, and Atlantic Transfer's cargo terminals.

As the airport expanded, it faced increasing complaints from its residential neighbors who had moved into suburban tract homes surrounding the airport following World War II. In order to expand a noise buffer zone around the airport, the Department of Airports spent more than $145 million between 1965 and 1985 purchasing homes and property in Palisades del Rey, West Westchester, Emerson Manor, North Westchester, and North Playa del Rey.

In 1967, the Department of Airports released a new master plan authored by William Pereira & Associates. The plan focused on alleviating traffic at the airport by proposing new roadway construction to serve up to 48 million passengers annually, a new terminal at the west end of the airport, and construction of small localized metroports throughout the Los Angeles metropolis. Although the metroports did not materialize, a new terminal for commuter traffic and air taxis at the western edge of World Way opened in 1970. In 1968, the World Way Postal Center, designed by Cesar Pelli and Anthony Lumsden of Daniel, Mann, Johnson, and Mendenhall (DMJM) opened on Century Boulevard. In 1974, a $410,000 sound barrier was installed along a 1,500-foot portion of the northern airport boundary.

By the late 1970s, demands on the airport had exceeded its facilities' operation capacity. Expectations of the 1984 Summer Olympic Games in Los Angeles also added to the urgency. In 1981, ground was broken on an expansion, which included a new double-deck roadway, an addition of more than 1 million square feet of terminal space, remodeling of existing terminal buildings, 8,800 new parking spaces, runway reconstruction, and reconstruction of the central utility plant. Gin Wong was the supervising architect, and Bechtel Civil & Minerals, Inc. and DMJM oversaw construction. At the same time, the new Tom Bradley International Terminal was designed by a joint venture of William Pereira & Associates, Daniel Dworsky and Associates, Bonito A. Sinclair and Associates, and John Williams and Associates. Deleuw, Cather and Company and the Ralph M. Parsons Company designed the 2.8-mile elevated roadway as part of the expansion.

In the 1980s, the Gateway Cargo Center and several other cargo terminals and buildings replaced the airport's original hangars and ATCT in the southeast corner of the airport. A new airport traffic control tower, designed by Kate Diamond of Siegel Diamond Architects and Adrianna Levinescu of Holmes & Narver, opened in 1996. The $26 million, 289-foot-tall ATCT complements the neighboring Theme Building.

Surfridge

Surfridge was an affluent community that originated in the 1920s that gradually dissolved through LAX expansion, beginning in the 1960s.[59] The community was located immediately west of the present airport, and was bounded by Pershing Drive to the east, Vista Del Mar to the west, and Imperial Highway to the south. Based on historic USGS topographic maps, the development of the Surfridge community began between 1924 and 1934.[60,61] The community was home to early Los Angeles elite, including William de Mille, Cecil B. DeMille, Charles Bickford, Mel Blanc, and Mae Murray.[62]

By the late 1950s, the airport had grown significantly and required additional land in order to expand. In addition, residents of Surfridge complained of increasing noise levels from the transition to jet engines. In 1961, the City of Los Angeles began purchasing Surfridge property through eminent domain.[63] Following acquisition by the city, houses were either moved or destroyed throughout the 1960s and into the 1970s, thereby dissolving the Surfridge community.

5.1.2 Cultural Resources Characterization

5.1.2.1 Previous Cultural Resources Inventories in the Study Area

The results of the literature review indicate that 14 cultural resources studies have been conducted within 0.5 mile of the North Airfield (Table 5.1.2.1-1, *Previous Surveys within the Proposed Undertaking Study Area*). Locations of these previous surveys are shown in Figure 5.1.2.1-1, *Topographic Map with USGS 7.5-Minute Quadrangle Index Showing Previously Surveyed Areas in the Cultural Resources Study Area*). Figure 5.1.2.1-1 indicates that much of the APE associated with the proposed undertaking was previously evaluated in 1995 as part of a larger archaeological resources reconnaissance survey of the LAX property.[64]

[59] Anton, Mike. 2 March 2013. "LAX Ghost Town a Home to Memories and Rare Butterflies." *Los Angeles Times*.

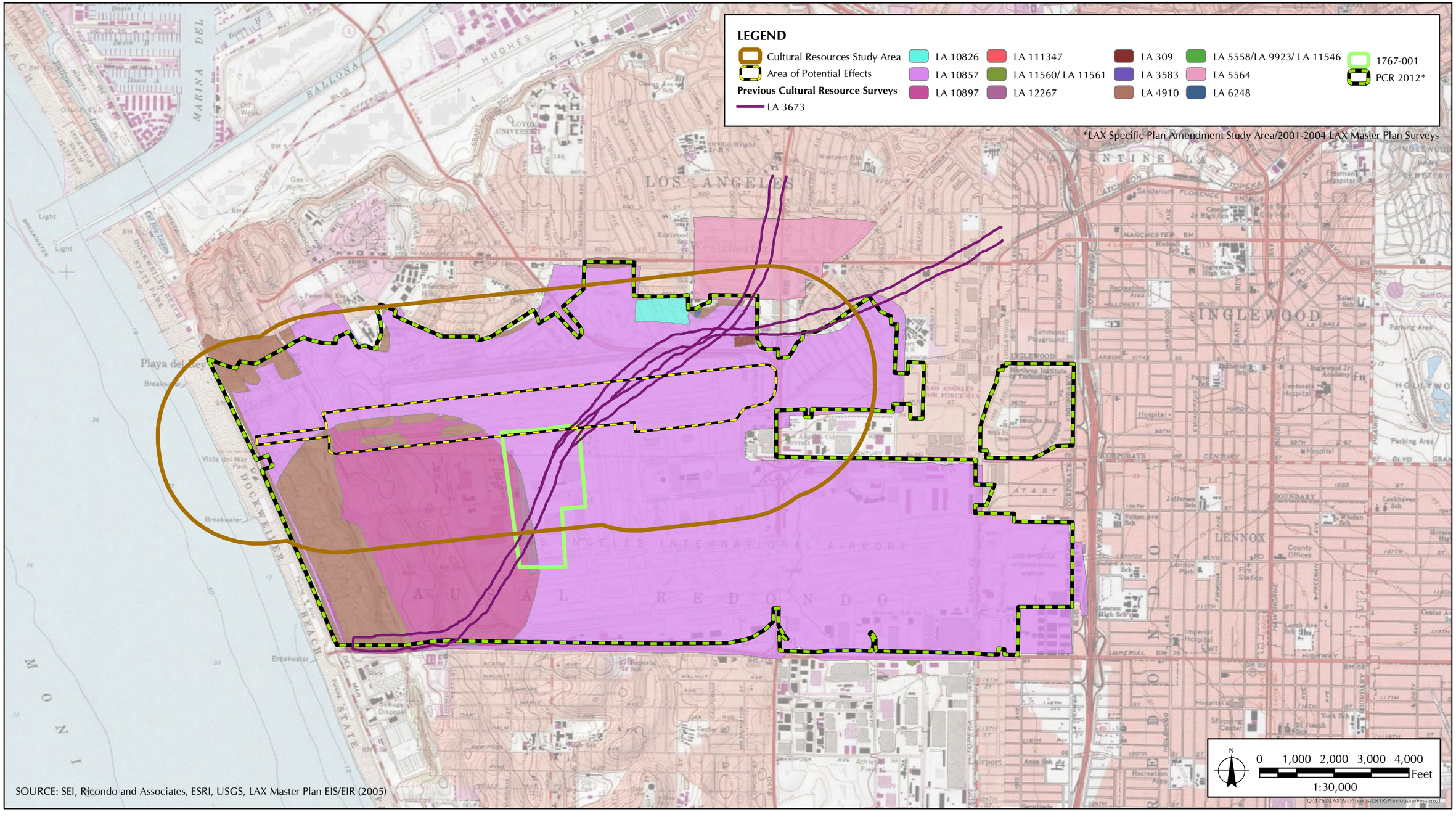
[60] U.S. Geological Service. 1924. Venice, California, 7.5-Minute Series Topographic Quadrangle.

[61] U.S. Geological Service. 1934. Venice, California, 7.5-Minute Series Topographic Quadrangle.

[62] Alexander, Zoe. April 2013 "Paradise Lost: the Rise & Fall of Surfridge." *Our South Bay*.

[63] Alexander, Zoe. April 2013 "Paradise Lost: the Rise & Fall of Surfridge." *Our South Bay*.

[64] Roschke, Rod. 1995. *Paleontological and Archaeological Resources Reconnaissance of LAX Property, Los Angeles County, California*. RMW Paleo Associates, Inc., Mission Viejo, CA.



