

HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT

BLEDSON CREEK SLOPE AND STORM DRAIN REPAIR PROJECT

**Line A Storm Drain Improvements on APN 0288-251-83
City of Highland, San Bernardino County, California**

For Submittal to:

City of Highland
27215 Base Line
Highland, CA 92346

Prepared for:

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June 3, 2020
CRM TECH Contract No. 3601A

Title: Historical/Archaeological Resources Survey Report: Bledsoe Creek Slope and Storm Drain Repair Project, Line A Storm Drain Improvements on APN 0288-251-83, City of Highland, San Bernardino County, California

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USGS Quadrangle: Harrison Mountain, Calif., 7.5’ quadrangle (Section 35, T1N R3W, San Bernardino Baseline and Meridian)

Project Size: Approximately 1.2 acres

Keywords: Northeastern San Bernardino Valley; Phase I historical/archaeological resources survey; Site 36-007051 (CA-SBR-7051H): former East Highlands Ranch; no “historical resources” within or adjacent to the project area

EXECUTIVE SUMMARY

Between March and June 2020, at the request of Jericho Systems, Inc., CRM TECH performed a cultural resources study on approximately 1.2 acres of vacant land in the City of Highland, San Bernardino County, California. The subject property of the study comprises a portion of Assessor's Parcel Number 0288-251-83, located on the south side of Highland Avenue between Rockspring Lane and Cloverhill Drive, to the west of the East Highland Reservoir, in the west half of Section 35, Township 1 North, Range 3 West, San Bernardino Baseline and Meridian.

The study is part of the environmental review process for the proposed construction of new underground storm drain improvements at the upstream terminus of Bledsoe Creek, replacement of a concrete apron at the storm drain outlet, and re-grading and stabilization of an existing embankment slope. The City of Highland, as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA). The purpose of the study is to provide the City with the necessary information and analysis to determine whether the proposed project would cause substantial adverse changes to any "historical resources," as defined by CEQA, that may exist in or near the project area.

In order to identify such resources, CRM TECH initiated a historical/archaeological resources records search and a Native American Sacred Lands File search, pursued historical background research, and carried out an intensive-level field survey. The records search results indicate that the entire project area was included in the overall perimeters of a previously recorded historic-period site, 36-007051 (CA-SBR-7051H), the former East Highlands Ranch, but no features or artifacts of the site were found within the current project boundaries. First recorded in 1990, the ranch complex has subsequently given way to the suburban housing development bearing the same name. During this study, no historic-period features or artifacts associated with the site were observed in the vicinity.

Based on the research results summarized above, CRM TECH recommends to the City of Highland a finding of *No Impact* regarding "historical resources." No further cultural resources investigation is recommended for this project unless construction plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during any earth-moving operations associated with the project, all work within 50 feet of the discovery should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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INTRODUCTION

Between March and June 2020, at the request of Jericho Systems, Inc., CRM TECH performed a cultural resources study on approximately 1.2 acres of vacant land in the City of Highland, San Bernardino County, California (Figure 1). The subject property of the study comprises a portion of Assessor's Parcel Number 0288-251-83, located on the south side of Highland Avenue between Rockspring Lane and Cloverhill Drive, to the west of the East Highland Reservoir, in the west half of Section 35, Township 1 North, Range 3 West, San Bernardino Baseline and Meridian (Figures 2, 3).

The study is part of the environmental review process for the proposed construction of new underground storm drain improvements at the upstream terminus of Bledsoe Creek, replacement of a concrete apron at the storm drain outlet, and re-grading and stabilization of an existing embankment slope. The City of Highland, as the lead agency for the project, required the study in compliance with the California Environmental Quality Act (CEQA; PRC §21000, et seq.). The purpose of the study is to provide the City with the necessary information and analysis to determine whether the proposed project would cause substantial adverse changes to any "historical resources," as defined by CEQA, that may exist in or near the project area.

In order to identify such resources, CRM TECH initiated a historical/archaeological resources records search and a Native American Sacred Lands File search, pursued historical background research, and carried out an intensive-level field survey. The following report is a complete account of the methods, results, and final conclusion of the study. Personnel who participated in the study are named in the appropriate sections below, and their qualifications are provided in Appendix 1.

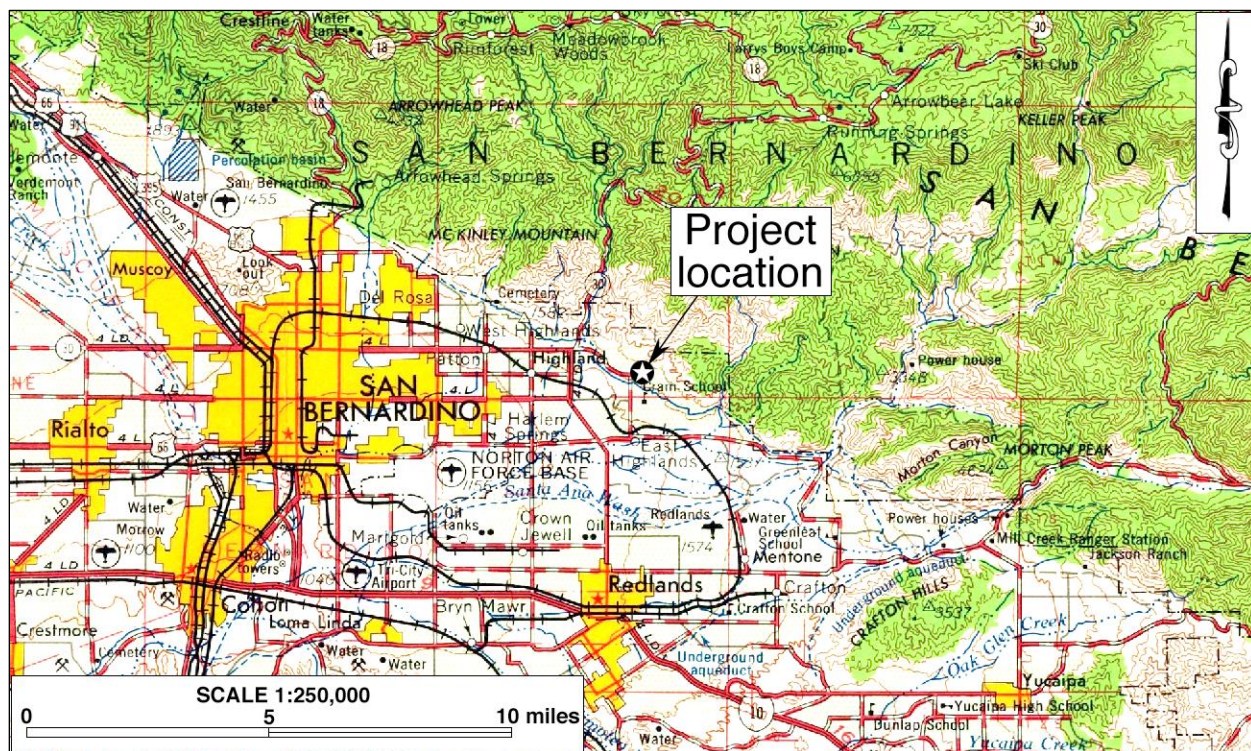


Figure 1. Project vicinity. (Based on USGS San Bernardino, Calif., 120'x60' quadrangle [USGS 1969])

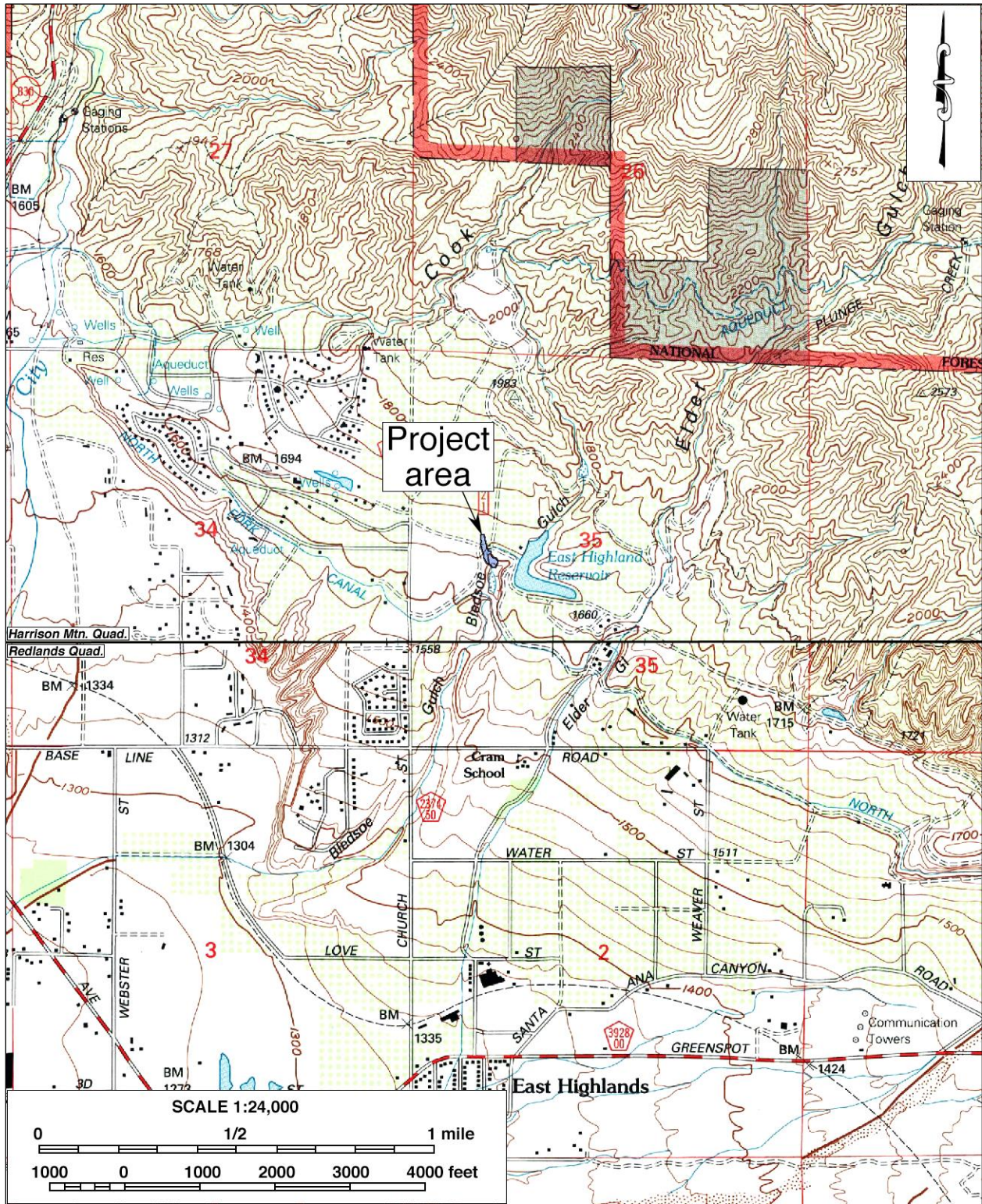


Figure 2. Project location. (Based on USGS Harrison Mtn. and Redlands, Calif., 7.5' quadrangles [USGS 1988; 1996])

