

Appendix D: Cultural and Paleontological Resources Study

Cultural and Paleontological Resource Study for the General Plan Update City of Lawndale, Los Angeles County

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MANAGEMENT SUMMARY

DUKE Cultural Resources Management, LLC (DUKE CRM) is under contract to De Novo Planning Group, to conduct a cultural and paleontological resources assessment for the Lawndale General Plan Update and Hawthorne Specific Plan Update (Project). The Project includes the City of Lawndale (City) and a length of Hawthorne Boulevard and limited side streets in total comprising approximately 1,260 acres.

The purpose of this report is to inventory the previously recorded paleontological and cultural resources in the City and Specific Plan area to assess the potential for impacts to these resources during implementation of the Project. This effort was completed in compliance with the California Environmental Quality Act (CEQA).

DUKE CRM requested paleontological records searches for the Project from the Natural History Museum of Los Angeles County and fossil localities within a three 3 mile radius were investigated on the online University of California Museum of Paleontology collections, Paleobiology Database, FAUNMAP, and other available published resources. Fossil localities have been recorded in deposits similar in age to those underlying the Project.

DUKE CRM requested a records search from the South Central Coastal Information Center (SCCIC). Records from the SCCIC indicate that there are at least 12 built environment historic resources mapped within the City of which nine are listed in the Built Environment Resource Directory maintained by the State Office of Historic Preservation. No prehistoric or historic archaeological resources have been previously recorded in the Project boundaries. A city-wide reconnaissance resource survey was conducted. A combination of digital, windshield, and reconnaissance survey methods were employed. No cultural resources were recorded.

INTRODUCTION

DUKE Cultural Resources Management, LLC (DUKE CRM) is under contract to De Novo Planning Group to conduct a cultural and paleontological resources assessment for the Lawndale General Plan Update and Hawthorne Boulevard Specific Plan Update Project (Project). The General Plan area consists of the City of Lawndale (City) comprising approximately 1,260 acres. The Hawthorne Boulevard Specific Plan is entirely within the General Plan and does not add any acreage to the General Plan. The purpose of this report is to inventory recorded paleontological, cultural, and historical resources in order to assess the potential for impacts to them during the implementation of the Project and to assist the City in managing these resources in their long term growth and development. This effort was completed in compliance with the California Environmental Quality Act (CEQA).

Project Location

The City of Lawndale is in the Los Angeles Basin situated approximately 26 miles southwest of downtown Los Angeles, and three miles from the Pacific Ocean (Appendix A, Map 1). Regional access is provided by the Interstate 405 (I-405), State Route 78 (SR 107), and SR 91. The City is located in the former *Sausal Redondo* Rancho in Township 3 south, Range 14 west in what would be sections 20, 21, and 28, as depicted on the USGS *Torrance, Calif. 7.5 Minute Quadrangles* (see Appendix A, Map 2). The central artery of the City is Hawthorne Boulevard. The Hawthorne Boulevard Specific Plan Update is located between Rosecrans Boulevard on the north and Redondo Beach Boulevard on the south. It also includes small segments of Redondo Beach Boulevard and other side streets. Generally, the area of the Project is nestled between the Cities of Hawthorne to the north, Redondo Beach to the west and south, and Torrance to the south and east. (Appendix A, Map 3).

Project Description

The project includes a comprehensive update to the City's General Plan (1992) and the Hawthorne Boulevard Specific Plan (1999) goals and polices to assist the City with their long-term growth and development. A Program Environmental Impact Report will be prepared to analyze the potential impacts associated with implementation of the new General Plan and Specific Plan.

Cultural Resource: Cultural resources are tangible remains of past human activity. These may include buildings, structures, prehistoric and historic archaeological sites, historic or prehistoric objects, rock art, earthworks, canals, and landscapes. These nonrenewable resources may yield unique information about past societies and environments and provide answers for modern day social and conservation problems. A cultural resource is not necessarily significant and is not necessarily eligible for the California Register of Historical Resources (CRHR).

Historical Resource: A historical resource is defined as any cultural resource that is either listed in or determined eligible for the CRHR, included in a local register of historical resources, or identified as significant in a historical resources survey (CEQA, PRC § 21084.1), and can be any of the above-listed types of cultural resources.

Tribal Cultural Resource: Tribal Cultural Resources (TCRs) are defined as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the CRHR or included in a local register of historical resources, or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant (CEQA, PRC § 21074).

Paleontological Resource: The term paleontological resource refers to any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth (SVP 2019).

Regulatory Setting

State Regulations

California Environmental Quality Act of 1970, as amended

The California Environmental Quality Act of 1970 (CEQA) is legislation that requires a Lead Agency to evaluate if a proposed project would have a significant adverse effect on the environment, including historical resources (defined above). CEQA Guidelines pertaining to historical resources (Section 15064.5(b)(1)) state that “A substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired”.

California Register of Historical Resources

The CRHR is the state-maintained list of cultural resources found to be historically significant. The CRHR is maintained by the California Department of Parks and Recreation. Much like the NRHP, the CRHR has four major criteria that a cultural resource must meet to be eligible for inclusion on the list:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history.

To be considered eligible for the CRHR a historical resource should also possess integrity of location, design, setting, materials, workmanship, feeling and association. As used here, integrity is defined as the ability of a historical resource to convey its significance. To determine which of these factors are most important will depend on the property being evaluated and which particular CRHR criterion under which the resource is considered eligible for listing. The period of significance is the period of time in which significant events or themes occurred. Alterations and impacts that affect the period of significance and overall integrity of the resource and its eligibility for the CRHR.

Furthermore, CEQA requires the lead agency consider whether or not a project will significantly affect unique archaeological resources that may be ineligible for listing in the CRHR and to avoid these unique archaeological resources when possible or mitigate any effects to less than significant levels (PRC 21083.2). As stated by CEQA, a unique archaeological resource means an archaeological artifact, object, or site that clearly demonstrates with a high probability that it meets, without merely adding to the current body of knowledge, any of the following criteria:

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

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (PRC section 21083.2(a); CEQA Guidelines section 15064.5(c)(4).) However, if a non-unique archaeological resource qualifies as a TCR (PRC 21074(c); 21083.2(h)), further consideration of significant impacts is required.

In addition, excavation must be stopped whenever human remains are uncovered, and the county coroner must be called in to assess the remains (Section 15064.5[e] of the CEQA Guidelines). If the county coroner determines that the remains are those of a Native American, the Native American Heritage Commission (NAHC) must be contacted within 24 hours, and the provisions for treating or disposing of the remains and any associated grave goods as described in Section 15064.5 of the CEQA Guidelines must be followed.

California Historical Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have been determined to have statewide historical significance. These resources are evaluated according to four criteria:

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

CHLs must also be approved for designation by the County Board of Supervisors or the City/Town Council in which the resource is located; must be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. The effect of designation on a property or resource is:

- Limited protection against alteration or demolition. Environmental review may be required under CEQA if a property is threatened by a project. The relevant local planning agency should be contacted for more information.
- If the municipality or local government participates in the Mills Act Program, then a historic property owner may enter into a contract with the local assessor for property tax reduction.
- Local building inspector must grant code alternative provided under the California Historical Building Code (CHBC). Registration will be recorded on the property deed.
- Automatic listing in CRHR.
- Bronze plaque at site (underwritten by local sponsor) ordered through the California Office of Historic Preservation (OHP); highway directional sign available through local Department of Transportation (Caltrans) district office.

A designated CHL needs to have the written consent of the property owner, and the local government is given 60 days for comment on any application for designation prior to the State Historical Resources Commission considers the nomination.

California Points of Historic Interest

California Points of Historical Interest (CPHI) are sites, buildings, features, or events that are of local (City or County) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. CPHIs designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR.

No resource may be designated as both a CHL and a CPHI. If a CPHI is subsequently granted status as a CHL, the CPHI designation will be retired. To be eligible for designation as a CPHI, a resource must meet at least one of the following criteria:

1. The first, last, only, or most significant of its type within the local geographic region (City or County).
2. Associated with an individual or group having a profound influence on the history of the local area.
3. A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer or master builder.

The effect of designation on a property or resource is:

- Limited protection against alteration or demolition. Environmental review may be required under CEQA if a property is threatened by a project. The relevant local planning agency should be contacted for more information.

- If the municipality or local government participates in the Mills Act Program, then a historic property owner may enter into a contract with the local assessor for property tax reduction.
- Local building inspector must grant code alternative provided under State Historic Building Code. Registration will be recorded on the property deed.

A designated CPHI needs to have the written consent of the property owner, and the local government is given 60 days for comment on any application for designation prior to the State Historical Resources Commission considers the nomination.

California Historical Building Code

The California Historical Building Code (CHBC) is defined by Sections 18950 to 18961 of Division 13, Part 2.7 of the Health and Safety Code. The CHBC provides guidelines and regulations for the preservation and contemporary use of historic structures and buildings that are considered “qualified historical buildings or structures.” The CHBC specifically provides alternative building regulations and guidelines for permitting repairs, alterations and additions necessary for preservation, rehabilitation, relocation, related construction, change of use, or continued use.

Section 8-201 of the CHBC (2016) defines a “qualified historical building or structure” as “any structure or property, collection of structures, and their associated sites deemed of importance to the history, architecture, or culture of an area by an appropriate local or state governmental jurisdiction. This includes structures on existing or future national, state or local historical registers or official inventories, such as the National Register of Historic Places (NRHP), CHL, CPHI, and city or county registers or inventories of historical or architecturally significant sites, places, historic districts, or landmarks.

Mills Act

The City of Lawndale authorized the creation of a Mills Act Program in 2010 for the preservation of historically significant properties. The Mills Act of 1972 is an economic incentive program by the State of California to encourage private property owners to restore and preserve qualified historic buildings. Local governments (Counties and Municipalities) can choose to implement and administer contracts with property owners to provide tax abatement, establish their own criteria for qualified historic buildings, and determine how many contracts they will allow in their jurisdiction. California State Codes relating to the Mills Act include the California Government Code, Article 12, Sections 50280 – 50290 and the California Revenue and Taxation Code, Article 1.9, Sections 439 – 439.4.

The Mills Act also known as the Historical Property Contract, is a formal agreement executed between the City of Lawndale and the property owner for a revolving, automatic ten-year term. Owners of qualified historic properties may apply for the program if they pledge to rehabilitate and maintain the historical and architectural character of their properties for the minimum ten-year life of the contract. A qualified historic property in the City of Lawndale is a property listed on the NRHP, the CRHR, or CHL.

Contracts are renewed each year so that the term of the contract can extend for ten years automatically. Under this contract, property owners agree to restore, maintain, and protect the property in accordance with specific historic preservation standards and other conditions identified in the contract. Periodic inspections by City and County of Los Angeles officials ensure proper upkeep of the property to the standards included in the contract. Either the property owner or the City may elect not to renew for any reason. The effect of non-renewal is to terminate the contract at the end of the current ten-year term. The owner may also petition the City to initiate an immediate cancellation. If cancelled, a penalty is imposed. The City may also cancel the contract, but only in the case of breach of the contract conditions. The contract is transferred to new owners if the property is sold and is binding to all successive owners.

Participation in the Mills Act is a benefit to qualified property owners, especially for recent buyers of historic properties but also for current owners of historic buildings who have made major improvements to their properties. An income approach to value rather than by the standard market approach determines the appraised value. The income approach, divided by a capitalization rate, determines the assessed value of the

property. In general, the income potential for an owner-occupied residential property is calculated by examining comparable rents for similar properties in the area, while the income amount on a commercial property is based on actual rent received. Because rental values vary from area to area, actual property savings may vary. In addition, as counties are required to assess all property annually, Mills Act properties may realize slight increases in property taxes each year.

Senate Bill 18

Senate Bill 18 (SB 18) states that prior to the amendment or adoption of any general plan or specific plan or the designation of open space land proposed on or after March 1, 2005, the local or county government shall conduct consultation with California Native American tribes for the purpose of preserving or mitigating impacts to Cultural Places. A Cultural Place is defined as:

- Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine (PRC 5097.9), or;
- Native American historic, cultural, or sacred site, that is listed or may be eligible for listing in the CRHR pursuant to Section 5024.1, including any historic or prehistoric ruins, any burial ground, or any archaeological or historic site (PRC Section 5067.995).