SOURCE: SEI, Ricondo and Associates, ESRI, USGS, LAX Master Plan EIS/EIR (2005)

FIGURE 5.1.2.1-1

Topographic Map with USGS 7.5-Minute Quadrangle Index Showing
Previously Surveyed Areas in the Cultural Resources Study Area

TABLE 5.1.2.1-1
PREVIOUS SURVEYS WITHIN THE PROPOSED UNDERTAKING STUDY AREA

Report No.	Year	Report Title	Authors
LA 309	1987	Archaeological Reconnaissance Report for Areas Relating to the North Outfall Replacement Sever Project, Los Angeles County, California.	Myra L. Frank & Associates
LA 3673	1987	Historic Property Survey Report, North Outfall Relief Sewer (NORS)	Myra L. Frank & Associates
LA 4910	1995	Paleontological and Archaeological Resources Reconnaissance of LAX Property, Los Angeles County, California	Raschke, Rod, RMW Paleo Associates, Inc.
LA 5558	2000	Cultural Resources Assessment for Pacific Bell Wireless Facility LA913-11, County of Los Angeles, California	LSA Associates, Inc.
LA 5564	1999	A Neighborhood History and Predications of Archaeological Potential	Sue Verity
LA 6248	2002	Phase I Archaeological Survey Fire Station Number 5, Westchester, California	Greenwood and Associates
LA 7851 & LA 11560	2006	Archaeological and Historic Evaluations for the Proposed Airport Surveillance Detection Equipment, Model 3X (ASDE-3X), to Serve LAX, Los Angeles, Los Angeles County, California	PAST, Inc.
LA 9923	2009	Cultural Resources Analysis for T-Mobile Site Number LA03358D "Intercom Building" 9800 South Sepulveda Avenue, Los Angeles, California	Archaeological Resources Technology
LA 10826	2008	Section 106 Consultation for Three-Hole Expansion and Two-Hole Course Modification, Westchester Golf Course and Los Angeles International Airport, Los Angeles, CA	Federal Aviation Administration, U.S. Department of Transportation
LA 10857	2005	The Final LAX Master Plan Mitigation Monitoring & Reporting Program	Brian F. Smith and Associates
LA 11546	1980	Cultural Resources Records Search, Site Visit Results, and Direct APE Historic Architectural Assessment for Clearwire Candidate CA-LOS2026B/LA03XC087, 9800 South Sepulveda Boulevard, Los Angeles, Los Angeles County, California. EBI Project 61103316	Michael Brandman Associates
LA 11561	2005	Proposed Federal Aviation Administration (FAA) Airport Surface Detection Equipment, Model X (ASDE-3X) to serve LAX Los Angeles, CA – Case # FAA040625A	SRI International
PCR 2012	2012	LAX Specific Plan Amendment Study	PCR Services Corporation
1767-001	2012	LAX Midfield Satellite Concourse Project, Cultural Resources Technical Report	Sapphos Environmental, Inc.
1767-002	2014	Proposed Runway 6L-24R and Runway 6R-24L Safety Area and Associated Improvements Project, Cultural Resources Technical Report	Sapphos Environmental, Inc.
	2001	Section 106 Report, Appendix I, LAX Master Plan Final EIS/EIRLAX Specific Plan Amendment Study	PCR Services Corporation
	2003	Supplemental Section 106 Report, Appendix S-G, LAX Master Plan Supplement to the Draft EIS/EIR	PCR Services Corporation

LA 309. This project involved a reconnaissance survey of five areas within Los Angeles County for the North Outfall Replacement Sewer Project. One of these areas (Survey Area #4) was located within 0.5 mile of the proposed project area. Results of the evaluation found no cultural resources within the areas of proposed surface modification.

LA 3673. This is a Historic Properties Survey Report prepared as part of a Supplemental Environmental Impact Statement for the proposed North Outfall Replacement Sewer project that would run through the airport and surrounding areas. The survey found no archaeological or built-environment resources eligible for listing on the NRHP within the project area.

LA 4910. This project involved a paleontological and archaeological resources reconnaissance survey of undeveloped areas of the LAX property. The study included a pedestrian survey of the entire LAX property, with the exception of a few restricted areas. Several newly identified prehistoric and historic sites were identified during the survey with a small number of previously recorded resources relocated and updated.

LA 5558. This project included an assessment of cultural resources for a proposed telecommunications facility to be installed on the facade of an existing building. Results of a records search indicate that no historic properties would be impacted by the proposed project.

LA 5564. This document provides a summary of the history of the Westchester neighborhood. In addition, it includes predications regarding the nature and extent of archaeological remains within the area that borders the intersection of Manchester Avenue and Sepulveda Boulevard.

LA 6248. This report discusses the results of a cultural resources study for the City of Los Angeles' proposed Fire Station No. 5, in the community of Westchester. A pedestrian survey of the proposed site identified samples of shell that were consistent with prehistoric use of the area. Given this finding, along with the project's proximity to an extensive prehistoric occupation complex, Greenwood and Associates recommended that a qualified archaeological monitor be present during earth-moving activities.

LA 7851 & LA 11560. Archaeological and historical evaluations were undertaken in support of a proposed project to install airport surveillance detection equipment. The evaluations included a records search and field surveys in three separate sites.

LA 9923. This report provided results of records search and field investigation to identify cultural resources and make recommendations regarding the installation of antennae and other cellular equipment. No historic properties were identified within the APE.

LA 10826. This document includes a letter exchange between the FAA and the Office of Historic Preservation (OHP) regarding a proposed expansion of the Westchester Golf Course located on LAX property. The FAA states that there are no documented cultural resources within the APE. The California State Historic Preservation Officer responded that he cannot concur that the undertaking will not affect historic properties because no information specific to the project area was provided by the FAA. The OHP recommends that a records search be conducted at the California Historical Resources Information Center in order to obtain information on previously identified cultural resources within the project area.

LA 10857. This report provides the Archaeological Treatment Plan as part of the LAX Master Plan Mitigation Monitoring and Reporting Program, in compliance with federal and state laws and guidelines for the protection of archaeological resources discovered at the airport.

LA 11546. This project involved a cultural resources records search, site visit, and historic architectural assessment for the proposed placement of antennas on the roof of an existing building. Results of this work indicate that no historic properties are located within the APE.

LA 11561. This memo provides an analysis of the potential effect of a project to install airport surveillance detection equipment. On behalf of the FAA, the consultants requested the California Office of Historic Preservation to concur with a finding that the project was not likely to adversely affect historic resources.

PCR 2012. The letter report details the findings of a records search conducted by PCR Services Corporation for the LAX Specific Plan Amendment Study. Results of this study indicate that 10 cultural resources, including built-environment resource, historic and prehistoric archaeological sites, and prehistoric isolate resources, were recorded within the proposed project area.

1767-001. Sapphos Environmental, Inc. recently conducted a cultural resources investigation for the proposed LAX Midfield Satellite Concourse Project. This assessment found no paleontological, archaeological, Native American sacred sites, or cemeteries within the proposed project property. Although 10 buildings and structures were recorded within the project area, none of these resources were determined to be historic resources under CEQA.

1767-002. Sapphos Environmental, Inc. recently conducted a cultural resources investigation for the proposed Runway 6R-24L and 6L-24R Safety Area and Associated Improvements Project. This assessment identified four historic period cultural resources within the APE. All the historic period cultural resources within the APE were determined ineligible for inclusion into the NRHP.

Section 106 Report, Appendix I, LAX Master Plan Final EIS/EIR. This Section 106 report identifying the historic resources present and potentially affected by the proposed 2004 Master Plan improvements was prepared for the LAX Master Plan Final EIS/EIR.

Supplemental Section 106 Report, Appendices S–G, LAX Master Plan Supplement to the Draft EIS/EIR. A supplemental Section 106 report identifying the historic resources present and potentially affected by the proposed Alternative D identified in the 2004 Master Plan improvements was prepared for the LAX Master Plan Final EIS/EIR.

5.1.2.2 Supplemental Literature Review: Previous Cultural Resources Inventories in the Study Area

The results of the supplemental literature review indicate that two additional cultural resources studies have been conducted within 0.5 mile of the APE of the proposed undertaking (Table 5.1.2.2-1, *Previous Cultural Resources Inventories within the Proposed Undertaking Study Area*). Locations of these previous surveys are shown in Figure 5.1.2.1-1). Brief summaries of each of these cultural resource studies are provided below.

TABLE 5.1.2.2-1
PREVIOUS CULTURAL RESOURCES INVENTORIES WITHIN THE PROPOSED UNDERTAKING STUDY AREA

Report No.	Year	Report Title	Authors
LA 11347	2011	Cultural Resources Monitoring Report for Taxi Lane S and Bradley West	CH2M HILL
LA 12267	2013	LAX Midfield Satellite Concourse Project Cultural Resources Technical Report	Frank, Stephanie and Holland, Karl, Sapphos Environmental

LA 12267. This report documents the results of cultural resources construction monitoring at Taxi Lane S and Bradley West within LAX. One newly recorded archaeological resource was documented as a result of the project. The resource is not within the APE.

LA 12267. Sapphos Environmental, Inc. conducted a cultural resources investigation for the proposed LAX Midfield Satellite Concourse Project. This assessment found no paleontological, archaeological, Native American sacred sites, or cemeteries within the proposed project property. Although 10 buildings and structures were recorded within the project area, none of these resources were determined to be historic resources under CEQA.

5.1.2.3 Previously Recorded Cultural Resources within the Study Area

The results of the records search determined that three archaeological sites, two archaeological isolates, and five built environment resources had previously been recorded within 0.5 mile of the North Airfield (Table 5.1.2.3-1, *Previously Recorded Cultural Resources within the Study Area)*; locations of the cultural resources are shown in Figure 5.1.2.3-1, *Previously Recorded Cultural Resources in the Cultural Resources Study Area*. A brief summary of each of these cultural resources is provided below. None of these previously documented cultural resources are located within the APE of the proposed undertaking.