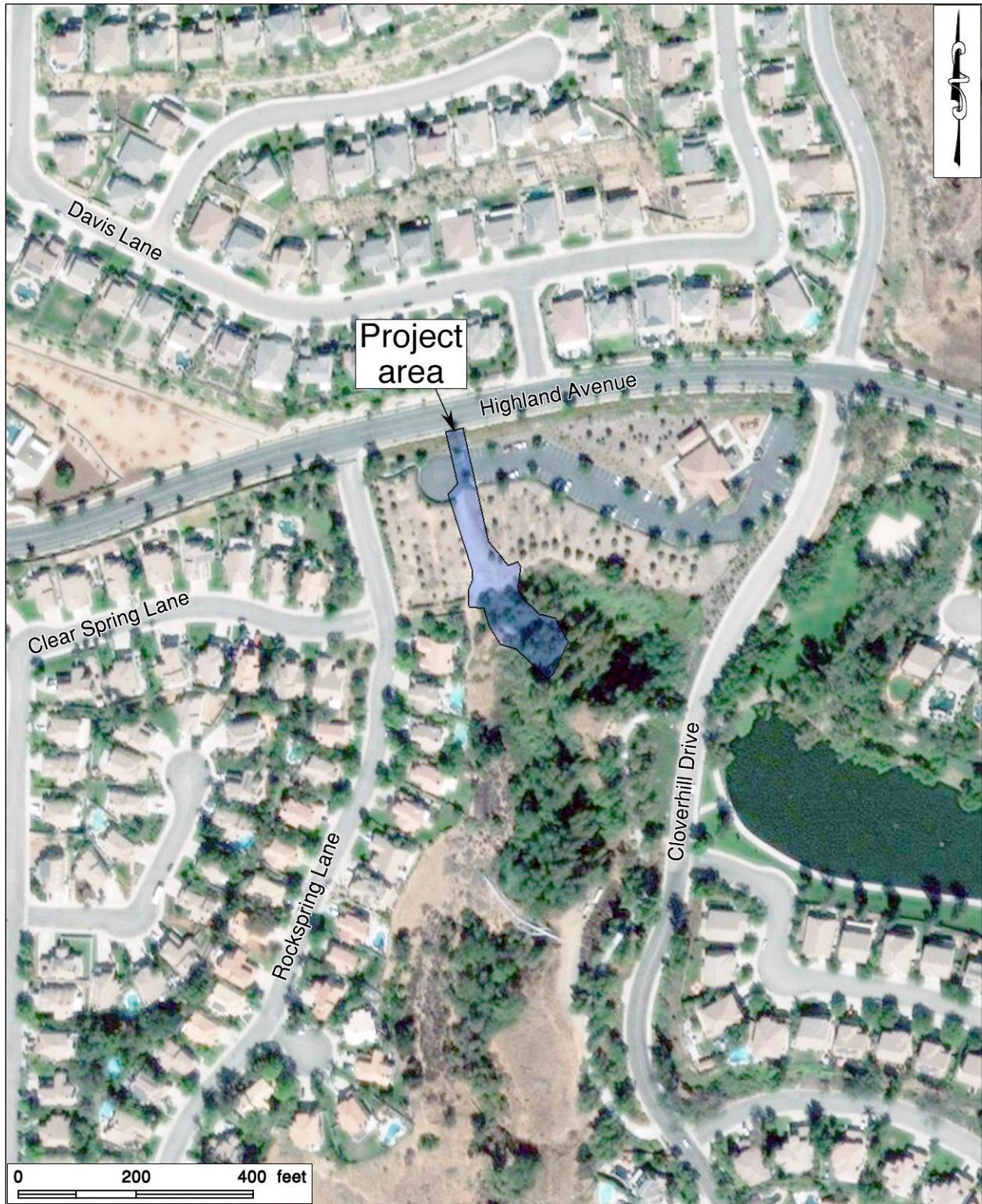


Figure 3. Aerial image of the project area.

SETTING

CURRENT NATURAL SETTING

The City of Highland is situated in the northeastern portion of the San Bernardino Valley, a broad inland valley defined by the San Gabriel and San Bernardino mountain ranges on the north and a series of low rocky hills on the south. The natural environment of the region is characterized by its temperate Mediterranean climate, with the average maximum temperature in July reaching over 90 degrees Fahrenheit (°F) and the average minimum temperature in January hovering around 35°F. Rainfall is typically less than 20 inches annually, most of which occurs between November and March.

The project area, in turn, is situated in the northeastern portion of the city, near the base of the San Bernardino Mountains. It is surrounded by an expansive suburban residential development known as East Highlands Ranch and occupies a part of the grounds of the East Highlands Ranch Master Homeowners Association Community Center (Figure 3). Elevations in the project area range approximately from 1,585 feet to 1,655 feet above mean sea level. The surface soil features brown fine- to coarse-grained sands with rocks of various sizes and small boulders.

The northern portion of the project area is relatively level in terrain and extends across the parking lot for the community center, a paved service road, and landscaped areas, and the southern portion drops sharply in elevation into the Bledsoe Gulch and contains a number of existing storm drain facilities, including a concrete-lined retention basin (Figure 4). Vegetation in the northern portion of the project area consists primarily of landscaping plants while the southern portion hosts a dense growth of sycamore and cottonwood trees, palms, and various bushes and weeds.

CULTURAL SETTING

The earliest evidence of human occupation in the inland southern California was discovered below the surface of an alluvial fan in the northern portion of the Lakeview Mountains, overlooking the



Figure 4. Current natural setting of the project area. *Left*: northern portion, view to the north; *right*: southern portion, view to the south. (Photographs taken on April 15, 2020)

San Jacinto Valley, with radiocarbon dates clustering around 9,500 before present (B.P.; Horne and McDougall 2008). Another site found near the shoreline of Lake Elsinore, close to the confluence of Temescal Wash and the San Jacinto River, yielded radiocarbon dates between 8,000 and 9,000 B.P. (Grenda 1997). Additional sites with isolated Archaic dart points, bifaces, and other associated lithic artifacts from the same age range have been found in the Cajon Pass area, typically atop knolls with good viewsheds (Basgall and True 1985; Goodman and McDonald 2001; Goodman 2002; Milburn et al. 2008).

The cultural prehistory of southern California has been summarized into numerous chronologies, including those developed by Chartkoff and Chartkoff (1984), Warren (1984), and others. Specifically, the prehistory of the inland region has been addressed by O'Connell et al. (1974), McDonald et al. (1987), Keller and McCarthy (1989), Grenda (1993), Goldberg (2001), and Horne and McDougall (2008). Although the beginning and ending dates of different cultural horizons vary regionally, the general framework of regional prehistory can be broken into three primary periods:

- **Paleoindian Period (ca. 18,000-9,000 B.P.):** Native peoples of this period created fluted spearhead bases designed to be hafted to wooden shafts. The distinctive method of thinning bifaces and spearhead preforms by removing long, linear flakes leaves diagnostic Paleoindian markers at tool-making sites. Other artifacts associated with the Paleoindian toolkit include choppers, cutting tools, retouched flakes, and perforators. Sites from this period are very sparse across the landscape and most are deeply buried.
- **Archaic Period (ca. 9,000-1,500 B.P.):** Archaic sites are characterized by abundant lithic scatters of considerable size with many biface thinning flakes, bifacial preforms broken during manufacture, and well-made groundstone bowls and basin metates. As a consequence of making dart points, many biface thinning waste flakes were generated at individual production stations, which is a diagnostic feature of Archaic sites.
- **Late Prehistoric Period (ca. 1,500 B.P.-contact):** Sites from this period typically contain small lithic scatters from the manufacture of small arrow points, expedient groundstone tools such as tabular metates and unshaped manos, wooden mortars with stone pestles, acorn or mesquite bean granaries, ceramic vessels, shell beads suggestive of extensive trading networks, and steatite implements such as pipes and arrow shaft straighteners.

Ethnohistoric Context

The present-day Highland area is generally recognized as a part of the homeland of the Serrano people, although other Native groups, such as the Gabrielino of the Los Angeles Basin, also claim the area as a part of their cultural influence. Together with that of the Vanyume people, linguistically a subgroup, the traditional territory of the Serrano includes the San Bernardino Mountains, part of the San Gabriel Mountains, and the Mojave River Valley in the southern portion of the Mojave Desert, reaching as far east as the Cady, Bullion, Sheep Hole, and Coxcomb Mountains. The name "Serrano" was derived from a Spanish term meaning "mountaineer" or "highlander." The basic written sources on Serrano culture are Kroeber (1925), Strong (1929), and Bean and Smith (1978). The following ethnographic discussion of the Serrano people is based mainly on these sources.

Prior to European contact, Serrano subsistence was defined by the surrounding landscape and primarily based on the gathering of wild and cultivated foods and hunting, exploiting nearly all of

the resources available. They settled mostly on elevated terraces, hills, and finger ridges near where flowing water emerged from the mountains. Loosely organized into exogamous clans led by hereditary heads, the clans were in turn affiliated with one of two exogamous moieties, the Wildcat (*Tukutam*) or the Coyote (*Wahiiam*). The exact nature of the clans, their structure, function, and number are not known, except that each clan was the largest autonomous political and landholding unit. The core of the unit was the patrilineage, although women retained their own lineage names after marriage. There was no pan-tribal political union among the clans.

Although contact with Europeans may have occurred as early as 1771 or 1772, Spanish influence on Serrano lifeways was negligible until the 1810s, when a mission *asistencia* was established on the southern edge of Serrano territory. Between then and the end of the mission era in 1834, most of the Serrano in the western portion of their traditional territory were removed to the nearby missions. In the eastern portion, a series of punitive expeditions in 1866-1870 resulted in the death or displacement of almost all remaining Serrano population in the San Bernardino Mountains. Today, most Serrano descendants are affiliated with the San Manuel Band of Mission Indians, the Morongo Band of Mission Indians, or the Serrano Nation of Indians.

Historic Context

The San Bernardino Valley, along with the rest of Alta California, was claimed by Spain in the late 18th century, and the first European explorers traveled through the area as early as 1772, three years after the beginning of Spanish colonization (Beck and Haase 1974:15). For nearly four decades afterwards, however, the arid inland valley received little attention from the European colonizers, who concentrated their efforts along the Pacific coast. Following the establishment of Mission San Gabriel in 1771, the San Bernardino Valley became a part of the mission's vast land holdings. The name "San Bernardino" was bestowed on the region in the 1810s, when the *asistencia* and an associated mission rancho, both bearing that name, were established in present-day Loma Linda (Lerch and Haenszel 1981).

After gaining independence from Spain in 1821, the Mexican authorities began in 1834 the process of secularization to dismantle the mission system in Alta California. During the next 12 years, former mission ranchos throughout Alta California were surrendered to the Mexican government, and subsequently divided and granted to various prominent citizens of the province. In 1842, the former mission rancho of San Bernardino was granted to members of a prominent Los Angeles family, the Lugos (Schuiling 1984:34). After the American annexation of Alta California in 1848, the Lugos sold the entire land grant in 1851 to a group of Mormon settlers, who promptly founded the town of San Bernardino, one of the first non-Indian settlements in what is known today as the Inland Empire (*ibid.*:45).