The intent of SB 18 is to establish “meaningful consultation” between tribal governments and local governments (government-to-government) at the earliest possible point in the planning process so that Cultural Places can be identified and preserved and to determine the necessary levels of confidentiality regarding Cultural Place locations and uses. SB 18 is not part of CEQA.

Assembly Bill 52

Assembly Bill 52 (AB 52) required an update to Appendix G (Initial Study Checklist) of the CEQA Guidelines to include questions related to impacts to TCRs. The law went into effect on July 1, 2015 with the changes to Appendix G approved on September 27, 2016. The Lead Agency would now also be charged with engaging with tribal governments at the earliest possible point in the planning process so that TCRs can be identified and preserved and to determine the necessary levels of confidentiality regarding TCR locations and uses.

Municipal Regulations

City of Lawndale General Plan 1992

The 1992 Lawndale General Plan addresses cultural resources in Chapter III, Resource Management, Section 2, Conservation Element. The addition of a conservation element is mandated under state government code section 65302(d). The overall purpose of Chapter 2 is to address increasing public concern for environmental quality, such as clean water and air, and the prevention and control of pollution, in light of growth and urbanization. The conservation element intends to:

- Promote the protection, maintenance and use of the state’s natural resources;
- Prevent the wasteful exploitation, destruction, and neglect of the state’s natural resources; and
- Recognize the natural resources must be maintained for the ecological value as well as for their direct benefits to the public.

The General Plan (1992:2-2) found that:

“The City of Lawndale is a highly urbanized area that functions primarily as bedroom community within the surrounding Los Angeles South Bay region. Because of the City’s high degree of urbanization, there are few natural resources remaining.”

The General Plan (1992:2-5) identified several private residences that, at the time, were believed to be of “local historical interest”. Mentioned among these was the First Congregational Church at 4521 W. 147th Street built in 1906 and the first church in the City. No other historic in age (50+ years or older) civic or public structures were known to exist within the City. Importantly, it was asserted that in terms of potential significant residential development that:

“Many of the significant residential buildings were moved into Lawndale from other areas within the Los Angeles region. Many of these buildings are unknown and unrecognizable to the community because they are not located in one general area of the City, and many are concealed behind mature landscaping, or by remodeling that has ‘modernized’ or significantly customized their appearance.” (City of Lawndale 1992:2-5)

The 1992 General Plan established Goal 4 for Cultural Resources:

“Promote the preservation and rehabilitation of cultural resources that are significant to the Lawndale community because of their age, architecture, history, or symbolism.”

The City adopted six related policies for implementation of the above Goal:

- Policy 4a: Promote the preservation and/or conservation of historic structures, places, and or architectural features.
- Policy 4b: Investigate the appropriateness and feasibility of implementation a Historic Preservation Ordinance for the preservation of historic structures.
- Policy 4c: Investigate the feasibility of implementing a local historic registry program.
- Policy 4d: Encourage the preservation of historic structures on their existing sites, or relocation if necessary and feasible.
- Policy 4e: Discourage the demolition or movement of historic structures without an evaluation of the condition of the structure, the cost of rehabilitation, and feasibility of preservation or conservation alternatives.
- Policy 4f: Encourage the adaptive re-use of historic structures.

The General Plan (1992) also details the implementation programs for cultural resources:

- 4.1 Historic Preservation: The City shall develop and implement a Historic Preservation Ordinance for the preservation of historic residences and structures.
- 4.2 Historic Registry: Establish the feasibility of implementing a local historic registry program that provides incentives for retrofitting and maintenance, as well as public recognition, of the local resource.
- 4.3 Demolition Review: The City shall prohibit the demolition or movement of historic structures without an evaluation of the condition of the structure, the costs of rehabilitation, and the feasibility of preservation or conservation alternatives.

SETTING

The setting of the Project, composed of environmental, cultural, and historic backgrounds contextualize the findings of the current study. The Project covers 1,260 acres that overlap a limited number of geological, geomorphological, topographic components. Various other factors of the natural setting include water accessibility, climate, and broad patterns of soil development. The prehistoric, ethnographic and historical settings form the backdrop to human occupation of the Project. Each of the contextual elements to this study are considered below.

Geomorphological Setting

California is divided into 11 geomorphic provinces, each naturally defined by unique geologic and geomorphic characteristics. The Project is located on the western end of the Peninsular Ranges geomorphic province. The Peninsular Ranges province is distinguished by northwest trending mountain ranges and valleys following faults branching from the San Andreas Fault. The Peninsular Ranges are bound to the east by the Colorado Desert and extend north to the San Bernardino – Riverside County line (Norris and Webb 1976), west into the submarine continental shelf, and south to the California state line.

Locally, the City of Lawndale is located within the western end of the inland portion of the Los Angeles Basin, an actively subsiding basin bound by the Santa Monica and San Gabriel Mountains to the north, the Santa Ana Mountains to the east, and the Palos Verdes Hills to the south (Yerkes et al. 1965). The City is in the southwestern block of the Los Angeles Basin, which was the site of initial basin deformation, and is currently dominated by folded marine strata (Hauksson 1990). The geologic units underlying the Project record coastal and inland deposition during the Pleistocene Epoch (2.5 million years ago to 11,700 years ago). Information regarding the specific geologic units and their paleontological sensitivity are discussed in detail in the results section of this report.

Environmental

The Project is broadly located within the Southern California/Northern Baja Coast region and it is composed of coastal and alluvial plains, marine terraces, and low hills within an area extending over 200 miles south into Baja California. The area has been largely cleared through overgrazing, agriculture and urban development. Before these modern and historic processes occurred, coastal sage scrub and chaparral vegetation communities with many endemic species once were widespread. Plant species in coastal sage scrub communities includes coastal cholla, white sage, golden yarrow, California buckwheat, black sage, and chamise. The chaparral communities on the low hills include mountain-mahogany, ceanothus, manzanita, and scrub oak though stands of coast and canyon live oaks, poison oak, and black walnut can also be present.

Specifically, the Project is located within the Los Angeles Plain ecoregion. Ecoregions denote general similarity in ecosystems and environmental resources. Moist and cool marine air greatly moderates temperatures and rainfall in the Los Angeles Plain with annual precipitation ranging from 10 to 17 inches. The ecoregion is nearly level with flat floodplains and terraces and very gently to gently sloping alluvial fans. The soil temperature regime is thermic and soil moisture regime is xeric. Hydrology has been greatly modified and channelized. The Los Angeles River drains the San Fernando Valley and San Gabriel Mountains (Griffith et al. 2016).

Cultural

Prehistory

Of the many chronological sequences proposed for southern California, two primary regional syntheses are commonly used in the archaeological literature. The first, advanced by Wallace (1955), defines four cultural horizons for the southern California coastal province, each with characteristic local variations:

- I. Early Man (~9000–8500 B.P.)
- II. Milling Stone (8500–4000 B.P.)
- III. Intermediate (4000–1500 B.P.)
- IV. Late Prehistoric (1500~200 B.P.)

Warren (1968:1) chose instead to define “traditions” (La Jolla, Encinitas, Campbell, and Chumash, Yuman, or Shoshonean) that are “a generic unit comprising of historically related phases. Cultural traditions are identified and distinguished from one another on the basis of differences in cultural patterns reflected in differences in artifact types and assemblages and difference in cultural features”. While Warren (1968) keeps environment and cultural traditions distinct, his efforts marked that the relationship between them, through time was important for archaeological study. These two chronologies are still commonly used in tandem to discuss the chronology of southern California.

King (1990), in his work in the Santa Barbara Channel region, introduced yet another chronological scheme that was based on the seriation of shell beads and grave goods backed by radiocarbon dates. King’s chronology is divided into three periods, Early, Middle, and Late with date ranges for each. King’s chronology is widely used in the Santa Barbara region and has been heavily employed in the discussion of the nature of the emergence of social complexity on the southern California coast (Arnold 1992; Arnold and Munns 1994; Gamble 2005; Kennett and Kennett 2000; Raab and Larson 1997). King (1990) argued that correlations can be made between the physical characteristics of beads and the social contexts in which they were used. King

analyzed beads and other artifacts, in addition to mortuary practices to demonstrate that changes in material culture reflect changes in society.

The works of Wallace (1955), Warren (1968) and King (1990) reflect a variety of methods to develop temporal sequences for describing archaeological remains. Refinements in methods, specifically the application of radiocarbon dating has significantly improved chronology building. In addition, applying successful models used in other regions, such as King's (1990) application of the Bennyhoff and Hughes (1987) method of shell bead seriation to the southern California region has aided in the refinement of chronology building for the region. Complications such as the timing of the adaptation of "marker" artifact types, arise when broad regional chronologies are applied to small local areas that do not fit neatly into large macro schemes. Likewise, the subtle, yet significant nuances of local, micro-chronologies often complicate attempts to create a simple chronology that can be applied to a large region, such as southern California.

Ethnography

The project is located within the boundaries of Gabrielino or Tongva Indians. The Gabrielino Indians are named because of their association with the *Mission San Gabriel Arcángel*. The Gabrielino are one of the least known Native American groups in California. Generally, their territory included all of the Los Angeles Basin, parts of the Santa Ana and Santa Monica Mountains, along the coast from Aliso Creek in the south to Topanga Canyon in the north, and San Clemente, San Nicolas, and Santa Catalina Islands.

The Gabrielino spoke a dialect of the Cupan group of the Takic language family. This language was part of the larger Uto-Aztecan language stock which migrated west from the Great Basin. The Gabrielino shared this language with their neighboring groups to the south and east (Bean and Smith 1978, Shipley 1978).

Groups of Gabrielino lived in villages that were autonomous from other villages. Each village had access to hunting, collecting, and fishing areas (Bean and Smith 1978). Villages were typically located in protected coves or canyons near water. Acorns were the most important food for the Gabrielino, although the types and quantity of different foods varied by season and locale. Other important sources of food were grass and many other seed types, deer, rabbit, jackrabbit, woodrat, mice, ground squirrels, quail, doves, ducks and other fowl, fish, shellfish, and marine mammals.

Typically, Gabrielino women gathered and men hunted, although work tasks often overlapped. Each village had a chief who controlled religious, economic, and warfare authorities. The chief had an assistant and an advisory council who assisted in important decisions and rituals. Each of these positions was hereditary being passed down from generation to generation (Bean and Smith 1978). According to mapping of Gabrielino villages undertaken by McCawley (1996), no known villages would be located within the City. The two nearest Gabrielino villages, which may compose large areas rather than just a single location, are *Swaanga* approximately 10 miles to the southeast and *Waachnga* approximately five miles to the northwest (McCawley 1996:Map 8). The Kirkman-Harriman Pictorial and Historical Map of Los Angeles (1938) also does not identify any Gabrielino villages within the City.

History

In California, the historic era is generally divided into three periods: the Spanish or Mission Period (1769 to 1821), the Mexican or Rancho Period (1821 to 1848), and the American Period (1848 to present). The first Europeans in California were the Spanish. In 1542 Juan Rodriguez Cabrillo entered what was to become known as San Diego Harbor (Rolle 2003) where he met a group of Kumeyaay Indians while on shore. Over the next few hundred years there were several maritime excursions along the California coast, but it would be more than 225 years until the Spanish established a permanent settlement. To protect its interests, Spain sent four excursions into California, two by land and two by sea. The entire expedition was led by Captain Gaspar de Portolá, military commander of California (Rolle 2003). Portolá came through the Los Angeles basin area in 1769 while travelling from San Diego to Monterey. To fulfill some of the religious goals of the expedition Father Junípero Serra was sent to California to establish a system of Catholic Missions. It was not until two years later on September 8, 1771 that *Mission San Gabriel Arcángel* was established by Fathers Pedro Cambon and Angel Somera (Hoover et al. 1990).