TABLE 5.1.2.3-1
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN THE STUDY AREA

Historic/Archaeological Resource	Resource Type	NRHP Eligibility
CA-LAN-202	Site	Ineligible
CA-LAN-1118	Site	Ineligible
CA-LAN-2358H/CA-LAN-*1H	Site	Ineligible
P-19-100115	Isolate	Ineligible
P-19-100116	Isolate	Ineligible
P-19-150442 (Milliron's Department Store)	Building	Ineligible due to age (in 1998)
P-19-150445 (Syad Realty Building)	Building	Ineligible
P-19-189869 (Clearwire CA-LOS2026B/LA03XC087)	Building	Ineligible
Loyola Theater (LAHCM No. 259)	Building	Not evaluated
Theme Building (LAHCM No. 570)	Structure	Eligible

KEY:
NRHP = National Register of Historic Places

CA-LAN-202. This prehistoric site, which measured 61 meters in diameter, was originally recorded in 1953 by Eberhart. Residential development of the area in the 1960s appears to have extensively disturbed the site. Although later revisits to the area identified isolated fragments of *Mytilus* shell, no other cultural materials were identified in the vicinity.[65] Based on these findings, it was concluded that the site is ineligible for the NRHP.[66]

CA-LAN-1118. This site was originally recorded by Stickel and Appier in 1981.[67] The remains were described as a shell midden with associated lithic debitage that covered a 250- by 100-meter area. Grading and road construction in this area has destroyed large portions of the site since its original recording.[68] Due to its lack of integrity, the site was determined to be ineligible for the NRHP.

CA-LAN-2258H/CA-LAN-*1H. This site was recorded by Raschke and others in 1995 in the area immediately west of the northernmost runway.[69] The site consists of a large scatter of historic debris that included concrete, asphalt, glass, brick fragments, plaster, linoleum fragments, countertop tiles, and metal fragments. Historic documents indicate that these deposits likely represent the remains of a Nike Missile testing site, which was constructed in 1954. The facility was demolished in 1993 in preparation of the construction of Westchester Parkway. Because the site largely consists of redeposited materials, the resource is not considered eligible for the NRHP.

P-15-100115. This isolated occurrence consists of a large flake of reddish quartzite. The isolate is not eligible for the NRHP.

P-19-100116. This isolated find consists of a large felsite porphyry flake. The isolate is not eligible for the NRHP.

P-19-150442 / Milliron's Department Store. Also known as the Broadway-Westchester Department Store, this building is located at the northwest corner of Sepulveda Boulevard and La Tijera Boulevard. Constructed in 1948, the building is considered to be a prime example of the International Style. The building was originally recorded in 1987 by Starzak, who noted that the cultural resource was not eligible for inclusion on the NRHP because of its age; it was recommended that the building be reconsidered for eligibility in 1998, when the structure is 50 years old.[70]

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[65] California Department of Parks and Recreation. 1980. Update to Primary Record for CA-LAN-202. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[66] Los Angeles World Airports. April 2004. *Master Plan Final Environmental Impact Statement/Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements*. Section 4.9.1, Historic/Architectural and Archaeological/Cultural Resources.

[67] California Department of Parks and Recreation. 1981. Primary Record for CA-LAN-1118. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[68] Raschke, Rod, Carol Stadum, and Ronald M. Bissell. 1995. *Paleontological and Archaeological Resources Reconnaissance of the Los Angeles International Airport (LAX) Property, Los Angeles County, California*. RMW Paleo Associates, Inc., Mission Viejo, CA.

[69] Raschke, Rod, Carol Stadum, and Ronald M. Bissell. 1995. *Paleontological and Archaeological Resources Reconnaissance of the Los Angeles International Airport (LAX) Property, Los Angeles County, California*. RMW Paleo Associates, Inc., Mission Viejo, CA.

[70] California Department of Parks and Recreation. 1987. Primary Record for P-19-150442. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

P-19-150455 / Syad Realty Building. This single-story commercial structure is located at the southwest corner of 89th Street and Sepulveda Boulevard. It was constructed in 1950 in a variation of a Utilitarian Style. Starzak argued that the structure does not appear to be eligible for individual listing on the NRHP on the basis of architectural merit or historic significance.[71]

P-19-189869 / Clearwire CA-LOS2026B/LA03XC087. This building is located at the southwest corner of 98th Street and Sepulveda Boulevard. The building is a Modern Style commercial building that was constructed as the United Savings and Loan building in 1964. An evaluation of the property found that the property does not appear to qualify for the NRHP.[72]

Loyola Theater. This theater building is located on Sepulveda Boulevard south of Manchester Avenue. Designed by Clarence J. Smale, the Baroque Modern style theater was built in 1948. In 1982, it was designated City of Los Angeles Historic-Cultural Monument #259.

Theme Building. Built in 1961 and 1962, the Theme Building was the centerpiece of the large expansion of LAX that converted it into a "jet-age airport." The building was designed by architects William Pereira, Charles Luckman, Welton Becket, and Paul Williams, and is composed of sets of parabolic arches from which a flying saucer–shaped restaurant is suspended. The Theme Building was found eligible for the NRHP under Criterion C. The Theme Building was also designated City of Los Angeles Historic-Cultural Monument #570 in 1992.

5.1.2.4 Supplemental Records Search: Previously Recorded Cultural Resources within the Study Area

The results of the supplemental records search determined that one additional built environment resource had previously been recorded within 0.5 mile of the APE of the proposed undertaking (Table 5.1.2.2-4, *Previously Recorded Cultural Resources within the Study Area Identified in the Supplemental Records Search*); locations of the cultural resources are shown in Figure 5.1.2.3-1. A brief summary of the identified cultural resource is provided below. The previously documented cultural resource is not located within the APE of the proposed undertaking.

[71] California Department of Parks and Recreation. 1987. Update to Primary Record for P-19-150445. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[72] California Department of Parks and Recreation. 2010. Primary Record for P-19-189869. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

TABLE 5.1.2.4-1
PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN THE STUDY AREA IDENTIFIED IN THE SUPPLEMENTAL RECORDS SEARCH

Historic/Archaeological Resource	Resource Type	NRHP Eligibility
P-19-186162	Control Tower	Not evaluated

KEY:
NRHP = National Register of Historic Places

P-19-186162. This site is currently a "beacon tower" that originally served as the control tower for Los Angeles International Airport. The tower was constructed in 1951 and operated as the control tower until 1961. The cultural resource has not been evaluated for inclusion for the NRHP.[73]

5.2 PHASE I CULTURAL RESOURCES SURVEY

5.2.1 Description of Cultural Resources

The Phase I survey identified no prehistoric archaeological resources within the APE. However, two historic-period cultural resources were recorded within the APE of the proposed undertaking during the cultural resources assessment (Runway 6R-24L and LAX Supplemental Site 1H) (Figure 5.2.1-1, *Newly Recorded Cultural Resources in the Cultural Resources Study Area*). Descriptions and significance evaluations of the two identified historic-period cultural resources are presented below. For more detailed information on these sites, the reader is referred to the completed DPR 523 site forms provided in Appendix B, *DPR 523 Forms*.

Runway 6R-24L. Runway 6R-24L is one of two runways in the north runway complex at LAX and is located within the APE (Image 5.2.1-1, *Runway 6R-24L, Facing East*). Historic documents and USGS topographic maps indicate that the runway was built sometime between 1958 and 1962 as part of the Jet Age improvement project at LAX.[74,75] The grooved, concrete runway measures 10,285 feet in length with a width of 150 feet; it is surrounded by a paved shoulder and blast pad, the latter of which is located on the eastern end of the APE. Related features associated with Runway 6R-24L include a number of taxiways, service roads, and approach lighting systems.

[73] California Department of Parks and Recreation. 2006. Primary Record for P-19-186162. Site form on file at the South Central Coastal Information Center, California State University, Fullerton.

[76] Thomas Brothers. 1957. *Los Angeles County 1957 Street Atlas*. Los Angeles, CA.

[76] Thomas Brothers. 1957. *Los Angeles County 1957 Street Atlas*. Los Angeles, CA.