A few miles to the northeast of San Bernardino, the present-day Highland area received the earliest Euroamerican settlers at least by the mid-1850s (Richards 1966). The name "Highland" was adopted by the settlers in 1883, when the area had a large enough population to warrant the establishment of a school district, and the town of Highland was laid out in 1891 (*ibid.*). During much of the 20th century, Highland remained a small rural settlement best known for citrus cultivation. In recent decades, however, like many other former rural towns in southern California, Highland has experienced rapid growth as a bedroom community, culminating in its incorporation in 1987.

RESEARCH METHODS

HISTORICAL/ARCHAEOLOGICAL RESOURCES RECORDS SEARCH

The historical/archaeological resources records search for this study was conducted by the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System on April 15, 2020. Located on the campus of California State University, Fullerton, SCCIC is the State of California's official cultural resource records repository for the County of San Bernardino. During the records search, SCCIC staff examined the center's digital maps, records, and databases for previously identified cultural resources and existing cultural resources reports within a one-mile radius of the project area. Due to facility closure during the COVID-19 pandemic, records that had not been digitized were unavailable to the SCCIC staff. Therefore, SCCIC cautions that the records search results "may or may not be complete" (see Appendix 2).

SACRED LANDS FILE SEARCH

In order to identify any known Native American cultural resources in or near the project area, on March 10, 2020, CRM TECH submitted a written request to the State of California Native American Heritage Commission (NAHC) for a records search in the commission's Sacred Lands File. NAHC is the State of California's trustee agency for the protection of "tribal cultural resources," as defined by California Public Resources Code §21074, and is tasked with identifying and cataloging properties of Native American cultural value, including places of special religious, spiritual, or social significance and known graves and cemeteries throughout the state. The response from NAHC is summarized below and attached to this report in Appendix 3.

HISTORICAL BACKGROUND RESEARCH

Historical background research for this study was completed by CRM TECH principal investigator/historian Bai "Tom" Tang. Sources consulted during the research included published literature in local and regional history, U.S. General Land Office (GLO) land survey plat maps dated 1858-1878, U.S. Geological Survey (USGS) topographic maps dated 1901-1996, and aerial photographs taken in 1938-2019. The historic maps are collected at the Science Library of the University of California, Riverside, and the California Desert District of the U.S. Bureau of Land Management, located in Moreno Valley. The aerial photographs are available at the Nationwide Environmental Title Research (NETR) Online website and through the Google Earth software.

FIELD SURVEY

On April 15, 2020, CRM TECH archaeologist Daniel Ballester carried out the pedestrian field survey of the project area. The northern portion of the property was surveyed at an intensive level by walking a series of parallel north-south transects spaced five meters (approximately 15 feet) apart, but the southern portion, containing the retention basin and steep slopes to the gulch, could not be surveyed effectively due to the dense vegetation growth. In the area that was surveyed intensively, visibility of the native ground surface was good (approximately 70-90%) except where clusters of landscaping plants or pavement are present.

RESULTS AND FINDINGS

HISTORICAL/ARCHAEOLOGICAL RESOURCES RECORDS SEARCH

According to the records search results provided by SCCIC, the project area was involved in a series of six cultural resources studies completed between 1974 and 1995 on the East Highlands Ranch, a 1,635-acre agricultural enterprise that has since given way to the suburban residential development bearing that name today (Figure 5). Some of these studies entailed systematic archaeological field surveys on various portions of the ranch, while others were focused on historical background research on the ranch and the buildings and other built-environment features on the property.

As a result of these studies, the entire East Highlands Ranch complex and its various features and components were recorded collectively between 1990 and 2003 as a historical site and subsequently designated 36-007051 (CA-SBR-7051H) in the California Historical Resources Inventory (see Appendix 4). The project area was included in the overall boundaries of the site, but no features or artifacts of the site are known to have been found at this location. Founded in the late 1880s by a James S. Edwards, a well-known early settler in the Redlands colony, the ranch was once an important part of Highland's agrarian past, but its former landholdings have been completely redeveloped and urbanized since the 1980s. Site 36-007051, therefore, no longer exists.

Within the one-mile scope of the records search, SCCIC records indicate that 15 additional historical/archaeological sites and an isolate (i.e., a locality with fewer than three artifacts) have been recorded previously. Among these, the isolate and one of the sites were of prehistoric (i.e., Native American) origin, consisting of a single granitic metate and a bedrock milling feature with a slick, respectively. The other 14 sites dated to the historic period and included seven irrigation features, a residential building, structural remains, orchards, and the San Bernardino Baseline. The nearest site to the project location represented the 1885 North Fork Canal, which traversed a few hundred feet to the south. Since none of these 16 resources were found in the immediate vicinity of the project area, none of them require further consideration during this study.

SACRED LANDS FILE SEARCH

In response to CRM TECH's inquiry, NAHC reported in a letter dated March 20, 2020, that Sacred Lands File identified no Native American cultural resources in the project vicinity. Noting that the absence of specific information would not necessarily indicate the absence of cultural resources, however, NAHC recommended that local Native American groups be consulted for further information and provided a referral list of potential contacts. NAHC's reply is attached to this report in Appendix 3 for reference by the City of Highland in future government-to-government consultations with the pertinent tribal groups.

HISTORICAL BACKGROUND RESEARCH

Historic maps consulted for this study demonstrate ample evidence of settlement and development activities in the project vicinity at least by the mid-19th century. In 1853-1877, when the U.S. government conducted the earliest systematic land surveys in the San Bernardino Valley, the surveyors noted settler Bledsoe's house and a small grain field a short distance to the southeast and

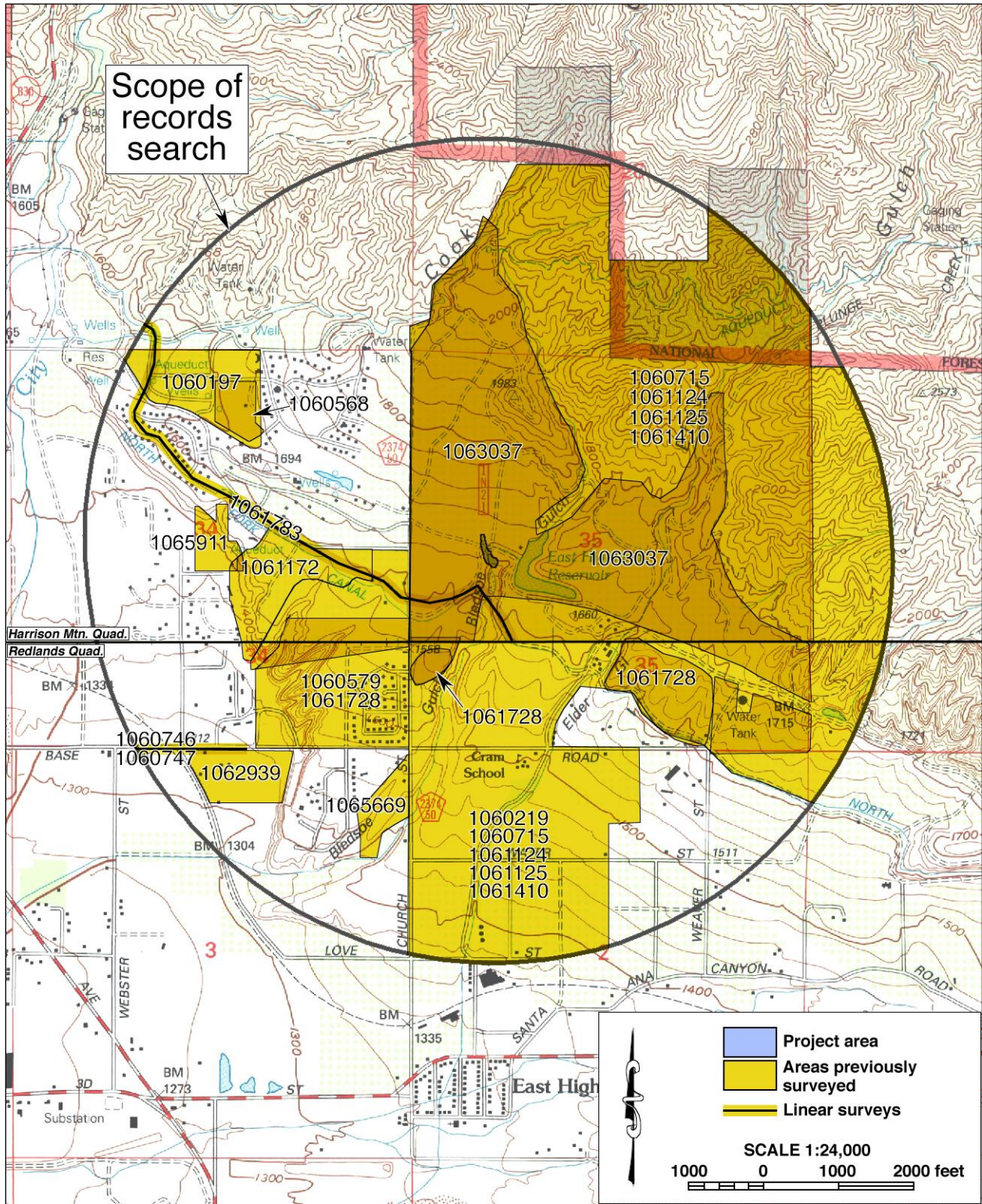


Figure 5. Previous cultural resources studies in the vicinity of the project area, listed by SCCIC file number. Locations of historical/archaeological resources are not shown as a protective measure.

the east of the project location, respectively, as well as a trail traversing east-west near the northern end of the project area (Figure 6).

As mentioned above, the project area became a part of James S. Edwards' East Highlands Ranch in the late 1880s (Lerch 1981:7-8). Maps from the late 1890s show the project area to be surrounded by the road on the north, the North Fork Canal on the south, and the forerunner of the East Highland Reservoir on the southeast, but no man-made features are depicted in the immediate vicinity except the winding road (Figure 7).

During the 1930s-1960s, most of the land around the project location was planted in orchards, presumably citrus groves, but the project area was part of a strip of land along the Bledsoe Gulch that remained uncultivated (Figures 8, 9; NETR Online 1938-1968). By that time the road that ran across the northern tip of the project area in the 1890s, still a dirt road as late as 1995, was joined by another dirt road that traversed roughly north-south across the project location (Figures 8, 9; NETR Online 1938-1995).

Starting in the 1980s, the East Highlands Ranch underwent a rapid transformation from agriculture to suburbia, and by 2007 the redevelopment had been largely completed (NETR Online 1980-2009; Google Earth 1994-2007). In the immediate vicinity of the project area, Highland Avenue was extended and paved along the northern edge of the project area between 1995 and 2002, and the community center and its parking lot were built in 2004-2005, replacing the last patch of the original orchards of the ranch (Google Earth 1995-2005). The citrus trees that are now found on the grounds of the community center were evidently planted in 2007-2009 (Google Earth 2007; 2009).