Ten years later on September 4, 1781, Los Angeles was founded. Early settlers farmed and they built a system of *zanjas*, or irrigation ditches, to transport water from the Los Angeles River to plots of land. With Mexican Independence in 1821, Los Angeles and California experienced great economic independence and growth (Rolle 2003). By 1822, the Mexican government began to grant permits to its citizens along the southern coast for animal pasture. Governor of Alta California, Juan Alvarado, gave the *Rancho Sausal Redondo* land grant to Antonio Ignacio Ávila, son of Spanish soldier Cornelio Ávila, that encompassed the present-day cities of Lawndale, Inglewood, Hawthorne, Redondo Beach, Manhattan Beach, and Hermosa Beach. The total acreage of the land grant was roughly 40,000 acres; but when the United States Land Commission confirmed title, *Rancho Sausal Redondo* was reduced to 22,000 acres. The City of Lawndale is located in what was the southwestern corner of *Rancho Sausal Redondo*. Between 1820 and 1841 the population of Los Angeles tripled to 1,680. California was ceded to the U.S. in 1848 with the signing of the Treaty of Guadalupe Hidalgo (City of Lawndale 2020).

The Treaty of Guadalupe Hidalgo assured owners that prior, valid land grants would be honored if a claim was filed as required by the Land Act of 1851. Soon after, Antonio Ignacio Ávila filed a claim for *Rancho Sausal Redondo* and was awarded a patent in 1855 by the Public Land Commission. He later died in 1858 and his heirs sold the *Rancho* to pay for the probate costs. In 1868, ten years after his death, a Scottish nobleman named Sir Robert Burnett purchased the land grant from Ávila's heirs. Having also acquired the *Aquaje de la Centinela* parcel, Burnett combined both areas and named it Centinela Ranch. After doing so, Burnett gradually slowed cattle ranching and began to incorporate his prior specialization of sheep raising. In 1873, Burnett leased Centinela Ranch to Daniel and Catherine Freeman and returned to his home in Scotland. The Freeman's continued to raise sheep but after a tumultuous two-year drought from 1875-1876, they began to plant barley along with several thousand citrus, almond, olive, and eucalyptus trees. The Freeman's made dry-land farming profitable and exported 3,000,000 bushels of barley and other crops to Liverpool and London well in to the 1880's (City of Lawndale 2020).

The history of what later would be Lawndale begins with the opening of the Redondo seaport in 1890 and the railroad service created between the port and Los Angeles. By 1902, the Los Angeles and Redondo railways passed along in what is now Hawthorne Boulevard, extending from Inglewood to Railroad Avenue. In March of 1905, real estate developer Charles B. Hopper subdivided and opened the southern portion of Centinela Ranch and named it Lawndale. It was marketed as an ideal poultry farming location for early settlers, but unfortunately a lack of buyers forced Hopper to change to smaller lots a year later. When the US Census was taken in 1910, the unincorporated town of Lawndale had already reached 142 residents. In the 1920's the discovery of oil transformed the Lawndale community into a town that built oil derricks, though the Great Depression muted this economic development. After WWII, Lawndale boomed primarily due to subsidized veteran housing and increased accessibility of the Harbor Freeway. Also, the Businessman's Group Association created zoning policies to promote and advertise the residential, commercial, and industrial advantages of Lawndale. Amid rapid commercial growth and urbanization of the Centinela Valley in 1958, zoning restrictions officially abolished agriculture in the community. On December 28, 1959, Lawndale was incorporated as a City in Los Angeles County, but long had a unique history and character (City of Lawndale 2020).

METHODS

The focus and purpose of this report are to support the CEQA process as part of the Project and, therefore are broad and programmatic in scope. Baseline paleontological, archaeological and historical data was compiled from record searches at various research facilities and online. Multiple survey methods, including desktop and field reconnaissance, were employed. Survey was limited due to lack of access to resources on private property and the shutdown of the Hawthorne Historical Society due to the Novel Coronavirus Pandemic. Research was also limited due to the same pandemic. The South Central Coastal Information at California State University, Fullerton was only able to respond with partial information as not all records are digital and therefore accessible.

Paleontological Resources Records Search

The geology of the Lawndale area has been mapped by Saucedo and others (2016) at a scale of 1:100,000. A paleontological records search were requested from the Natural History Museum of Los Angeles County (LACM). Fossil localities within 3 miles of the Project were investigated by DUKE CRM using the online University of California Museum of Paleontology collections, Paleobiology Database, FAUNMAP, and other published resources (Miller 1971; Jefferson 1991a, b). Additional background research was conducted in the Journal of Vertebrate Paleontology.

Cultural Resources Records Search

On April 9, 2020, Nicholas F. Hearth of DUKE CRM requested a records search at the South Central Coastal Information Center (SCCIC). The SCCIC provided the records search results on June 9, 2020. The SCCIC is part of the California Historical Resources Information System (CHRIS) and is located at California State University, Fullerton. The SCCIC records search included a review of all recorded historic and prehistoric archaeological sites within the City including the California OHP's Historic Resources Inventory (HRI) directory, as well as a review of known cultural resource survey and excavation reports. The California State Historic Property Data File (HPDF) was examined, which includes the NRHP, CRHR, CHL, and CPHI. The Built Environment Resource Directory (BERD) was also consulted.

Research

Throughout the course of the Project, research was conducted in an effort to assess cultural sensitivity and focus field efforts. This included both published and unpublished materials. The following online resources were reviewed:

- Historic aerial photos and maps
 - http://mil.library.ucsb.edu/ap_indexes/FrameFinder/,
 - http://www.davidrumsey.com/rumsey_collection.kmz,
 - www.historicaerials.com,
 - <https://oac.cdlib.org/>
 - <https://www.loc.gov/collections/sanborn-maps>
 - and <https://livingatlas.arcgis.com/topoexplorer/index.html>
- NRHP (<http://www.gelib.com/historic-places-inventory.htm>)
- Soil mapping data (<https://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/survey/>)

Field Surveys

On April 29, 2020, a combination of reconnaissance and pedestrian archaeological and historic resource field survey was performed within the City. Survey efforts attempted to relocate potential resources that were generally indicated upon the 1992 General Plan Update for the City. Access to these potential resources was through public roads. The resources' status was determined by the presence/absence of appearance of a potential historic built environment resource, and/or basic level of development and.

Personnel

DUKE CRM Archaeologist Nicholas F. Hearth., M.A. RPA conducted the reconnaissance survey of archaeological and built environment resources, and prepared this report. Mr. Edgar Alvarez, B.A. was the co-author of this report. Paleontologist Benjamin Scherzer, M.S. conducted all paleontological research and prepared the geology, natural setting, and all paleontology sections of this report. Curt Duke, M.A., President and Principal Archaeologist for DUKE CRM oversaw all efforts and contributed to this report.

Mr. Duke meets the professional qualifications of the Secretary of the Interior for prehistoric and historical archaeology; he is also a Registered Professional Archaeologist (RPA) who has worked in all phases of archaeology (archival research, field survey, testing and data recovery excavation, laboratory analysis, construction monitoring) since 1994. Mr. Duke holds a Master of Arts degree in Anthropology with an emphasis in archaeology from California State University, Fullerton and a Bachelor of Arts degree in

Anthropology from the University of California, Santa Cruz. Mr. Duke has worked throughout southern and Northern California and parts of Arizona and Nevada.

Mr. Hearth has worked as an archaeologist in cultural resource management since 2002. He meets the Secretary of Interior's Professional Qualifications Standards for Prehistoric Archaeology. He received his B.A. in Anthropology in 2003 from the University of Massachusetts, Amherst, and his M.A. in Anthropology in 2006 from the University of California, Riverside. Mr. Hearth has worked in California, New Mexico and multiple states both in the Midwest and New England. Mr. Hearth is well-versed applying Section 106 of the NHPA, NEPA, and CEQA on a variety of projects across many market sectors. Mr. Hearth has completed projects in all phases of archaeology: Phase I Pedestrian and Shovel Test Surveys, Extended Phase I Survey, Buried Site Testing, Archaeological Sensitivity Assessments, Phase II Testing and Evaluations, Phase III Data Recovery, Phase IV Monitoring, Controlled Demolition, and Native American consultation. His project responsibilities primarily include overseeing archaeological, historical, and paleontological studies, directing all phases of archaeological and historical field and laboratory work, conducting ensuring that the quality of analysis and reporting meets or exceeds appropriate local, state, and federal standards.

Mr. Scherzer holds a Master of Science in Earth Sciences from Montana State University, Bozeman. He has more than 10 years of experience in paleontological research, field surveys, fossil salvage, laboratory identification, report preparation, and curatorial experience. Mr. Scherzer is a member of the Society for Vertebrate Paleontology, Geological Society of America, Society for Sedimentary Geology, and the Paleontological Society.

RESULTS

Paleontological Resources Records Search

The City of Lawndale is underlain by two geologic units. Individual units, and their paleontological sensitivity, are described below.

Old alluvium, undivided (Qoa)

Old alluvium underlies the majority of the Project. It is composed of moderately well-consolidated, poorly-sorted, permeable, slightly dissected gravel, sand, silt, and clay. These sediments were deposited on canyon floors by fluvial activity in the late to middle Pleistocene Epoch (Saucedo et al. 2016).

Old eolian deposits (Qoe)

Old eolian deposits underlie the northwest and southwest corners of the Project. It is composed of poorly consolidated, dense to very dense, well-sorted, fine- to coarse-grained sand and silty sand. These sediments were deposited as eolian coastal dunes in the late to middle Pleistocene (Saucedo et al. 2016) but the dune formation processes are now inactive (Poland et al. 1959).

The climate of Southern California during the Pleistocene was cooler and moister than the modern Mediterranean climate (Lamb 1989). In contrast to the harsh, cold conditions in high latitudes near the ice sheets, Southern California experienced a relatively milder climate during this time (Calder 1983). During this time, the area was inhabited by the familiar Pleistocene or "Ice Age" fauna, such as mammoth, mastodons, horses, camelids, and ground sloths (Stock 2001).

Deposits from the Pleistocene Epoch have not produced any fossil localities within the Project, but have produced two fossil localities within 3 miles:

- The "Mobile Oil Refinery" locality produced cetacean (whale) and *Equus* (horse) material from two miles southeast of the Project (Jefferson 1991b) and
- Locality LACM 2035 produced *Mammuthus columbi* (Columbian mammoth) on 139th St, one mile north of the Project (Miller 1971).

Due to fossil material being previously discovered in deposits from the Pleistocene Epoch in vicinity of the Project, both old alluvium and old eolian deposits have a high paleontological sensitivity at the surface and at depth.

Table 1. Geologic Units and Their Paleontological Potential

Age	Geologic Unit	Fossils Present ¹	Paleontological Sensitivity
Pleistocene	Old alluvium (<i>Qoa</i>)	Whale, horse, Columbian mammoth	High at surface and at depth
	Old eolian deposits (<i>Qoe</i>)		

Cultural Resources Records Search

Cultural Resources

Results of the records search from the SCCIC and BERD indicate that twelve historic built environment resources are recorded within the City. No prehistoric cultural resources have been documented within the City. These resources are listed in Table 2.

Table 2. Cultural Resources within the City of Lawndale

Primary # or BERD #	Resource Age	Characteristics	Year Recorded	Status
P-19-178543	1972	Single Family Property (HP2) at 16713 Firmona Ave	Unknown	7R
P-19-188892	1959	Educational Building Complex	2010	U
P-19-188893	U	Educational Building Complex	2010	3CS
P-19-190021	U	Commercial Building, 3 stories and under	2012	6Z
481616	1935	Single Family Property at 4724 W 159 th St	1993	U
480244	1941	Single Family Property at 4523 W 167 th St	1993	U
483066	1939	Single Family Property at 4609 W 167 th St	1993	U
483164	1936	4726 W 167 th St	1993	U
481694	1935	Multiple Family Property (HP3), 2-4 unit at 4562 W. 172 nd St	1993	U
561704	1946	Urban Open Space, Alondra Park, at 3850 Manhattan Boulevard	2003	U
574962	1923	Government Building (HP14), City Hall at 14717 Burin Ave	1997	U
681590	1955	Commercial Building, 3 stories, at 16715 Hawthorne Boulevard	2018	U
NHRP Status Code 3CS: Appears eligible for CR as an individual property through survey evaluation 6Z: Found ineligible for NR, CR or Local designation through survey evaluation 7R: Identified in Reconnaissance Level Survey: Not evaluated. U: Unknown information				

All historic built environment resources are located within the City surrounded by paved asphalt parking lots, commercial buildings, and single-family residential homes. None of the resources were accompanied by any historic archaeological deposits. Nor were any prehistoric cultural resources identified. The records of three built environment resources were provided by the SCCIC, below is a brief description of three of the historic built environment resources within the City.