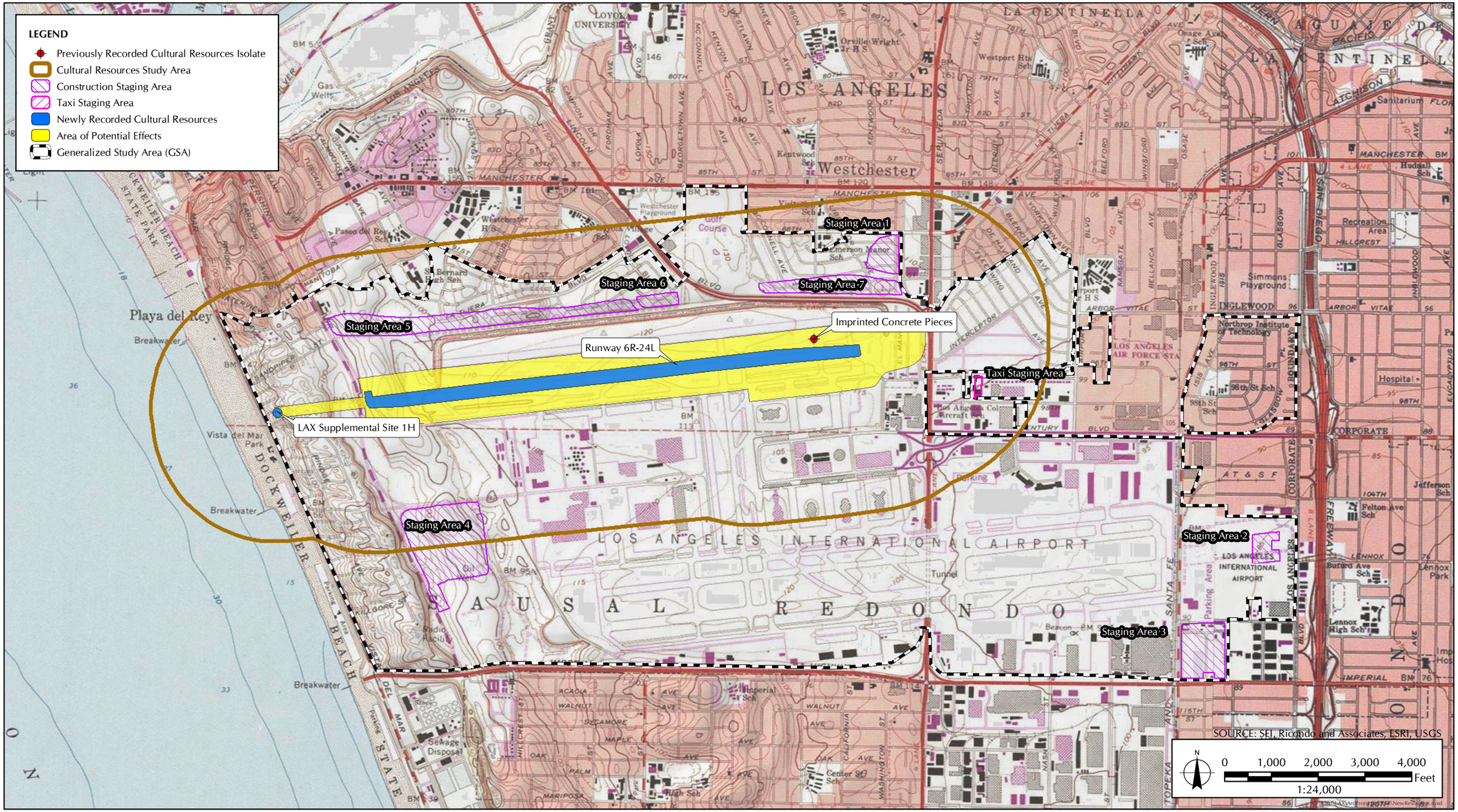

FIGURE 5.2.1-1

Newly Recorded Cultural Resources in the Cultural Resources Study Area

Image 5.2.1-1. *Runway 6R-24L, Facing East*

Over the years, Runway 6R-24L has undergone numerous improvements and modifications in response to the increasing demands of air traffic at LAX. The runway is paved with modern concrete; striping and other marking elements are painted on its surface. Although no identifiable historic materials were found in association with Runway 6R-24L, a broken piece of concrete with stamped lettering was identified in the immediate vicinity of the feature. The imprinted concrete fragments (possibly an identifier from a FAA navigational aid) appear to read, "FAA G5" and "C…IF." No additional information could be found as to the exact function or age of the materials (Image 5.2.1-2, *Concrete Fragments with Imprinting, Located North of Runway 6R-24L*).

Image 5.2.1-2. *Concrete Fragments with Imprinting, Located North of Runway 6R-24L*

LAX Supplemental Site 1H. LAX Supplemental Site 1H is located within the APE, approximately one-third of a mile west of Runway 6R-24L (Image 5.2.1-3, *LAX Supplemental Site 1H, Facing South*). A MALSR approach light associated with Runway 6R-24L is situated approximately at the center of the site. The site contains structural debris from the former Surfridge community, including brick and cement fragments, and lesser amounts of bottle glass, rebar, and nails.

The site is bordered by airport access roads that were once residential streets. The 1957 Thomas Brothers Los Angeles County Street Atlas lists these currently unnamed access roads as Ney Street directly north of the site, Argo Street directly south of the site, and Rindge Avenue directly east of the site.[76] Historically, several structures existed within the APE. The 1934 USGS Venice topographic quadrangle depicts five structures on Ney Street and two structures on Argo Street, all within approximately 200 feet of the site boundary and APE.[77] The 1942 USGS Venice topographic quadrangle depicts six structures on Ney Street, two structures on Argo Street, and two structures on Rindge Avenue, all within approximately 200 feet of the site boundary and APE.[78] An aerial photo dating to 1952 shows approximately 19 structures within approximately 200 feet of the site boundary and APE.[79] The 1964 USGS Venice topographic quadrangle shows no structures present within the site boundary and APE, which is confirmed by a 1972 aerial photo.[80,81]

[76] Thomas Brothers. 1957. *Los Angeles County 1957 Street Atlas*. Los Angeles, CA.

[77] U.S. Geological Service. 1934. Venice, California, 7.5-Minute Series Topographic Quadrangle.

[78] U.S. Geological Service. 1942. Venice, California, 7.5-Minute Series Topographic Quadrangle.

[79] Nationwide Environmental Title Research, LLC. 1952 aerial photo. Tempe, AZ. Accessed at: http://www.historicaerials.com.

[80] U.S. Geological Service. 1964. Venice, California, 7.5-Minute Series Topographic Quadrangle.

Image 5.2.1-3. *LAX Supplemental Site 1H, Facing South*

5.2.2 Significance Evaluation of Cultural Resources

The historical significance of Runway 6R-24L and LAX Supplemental Site 1H was determined by applying the procedures and criteria for the NRHP.

Runway 6R-24L. The NRHP eligibility criteria for has been applied to this site. Archival data indicate that Runway 6R-24L was first constructed between 1958 and 1962. Initial research has yielded no information suggesting an association of the runway with either significant historic events or people (Criteria A and B). Although the runway does appear to be associated with aviation history, it does not illustrate any significant association with the development of the commercial airline and airport industry in the early 20th century. Moreover, the runway has been heavily altered since its initial construction and thus no longer retains its original or historic appearance, visual narrative, or characteristics from a specific period that would make the resource eligible under Criterion C. Finally, research has provided no indication that the runway has the potential to yield any further information important to the history of the United States (Criterion D). Taken together, Runway 6R-24L does not meet any of any of the criteria for listing to the NRHP and, thus, cannot be considered a historic property.

[81] Nationwide Environmental Title Research, LLC. 1972 aerial photo. Tempe, AZ. Accessed at: http://www.historicaerials.com.

In order for a property to be eligible for listing in the NRHP, it must also retain its historic integrity. As mentioned above, Runway 6R-24L has been subjected to a number of improvements and alterations over the past 50 years. These modifications have significantly affected the runway's integrity in design, materials, and workmanship. Moreover, the continual development and expansion of LAX has resulted in a loss of integrity of setting and feeling. As such, it may be concluded that Runway 6R-24L does not retain a level of integrity needed to make it eligible for listing on the NRHP and, thus, cannot be considered a historic property.

LAX Supplemental Site 1H. The NRHP eligibility criteria have been applied to this site. Archival documents indicate that structures formerly present in and around LAX Supplemental Site 1H were constructed between circa 1934 and 1952 as part of the Surfridge community. No information has been found to indicate that LAX Supplemental Site 1H was associated with a historic event (Criteria A). Although individuals significant to the early motion picture industry are known to have owned properties in Surfridge, no residences associated with such persons remain intact today in the former Surfridge area (Criterion B). In addition, no information was found regarding the exact location of such properties. LAX Supplemental Site 1H does not significantly embody the distinctive characteristics of an engineering structure or architectural style, type, or period, which would make it eligible for inclusion under Criterion C as there are no structures remaining in and around the site. Finally, research has provided no indication that the site has the potential to yield potentially important information (Criterion D). Taken together, the resource does not meet any of the criteria for listing to the NRHP and, thus, cannot be considered a historic property.

The integrity of LAX Supplemental Site 1H has been effectively destroyed by airport operations and activities over the past 50 years. These activities include the removal of the housing, landscape, street lights, and street signs, and the construction of airport runway safety improvements. The complete removal of Surfridge residences has resulted in a loss of integrity of setting and feeling. Taken together, the data suggest that LAX Supplemental Site 1H does not retain a level of integrity that is needed to make it eligible for listing on the NRHP and, thus, cannot be considered a historic property.

5.3 SUMMARY OF FINDINGS

5.3.1 Cultural Resources

One built-environment resource, Runway 6R-24L, and one historic archaeological site, LAX Supplemental Site 1H, were documented in the proposed undertaking APE. Neither resource meets the eligibility requirements for the NRHP. Furthermore, all of the ground-disturbing activities associated with this undertaking will be located in previously disturbed areas that are not anticipated to contain intact subsurface deposits. Therefore, the proposed undertaking is not expected to have any effects on historic properties or historic resources.

However, results of the records search and archival research suggest that a number of archaeological sites are located within the larger cultural resources study area. In addition, the records search of the NAHC Sacred Lands File indicates that Native American traditional cultural places are also present in the immediate vicinity of the proposed undertaking. These findings suggest a potential for the unanticipated discovery of buried cultural deposits if construction activities extend into native or undisturbed soil.

If plans for the proposed undertaking are modified so that ground disturbances occur in areas that do not consist of re-deposited fill or that have not been previously disturbed, it is recommended

that an archaeological construction monitoring program be implemented in accordance with Mitigation Measure (MM) HA-5 of the MMRP and that procedures outlined in the Archaeological Treatment Plan[82] completed pursuant to MM HA-4 of the MMRP be followed to ensure the long-term protection and proper treatment of any unexpected archaeological discoveries of federal, state, and/or local significance found within the APE.