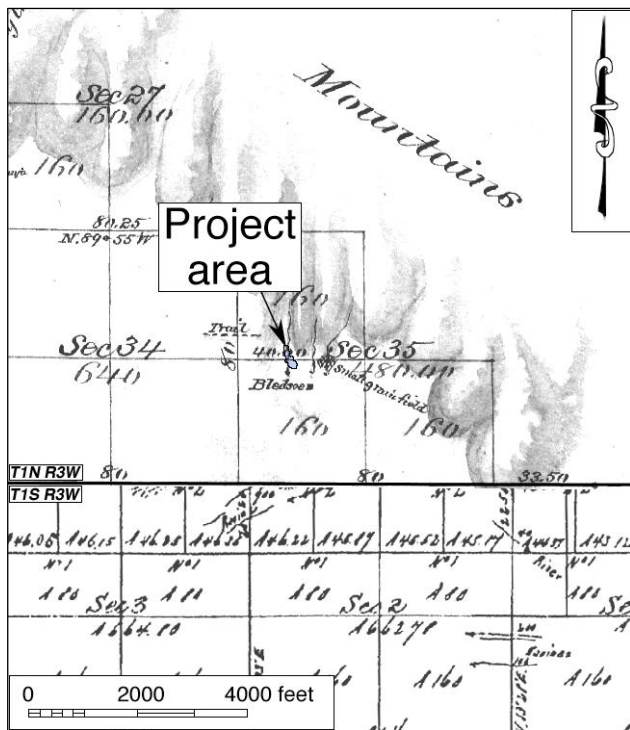


Figure 6. The project area and vicinity in 1853-1877. (Source: GLO 1858; 1878)

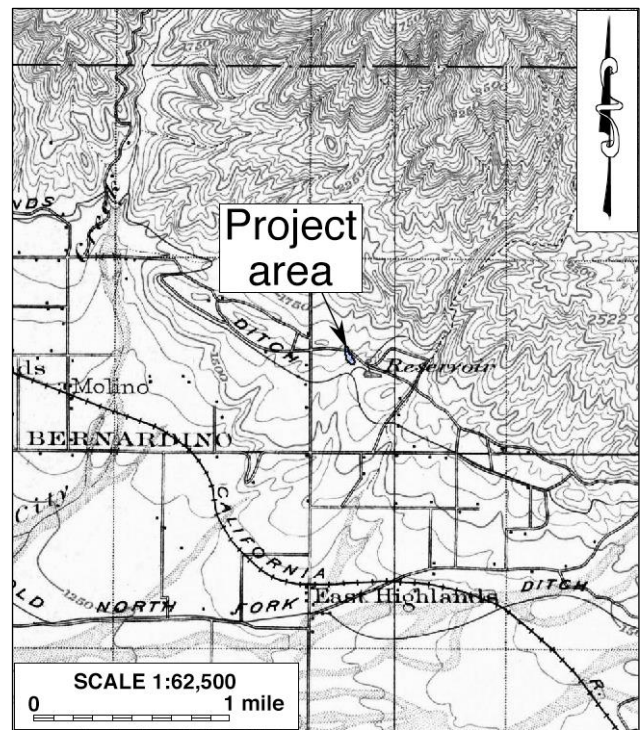


Figure 7. The project area and vicinity in 1898-1899. (Source: USGS 1901)

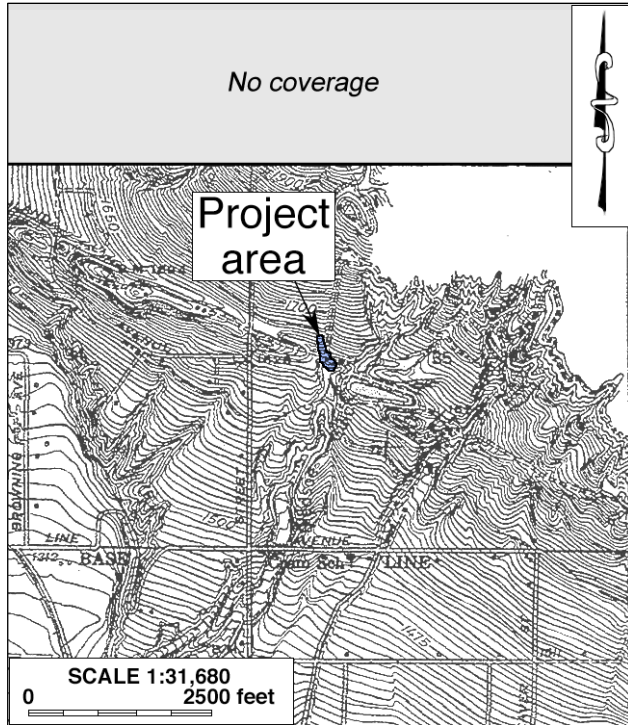


Figure 8. The project area and vicinity in 1939. (Source: USGS 1943)

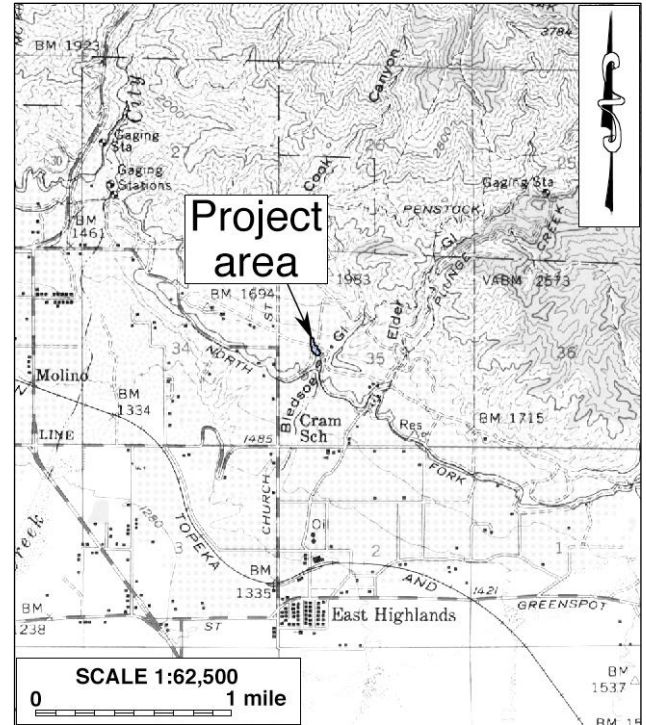


Figure 9. The project area and vicinity in 1952. (Source: USGS 1954)

Since then, the character of the project area has remained unchanged (NETR Online 2009-2016; Google Earth 2009-2019).

FIELD SURVEY

The field survey produced negative results for any potential cultural resources, and no buildings, structures, objects, sites, features, or artifacts more than 50 years of age were encountered within or adjacent to the project boundaries. Field observations provided clear evidence that the ground surface in the entire project area had been extensively disturbed by past construction activities, in the northern portion in association with the community center and in the southern portion in association with the storm drain facilities. As a result, further survey effort in the heavily vegetated southern portion of the project area was deemed unproductive and unnecessary.

DISCUSSION

The purpose of this study is to identify any cultural resources within the project area and assist the City of Highland in determining whether such resources meet the official definition of “historical resources,” as provided in the California Public Resources Code, in particular CEQA. According to PRC §5020.1(j), “‘historical resource’ includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.”

More specifically, CEQA guidelines state that the term “historical resources” applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the lead agency (Title 14 CCR §15064.5(a)(1)-(3)). Regarding the proper criteria for the evaluation of historical significance, CEQA guidelines mandate that “generally a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing on the California Register of Historical Resources” (Title 14 CCR §15064.5(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- (2) Is associated with the lives of persons important in our past.
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.
(PRC §5024.1(c))

In summary of the research results presented above, the project area was encompassed entirely in the overall perimeters of Site 36-007051, the former East Highlands Ranch, but no features or artifacts associated with the site were found within the current project boundaries. Since its first recordation in 1990, the ranch complex has been completely removed and replaced with suburban residential neighborhoods, and no identifiable physical remnants of the site survive in the project vicinity today. No other potential “historical resources” were encountered throughout the course of the study. Based on these findings, and in light of the criteria listed above, the present study concludes that no “historical resources” exist within or adjacent to the project area.

CONCLUSION AND RECOMMENDATIONS

CEQA establishes that “a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment” (PRC §21084.1). “Substantial adverse change,” according to PRC §5020.1(q), “means demolition, destruction, relocation, or alteration such that the significance of a historical resource would be impaired.” Since no “historical resources,” as defined by CEQA, have been identified within or adjacent to the project area, CRM TECH presents the following recommendations to the City of Highland:

- The project as currently proposed will not cause a substantial adverse change to any known “historical resources.”
- No further cultural resources investigation is necessary for the proposed project unless construction plans undergo such changes as to include areas not covered by this study.
- If buried cultural materials are encountered during any earth-moving operations associated with the project, all work within 50 feet of the discovery should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

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- Lerch, Michael K.
 1981 Cultural Resources Assessment of the East Highlands Ranch, San Bernardino County, California. On file, South Central Coastal Information Center, California State University, Fullerton.
- Lerch, Michael K., and Arda M. Haenszel
 1981 Life on Cottonwood Row. *Heritage Tales* 1981:33-71. Fourth Annual Publication of the City of San Bernardino Historical Society, San Bernardino.
- McDonald, Meg, Philip J. Wilke, and Andrea Kauss
 1987 McCue: An Elko Site in Riverside County. *Journal of California and Great Basin Anthropology* 9(1):46-73.
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 2008 Archaeological Investigation at Baldy Mesa-Cajon Divide for the Baldy Mesa Off-Highway-Vehicle Recreation Trails Project, San Bernardino National Forest, San Bernardino County, California. San Bernardino National Forest Technical Report 05-12-53-091. San Bernardino.
- NETR Online
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- Richards, Elizabeth W.
 1966 *Guideposts to History, Concerning Origins of Place and Street Names in San Bernardino County*. Santa Fe Federal Savings and Loan Association, San Bernardino.
- Schuiling, Walter C.
 1984 *San Bernardino County: Land of Contrast*. Windsor Publications, Woodland Hills, California.
- USGS (United States Geological Survey, U.S. Department of the Interior)
 1901 Map: Redlands, Calif. (15', 1:62,500); surveyed in 1898-1899.
 1943 Map: Redlands and Vicinity, Calif. (1:31,680); surveyed in 1939.
 1954 Map: Redlands, Calif. (15', 1:62,500); aerial photographs taken in 1952.
 1969 Map: San Bernardino, Calif. (120'x60', 1:250,000); 1958 edition revised.
 1988 Map: Harrison Mtn., Calif. (7.5', 1:24,000); 1967 edition photorevised.
 1996 Map: Redlands, Calif. (7.5', 1:24,000); 1967 edition photorevised in 1994.
- Warren, Claude N.
 1984 The Desert Region. In Michael J. Moratto (ed.): *California Archaeology*; pp. 339-430. Academic Press, Orlando, Florida.