P-19-188892

Resource P-19-188892 is the Lawndale High School Campus complex. First constructed in 1959, it was built to accommodate the postwar growing population needs of the newly founded City of Lawndale. The core campus consists of an administration building, a cafeteria, classroom buildings, support buildings, athletic fields, and a parking lot (McKenna et al. 2010). The original campus was a series of one- and two-story brick and cinder block buildings with low pitched roofs constructed on concrete pads. Windows consisted of steel framed fixed and casements. The campus complex was recommended not historically significant (McKenna et al. 2010).

P-19-188893

Resource P-19-188893 is the Leuzinger High School complex. It is the earliest high school built in the City in 1930, shortly after the Great Depression. It consisted of a main administration building, a cafeteria, an Olympian gym and a classroom building. It was named in honor of Adolph Leuzinger, who was a member of the Inglewood Union High School District Board of Trustees for 25 consecutive years. The campus was later expanded in 1956 with the addition of a new cafeteria, locker rooms north of the Olympic gymnasium, and classroom buildings 2, 3, 4, and 5 (McKenna et al. 2011). By 1976, a locker room, the Thompson gym, and

classroom buildings 6, 7, and 8 (McKenna et al. 2011) had been added. Leuzinger High School was recommended to be considered a significant cultural resource under CEQA, therefore qualifies as a historical resource eligible for listing in the CRHR. Additionally, it was recommended that any additional alterations or demolition to the Olympic Gymnasium and/or Memorial Garden be avoided while any alterations to the interior of the Main Administration Building be kept to a minimum (McKenna et al. 2011).

P-19-190021

Located in a commercial zone in the City of Lawndale, 16720 Hawthorne Boulevard is a two-story retail building and a 10-vehicle parking lot first constructed in 1947. Designated as Tract 8293, Lot Number 106 and 107, this 6,000 square foot retail building measures roughly 50 feet wide by 105 feet long. Much of the construction is reinforced masonry on a concrete foundation and clad with stucco (Johnson 2012). The building has a flat roof covered with asphalt and gravel. The roof has a stepped parapet and fenestration that consists of an enframed window wall on the front with metal frames that span the length of the building. There are no records of the original site plan or building permit, however, by 1970 a building permit indicates that the building was used for office space by the Mattel Toymakers Federal Credit Union (Johnson 2012). By 2003, building permits show the building was remodeled with the addition of a bathroom, a storefront, and stairs, as well as the demolition of a partition wall. The property does not appear to qualify for the NRHP (Johnson 2012).

Cultural Resource Studies

Based on the research from the SCCIC, five cultural resources studies have been completed in the Project area. Cultural resource studies date from 1991 to the present. Most of these projects relate to upgrading development of a highway, water reclamation and the Leuzinger High School. The bibliography from the SCCIC for cultural resource studies within the City is provided in Appendix C.

Additional Research

Supplemental additional research was conducted referencing online resources of maps, land grants, and aerial photographs. The earliest map of the Lawndale area found during research is a circa 1840s *Diseño del Rancho Sausal Redondo* that depicts a not-to-scale corral, mountain ranges to the west, and a broad flat area for the majority of the diseño (Calisphere 2011). The location of the Project is unclear due to the mapping inaccuracies common with diseño sketches.

General Land Office (GLO) plat maps of the area from original and supplemental survey dating from 1869 was reviewed for historic land ownership information and other pertinent historical locations within the Project (GLO 1869). Most of the Project is within Township 3 south, Range 14 west, and if plotted what would be Sections 21 and 28 though a small portion is in Section 20. The entire Project was plotted as within the *Rancho Sausal Redondo* and no features within the Rancho were mapped. It was noted that “George Harrison’s survey of the Sausal Redondo was decided to be the correct survey by the Secretary of the Interior, October 31, 1871”. Data was on file for the 1858 Mexican Land Grant Survey and the 1875 State of California Survey, but no plat images were available. No other GLO plat maps were available.

A minimum level of development consisting of widely spaced roads, is indicated in the Project on the 1880 map of the Los Angeles Basin (Rumsey Map 2020). Historic USGS maps of the City date from 1896 through the modern era as late as 1981 (USGS 2020). The following maps were reviewed:

- *Redondo, Calif.* 7.5 minute (1:24,000 scale), 1896;
- *Torrance, Calif.* 7.5 minute (1:24,000 scale), 1924, 1934;
- *Inglewood, Calif.* 7.5 minute (1:24,000 scale), 1950, 1952, 1964, 1972, and 1981;
- *Southern California Map Sheet No. 1.* (1:250,000 scale), 1901, 1904; and
- *Long Beach, California* (1:250,000 scale), 1949, 1957, 1960.

These maps track the growth of the Lawndale area over late 19th through the 20th century. The late 19th and early 20th century maps indicate the area that would later become the City of Lawndale is rural and largely devoid of roads even, except around its borders. The 1924 *Torrance, Calif.* Map covers most of the Project and

indicates that the area is known as Lawndale. Approximately 100 structures including what likely are residences, a school and a rail line are indicated though in essence the area indicate as Lawndale retains a largely rural character. The 1934 version of the same map indicates a greater number of structures, especially in the southern end of the Project, but the rural character is largely retained due to the low density of the development. The single school on this later map shows that it has been moved to the center of town. A single 1938 aerial image (UCSB) indicated an even greater level of development than the 1934 USGS.

By the mid-20th century, USGS maps and many aerial photographs are available to consult (UCSB 2020). Urban levels of development of Lawndale dates to the mid-20th century as show on maps and aerial photography. A major transportation-related development is Highway 405, which is apparent on maps by 1957. The nearly complete urbanization is evident by the 1964 USGS maps.

Cultural Resources Field Survey

On April 29, 2020, a reconnaissance-level overview of the City was conducted by Nicholas F. Hearth of DUKE CRM. Reconnaissance survey consisted of surveying the City to get a general sense of the potential for the historical nature and visits to locations of built environment resources indicated in the previous General Plan (City of Lawndale 1992:Figure B). Revisits to site and resource locations were cursorial in effort. The goal was to determine if the resource was present and if the surrounding area of the resource has been disturbed. Photographs were taken, and field notes were taken to document the findings. The reconnaissance-level survey of the City revealed that land use within Lawndale is predominantly residential though commercial development is also present especially along Hawthorne Boulevard, see Figures 2-4.

A total of 12 built environment resources have been previously recorded within the City and are on-file with the SCCIC and BERD. In the City's (1992:Figure B) General Plan 32 locations of historic structures were indicated. Of these 32 locations, 17 were visited during the field survey, see Table 3, and Figures 5 - 10. The remaining 15 historic structures noted in the 1992 General Plan appear to be removed or are so altered as to be unrecognizable.



Figure 1. Project area overview along Grevellia Avenue, view north.



Figure 2. Project area overview along Hawthorne Boulevard, view south.

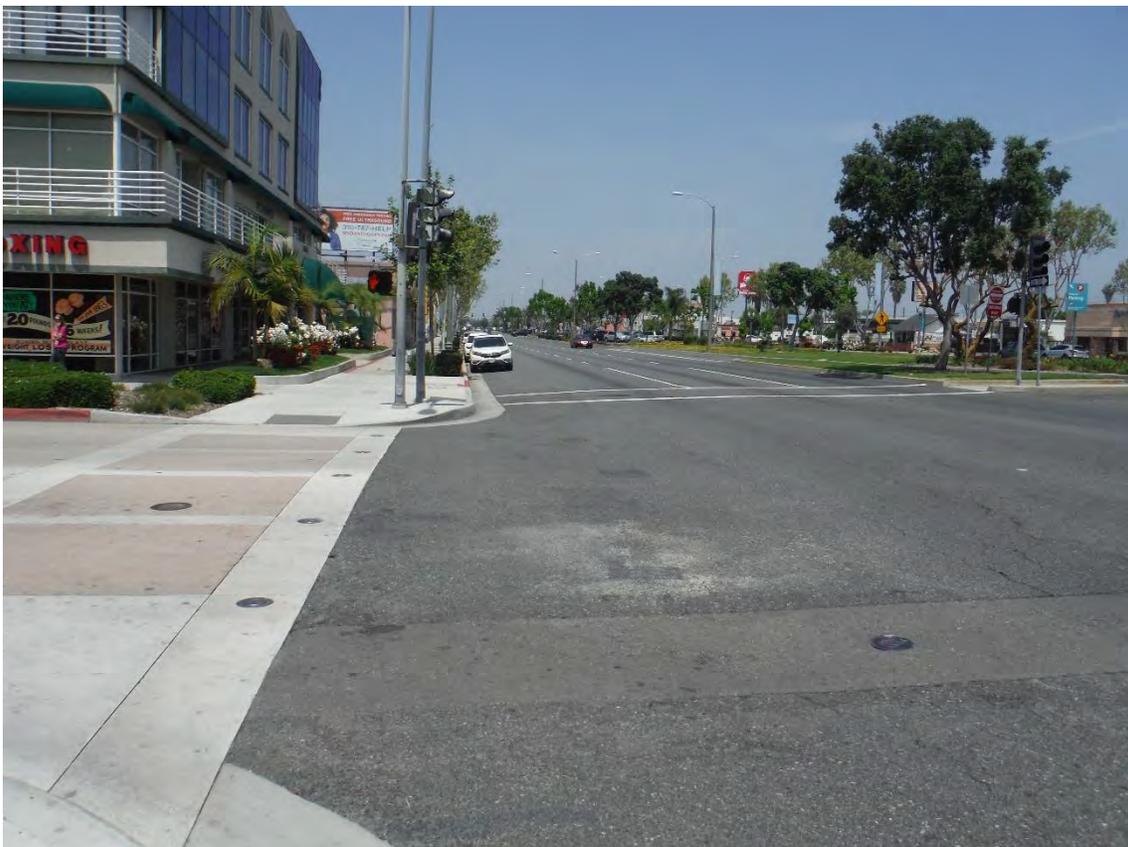


Figure 3. Project area overview along Hawthorne Boulevard and West 147th Street, view north.

Table 3. Potential Built Environment Resources Locations Visited during Reconnaissance Survey

BERD #	Address (approximate)	Notes and Condition
N/A	16700 Prairie Ave.	Single family residence (SFR) Extant
N/A	4039 160 th St.	SFR, Extant
N/A	4061 159 th St.	SFR, Extant
N/A	4061 W. 147 th St.	SFR, Extant
N/A	14752 Prairie Ave	SFR, Extant
N/A	14615 Osage Ave.	SFR, Extant
N/A	4118 W. 147 th St.	SFR, Extant
N/A	<u>14606 Freeman Ave</u>	SFR, Extant
N/A	NW Corner of 149 th and Larch	SFR, likely extant (view obscured)
N/A	14814 Grevillea Ave.	SFR, Extant
N/A	4625 154 th St.	SFR, Extant
N/A	4630 154 th St.	SFR, Extant
N/A	4555 171 st .	SFR, Extant
574962	14717 Burin Ave.	City Hall, Extant
481616	4724 159 th St.	SFR, Extant
480244	4523 167 th St.	SFR, Extant
681590	16715 Hawthorne Boulevard	Commercial Building, 3 stories, NRHP status 6Y



Figure 4. Single Family Residence at 4039 160th St, view north.