[82] Los Angeles World Airports. June 2005. *Archaeological Treatment Plan*. Prepared by: Brian F. Smith and Associates, San Diego, CA.

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APPENDIX A
RESUMES

Tiffany C. Clark, PhD, RPA

PhD Anthropology, emphasis in Archaeology, Arizona State University, Tempe, 2006

MA Anthropology, emphasis in Bioarchaeology, Arizona State University, Tempe, 1997

AB (cum laude), Biology, minor in Anthropology, Occidental College, Los Angeles, 1992

Registered Professional Archaeologist (ID No. 989197)

Cultural Resources Specialist

- *Principal Investigator of archaeological studies*
- *Phase/Class I, II, and III archaeological investigations*
- *Prehistoric and historic laboratory analyses*
- *Preparation of prehistoric and historic archaeological reports*
- *CRHR and NRHP site eligibility assessments*

Years of Experience: 18+

Relevant Experience:

- *LA Plaza Cultura y Artes Project, Los Angeles County*
- *Phase I Cultural Resources Inventory, Avalon Wind Energy Project, Kern County*
- *Phase I Cultural Resources Technical Study, Keeler Dunes, Inyo County*
- *Cultural Resources Study, State Route 710, Los Angeles County*
- *Phase II/III Archaeological Investigations, Catalina Renewable Energy Project, Kern County*
- *Phase III Archaeological Investigations, Red Mountain Freeway, Maricopa County*

Dr. Tiffany Clark, archaeologist and cultural resources specialist for Sapphos Environmental, Inc., has more than 18 years of experience in cultural resources management, archaeological survey and excavation, laboratory analysis, and report preparation. She has supervised projects in California and Arizona pursuant to the National Historic Preservation Act, the National Environmental Policy Act, and the California Environmental Quality Act. Her training and background meet the U.S. Secretary of the Interior's Professional Qualifications Standards in Archaeology.

As a principal investigator, Dr. Clark has managed Phase I (records search and pedestrian survey), Phase II (site eligibility testing), and Phase III (data recovery) projects. She has authored numerous cultural resources technical reports and environmental documents for compliance with local, state, and federal regulations. She has successfully coordinated with a variety of lead and regulatory agencies, including the Bureau of Land Management, California Department of Transportation, Federal Aviation Administration, U.S. Fish and Wildlife Services, U.S. Forest Service, and U.S. Army Corps of Engineers.

Dr. Clark specializes in the prehistoric archaeology of the interior deserts of the American Southwest. Her research interests include prehistoric economies in smaller-scale societies. She is especially interested in economic specialization and the organization of ceramic production and distribution systems. Her research has relied on a variety of compositional and technological analysis techniques to answer archaeological questions related to ceramic specialization and exchange.

Dr. Clark has also conducted research on the organization of prehistoric subsistence practices and faunal resource procurement strategies. She has identified and analyzed animal remains from numerous archaeological sites throughout the American Southwest. Her research has addressed the effect of population aggregation on large-game availability, the impact of 17th century Spanish colonization on Native American hunting strategies, and the role of European domesticated animals in indigenous subsistence systems.

Dr. Clark is a member of the Register of Professional Archaeologists, Society for American Archaeology, and Society for California Archaeology. She has authored or coauthored numerous professional reports and routinely presents papers at professional meetings. She has published articles in a variety of peer-reviewed journals, including *Ethnobiology*, the *Journal of Archaeological Anthropology*, and *Kiva*.

Clarus J. Backes, Jr., MA, RPA

MA, Anthropology, California State University, Long Beach, 2009

BA (magna cum laude), Anthropology, emphasis in Archaeology and Linguistics, California State University, Los Angeles, 2005

Registered Professional Archaeologist (ID No. 1673640)

Certified Archaeological Consultant, County of Riverside, California (Certification No. 247)

Archaeological Resources Manager

- *Field and laboratory crew chief*
- *Excavation and data recovery*
- *Preparation of prehistoric and historic archaeological reports*
- *Prehistoric and historic laboratory analyses*
- *Archaeological monitoring*

Years of Experience: 13

Relevant Experience:

- *Manzana Wind Energy Project*
- *Catalina Alternative Energy Project*
- *Avalon Wind Energy Project*
- *2008 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan*
- *Phase I Archaeological Survey of the Vasquez Rocks Natural Area Park*
- *Black Lava Butte Wind Energy Site Testing*

Mr. Clarus Backes, Archaeological Resources Manager for Sapphos Environmental, Inc., has 13 years of professional experience and has supervised numerous projects in California in support of compliance with the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), and Sections 106 and 110 of the National Historic Preservation Act (NHPA). Mr. Backes has worked as a cultural resources specialist and manager at Sapphos Environmental, Inc. for five years. He has participated in a wide range of projects involving archaeological survey, testing, data recovery, monitoring, laboratory analysis, and the development of mitigation and treatment plans, and has over 10 years of experience in a decision-making capacity on cultural resources projects in California. His training and background meet the U.S. Secretary of the Interior's Professional Qualifications Standards for prehistoric and historic archaeology.

Mr. Backes specializes in the prehistoric archaeology of Southern California. His research interests include hunter-gatherer subsistence and technology; archaeological applications of evolutionary theory; rock art technology, including pigment manufacture and exchange; and the application of physical science techniques to archaeological questions.

Mr. Backes's current research includes compositional and provenance analyses of pigments, ceramics, obsidian, and other archaeological materials via laser ablation inductively coupled plasma mass spectrometry (LA-ICP-MS). This research is conducted in association with the Institute for Integrated Research on Materials, Environment and Society (IIRMES) at California State University, Long Beach (CSULB), and supports several ongoing North American and Mesoamerican archaeological projects.

Mr. Backes also specializes in rock art recording and analysis, including in situ and laboratory pigment compositional analyses. He has conducted detailed, high-resolution baseline conditions assessments at numerous rock art sites in Southern California using analog and digital formats, ultraviolet and infrared photography, and digital enhancement. He has also pioneered techniques for ultraviolet fluorescence analysis of damaged pictograph sites. He regularly conducts rock art research in the western Mojave Desert, at China Lake Naval Air Weapons Station, and as part of the University of California, Los Angeles (UCLA), Little Lake Rock Art Digital Conservation Project.

Mr. Backes is a member of the Society for American Archaeology (SAA), Society for California Archaeology (SCA), and the American Rock Art Research Association (ARARA). He has authored or coauthored numerous professional reports, peer reviewed publications and monographs, and routinely presents papers at professional meetings.

Christopher W. Purtell, MA, RPA

Master of Arts, Anthropology (Emphasis in Archaeology), California State University, Fullerton, 2013

Bachelor of Arts (honors in the major), Anthropology/ Archaeology, California State University, Dominguez Hills, 2005

Registered Professional Archaeologist (ID No. 990027)

Senior Archaeological Resources Coordinator

- *Environmental analysis and compliance in support of CEQA, NEPA, and NHPA*
- *Archaeological principal investigator*
- *Project management of archaeological studies*
- *Phase I, II, and III archaeological investigations*
- *Prehistoric and historic laboratory analysis*
- *Coordination with Native American Heritage Commission*
- *Archaeological construction monitoring*
- *Archaeological record search*
- *Ethnographic research*

Years of Experience: 8

Relevant Experience:

- *Phase I surveys and Technical Reports, Catalina Renewable Energy Project, Avalon Wind Energy Project, Manzana Wind Energy Project, Hoffman Summit Wind Energy Project, and PdV Wind Energy Project*
- *Cultural Task Manager for 2008 Owens Valley PM_{10} Environmental Impact Report*
- *Phase I, II, and III Investigations for the Vasquez Rocks Natural Area Park*
- *Project Manager for the LA Plaza de Cultura y Artes*

Mr. Christopher Purtell is a project archeologist (senior archaeological resources coordinator) for Sapphos Environmental, Inc. Mr. Purtell has eight years of experience in project management, environmental compliance, archaeological survey, excavation, monitoring, laboratory analysis, and documentation.

As a senior archaeological resources coordinator, Mr. Purtell has undertaken and contributed to work efforts for prehistoric and historic archaeology in the Great Basin and Mojave Desert pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). As a field director, Mr. Purtell has managed field crews in intensive pedestrian surveys, excavations, and laboratory analyses. He has co-authored cultural analyses for fatal flaw studies; authored environmental compliance documents, such as Initial Studies, Environmental Impact Reports, and Cultural Resources Technical Reports; and compiled California Department of Parks and Recreation (DPR) site records. He has successfully coordinated with a variety of lead and regulatory agencies, including the Bureau of Land Management (BLM) among others. His training and background meet the U.S. Secretary of the Interior's Professional Qualifications Standards for prehistoric and historic archaeology.

Mr. Purtell has conducted archaeological research in California, western Mexico, Baja California, and the north coast of Peru. He specializes in lithic trajectories and technologies, and received the 2007–2008 Professional Distinction Award for Field and Laboratory Analysis from the California State University, Fullerton, Graduate School of Anthropology. Additional research interests include geographic information system (GIS) studies on prehistoric migration patterns, the archaeology of San Nicolas Island and Baja California, and California rock art. Mr. Purtell's recent work assignments have included cultural resources manager at the 9,212-acre site of the 2008 Owens Valley PM_{10} Planning Area Demonstration of Attainment State Implementation Plan in Inyo County, California, for the Great Basin Unified Air Pollution Control District; cultural resources task manager for the 8,300-acre Avalon Wind Energy Project; Catalina Renewable Energy Project; and project manager for the LA Plaza de Cultura y Artes in El Pueblo de Los Angeles Historic District in downtown Los Angeles.