**APPENDIX 1:
PERSONNEL QUALIFICATIONS**

**PRINCIPAL INVESTIGATOR/HISTORIAN
Bai “Tom” Tang, M.A.**

Education

- 1988-1993 Graduate Program in Public History/Historic Preservation, UC Riverside.
1987 M.A., American History, Yale University, New Haven, Connecticut.
1982 B.A., History, Northwestern University, Xi’an, China.
- 2000 “Introduction to Section 106 Review,” presented by the Advisory Council on Historic Preservation and the University of Nevada, Reno.
1994 “Assessing the Significance of Historic Archaeological Sites,” presented by the Historic Preservation Program, University of Nevada, Reno.

Professional Experience

- 2002- Principal Investigator, CRM TECH, Riverside/Colton, California.
1993-2002 Project Historian/Architectural Historian, CRM TECH, Riverside, California.
1993-1997 Project Historian, Greenwood and Associates, Pacific Palisades, California.
1991-1993 Project Historian, Archaeological Research Unit, UC Riverside.
1990 Intern Researcher, California State Office of Historic Preservation, Sacramento.
1990-1992 Teaching Assistant, History of Modern World, UC Riverside.
1988-1993 Research Assistant, American Social History, UC Riverside.
1985-1988 Research Assistant, Modern Chinese History, Yale University.
1985-1986 Teaching Assistant, Modern Chinese History, Yale University.
1982-1985 Lecturer, History, Xi’an Foreign Languages Institute, Xi’an, China.

Cultural Resources Management Reports

Preliminary Analyses and Recommendations Regarding California’s Cultural Resources Inventory System (with Special Reference to Condition 14 of NPS 1990 Program Review Report). California State Office of Historic Preservation working paper, Sacramento, September 1990.

Numerous cultural resources management reports with the Archaeological Research Unit, Greenwood and Associates, and CRM TECH, since October 1991.

PRINCIPAL INVESTIGATOR/ARCHAEOLOGIST
Michael Hogan, Ph.D., RPA*

Education

- 1991 Ph.D., Anthropology, University of California, Riverside.
1981 B.S., Anthropology, University of California, Riverside; with honors.
1980-1981 Education Abroad Program, Lima, Peru.
- 2002 Section 106—National Historic Preservation Act: Federal Law at the Local Level.
UCLA Extension Course #888.
- 2002 “Recognizing Historic Artifacts,” workshop presented by Richard Norwood,
Historical Archaeologist.
- 2002 “Wending Your Way through the Regulatory Maze,” symposium presented by the
Association of Environmental Professionals.
- 1992 “Southern California Ceramics Workshop,” presented by Jerry Schaefer.
1992 “Historic Artifact Workshop,” presented by Anne Duffield-Stoll.

Professional Experience

- 2002- Principal Investigator, CRM TECH, Riverside/Colton, California.
1999-2002 Project Archaeologist/Field Director, CRM TECH, Riverside.
1996-1998 Project Director and Ethnographer, Statistical Research, Inc., Redlands.
1992-1998 Assistant Research Anthropologist, University of California, Riverside
1992-1995 Project Director, Archaeological Research Unit, U. C. Riverside.
1993-1994 Adjunct Professor, Riverside Community College, Mt. San Jacinto College, U.C.
Riverside, Chapman University, and San Bernardino Valley College.
1991-1992 Crew Chief, Archaeological Research Unit, U. C. Riverside.
1984-1998 Archaeological Technician, Field Director, and Project Director for various southern
California cultural resources management firms.

Research Interests

Cultural Resource Management, Southern Californian Archaeology, Settlement and Exchange
Patterns, Specialization and Stratification, Culture Change, Native American Culture, Cultural
Diversity.

Cultural Resources Management Reports

Author and co-author of, contributor to, and principal investigator for numerous cultural resources
management study reports since 1986.

Memberships

* Register of Professional Archaeologists; Society for American Archaeology; Society for California
Archaeology; Pacific Coast Archaeological Society; Coachella Valley Archaeological Society.

PROJECT ARCHAEOLOGIST/FIELD DIRECTOR
Daniel Ballester, M.S., RPA

Education

- 2013 M.S., Geographic Information System (GIS), University of Redlands, California.
- 1998 B.A., Anthropology, California State University, San Bernardino.
- 1997 Archaeological Field School, University of Las Vegas and University of California, Riverside.
- 1994 University of Puerto Rico, Rio Piedras, Puerto Rico.

- 2007 Certificate in Geographic Information Systems (GIS), California State University, San Bernardino.
- 2002 “Historic Archaeology Workshop,” presented by Richard Norwood, Base Archaeologist, Edwards Air Force Base; presented at CRM TECH, Riverside, California.

Professional Experience

- 2002- Field Director/GIS Specialist, CRM TECH, Riverside/Colton, California.
- 1999-2002 Project Archaeologist, CRM TECH, Riverside, California.
- 1998-1999 Field Crew, K.E.A. Environmental, San Diego, California.
- 1998 Field Crew, A.S.M. Affiliates, Encinitas, California.
- 1998 Field Crew, Archaeological Research Unit, University of California, Riverside.

PROJECT ARCHAEOLOGIST/REPORT WRITER
Ben Kerridge, M.A.

Education

- 2014 Geoarchaeological Field School, Institute for Field Research, Kephallenia, Greece.
- 2010 M.A., Anthropology, California State University, Fullerton.
- 2009 Project Management Training, Project Management Institute/CH2M HILL, Santa Ana, California.
- 2004 B.A., Anthropology, California State University, Fullerton.

Professional Experience

- 2015- Project Archaeologist/Report Writer, CRM TECH, Colton, California.
- 2015 Teaching Assistant, Institute for Field Research, Kephallenia, Greece.
- 2009-2014 Publications Delivery Manager, CH2M HILL, Santa Ana, California.
- 2010- Naturalist, Newport Bay Conservancy, Newport Beach, California.
- 2006-2009 Technical Publishing Specialist, CH2M HILL, Santa Ana, California.

APPENDIX 2

**NOTE FROM SCCIC
ON RECORDS SEARCH RESULT**

South Central Coastal Information Center
Orange, Los Angeles, Ventura and San Bernardino Counties
California Historical Resources Inventory System
California State University, Fullerton,
Department of Anthropology, MH-426
800 North State College, Fullerton, CA 92834
Telephone 657.278.5395

April 15, 2020

SCCIC JOB #21219

Nina Gallardo
CRM TECH

RE: Bledsoe Creek Slope and Storm Drain Repair Project (CRM TECH No. 3601)

These records search results are provided to you under emergency conditions due to the Covid-19 Virus. You were provided with instructions for requesting a records search under our emergency protocols for San Bernardino County. The data request form you submitted for the above referenced job may or may not have been in compliance with our instructions. When your request was in conflict with our instructions, we may have defaulted to our emergency protocols and provided you with what was available. See the next page if there were any notes that we needed to convey to you.

We can only provide you information that is already in digital format; therefore, your record search may or may not be complete. Some records are only available in paper formats and so may not be available here. This also means that there may be data missing from the database bibliographies; locations of resource and report boundaries may be missing or mis-mapped on our digital maps; and that no pdf of a resource or report is available or may be incomplete.

As for the mapped data, bibliographic databases, and pdfs of records and reports; not all the data in our digital archive for San Bernardino County was processed by SCCIC, therefore, we cannot vouch for its accuracy. Accuracy checking and back-filling of missing information is an on-going process under normal working conditions and cannot be conducted under the emergency protocols.

Sincerely,
Stacy St. James
South Central Coastal Information Center
sccic@fullerton.edu Phone 657.278.5395

APPENDIX 3

SACRED LANDS FILE SEARCH RESULT

SACRED LANDS FILE & NATIVE AMERICAN CONTACTS LIST REQUEST

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Boulevard, Suite 100
West Sacramento, CA 95691
(916)373-3710
(916)373-5471 (Fax)
nahc@nahc.ca.gov

Project: Proposed Bledsoe Creek Slope and Storm Drain Repair Project (CRM TECH No. 3601)

County: San Bernardino

USGS Quadrangle Name: Harrison Mountain and Redlands, Calif.

Township 1 North **Range** 3 West **SB BM; Section(s):** 35

Company/Firm/Agency: CRM TECH

Contact Person: Nina Gallardo

Street Address: 1016 E. Cooley Drive, Suite A/B

City: Colton, CA **Zip:** 92324

Phone: (909) 824-6400 **Fax:** (909) 824-6405

Email: ngallardo@crmtech.us

Project Description: The primary component of the project is to construct new underground storm drain improvements at the upstream terminus of Bledsoe Creek, replace a concrete apron at the storm drain outlet, re-grade and stabilize an existing embankment slope near the East Highlands Ranch Master Homeowners Association Community Center, in the City of Highland, California.

March 10, 2020

NATIVE AMERICAN HERITAGE COMMISSION

March 20, 2020

Nina Gallardo
CRM TECH

Via Email to: ngallardo@crmtech.us

Re: Proposed Bledsoe Creek Slope and Storm Drain Repair Project, San Bernardino County

Dear Ms. Gallardo:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green
Cultural Resources Analyst

Attachment



CHAIRPERSON
Laura Miranda
Luiseño

VICE CHAIRPERSON
Reginald Pagaling
Chumash

SECRETARY
Merri Lopez-Keifer
Luiseño

PARLIAMENTARIAN
Russell Attebery
Karuk

COMMISSIONER
Marshall McKay
Wintun

COMMISSIONER
William Mungary
Paiute/White Mountain
Apache

COMMISSIONER
Joseph Myers
Pomo

COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

**Native American Heritage Commission
Native American Contact List
San Bernardino County
3/20/2020**

**Agua Caliente Band of Cahuilla
Indians**

Jeff Grubbe, Chairperson
5401 Dinah Shore Drive
Palm Springs, CA, 92264
Phone: (760) 699 - 6800
Fax: (760) 699-6919

Cahuilla

**Quechan Tribe of the Fort Yuma
Reservation**

Jill McCormick, Historic
Preservation Officer
P.O. Box 1899
Yuma, AZ, 85366
Phone: (760) 572 - 2423
historicpreservation@quechantribe.com

Quechan

**Agua Caliente Band of Cahuilla
Indians**

Patricia Garcia-Plotkin, Director
5401 Dinah Shore Drive
Palm Springs, CA, 92264
Phone: (760) 699 - 6907
Fax: (760) 699-6924
ACBCI-THPO@aguacaliente.net

Cahuilla

**San Fernando Band of Mission
Indians**

Donna Yocum, Chairperson
P.O. Box 221838
Newhall, CA, 91322
Phone: (503) 539 - 0933
Fax: (503) 574-3308
ddyocum@comcast.net

Kitanemuk
Vanyume
Tataviam

**Morongo Band of Mission
Indians**

Denisa Torres, Cultural Resources
Manager
12700 Pumarra Rroad
Banning, CA, 92220
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Cahuilla
Serrano

**San Manuel Band of Mission
Indians**

Jessica Mauck, Director of
Cultural Resources
26569 Community Center Drive
Highland, CA, 92346
Phone: (909) 864 - 8933
jmauck@sanmanuel-nsn.gov

Serrano

**Morongo Band of Mission
Indians**

Robert Martin, Chairperson
12700 Pumarra Rroad
Banning, CA, 92220
Phone: (951) 849 - 8807
Fax: (951) 922-8146
dtorres@morongo-nsn.gov

Cahuilla
Serrano

**Serrano Nation of Mission
Indians**

Mark Cochrane, Co-Chairperson
P. O. Box 343
Patton, CA, 92369
Phone: (909) 528 - 9032
serranonation1@gmail.com

Serrano

**Quechan Tribe of the Fort Yuma
Reservation**

Manfred Scott, Acting Chairman
Kw'ts'an Cultural Committee
P.O. Box 1899
Yuma, AZ, 85366
Phone: (928) 750 - 2516
scottmanfred@yahoo.com

Quechan

**Serrano Nation of Mission
Indians**

Wayne Walker, Co-Chairperson
P. O. Box 343
Patton, CA, 92369
Phone: (253) 370 - 0167
serranonation1@gmail.com

Serrano

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Proposed Bledsoe Creek Slope and Storm Drain Repair Project, San Bernardino County.