Figure 5. Single Family Residence at 4061 W. 147th St., view northwest



Figure 6. Single Family Residence at 14606 Freeman Ave, view east



Figure 7. Single Family Residence at 4555 171st St., view north



Figure 8. Commercial Building at 16715 Hawthorne Boulevard, view west



Figure 9. City Hall at 14717 Burin Ave, view southwest

RECOMMENDATIONS

The unique environment, events, people, and places of Lawndale have shaped its history, archaeology and paleontology. The traces of these events, people, and places are cultural and paleontological resources that are the physical remains of past activities. DUKE CRM recommends compliance with CEQA that requires a Lead Agency to evaluate if a proposed project would have a significant adverse effect on the environment, including historical resources. CEQA Guidelines pertaining to historical resources (Section 15064.5(b)(1)) state that “A substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired”. The following recommendations build on the previous goals and policies regarding the treatment of paleontological, archaeological, and historic resources.

Historic Resources

Historic built environment resources are the tangible evidence of past human activity, but are limited to buildings, structures, objects, linear features such as railroads or canals, and other types of earthworks. Twelve built environment resources are recorded at the SCCIC and in the BERD. The City’s 1992 General Plan lists 32 historic structures. Through the reconnaissance survey it was determined 17 of the 32 structures are extant, the remaining 15 have either been demolished or are so disturbed so as to be unrecognizable. Four of these 17 were also listed at the SCCIC/BERD bringing the total historic structures recorded in the City to 25. None are listed on the NRHP or CRHR. The following recommendations for built environment resources should be applied to all projects conducted within the jurisdiction of the City of Lawndale.

1. If there is a building/structure that is 50 years or older, it should be evaluated for significance and eligibility for the CRHR.
2. If the building/structure is eligible for the CRHR preservation is the preferred treatment.
3. If preservation is not accomplished, minimization of impacts is recommended.
4. Mitigation of impacts is recommended for any impacts to historical resources,

Archaeological Resources

Archaeological resources are tangible remains of past human activity. These may include prehistoric and historic sites, artifacts, rock art, ruins, features, and landscapes. These nonrenewable resources may yield unique information about past societies and environments, and provide answers for modern day social and conservation problems. Within the City, no archaeological resources are previously recorded. This situation seems highly likely to be a consequence of development occurring prior to the implementation of CEQA, rather than a lack of archaeological sites. The following recommendations for archaeological resources should be applied to all projects conducted within the jurisdiction of the City of Lawndale.

1. The project/property should be reviewed for archaeological sensitivity. This will involve a qualified archaeologist reviewing geology and soils reports and maps, historic maps, and as-built plans of the project/property.
2. The qualified archaeologist should make a recommendation of high, moderate, low, or no sensitivity for archaeological resources.
3. In areas of high sensitivity, buried sites testing is recommended prior to construction. Alternatively, full-time monitoring could be implemented during construction activities. In any event, if an archaeological site is discovered it should be evaluated/excavated to determine significance, this would include artifact analysis, interpretation, and a technical report. If the site is significant, preservation is the preferred treatment. If preservation is not accomplished, then treatment and/or mitigation of the site would be required.
4. In areas of moderate sensitivity, part-time monitoring during construction activities is recommended. If an archaeological site is discovered it should be evaluated/excavated to determine significance, this would include artifact analysis, interpretation, and a technical report. If the site is significant, preservation is the preferred treatment. If preservation is not accomplished, then treatment and/or mitigation of the site would be required.
5. In areas of low sensitivity, spot-check monitoring during construction activities is recommended. If an archaeological site is discovered it should be evaluated/excavated to determine significance, this would include artifact analysis, interpretation, and a technical report. If the site is significant, preservation is the preferred treatment. If preservation is not accomplished, then treatment and/or mitigation of the site would be required.
6. In areas of no sensitivity, no monitoring during construction activities is recommended. If an archaeological site is discovered a qualified archaeologist should be retained to evaluate/excavate the site to determine significance, this would include artifact analysis, interpretation, and a technical report. If the site is significant, preservation is the preferred treatment. If preservation is not accomplished, then treatment and/or mitigation of the site would be required.

A qualified archaeologist is a person with a M.A. in anthropology or archaeology (or closely related field) with at least one year of full-time professional experience in the field of archaeology, who has completed a supervised field school, who possess a demonstrated ability to conduct research to completion, and who maintains one year in a supervisory level in archaeological study; and/or who is a Registered Professional Archaeologist (RPA).

Paleontological Resources

The paleontological resources research indicates that the geologic formations in the City are known to contain paleontological localities with rare, well-preserved fossil materials that offer important information about the plant or animal and/or its evolutionary history. Both formations have been determined to be highly sensitive for paleontological resources. These important resources are most often destroyed as a result of construction, such as excavation, trenching, and tunneling. Impacts can be mitigated through pre-construction and construction mitigation programs. The following recommendations for paleontological resources should be applied to all projects conducted within the jurisdiction of the City of Lawndale.

1. The project/property should be reviewed for paleontological sensitivity. This will involve a qualified paleontologist reviewing geology and soils reports and maps, historic maps, and as-built plans of the project/property.

2. The qualified paleontologist should make a recommendation of high, moderate, low, or no sensitivity for paleontological resources.
3. In areas of high sensitivity, full-time monitoring should be implemented during construction activities. If a paleontological site is discovered it should be evaluated/excavated to determine significance. If it is significant, preservation is the preferred treatment. If preservation is not accomplished, then treatment and/or mitigation of the fossil would be required.
4. In areas of moderate sensitivity, part-time monitoring should be implemented during construction activities. If a paleontological site is discovered, it should be evaluated/excavated to determine significance. If it is significant, preservation is the preferred treatment. If preservation is not accomplished, then treatment and/or mitigation of the fossil would be required.
5. In areas of low sensitivity, spot-check monitoring should be implemented during construction activities. If a paleontological site is discovered, it should be evaluated/excavated to determine significance. If it is significant, preservation is the preferred treatment. If preservation is not accomplished, then treatment and/or mitigation of the fossil would be required.
6. In areas of no sensitivity, no monitoring during construction activities is recommended. If a paleontological site is discovered, a qualified paleontologist should be retained to evaluate/excavate the discovery to determine significance. If it is significant, preservation is the preferred treatment. If preservation is not accomplished, then treatment and/or mitigation of the fossil would be required.

A qualified paleontologist is a person with a B.S. or B.A. in geology, or closely related discipline with an emphasis in paleontology and demonstrated experience and competence in paleontological research, fieldwork, reporting, and curation.

CONCLUSIONS

DUKE CRM has conducted a cultural (archaeological and historical) and paleontological resources assessment for Project for the City, comprising approximately 1,260 acres. The purpose of this report is to inventory the previously recorded paleontological and cultural resources in the City, to assess the potential for impacts to these resources during implementation of the Project. This effort was completed in compliance with the CEQA.

DUKE CRM requested cultural and paleontological records searches. There are at least 12 cultural resources mapped within the City and all are historic built environment resources. No historic or prehistoric archaeological resources have been previously recorded within the City. Additionally, fossil localities have not been recorded in the City. The entire City is underlain by Pleistocene-age alluvium and Pleistocene-age eolian deposits that are considered to have a high sensitivity for paleontological resources due to the discovery of these resources near the City in similar deposits.

DUKE CRM recommends compliance with the resource management regulations in CEQA. Tribal Cultural Resources are recommended to be added to the City's categories of cultural resources which reflect changes to CEQA.

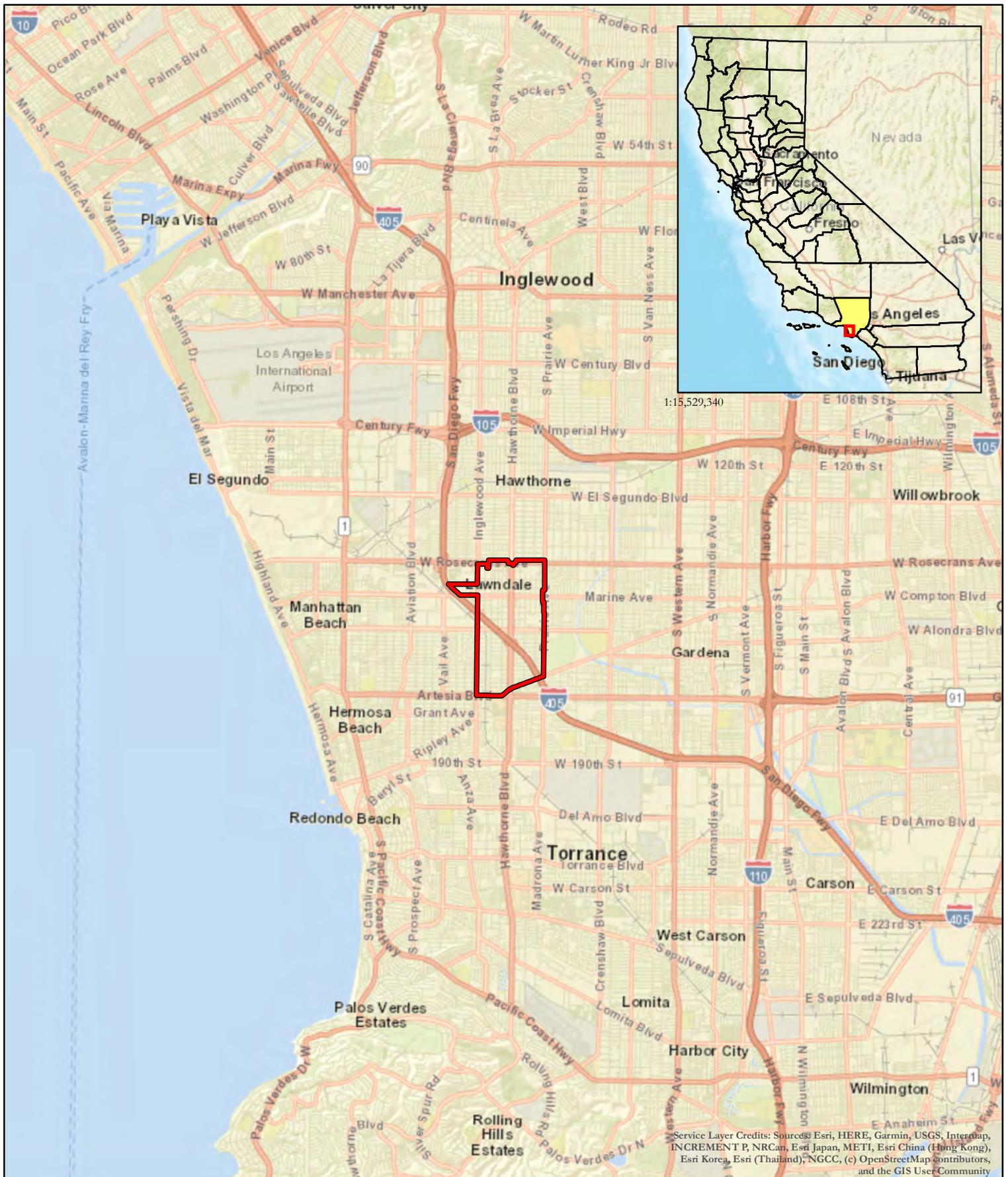
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1989 The Nonmarine Mollusks of Pit 91, Rancho La Brea, Southern California, and Their Paleoecologic and Biogeographic Implications. Master's thesis. Department of Geology, California State University, Northridge.
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1997 Medieval Climatic Anomaly and Punctuated Cultural Evolution in Coastal Southern California. *American Antiquity* 62:319-336.
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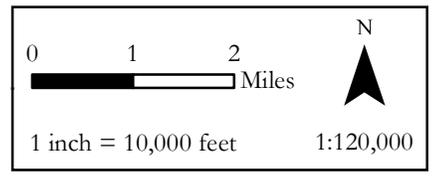
Appendix A
Project Maps