Mr. Purtell's professional experience includes over 20 years as a business director and program manager in the manufacturing of aerospace airframe components prior to his cultural resources management work. Mr. Purtell has extensive working knowledge in program management practices, quality management principles, and International Organization for Standardization 9002 quality procedures and applications, which are international in scope, and which have given him the necessary knowledge and expertise to manage complex cultural resources projects.

Adam J. White

BA, Anthropology and History, minors in Geology and Near Eastern Languages and Cultures, University of California, Los Angeles, 2011

Archaeological Resources Coordinator

- *Preparation of cultural resource survey reports*
- *Field crew chief*
- *Phase I archaeological investigations*
- *Laboratory analysis of prehistoric artifacts*

Years of Experience: 3

Relevant Experience:

- *STEP Archaeologist with Petrified Forest National Park, Arizona*
- *NAGPRA consultation and report preparation with Hopi, Zuni, and Navajo tribes.*
- *Understanding of National Park Service guidelines and regulations*
- *Surveys, significance evaluations and data recovery for Kern County Wind Development projects*

Mr. Adam White, Archaeological Resources Coordinator for Sapphos Environmental, Inc., has more than 3 years of experience in archaeological survey and excavation, laboratory analysis, and report preparation in California, the American Southwest, and Egypt. He has been involved with numerous cultural resource management projects within the private sector in California and has worked as an archaeologist for the National Park Service at Petrified Forest National Park, Arizona. Mr. White has also been an active participant in the UCLA/RUG Fayum Project in Al-Fayum, Egypt.

As an Archaeological Resources Coordinator for Sapphos Environmental, Inc., Mr. White has acted as project manager for cultural resources surveys and assessments, has led field crews in intensive pedestrian surveys for projects in urban and desert areas of southern California, and has worked on Phase II evaluation and Phase III data recovery projects. He has drafted numerous cultural resource technical reports, including California Department of Parks and Recreation resource reports and various internal documents. Mr. White has a strong background in site mapping using a variety of techniques, including Total Station, differential global positioning system (GPS), and traditional mapmaking methods. He has attended Section 106 training by ACHP.

Mr. White gained much experience in National Park Service archaeology during his employment as a GS-05 STEP Archaeologist at Petrified Forest National Park, Arizona. During summer 2010, he conducted numerous condition assessments at sites throughout the park, assisted in various research projects with different universities, and compiled Native American Graves Protection and Repatriation Act (NAGPRA) reports.

Mr. White has conducted academic research throughout Arizona at Hopi Reservation, Petrified Forest National Park, and Bureau of Land Management (BLM) land with the University of Redlands; University of Colorado, Boulder (UCB); and University of California, Los Angeles (UCLA). These projects have included mapping prehistoric Hopi pueblos, recording rock art panels, and surveying for Pueblo IV habitation sites. He is also a participant in the UCLA/RUG Fayum Project in Al-Fayum Egypt, where he has assisted in the excavation of a Graeco- Roman town and survey for Neolithic camp sites.

Mr. White is a member of the Society for American Archaeology (SAA) and presented research at the group's 76th Annual Meeting in April 2011.

Marilyn Novell, MS

MS, History of Architecture and Urbanism, University of California, Berkeley, 2010

BA, American Studies, concentration in Cultural Landscapes, University of California, Berkeley, 2008

Historic Resources Coordinator/Architectural Historian/Technical Editor

Years of Experience: 7

- *Architectural history*
- *Cultural landscapes research and writing*
- *Urban geography*
- *Historic resources inventories*
- *Cultural resources technical reports*
- *Historic context statements*
- *Field surveys in support of CEQA compliance*
- *Architectural photography*
- *Applications for landmark status*
- *California Department of Parks and Recreation (DPR) recordation*
- *Project management*
- *Historic Resources Inventory for the Los Angeles Unified School District*
- *Application for Landmark Status: University YWCA, Berkeley, California*
- *Research and writing for SurveyLA's Historic Context Statement*
- *Management of architecture, housing, urbanism, and city planning content for social media–driven web site*

Ms. Marilyn Novell has over seven years of professional and academic experience in historic preservation, cultural resources documentation, and architectural history.

Ms. Novell has worked on historic and cultural resource assessments for projects in Los Angeles, Santa Monica, Berkeley, Utah/Colorado, and the Klamath River basin in California. As a member of the board of directors of the Julia Morgan-designed Berkeley City Club, she participated in documenting the building's grounds for the Historic American Landscapes Survey (HALS). Ms. Novell has experience in developing historical and cultural resources sections and technical reports, specifically those related to Native American tribal trust resources and cultural values. Her qualifications meet the Secretary of the Interior's Professional Qualification Standards for Architectural History and History.

Ms. Novell's professional background includes management and contributions to projects aimed at the evaluation of historic properties and districts. She contributed to the City of Los Angeles Historic Resources Survey project (SurveyLA), both in the City Office of Historic Resources and for consultant firms conducting the survey for the City. In this capacity, she assisted in recording and evaluating properties in the field, researching identified properties, and writing summary reports. At Sapphos Environmental, Inc. she served as historic resources coordinator for an ongoing district-wide Historic Resource Inventory for the Los Angeles Unified School District (LAUSD). Her responsibilities included background research, writing of summary reports, intensive-level surveys of 55 postwar LAUSD campuses, and compiling evaluations and significance statements for California Department of Parks and Recreation (DPR) historic resources forms.

She served as project manager for Stonegate at Sierra Madre, California, a 21-parcel development that encompasses two historic structures. The project included researching and writing a Historic Structures Report and design review for proposed construction at the development.

During her years of experience with Internet technology and content, she was instrumental in the development of a national online database of New Deal–era public projects including schools, post offices, airports, hospitals, murals, and parks. In 2013, she founded the news-gathering web site 100% Built, focused on architecture, cities, and the built environment; the technology and interface were adopted by *Places Journal* to enhance the periodical's online presence.

Ms. Novell's areas of interest include social and cultural factors in buildings and landscapes, urban and suburban growth patterns, and Southern California history. Her master's thesis was a case study of a 1950 housing tract in the San Francisco Bay area that traced the histories of 63 originally nearly identical houses over time to their current highly individualized state, reflecting cultural, economic, and aesthetic changes in the residents and the community. She is a member of the California Preservation Foundation, the Los Angeles Conservancy, the Society of Architectural Historians, the National Trust for Historic Preservation, and the Vernacular Architecture Forum.

APPENDIX B
DPR 523 FORMS

State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI #**
PRIMARY RECORD
Trinomial
NRHP Status Code
Other Listings
Review Code **Reviewer** **Date**

Page 1 **of** 4 ***Resource Name or #:** LAX Supplemental Site 1H
P1. Other Identifier:
***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Los Angeles
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad:** Venice **Date:** 1964 **T** 3S; **R** 15W; UNSECTIONED**;** S.B. **B.M.**
c. Address: 1 World Way West City: Los Angeles Zip: 90045
d. UTM: Zone: 11S; 366735 mE/ 3757110 mN (G.P.S.) Datum at MALSR approach light
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) The site is located in the former Surfridge community west of Pershing Drive, east of Vista Del Mar and north of Imperial Highway. It is approximately one-third of a mile west of runway 6R-24L of the Los Angeles International Airport (LAX).

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The site is a sparse scatter of historical structural debris that appears to be from the demolished Surfridge community located directly west of Los Angeles International Airport. The cultural materials present consist primarily of structural concrete and brick fragments, but also includes green and clear bottle glass fragments, rebar, and nails in lesser amounts. No historic artifacts with temporarily diagnostic maker's marks were encountered. The structural debris within the current project's area of potential effects (APE) is roughly defined to be within a 100-foot radius of the datum, but structural debris continues to the north and south of the site. Site recordation was limited to the current project's APE, and therefore, the limits of the historical debris scatter are incompletely defined. .

***P3b. Resource Attributes:** (List attributes and codes) AH4: Privies/dumps/trash scatters
***P4. Resources Present:** ☐ Building ☐ Structure ☐ Object ■ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #)
Site overview, facing south; 7/16/2014

***P6. Date Constructed/Age and Sources:**
■ Historic ☐ Prehistoric ☐ Both

***P7. Owner and Address:**
Los Angeles World Airports
1 World Way
Los Angeles, CA 90045

***P8. Recorded by:** (Name, affiliation, and address)
AJ White
Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, CA 91107

***P9. Date Recorded:** July 16, 2014

***P10. Survey Type:** (Describe)
Pedestrian

***P11. Report Citation:** Sapphos Environmental, Inc. 2014. *Los Angeles International Airport Proposed Runway 6L-24R and Runway 6R-24L Safety Area and Associated Improvements Project Cultural Resources Technical Report.* Pasadena, CA.

***Attachments:** ☐ NONE ■ Location Map ☐ Sketch Map ■ Continuation Sheet ☐ Building, Structure, and Object Record ■ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **Trinomial**

ARCHAEOLOGICAL SITE RECORD

 ***Resource Name or #:** LAX Supplemental Site 1H

***A1. Dimensions:** a. Length: 100 feet (N/S) × b. Width: 100 feet (E/W)
Method of Measurement: ☐ Paced ☐ Taped ■ Visual estimate ☐ Other:
Method of Determination (Check any that apply.): ■ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☐ Topography ☐ Cut bank ☐ Animal burrow ☐ Excavation ☐ Property boundary ☐ Other (Explain):

Reliability of Determination: ☐ High ☐ Medium ■ Low Explain: Site limits incompletely defined. Site recordation was limited to the current project's APE due to airport security concerns.