APPENDIX 4

**CALIFORNIA HISTORICAL RESOURCES INVENTORY
RECORD FORMS**

Site 36-007051 (CA-SBR-7051H)

Update 10/04

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

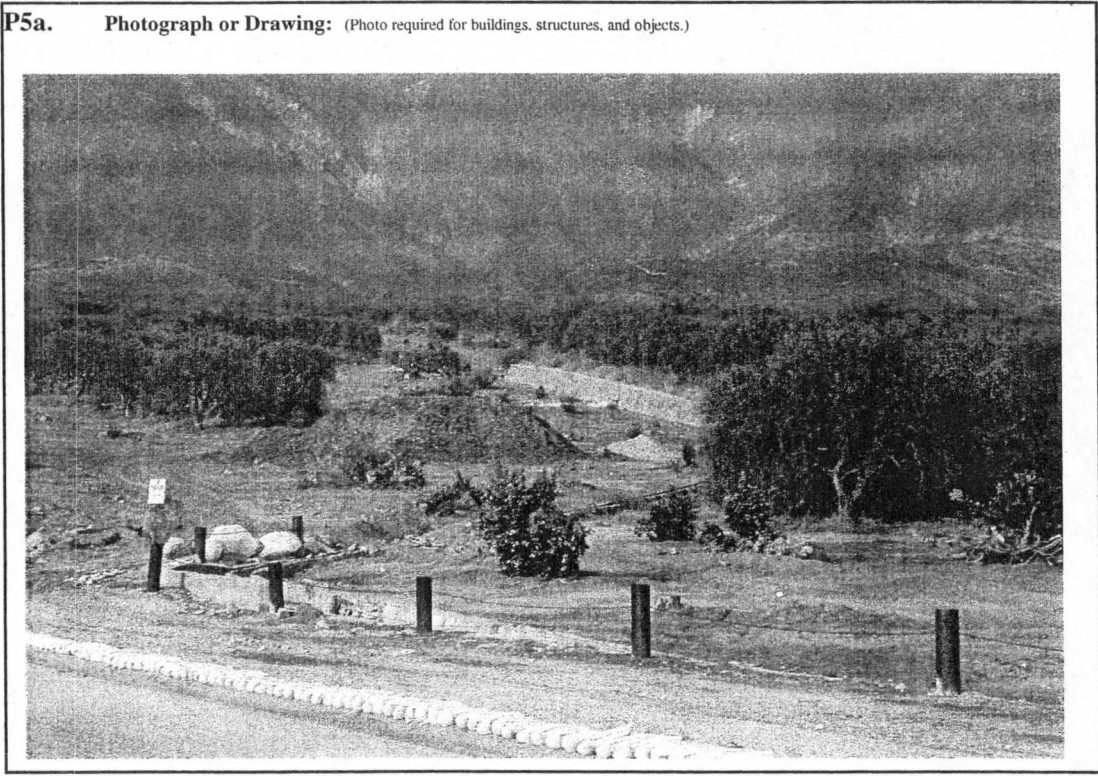
Primary # 36-007051
HRI # _____
Trinomial CA-SBR-7051H (update)
NRHP Status Code _____

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 of 41

*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

- P1. Other Identifier: East Highlands Ranch
- *P2. Location: Not for Publication Unrestricted *a. County San Bernardino
and (P2b and P2c or P2d. Attach a Location Map as necessary.)
- *b. USGS 7.5' Quad Harrison Mountain Date 1967 (1988) T 1 N ; R 3 W ; SW 1/4 of Sec 26 ; S.B.B.M.
T 1 N ; R 3 W ; NW 1/4 of Sec 35 ; S.B.B.M.
- c. Address _____ City _____ Zip _____
- d. UTM: (Give more than one for large and/or linear resources) Zone 11 ; 484354 mE / 3777427 mN;
Zone 11 ; 484060 mE / 3776414 mN; Zone 11 ; 484072 mE / 3777108 mN, Zone 11 ; 484515 mE / 3776603 mN
- e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Tract 16014
- *P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The site consists of an extensive water conveyance system within Tract 16014 of the East Highlands Ranch orange grove. This system consists of flumes, retaining walls, drainage ditches, distribution receptacles, a reservoir, and a pump. There is a total of 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78. This portion of the site is 93.3 acres in size. (See attached Continuation Sheet)
- *P3b. Resource Attributes: (List attributes and codes) HP20. Canal/aqueduct; HP 33. Farm/ranch
- *P4. Resources Present: Building Structure Object Site District Element of District Other (Isolates, etc.)



P5b. Description of Photo: (View, data, accession #) Overview of East Highlands Ranch orange grove from Church Street (1199.jpg) View to the north.

*P6. Date Constructed/Age and Sources: Historic Prehistoric Both 1905-1925 (Danny Paramo, personal communication 11/20/03)

*P7. Owner and Address: Spring Pacific Properties, LLC
15751 Rockfield Boulevard,
Suite 100
Irvine, California 92618

*P8. Recorded by: (Name, affiliation, and address): Caprice D. (Kip) Harper and Paul O. Shattuck
LSA Associates, Inc.
20 Executive Park, Suite 200
Irvine, California 92614

*P9. Date recorded: 11/20/03 and 11/21/03

*P10. Survey Type: (Describe) Intensive Survey

* P11. Report citation: (Cite survey report and other sources or enter "none.") Cultural Resources Compliance Report for the East Highlands Ranch and Mitigation Measures 37 and 38 of Tract 16014, City of Highland, San Bernardino County, California. January 2004

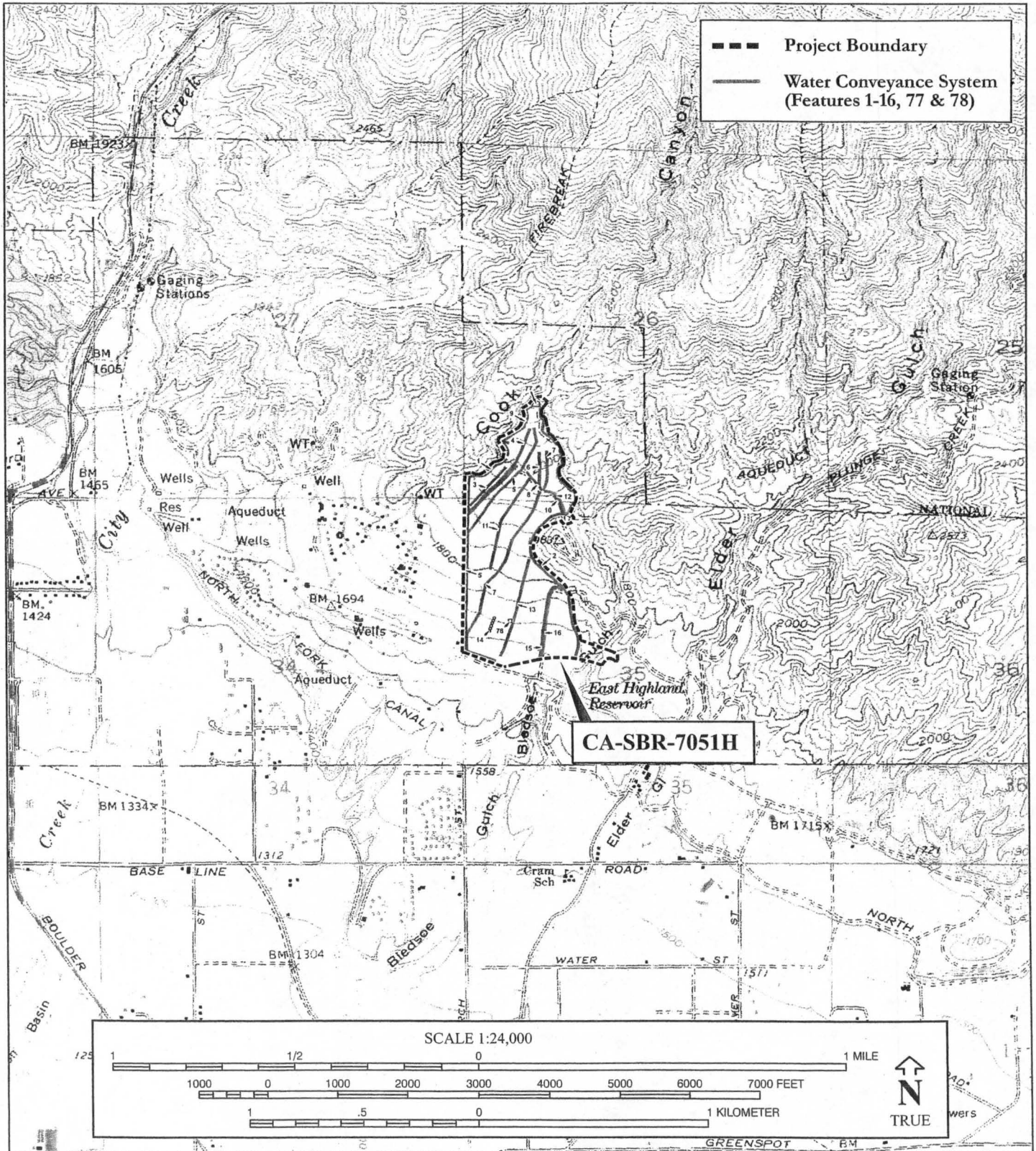
Attachments: None Location Map Sketch Map Continuation Sheet Building, Structure, and Object Record
 Archaeological Record District Record Linear Feature Record Milling Station Record Rock Art Record
 Artifact Record Photograph Record Other (List) _____

State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
LOCATION MAP

Primary # _____
HRI # _____
Trinomial CA-SBR-7051H (update)

*Resource Name or # (Assigned by recorder) Tract 16014 Water Conveyance System

*Map Name: Harrison Mountain, CA *Scale: 1:24,000 *Date of Map: 1967 (1988)



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

Primary # _____
HRI # _____
Trinomial CA-SBR-7051H (update)

Page 3 of 41

*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/20/03 and 11/21/03 Continuation Update

***P3a. Description:** Below is a brief list of Features 1-16, 77 and 78:

Feature 1 consists of two distinct sections: a flume and a v-shaped drainage ditch and retaining wall.