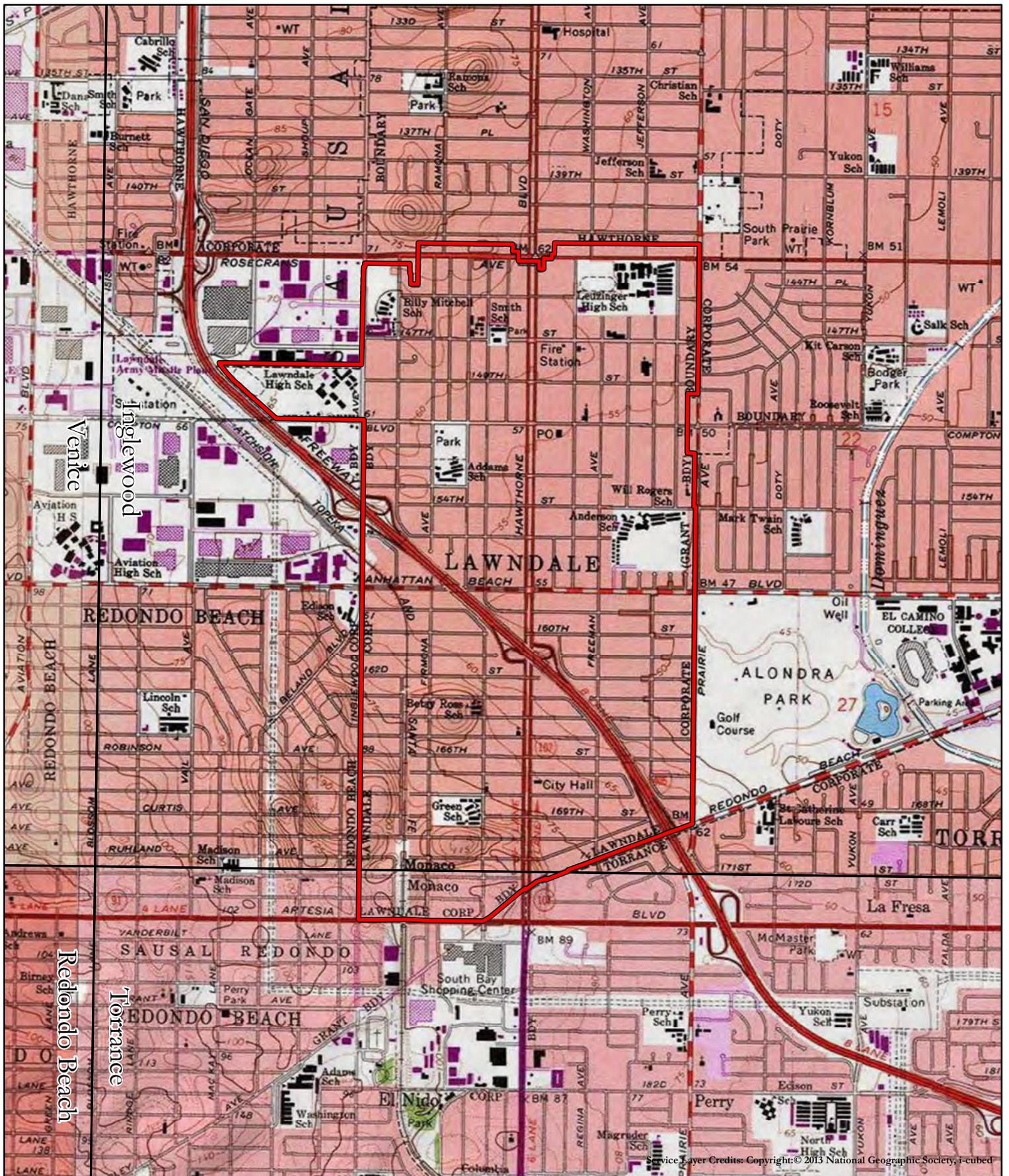


City of Lawndale General Plan and Hawthorne Boulevard Specific Plan Update
 DUKE CRM Project C-0325



 Project Area





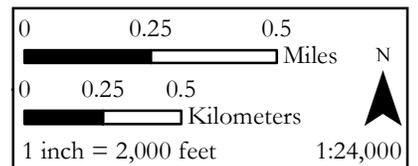
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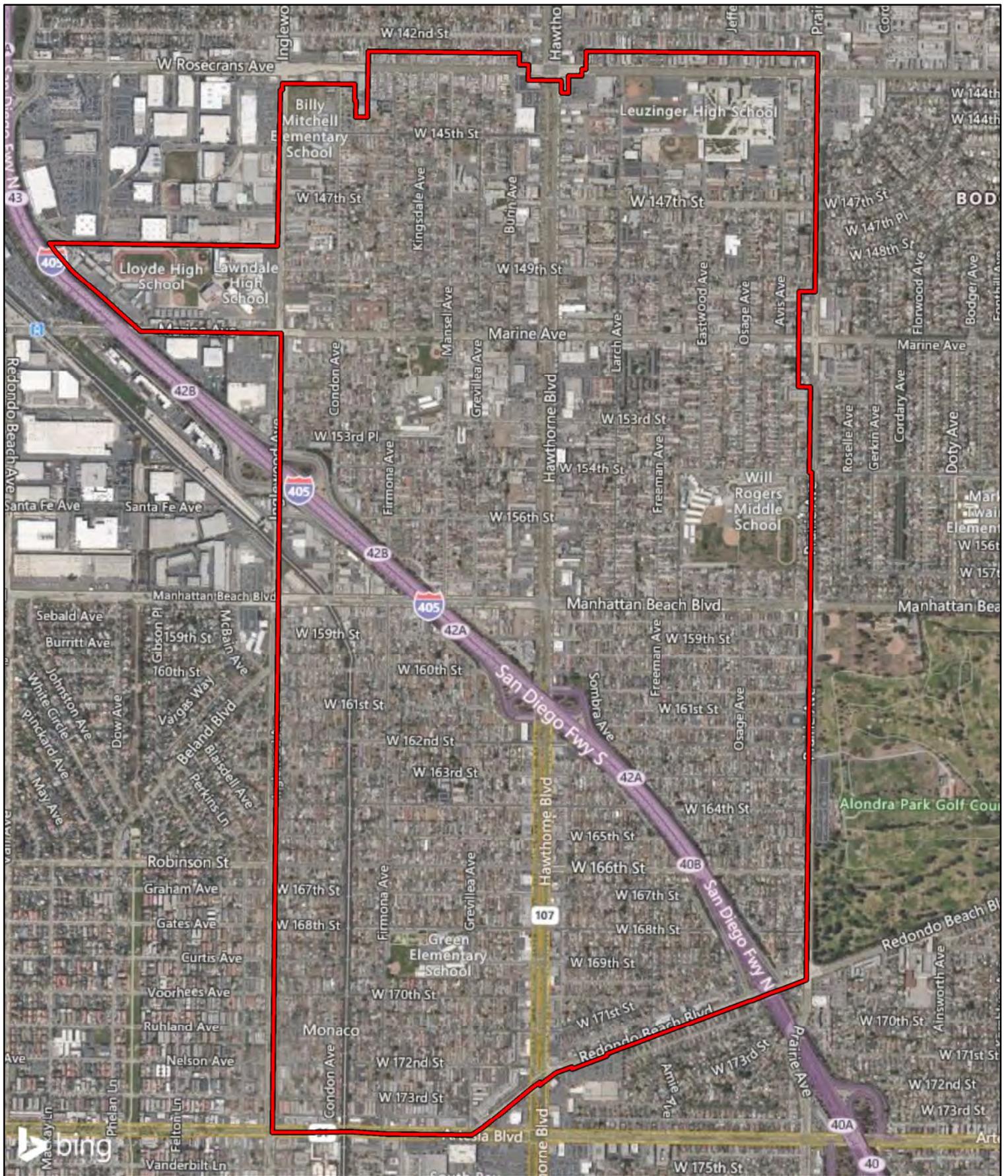
City of Lawndale General Plan and Hawthorne Boulevard Specific Plan Update

DUKE CRM Project C-0325



- Project Area
- USGS 7.5' Quads

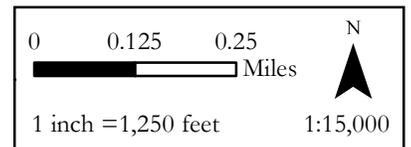


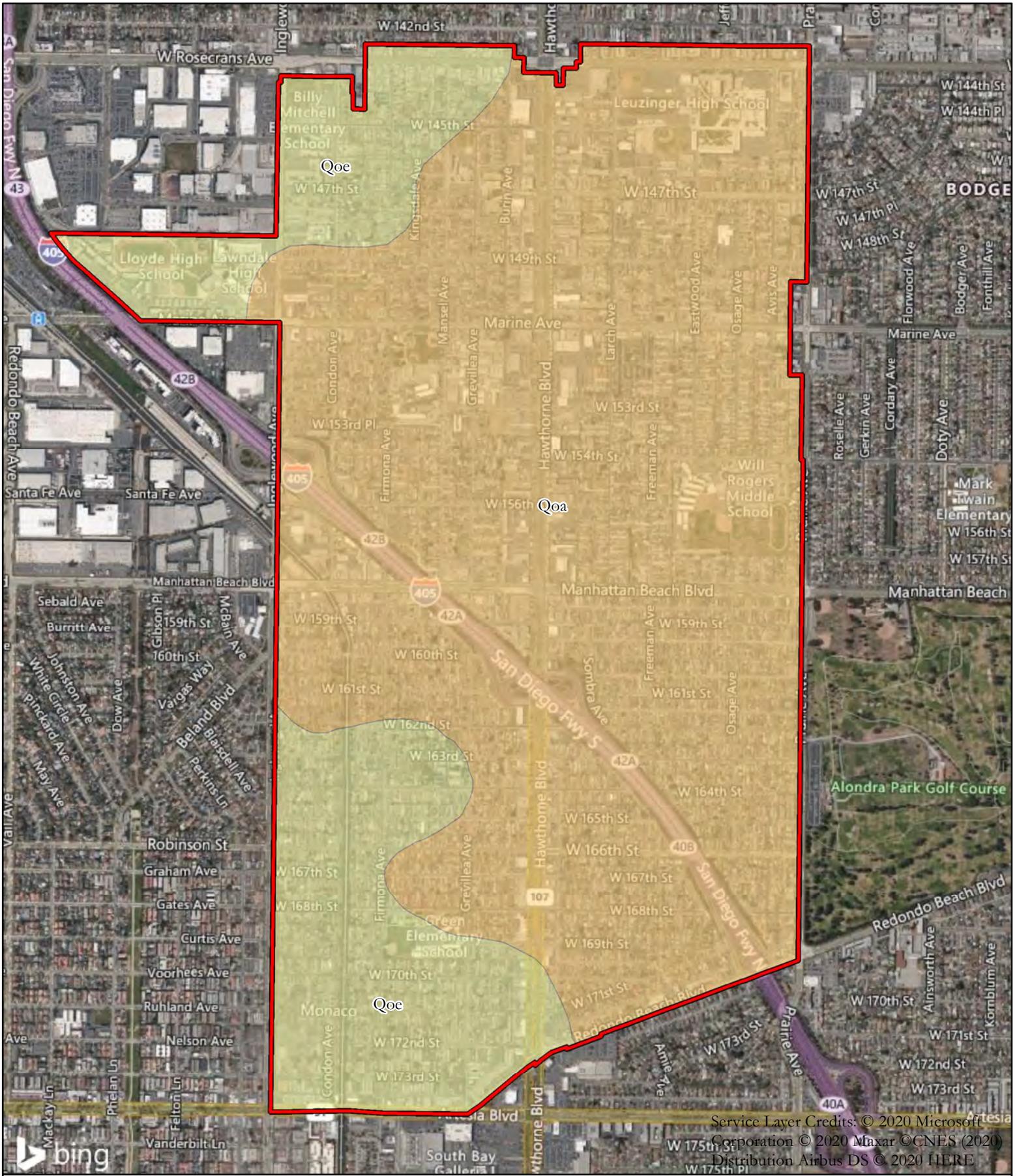


City of Lawndale General Plan and Hawthorne Boulevard Specific Plan Update
 DUKE CRM Project C-0325