Limitations (Check any that apply): ■ Restricted access ■ Paved/built over ■ Site limits incompletely defined ■ Disturbances ■ Vegetation ☐Other (Explain):

A2. Depth: ☐ None ☐ Unknown Method of Determination: Based on surface observations.

***A3. Human Remains:** ☐ Present ☐ Absent ☐ Possible ☐ Unknown (Explain): None observed

***A4. Features:** No features were identified.

***A5. Cultural Constituents** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features.):
The site is a diffuse historical debris scatter primarily composed of structural concrete and brick fragments, but also including green and clear bottle glass fragments, rebar, and nails. One white ceramic dish fragment was noted. No historic artifacts with temporarily diagnostic maker's marks were encountered.

***A6. Were Specimens Collected?** ■ No ☐ Yes (If yes, attach Artifact Record or catalog and identify where specimens are curated.)

***A7. Site Condition:** ☐ Good ☐Fair ■ Poor (Describe disturbances.): Very little of the original structures remain as they were either relocated or destroyed during the 1960s and 1970s during airport expansion. The area was further disturbed through the installation of a Medium Intensity Approach Lighting System (MALSR) approach light at a later date. Modern trash is present throughout the site.

***A8. Nearest Water** (Type, distance, and direction.) Pacific Ocean, approximately 930 feet to the southwest.

***A9. Elevation:** 94 feet above mean sea level

A10. Environmental Setting (Describe culturally relevant variables such as vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc.): The site is located on the western slope of the Palisades del Rey Dunes in low-lying Southern California coastal vegetation. Although the area was once cleared for residential structures, dune sand and vegetation have largely reclaimed much of the area. The land slopes at approximately 8 degrees to the southwest.

A11. Historical Information: See continuation sheet.

***A12. Age:** ☐ Prehistoric ☐ Protohistoric ☐ 1542-1769 ☐ 1769-1848 ☐ 1848-1880 ☐ 1880-1914 ■ 1914-1945 ■ Post 1945 ☐ Undetermined Describe position in regional prehistoric chronology or factual historic dates if known: See continuation sheet.

A13. Interpretations (Discuss data potential, function[s], ethnic affiliation, and other interpretations): The historic artifacts appears to represent the structural debris of one or more residential structures belonging to the demolished Surfridge community.

A14. Remarks: None.

A15. References (Documents, informants, maps, and other references): See continuation sheet.

A16. Photographs: P1010327-P1010332

Original Media/Negatives kept at: Sapphos Environmental, Inc.

***A17. Form Prepared by:** AJ White **Date:** 7/17/2014

Affiliation and Address: Sapphos Environmental, Inc., 430 North Halstead, Pasadena, CA 91107

A11. Historical Information:

The site is within the boundaries of the demolished Surfridge community. Surfridge was an affluent community that originated in the 1920s and was destroyed beginning in the 1960s through LAX expansion.[1] Development began between 1924 and 1934, based on historic USGS topographic maps of the area.[2,3] The community was home to early Los Angeles elite, including William de Mille, Cecil B. DeMille, Charles Bickford, Mel Blanc, and Mae Murray.[4]

By the late 1950s, the airport had grown significantly and needed room to expand. In addition, residents of Surfridge complained of increasing noise levels from the transition to jet engines. In 1961, the City of Los Angeles began purchasing Surfridge property through eminent domain.[5] Following acquisition by the city, houses were either moved or destroyed throughout the 1960s and into the 1970s, thereby dissolving the Surfridge community.

The site is bordered by airport access roads that were once residential streets. The 1957 Thomas Brothers Los Angeles County Street Atlas lists these currently unnamed access roads as Ney Street directly north of the site, Argo Street directly south of the site, and Rindge Avenue directly east of the site.[6] Several structures existed close to or within the site. The 1934 USGS Venice topographic quadrangle depicts five structures on Ney Street and two structures on Argo Street, all within approximately 200 feet of the site.[7] The 1942 USGS Venice topographic quadrangle depicts six structures on Ney Street, two structures on Argo Street, and two structures on Rindge Avenue, all within approximately 200 feet of the site.[8] An aerial photo dating to 1952 shows approximately 19 structures within approximately 200 feet of the site vicinity.[9] The 1964 USGS Venice topographic quadrangle shows no structures present in the site vicinity, which is confirmed by a 1972 aerial photo.[10,11]

[1] Anton, Mike. 2 March 2013 “LAX Ghost Town a Home to Memories and Rare Butterflies.” *Los Angeles Times.*

[2] U.S. Geological Service. 1924. Venice, California, 7.5-minute Series Topographic Quadrangle.

[3] U.S. Geological Service. 1934. Venice, California, 7.5-minute Series Topographic Quadrangle.

[4] Alexander, Zoe. April 2013 “Paradise Lost: the Rise & Fall of Surfridge.” *Our South Bay.*

[5] Alexander, Zoe. April 2013 “Paradise Lost: the Rise & Fall of Surfridge.” *Our South Bay.*

[6] Thomas Brothers. 1957. *Los Angeles County 1957 Street Atlas.* Los Angeles, CA.

[7] U.S. Geological Service. 1934. Venice, California, 7.5-minute Series Topographic Quadrangle.

[8] U.S. Geological Service. 1942. Venice, California, 7.5-minute Series Topographic Quadrangle.

[9] Nationwide Environmental Title Research, LLC. 1952 aerial photo. Tempe, AZ. Accessed at: http://www.historicaerials.com.

[10] U.S. Geological Service. 1964. Venice, California, 7.5-minute Series Topographic Quadrangle.

[11] Nationwide Environmental Title Research, LLC. 1952 aerial photo. Tempe, AZ. Accessed at: http://www.historicaerials.com.

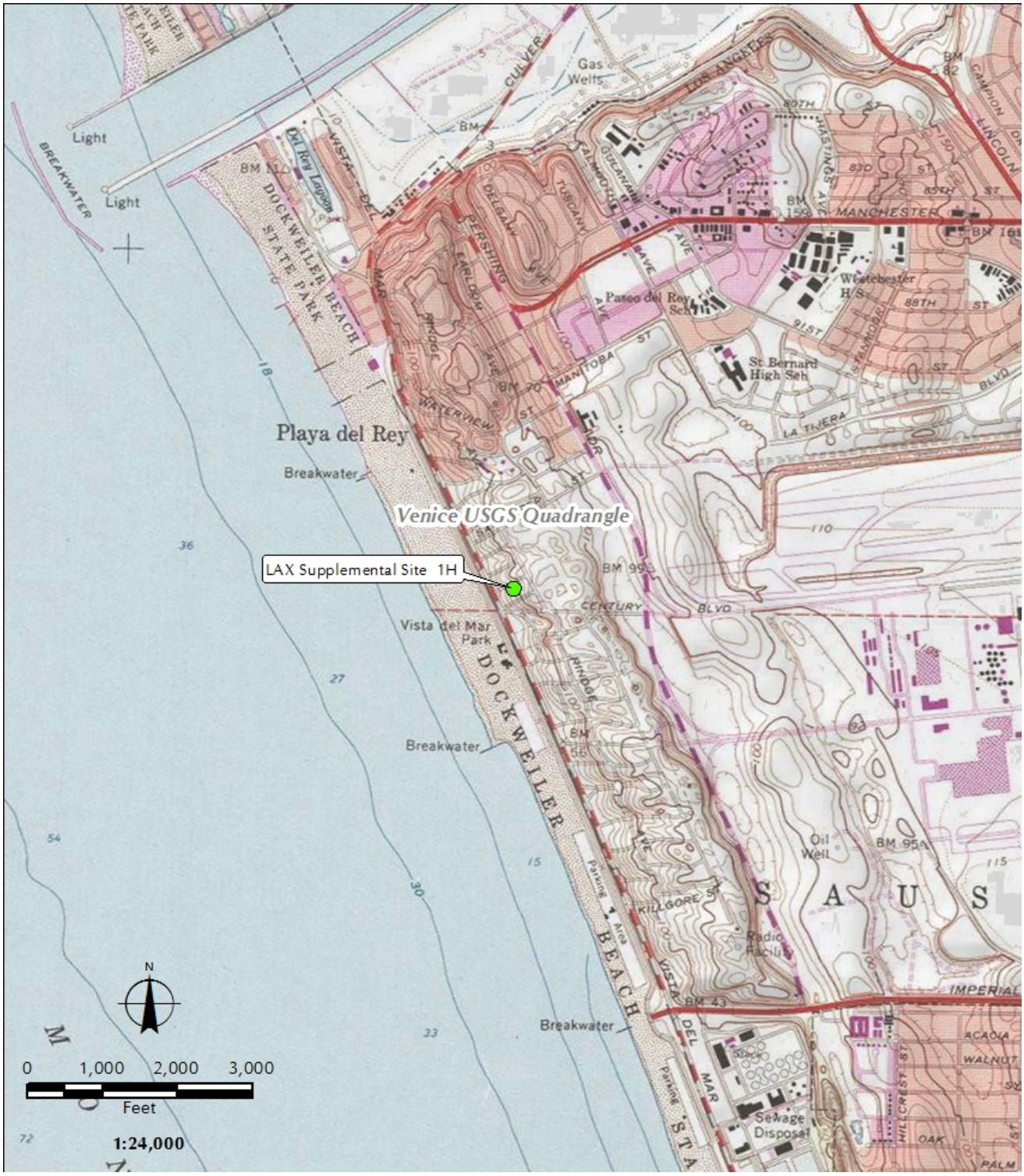
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