Feature 2 consists of three distinct segments: a flat-bottom ditch with angled lip and retaining wall, a flat-bottom ditch and retaining wall with straight sides, and a flume with metal gates.

Feature 3 is a concrete-lined flume that is situated on a split cobble and concrete base.

Feature 4 is predominantly a drainage ditch composed of three distinct segments: a concrete flume, two parallel drainage ditches, and a drainage ditch with an angled lip and retaining wall.

Feature 5 consists of two distinct sections: a flume, and a flume with retaining wall and drainage ditch. The upper segment (northernmost section) is a flat-bottom flume constructed of concrete and brick.

Feature 6 is a split-cobble and concrete flume with a flat bottom.

Feature 7 consists of three distinct segments: a flume with gates; a flume with gates, retaining wall, and a stepped, flat bottom drainage ditch; and a flume with metal gates, retaining wall, and drainage ditch with straight sides.

Feature 8 is a concrete flume with metal gates along its northern side.

Feature 9 is a concrete flume with a flat bottom with gates.

Feature 10 is a split-cobble and concrete drainage ditch with a flat bottom and angled lip.

Feature 11 is a concrete and brick flume situated on a split-cobble and concrete retaining wall and drainage ditch. The drainage ditch has a flat bottom and straight sides.

Feature 12 is a concrete flume with metal gates

Feature 13 is a concrete and brick flume situated on top of a split-cobble retaining wall and drainage ditch with straight sides.

Feature 14 is a series of 19 concrete irrigation standpipes connected by underground concrete pipe.

Feature 15 is a split-cobble and concrete drainage ditch; it is directly associated with Feature 16.

Feature 16 is a split-cobble and concrete drainage ditch; it is directly associated with Feature 15.

Feature 77 is the earthen reservoir that provided water to the entire irrigation system in Tract 16014. The reservoir received water from Plunge Creek via the 10-inch pipeline built for that purpose. The reservoir received its water on its east side through a concrete water diversion box. This water diversion structure controlled the flow of water into the reservoir and diverted any surplus water into Feature 2 where it could be directed to Features 13, 15, and 16 further down-slope. Water was distributed to Features 4, 5, 6, 7, and 9 via underground pipes. (See attached Continuation Sheet for photos of Feature 77.)

Feature 78 is an electrical pump and associated water receptacle. The water receptacle measures 10 by 12 feet and is 6 feet deep. The pump provided water via underground metal pipes to the reservoir (Feature 77) and to concrete water distribution boxes associated with Features 5 and 7. The water pumped uphill would then be conveyed by gravity through the existing irrigation structures. Mr. Paramo, a long-time employee and supervisor for East Highlands Ranch, estimated the date of construction of the pump system to be in the mid-1950s. His estimate is borne out by the date of 1955, which is marked on the pipe outlets at the water distribution boxes for Features 5 and 7. (See attached Continuation Sheet for photos of Feature 78.)

Refer to the attached Linear Feature forms for additional detail regarding Features 1-16.

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

Primary # _____

HRI # _____

Trinomial CA-SBR-7051H (update)

Page 4 of 41

*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/20/03 and 11/21/03 Continuation Update

P5. Photograph or Drawing:



P5b. Description of Photo: Overview of Feature 77 reservoir (1195.jpg).
View to the west.



P5b. Description of Photo: Overview of Feature 78 water pump (1210.jpg).
View to the south.

*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

B1. Historic Name: East Highlands Ranch

B2. Common Name: _____

B3. Original Use: Orange Grove

B4. Present Use: Abandoned orange grove slated to be developed

*B5. Architectural Style: _____

*B6. Construction History: (Construction date, alterations, and date of alterations)

The irrigation system for the citrus grove on this parcel was constructed between 1905 and 1925 and was actively used until 2000, when production was halted. In the intervening years, the water conveyance features required periodic repairs, but these repairs did not significantly alter these features. In the mid-1950s, an underground pumping system was added to supplement the existing water supply. The visible pipes at the outlets are marked with the date "1955."

*B7. Moved? No Yes Unknown Date: _____ Original Location: _____

*B8. Related Features: This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of East Highlands Ranch. There is a total of 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.

B9a. Architect: Unknown

b. Builder: Unknown

*B10. Significance: Theme Citrus Industry Area City of Highland: San Bernardino County

Period of Significance 1905-2000 Property Type Orange Grove and Irrigation System Applicable Criteria 1 and 3

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)
The irrigation and citriculture features located within the project area are part of the much larger East Highlands Ranch Water Conveyance System, which is associated with the historic citrus industry in San Bernardino County, California. This portion of the East Highlands Ranch Water Conveyance System is an excellent example of a vernacular irrigation system because of its exceptionally efficient use of water and the recapturing of wastewater to irrigate the crops. Portions of the system within this parcel appear eligible for the California Register under Criteria 1 and 3. However, other portions of the system within this parcel do not retain integrity due to damage from the construction of fire breaks during recent firefighting activities (October 2003) and three years of neglect. Also, recent residential development has compromised the integrity of the setting and feeling. The documentation contained in this report and the local citrus industry research that appear in *Archaeological and Historical Investigations of the Cram School Site and Tentative Tracts 13551 and 15554, East Highlands, San Bernardino County, California* (Sturm et al. 1995) and *Cultural Resources Assessment for 278.4 Acres Within East Highlands Ranch, San Bernardino County, California* (McLean et al. 1995) are considered adequate mitigation for project impacts to this parcel.

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

*B12. References: 1977, Scott, M.B., *Development of Water Facilities in the Santa Ana River Basin, California, 1810-1968*. United States Department of the Interior, Geological Survey.
2003, Harper, Caprice D. and Paul Shattuck, *Archaeological Survey Report, East Highlands Ranch, Tract 16014, City of Highland, San Bernardino County, California*, Unpublished report on file at the San Bernardino Archaeological Information Center, Redlands, California.

B13. Remarks:

*B14. Evaluator: Judith Marvin and Caprice D. (Kip) Harper,
LSA Associates, Inc. 20 Executive Park, Suite 200, Irvine, CA 92614

*Date of Evaluation: 11/21/03

(Sketch Map with north arrow required.)

See Linear Feature Records.

(This space reserved for official comments.)

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

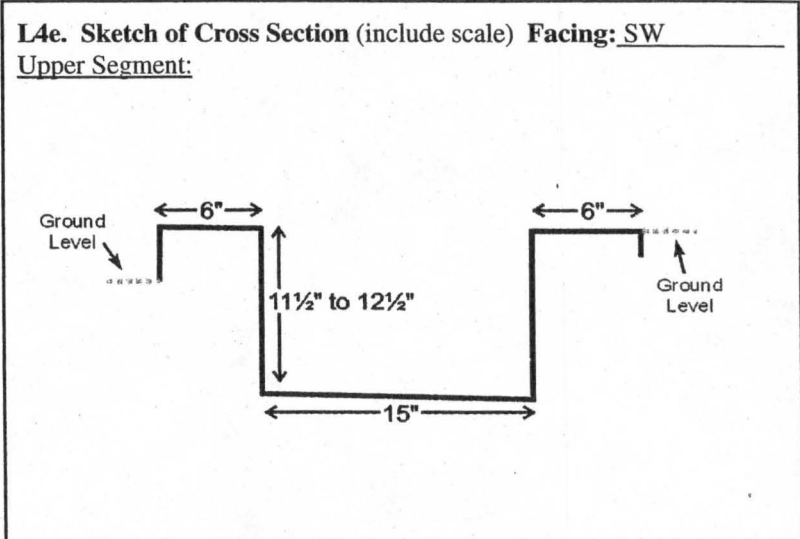
Primary # _____
 HRI # _____
 Trinomial CA-SBR-7051H (update)

Page 6 of 41 *Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

- L1. Historic and/or Common Name:** East Highlands Ranch
- L2a. Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 1
- 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) **Zone** 11; 484238 mE / 3777192 mN; Zone 11; 484066 mE / 3776948 mN;
- L3. Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)
 See attached Continuation Sheet.

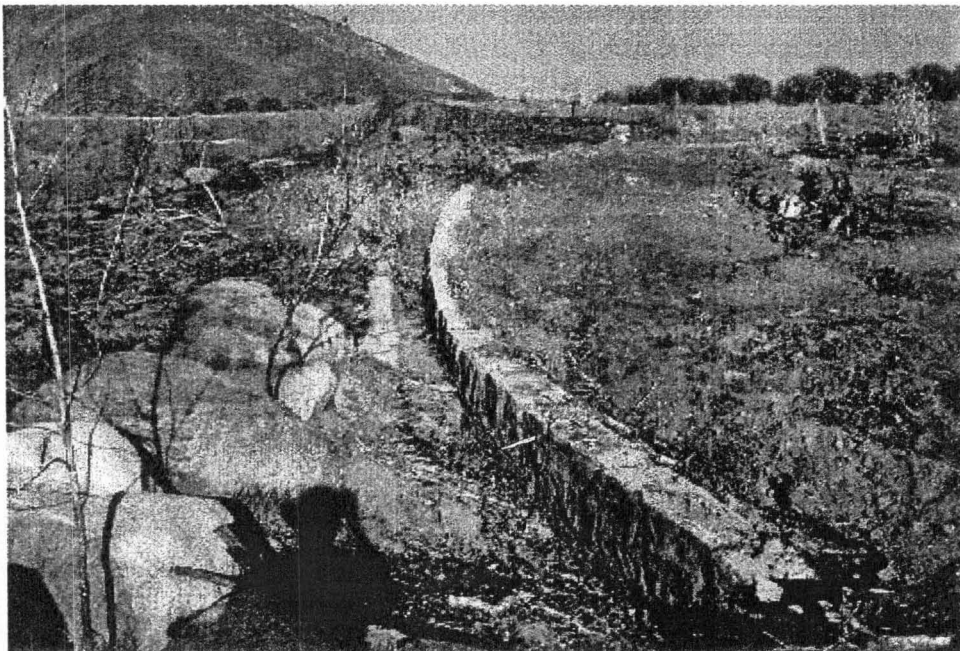
- L4. Dimensions:** (In feet for historic features and meters for prehistoric features)
- a. **Top Width** See Figure L4e for details.
- b. **Bottom Width** See Figure L4e for details.
- c. **Height or Depth** See Figure L4e for details.
- d. **Length of Segment** 1,100 feet (335 m)

L5. Associated Resources: This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are a total of 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.