 Project Area



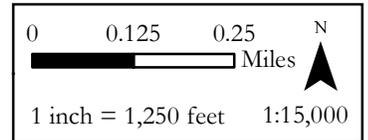


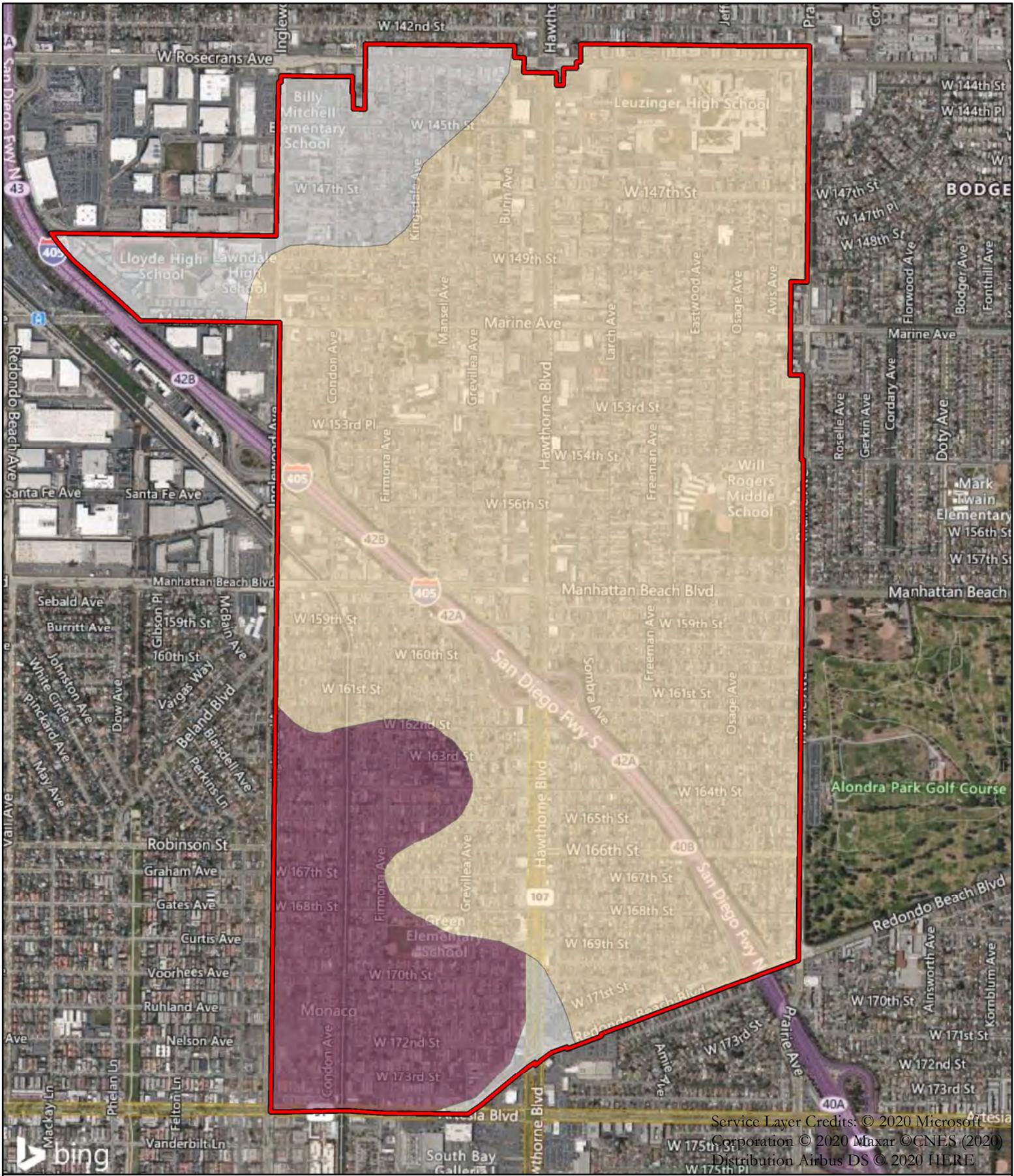
City of Lawndale General Plan and Hawthorne Boulevard Specific Plan Update
 DUKE CRM Project C-0325



 Project Area

Geology from Saucedo, et al. (2016):
 Qoa: Old alluvium
 Qoe: Old eolian deposits





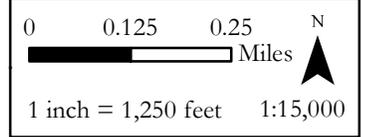
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City of Lawndale General Plan and Hawthorne Boulevard Specific Plan Update
 DUKE CRM Project C-0325



 Project Area

- Soil from NRCS Web Soil Survey (2020):
-  Urban land-Centinela-Typic Xerorthents
 -  Urban land-Abaft-Marina complex
 -  Urban land-Marina complex



Appendix B

Resumes

Curt Duke

President/Principal Archaeologist



Expertise

Cultural Resources Management
California Prehistory
Section 106 Compliance
CEQA Compliance
Native American Consultation

Education

CSU, Fullerton, M.A., Anth, 2006
SDSU, Grad Studies, Anth, 1996-97
UC Santa Cruz, B.A., Anth, 1994

Professional Registrations

RPA, No. 15969
County of Riverside (No. 151)
County of Orange

Professional Memberships

Society for California Archaeology
Society for American Archaeology
Pacific Coast Archaeological Society
Assoc. of Environmental Professionals
Building Industry Association

Professional Experience

President/Principal Archaeologist, DUKE CRM, March 2011 to present
Archaeologist/Principal, LSA Associates, 1997-2011
Archaeological/Paleontological Technician, Various Companies, 1995-97
Archaeological Technician/Teachers Assistant, Cabrillo College, 1994
Anthropological Laboratory Technician, UC Santa Cruz, 1994

Selected Project Experience

Reid/Baldwin Adobe, LA Arboretum, Arcadia, 2019-Present
Veteran Affairs Medical Clinic, Santa Rosa, 2019
Deane Dana Friendship Park, Rancho Palos Verdes, 2019
Makayla Mine Expansion Project, Olancho, 2019
Sweeny Road, Lompoc, 2018
Vantage Point Church, Eastvale, 2016 and 2018
VA West Los Angeles Campus Master Plan, 2017-Present
Avenue S-8 and 40th St. E. Roundabout, Palmdale, 2017-18
SR-110 Improvements, Los Angeles, 2017
Diamond Valley Estates Specific Plan, Hemet, 2017
VA West Los Angeles Campus Hospital Replacement, 2016-Present
Shoemaker Bridge Replacement, Long Beach, 2016-Present
Spruce Goose Hangar, Playa Vista, 2016
Rice Avenue at 5th Street Grade Separation, Oxnard, 2015-Present
Vila Borba, Chino Hills, 2013-Present
Skyridge Residential, Mission Viejo, 2011-Present
Baker Water Treatment Plant, Lake Forest, 2014-2015
VA Clinic, Loma Linda, 2014-Present
Evanston Inn, Pasadena, 2014-2016
Petersen Ranch, Leona Valley, 2013-2014
California Street/Highway 101, Ventura, 2014-Present
6th Street Bridge Replacement, Los Angeles, 2013-Present
I-15/I-215 IC Project, Devore, 2008-10
Colton Crossing Rail-to-Rail Grade Separation, 2008-11
City of LA DPW BOE, On-Call, Cultural/Paleo Services, 2008-11
Mid County Parkway, Riverside County, 2014-10
McSweeny Farms Specific Plan, Hemet, 2004-08
Mesquite Regional Landfill, Coachella Valley, 2006-08
Hacienda at Fairview Valley Specific Plan, Apple Valley 2007-08
Majestic Hills Specific Plan, Hesperia, 2006-07
Chuckwalla Solar I Project, Desert Center, 2007-08
Needles Highway Improvement Project, 2004-06
Superstition Solar I Project, Salton Sea, Imperial County, 2008
Muddy Canyon Archaeological Project, Newport Beach, 1997-2001
Temecula 32, Archaeological Phase II Testing, 2007
Mammoth Lakes Parks/Rec and Trail System Master Plan, 2010
24th Street Improvements, City of Bakersfield, 2008-11
California Valley Solar Ranch, San Luis Obispo County, 2009-10
Delano-Alpaugh Water Pipeline, Kern/Tulare Counties, 2006-09
I-15/SR-79 IC Project, Temecula, 2006-10
Westlake Historic Resources Survey, Los Angeles, 2008-09
CETAP, western Riverside County, 1999-2001
Los Coches Creek Elementary School, near Alpine, 2003-06
Oak Valley Specific Plan 1 Amendment, Beaumont, 2004
San Nicolas Island, Naval Base Ventura County, CA, 1997

Brian Glenn

Principal Investigator/Archaeologist



Professional Experience: 30 Years

Expertise

Cultural Resources Management
California Prehistory
Section 106 & CEQA Compliance
Native American Consultation
Database (Collections) Management

Education

UCLA, M.A. Anthropology, 1991
UC, Santa Barbara, B.A., Anthropology,
1986
UC, Santa Barbara, B.A., Geography, 1986
San Diego Mesa College, Certificate, GIS,
2010

Professional Registrations

RPA, No. 989903

Professional Memberships

Society for California Archaeology
Society for American Archaeology
San Diego County Archaeological Society
President, 1999

Summary of Qualifications

Mr. Glenn has worked on hundreds of cultural resources management projects over his 30 year career. This includes projects throughout California in compliance with Section 106 of the National Historic Preservation Act (NHPA) and California Environmental Quality Act (CEQA). He is listed on the RPA and meets the Secretary of Interior Standards for Principal Investigator. His recent experience includes cultural resources surveys and studies for clients such as the Los Angeles Department of Water and Power, Metropolitan Transit Authority, and La Plaza Foundation. His responsibilities have included the preparation of technical reports (assessment, evaluation, and mitigation), cultural resources management plans and EIS/EIR sections, as well as archaeological monitoring. He has training and significant experience in lithic, faunal, typological and spatial analyses, as well as obsidian source and hydration studies. He has identified, evaluated, and investigated historic era resources from a 1792 Spanish gun emplacement on Ballast Point overlook San Diego Bay to late 19th to mid-20th century household and commercial deposits. Mr. Glenn received B.A. degrees in Geography and Anthropology from UC, Santa Barbara and an M.A. in Archaeology from UCLA. During his graduate work at UCLA, he was acting coordinator of the SCCIC (CHRIS).

Selected Project Experience

First Solar Energy Blythe #1, City of Blythe, CA

Mr. Glenn supervised construction monitoring of the 200-acre solar project in Blythe, CA and prepared the Phase IV report for the County of Riverside. A single historic era dump site was located, recorded and reported.

Hammock Project, SCE, County of Riverside, CA

Conducted a cultural resources assessment of a two-mile section of transmission line in anticipation of upgrades.

Arbor Ridge, Beaumont, CA

Conducted a Phase I cultural resources assessment of a 1,200-acre project area in Beaumont, Riverside County that included historic archives review, pedestrian survey and paleontological literature review for SunCal Development/City of Beaumont.

MWD of Southern California Potholing Project. County of Riverside, CA

Conducted a pedestrian survey of six proposed potholing locations directly adjacent to the Colorado River Aqueduct for the Metropolitan Water District of Southern California.