***Resource Name or #:** LAX Supplemental Site 1H

***Map Name:** Venice, California ***Scale:** 1:24,000 ***Date of Map:** 1981 Revised 1964



State of California — The Resources Agency **Primary #**
DEPARTMENT OF PARKS AND RECREATION **HRI #**

PRIMARY RECORD

Trinomial
NRHP Status Code

Other Listings
Review Code **Reviewer** **Date**

 *__Resource Name or #:__ Runway 6R-24L, Los Angeles International Aiport

P1. Other Identifier:

***P2. Location:** ☐ **Not for Publication** ■ **Unrestricted** ***a. County:** Los Angeles

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad:** Venice **Date:** 1964 **T** 3S; **R** 15W; UNSECTIONED**;** S.B. **B.M.**

c. Address: 1 World Way West City: Los Angeles Zip: 90045

d. UTM: Zone: 11S; 369000mE/ 3757350mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation: Runway 6R-24L is the southernmost runway in the North Airfield at the Los Angeles International Airport.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Runway 6R-24L is one of two runways in the North Runway Complex at Los Angeles International Airport (LAX). Historic documents and U.S. Geological Survey (USGS) topographic maps indicate that the runway was built sometime between 1958 and 1962 as part of the jet-age improvement project at LAX (*Los Angeles Times*, 1957; USGS, 1964). The grooved, concrete runway measures 10,285 feet in length with a width of 150 feet; the runway is surrounded by a paved shoulder and blast pad, the latter of which is located on its eastern end. Related features associated with Runway 6R-24L include a number of taxiways, service roads, and approach lighting systems.

***P3b. Resource Attributes:** (List attributes and codes) HP11. Engineering Structure

***P4. Resources Present:** ☐ Building ■ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)

P5b. Description of Photo: (View, date, accession #) Runway 6R-24L, facing east, 6/14/2013

***P6. Date Constructed/Age and Sources:** ■ Historic
☐ Prehistoric ☐ Both

***P7. Owner and Address:**

Los Angeles World Airports
1 World Way
Los Angeles, CA 90045

***P8. Recorded by:** (Name, affiliation, and address)

Tiffany Clark
Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, CA 91107

***P9. Date Recorded:** June 14, 2013

***P10. Survey Type:** (Describe) Pedestrian

***P11. Report Citation:** Sapphos Environmental, Inc. 2013. Memorandum for the Record: Results of the Cultural Resources Evaluation for the Proposed LAX North Runway Safety Area Improvements Project. Pasadena, CA.

***Attachments:** ☐ NONE ■ Location Map ☐ Sketch Map ☐ Continuation Sheet ■ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ■ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐ Other (List):

BUILDING, STRUCTURE, AND OBJECT RECORD

*NRHP Status Code

 ***Resource Name or #** (Assigned by recorder) Runway 6R-24L, Los Angeles International Airport

B1. Historic Name: North Runway, Los Angeles International Airport
B2. Common Name: Runway 6R-24L
B3. Original Use: Airport Runway B4. Present Use: Airport Runway
***B5. Architectural Style:** Not applicable
***B6. Construction History:** (Construction date, alterations, and date of alterations)
Runway was originally built between 1958 and 1962 as part of the jet-age improvement project at LAX (*Los Angeles Times*, 1957; U.S. Geological Survey, 1964). The runway had been subject to an unknown number of alterations and improvements since its construction.

***B7. Moved?** ■No ☐Yes ☐Unknown **Date:** **Original Location:** Not applicable

***B8. Related Features:**
Related features associated with Runway 6R-24L include a number of taxiways, service roads, and approach lighting systems.

B9a. Architect: Unknown b. Builder: Unknown

***B10. Significance: Theme:** Airports **Area:** City of Los Angeles

Period of Significance: Property Type: Applicable Criteria:
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The construction of Runway 6R-24L was part of the jet-age improvement project that was began at LAX in the late 1950s. The first phase of construction began in 1957, and involved field improvements and the extension of existing runways, followed by excavations for the underground components. The final phase included the construction of the North Runway (Runway 6R-24L), new passenger terminal buildings and airline maintenance areas, and the control tower. During this time, the Theme Building was also constructed at LAX. Considered to be the centerpiece of the new airport design, the building reflected the Jet Age mentality with its modern-styled parabolic arch's four legs rise 135 feet from the ground and 340 feet across the base in the center of the terminal area.

Runway 6R-24L does not meet any of the evaluative criteria for inclusions on the National Register of Historic Places (Criteria A–D) or the California Register of Historical Resources (Criteria 1–4). In addition, the runway has been subjected to a number of alterations and improvements and as such, does not possess much of its original integrity.

B11. Additional Resource Attributes: (List attributes and codes) HP11. Engineering Structure

***B12. References:** *Los Angeles Times*. 25 November 1957. "Airport Project Will Start Soon: Ground-Breaking Ceremonies Slated Dec. 8 for $46,000,000 Expansion Project."

U.S. Geological Survey. 1964. *7.5-Minute Series, Venice, California, Topographic Quadrangle*. Reston, VA.

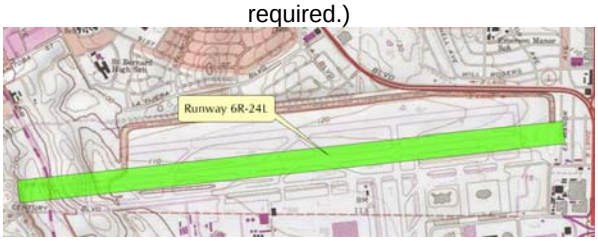
B13. Remarks: None

***B14. Evaluator:** Tiffany Clark, Sapphos Environmental, Inc., Pasadena, CA

***Date of Evaluation:** June 14, 2013

(This space reserved for official comments.)

(Sketch Map with north arrow required.)



North Arrow

L1. Historic and/or Common Name: Runway 6R-24L

L2a. Portion Described: ■ Entire Resource ☐ Segment ☐ Point Observation **Designation:** Runway 6R-24L

b. Location of point or segment: (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) The entirety of Runway 6R-24L has been field inspected. See map for location of runway.

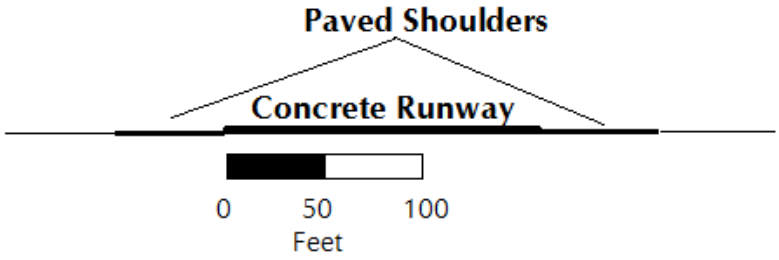
L3. Description: (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)

Runway 6R-24L is one of two runways in the North Runway Complex at LAX. Historic documents and U.S. Geological Survey topographic maps indicate that the runway was built sometime between 1958 and 1962 as part of the jet-age improvement project at LAX (*Los Angeles Times*, 1957; U.S. Geolgoical Survey, 1964). The grooved, concrete runway measures 10,285 feet in length with a width of 150 feet; the runway is surrounded by a paved shoulder and blast pad, the latter of which is located on its eastern end. Related features associated with Runway 6R-24L include a number of taxiways, service roads, and approach lighting systems.

Over the years, Runway 6R-24L has undergone numerous improvements and modifications in response to the increasing demands of air traffic at LAX. The runway is paved with modern concrete; striping and other marking elements are painted on its surface. Although no identifiable historic materials were found in association with Runway 6R/24L, a broken piece of concrete with stamped lettering was identified in the immediate vicinity of the feature (see photograph below) (11S 370233mE, 3757589 mN). The imprinted concrete fragments appear to read “FAA G5” and “C…IF.” No information could be found as to the possible function or age of the remains.

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
a. Top Width: 150 feet
b. Bottom Width: Not applicable
c. Height or Depth: Not applicable
d. Length of Segment: 10,285 feet

L4e. Sketch of Cross-Section (include scale) **Facing:** East



L5. Associated Resources: Taxiways, service roads, and approach lighting systems.

L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) Runway is located on a level area west of the El Segundo Dunes.

L7. Integrity Considerations: The runway has been subjected to a number of alterations and improvements since its construction. As such, it does not possess much of its original integrity.

L8a. Photograph, Map or Drawing

L8b. Description of Photo, Map, or Drawing (View, scale, etc.)

Stamped concrete piece found in association with Runway 6R-24L.

L9. Remarks: None

L10. Form Prepared by: (Name, affiliation, and address)

Tiffany Clark
Sapphos Environmental, Inc.
430 North Halstead Street
Pasadena, CA 91107

L11. Date: June 20, 2013

State of California — The Resources Agency	Primary #
DEPARTMENT OF PARKS AND RECREATION	HRI#
LOCATION MAP	Trinomial

Page 5 **of** 5 ***Resource Name or #:** Runway 6R-24L

***Map Name:** Venice, California ***Scale:** 1:24,000 ***Date of Map:** 1964