Nicholas F. Hearth

Principal Investigator/ Archaeologist



Expertise

Cultural Resources Management
California Prehistory
Section 106 & CEQA Compliance
Native American Consultation
Lithic Analysis

Education

UC, Riverside, PhD Candidate,
Anthropology
UC, Riverside, M.A., Anthropology, 2006
UMass, Amherst, B.A., Anthropology,
2003

Professional Registrations

RPA, No. 989903

Professional Memberships

Society for California Archaeology
Society for American Archaeology
Prehistoric Quarry and Early Mines
Interest Group
Coachella Valley Archaeological Society

Professional Archaeological Experience

Principal Investigator, DUKE CRM, March 2018-present.
Field/Laboratory Director, DUKE CRM, 2014-2018.
Associate Archaeologist, Applied EarthWorks, 2012-2014.
Archaeologist, Public Archaeology Laboratory, 2011-2012.
Project Leader, Valles Caldera National Preserve, 2011.
Field Director, Florin Cultural Resource Services, 2010.
Archaeologist, Bighorn Archaeological Consultants, 2009-2010.
Lithic Analyst/Field Supervisor, Northwestern University
Archaeology Project, 2007-2009.
Crew Chief, Yalahau Region Human Ecology Proj., 2005-2007.
Report Writer, CRM Tech, 2006.
Field Technician, Yalahau Region Human Ecology Proj., 2004.
Field/Laboratory Technician, Public Archaeology Survey Team,
2003-2004.
Laboratory Director/Laboratory Assistant/Field Technician,
UMass Archaeological Services, 2002-2003.

Selected Project Experience*

Reid-Baldwin Adobe, LA Arboretum, Arcadia, 2019 – present
SR 57-60 IC and Golf Course, Diamond Bar, 2019 - present
Makayla Mine Expansion Project, Olancho, 2019
PCH Signal Improvements, Malibu, 2019 – present
Ocean Place (Tract 17425), Seal Beach, 2018 - present
1st over Glendale, Los Angeles, 2018 - 2019
Diamond Valley Estates Residential, Hemet, 2017 - present
SBCTA 210/Pepper, Rialto, 2016-2019
Vila Borba Residential, Chino Hills, 2015-present
California Street, Ventura, 2014-present
Skyridge Residential, Mission Viejo, 2014-present
26426 National Trails Highway, Helendale, 2018
City of Redlands TTM20126, 2018
Vanderham Monitoring, Jurupa Valley 2017-2018
Trumark-Higgins Monitoring, Chino Hills, 2017
Mission Heritage, Riverside, 2017
76 Station, Orange, 2016
Vantage Point Church, Eastvale, 2016
Rancho Mirage Resignalization, 2015-2016.
Rice Avenue at 5th St., Grade Separation, Oxnard, 2015-2018
Lakeside Temescal Valley Residential Development, 2014-2016
Tracy Hills Specific Plan, 2015
Clinton Keith Road Expansion, Murrieta, 2014
Mission Hills Reservoir, Indio, 2013
Regent Crossroads, Winchester, 2013
Crowder Canyon Arch. District Data Recovery Plan, 2013
San Gabriel Trench Archaeological Project, 2013
I10/Jefferson St. Interchange Improvement, 2012-2013
PG&E TCS Remediation, Needles, 2012 to 2014
Old Place Neck Data Recovery, Staten Island, NY. 2012
Jackson Flat Data Recovery Kanab, UT, 2009-2010

*Complete project experience available upon request

Edgar Alvarez

GIS Analyst/ Archaeologist



Years Experience: 5 Years

Years with DUKE CRM: 2 Months

Expertise

Cultural Resources Management
California Prehistory
Section 106 & CEQA Compliance
Native American Consultation
GIS Analysis

Education

CSU, Northridge, B.A., Anthropology,
Minor in GIS, 2016
PCIAP, Catalina Island Field School, 2015

Professional Memberships

Society for California Archaeology
Society for American Archaeology

Selected Project Experience

PCH Signal Systems Project, Malibu, 2020
Indian Wells General Plan, 2020
Lawndale General Plan, 2020
Mokelumne Aqueducts Tunnel, Stockton, 2020
Sunnymead Car Wash, Moreno Valley, 2020
Vernola Marketplace Project, Jurupa Valley, 2020
Bluff Street Reservoir Project, Norco, 2020
Purple Line Extension (Westside Subway), L.A., 2018 - 2019
Southern California Edison (SCE) EC L.A., 2018 - 2019
Rincon Band of Luiseno Indians Survey, SD, 2018 - 2019
Purple Line Extension 2 (Rodeo Subway), Beverly Hills, 2020
El Centro International Border Wall, El Centro, 2020
SOCAL Gas Pipeline, Seal Beach, 2020
(LAWA) Terminal 1.5 Project, L.A., 2018 - 2019
Desert Trails Preparatory Project, Victorville, 2019
Florence Mills Apartments Project, L.A., 2019
Ridge Development Project, Penryn, 2019
31801 Pacific Coast Highway Project, Malibu, 2018
Boyle Heights Sports Center Gym Project, L.A., 2018
Cold Canyon Landfill Expansion, Arroyo Grande, 2018
Daggett Solar Farm Project, Daggett, 2018
Roosevelt Park Stormwater Capture Project, L.A., 2018
Ava Hollywood Mixed Use High-Rise Project, L.A., 2018
Corona Affordable Housing Project, L.A., 2018
Elk Creek Bridge Studies (TO 31), Lake Mendocino, 2019
Carlotta Curve Improvement (TO 56), Lake Mendocino, 2019
Three Bridges Replacement (TO 57), Lake Mendocino, 2019
South Eel River Bridge Seismic (TO 60), Lake Mendocino, 2019
Gualala Shoulders and Rumble (TO 62), Lake Mendocino, 2019
State Route 132 West Freeway, Modesto, 2020
CBP Road Improvements, El Centro, 2019
Yuma International Border Wall, Yuma, 2020
LAX Police Station, Inglewood, 2019
Ladera Park Storm Water Capture, L.A., 2019
Gates Canyon Storm Water Capture, Calabasas, 2020
PG&E Irrigation Line, Pismo Beach, 2020
Deep Soil Mixing Project, Malibu, 2020
CBP Chula Vista INT Border Wall, Chula Vista, 2020
SCE Woolsey Fire, Malibu, 2018

Benjamin Scherzer

Paleontologist



Expertise

Paleontological Resources Management
Fossil excavation
Fossil preparation
Stratigraphy
Natural gas mudlogging
Directional drilling

Education

M.S., Earth Science, 2008, MSU, Bozeman, MT
B.A., Geology/Math, 2002, Earlham College, IN

Professional Registrations

Paleontologist, County of Orange
Paleontologist, County of Riverside

Professional Memberships

Society of Vertebrate Paleontology
Geological Society of America
Society for Sedimentary Geology
American Association of Petroleum Geologists, Pacific Section
South Coast Geological Society
Western Association of Vertebrate Paleontologists

Publications and Professional Papers

Scherzer, B. 2017. A possible physeteroid (cetacea: odontoceti) from the Yorba member of the Puente Formation, Orange County, California.

Scherzer, B. 2016. An archaic baleen whale (Cetacea: Mysticeti) from the Vaqueros Formation, and other fossil material from the Skyridge Project, Orange County, California.

Scherzer, B. 2015. Miocene teleost fish from Chino Hills: preliminary results from the Vila Borba Project, San Bernardino County, California.

Professional Experience

Paleontologist, DUKE CRM, February 2014-present
Paleontologist, VCS Environmental, 2020-present
Paleontologist, Rincon Consultants, 2020-present
Paleontologist, Red Tail Environmental, 2020-present
Paleontologist, L&L Environmental, 2017-2018
Stratigrapher, Archeological Resource Management Corp., 2015-2018
Paleontological Specialist II, SD Natural History Museum, 2013-2018
Paleontological Specialist II, SWCA (Pasadena), 2012-2015
Paleontologist, SWCA (Vernal, UT), 2011-2012
Fossil Preparator, Carter County Museum, 2010-2011
Physical Science Technician, Badlands National Park, 2010
Mudlogger/Geologist, Pason Systems USA, 2006-2009
Paleontological Field Assistant, ARCADIS US, 2006-2007

Selected Project Experience

210 Mixed Flow Lane Addition, Highlands, 2020-present
Reid-Baldwin Adobe, Arcadia, 2019-present
San Jacinto GP & Update, San Jacinto, 2019-present
I-5 Widening, Aliso Viejo, 2018-2020
Sweeny Rd, Lompoc, 2018-2020
Atlanta Avenue Widening, Huntington Beach, 2018-present
Ocean Place, Seal Beach, 2018-present
Lake Forest Civic Center, Lake Forest, 2018-present
Vanderham Monitoring, Jurupa Valley, 2017-2018
Gold Flora Farms, Desert Hot Springs, 2017-2019
I-5 HOV Truck Lanes, Santa Clarita, 2017-2018
Brasada Homes, San Dimas, 2017-2018
Indus Light Industrial Building, Chino Hills, 2017-2018
Murrieta's Hospitality Commons, Murrieta, 2017-2019
6th Street Viaduct, Los Angeles, 2017-present
I-15 TEL, Riverside and San Bernardino Counties, 2017
Lewis Street, Anaheim, 2017
The Crossings, Chino Hills, 2016-2017
Reata Glen, Mission Viejo, 2016-2018
Greenville-Banning Channel, Costa Mesa, 2016
Diamond Valley, Hemet, 2017
Marywood Residential, Orange, 2016-2017
Rancho Mission Viejo, Mission Viejo, 2015-2018
Santa Margarita Water District Tesoro Reservoirs, Mission Viejo, 2015
Evanston Inn, Pasadena, 2015
Sycamore to Peñasquitos 230 kV Transmission Line, San Diego, 2015
Lakeside Temescal Valley, Temescal Valley, 2015-2020
Vila Borba, Chino Hills, CA, 2013-present
RP-Outfall Relocation, Ontario, 2014
Serrano Ridge, Temescal Valley, 2014
Lago Los Serranos, Chino Hills, 2014
Baker WTP, Lake Forest, 2014
Skyridge Residential, Mission Viejo, 2014-present
Pacific Highlands, San Diego, 2014
Sol y Mar, Ranchos Palos Verdes, 2013-2014
Mojave Solar Power, Hinkley, 2013
Genesis Solar Energy, Blythe, 2012-13

Appendix C
Cultural Resource Study Bibliography

Report #	Authors	Year	Title
LA-02499	McKenna, Jeanette A.	1991	Results of a Standard Prehistoric Archaeological Records Check, City of Redondo Beach, Los Angeles County, California - General Plan Eir
LA-02904	Stickel, Gary E.	1993	Draft Report a Phase I Cultural Resources Literature Search for the West Basin Water Reclamation Project
LA-05499	Smith, Philomene C.	2000	Negative Archaeological Survey Report: to Cold Plane the Existing Pavement on Route 405 and Overlay With 30mm of Rubberized Asphalt Concrete at Selected On/off-ramps From Vermont Ave. to Manchester Blvd.
LA-06013	Maki, Mary K.	2002	Community/civic Center Construction Project, City of Lawndale
LA-06236	Sylvia, Barbara	2002	Highway Project on Route 405 Between Crenshaw Blvd. and Manhattan Beach Blvd. in Torrance and Lawndale in Los Angeles County
LA-08777	Bonner, Wayne H.	2006	Cultural Resources Records Search and Site Visit Results for T-mobile Candidate La03471d (bollinger Gym), 4110 West 154th Street, Lawndale, Los Angeles County, California
LA-10132	Johnson, Ken	1965	Fun, Frustration and Fulfillment an Historical Study of the City of Redondo Beach
LA-10333	McKenna, Jeanette M.	2009	A Brief Historic Context Statement Prepared for the General Plan Update: The City of Torrance, Los Angeles County, California
LA-10764	McKenna, Jeanette	2011	A Cultural Resources Overview and Architectural Evaluation of the Leuzinger High School Campus, 4118 W. Rosecrans Avenue, Lawndale, Los Angeles County, CA
LA-10765	McKenna, Jeanette	2010	A Cultural Resources Overview and Architectural Evaluation of the Lawndale High School Campus, 14901 S. Inglewood Avenue, Lawndale, Los Angeles County, CA
LA-11767	Johnson, Brent	2012	Direct APE Historic Architectural for AT&T Mobility, LLC, 405 Fwy/Redondo Beach Blvd. 16720 Hawthorne Boulevard, Lawndale, CA
LA-12571	O'Neil, Stephen and Black, Megan	2014	Archaeology Survey Report In Support of the Huitt-Zollars Inglewood Avenue Corridor Widening Project, City Lawndale, Los Angeles County, California