- L6. Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.)
 (See attached Continuation Sheet)
- L7. Integrity Considerations:** (See attached Continuation Sheet)

L8a. Photograph, Map or Drawing



L8b. Description of Photo, Map, or Drawing:
Overview of Feature 1 upper segment View to the NE. (1133.jpg)

L9. Remarks:

L10. Form Prepared by:
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

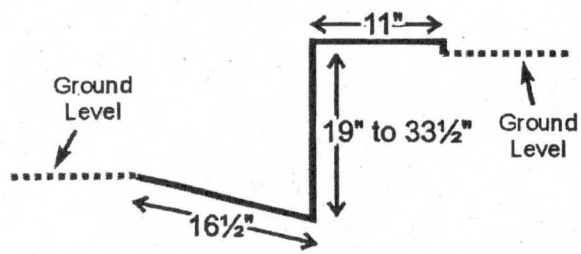
L11. Date:
 11/20/03

DPR 523A (1/95)

*Required Information

L3. Description: Feature 1 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 1 consists of two distinct sections: a flume; and a v-shaped drainage ditch and retaining wall. The upper segment (northernmost) is a flat-bottom flume constructed of split cobbles and concrete; it has metal gates along its south side. The upper segment of the flume is oriented to the southwest and is 600 feet (183 m) in length. The lower segment is a south-trending V-shaped drainage ditch and retaining wall constructed of split cobbles and concrete; it is 500 feet (152 m) in length and ends where it merges water flow with the drainage ditch for Feature 4. Please see diagrams for typical cross sections.

L4e. Sketch of Cross Section (including scale) Facing: North
Lower Segment:



L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Feature 1 has a few intermittent breaks in the flume that would effectively prevent it from carrying water. In addition, recent fire prevention activities due to the October 2003 wildfires have damaged the resource. Planned development of this parcel will result in the destruction of this feature.

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*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

L1. **Historic and/or Common Name:** East Highlands Ranch
 L2a. **Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 2

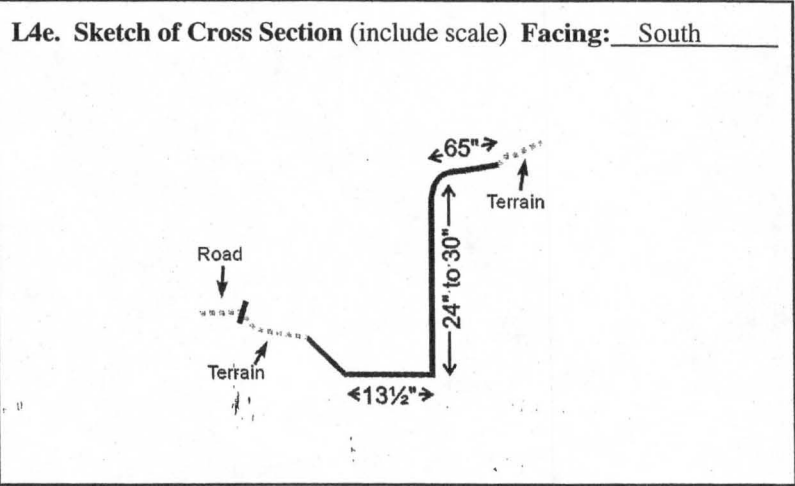
b. **Location of point or segment:** (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) **Zone** 11 ; 484384 mE / 3777425 mN; **Zone** 11 ; 484545 mE / 3776311 mN

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

L4. **Dimensions:** (In feet for historic features and meters for prehistoric features)
 a. **Top Width** See Figure L4e for details
 b. **Bottom Width** See Figure L4e for details
 c. **Height or Depth** See Figure L4e for details
 d. **Length of Segment** 4,250 feet (1,296 m)

L5. **Associated Resources:** This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.

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



L6. **Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.

L7. **Integrity Considerations:** See attached Continuation Sheet.

L8a. **Photograph, Map or Drawing**



L8b. **Description of Photo, Map, or Drawing** (view, scale, etc.)
 Overview of Feature 2 middle segment (1185.jpg). View to the south.

L9. **Remarks:**

L10. **Form Prepared by:**
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. **Date:**
 11/21/03

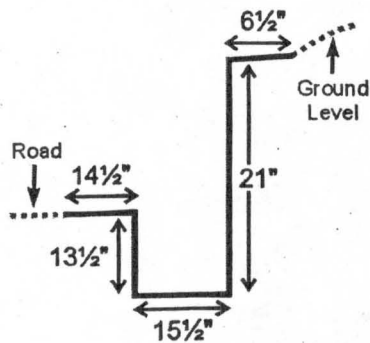
DPR 523A (1/95)

*Required Information

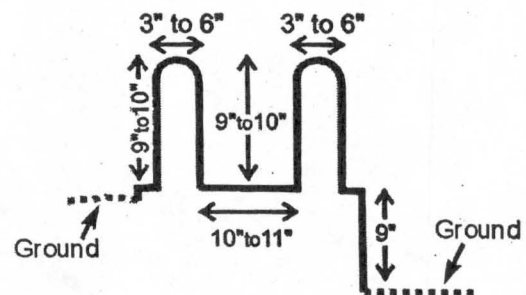
*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/21/03 Continuation Update

L3. Description: Feature 2 is a split-cobble and concrete-lined drainage ditch and flume located along a dirt road that constitutes the eastern boundary of the orchard. It runs south from the reservoir at the northern end of the parcel to the southern end near Highland Avenue. Feature 2 consists of three distinct segments: a flat-bottom ditch with angled lip and retaining wall; a flat-bottom ditch and retaining wall with straight sides; and a flume with metal gates. The total length of the feature is 4,250 feet (1,296 m). The upper segment (northernmost) is a flat-bottomed drainage ditch with an angled lip and retaining wall constructed of split cobbles and concrete; it is 1,875 feet (572 m) in length. The middle segment differs only slightly from the upper segment in that the drainage ditch is flat-bottomed with a straight side wall. The middle segment continues southward for 1,500 feet (457 m). The lower segment is a concrete flume with metal gates along the western side of the flume; it is 875 feet (267 m) in length. The lower segment watered the portion of the orchard that lies to the west. Any excess water would have drained into Feature 16. The upper and middle segments of Feature 2 were designed to catch any excess water flow that may have been missed by Features 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12. Please see diagram for typical cross sections of the three segments.

L4e. Sketch of Cross Section (including scale) Facing: South
Middle Segment Facing South:



Lower Segment Facing South:



L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Feature 2 has a few intermittent breaks in the flume that would effectively prevent it from carrying water. Planned development of this parcel will result in the destruction of this feature.

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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Primary # _____
 HRI # _____
 Trinomial CA-SBR-7051H (update)

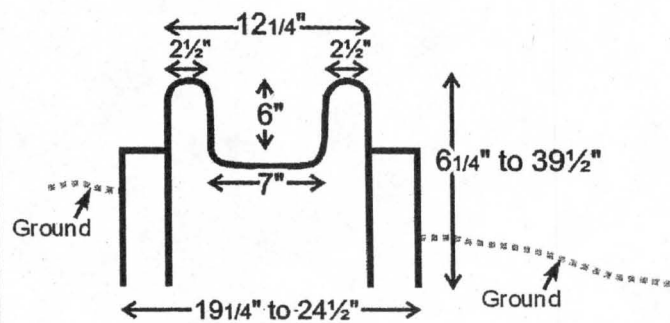
Page 10 of 41 *Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

- L1. Historic and/or Common Name:** East Highlands Ranch
- L2a. Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 3
- 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) **Zone** 11; 484234 mE / 3777153 mN; **Zone** 11; 484076 mE / 3776981 mN;
- L3. Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)
 See attached Continuation Sheet.

- L4. Dimensions:** (In feet for historic features and meters for prehistoric features)
- a. **Top Width** 12 1/4 inches
- b. **Bottom Width** 7 inches
- c. **Height or Depth** 19 1/4 to 24 1/2 inches
- d. **Length of Segment** 800 feet (244 m)

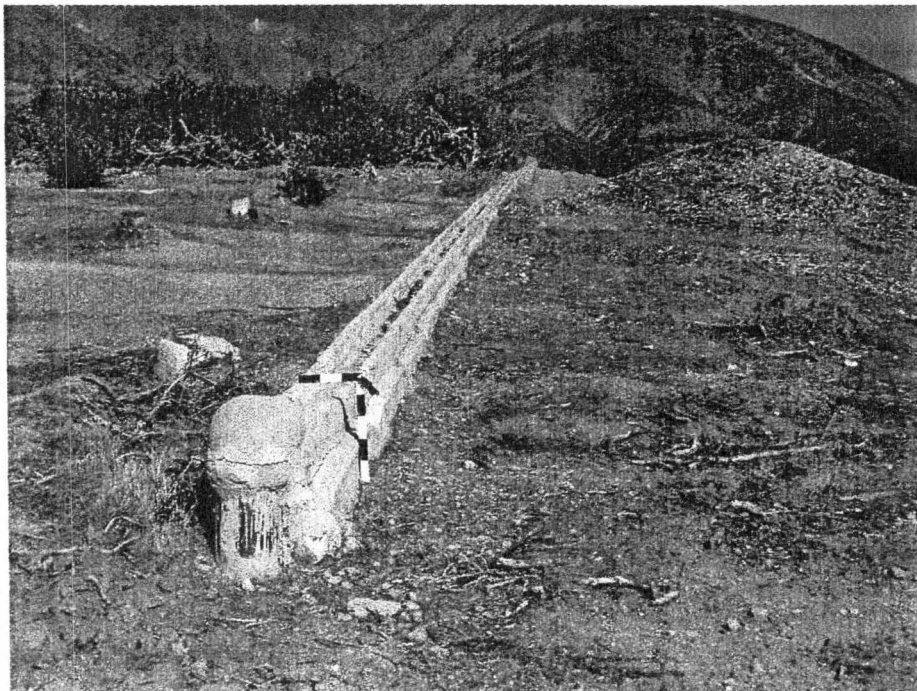
L5. Associated Resources: This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1–16, 77, and 78.

L4e. Sketch of Cross Section (include scale) Facing: NNE



- L6. Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.
- L7. Integrity Considerations:** See attached Continuation Sheet.

L8a. Photograph, Map or Drawing



- L8b. Description of Photo, Map, or Drawing** (view, scale, etc.)
Overview of Feature 3 (1107.jpg). View to the NNE.
- L9. Remarks:**
 Scale in photo is in 10 cm units.
- L10. Form Prepared by:**
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614
- L11. Date:**
 11/20/03

DPR 523A (1/95)

*Required Information

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*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/20/03 Continuation Update

L3. Description: Feature 3 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 3 is a concrete-lined flume that is situated on a split cobble and concrete base. The flume is oriented to the southwest and is 800 feet (244 m) in length. Metal gates are situated along both sides of the flume. A rectangular, concrete water diversion box is located near the southernmost end of the feature to capture excess water. An underground pipe connects this feature to Feature 4. Please see diagram for a typical cross section.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Planned development of this parcel will result in the destruction of this feature.

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DEPARTMENT OF PARKS AND RECREATION
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HRI # _____

Trinomial CA-SBR-7051H(update)

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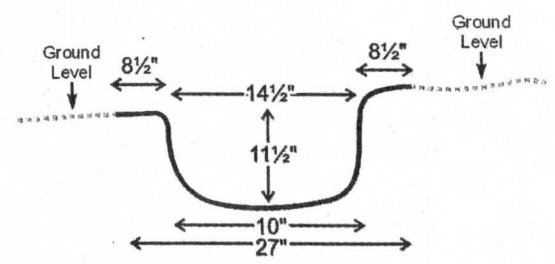
*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

- L1. Historic and/or Common Name:** East Highlands Ranch
- L2a. Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 4
- 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) **Zone** 11; 484339 mE / 3777324 mN; Zone 11; 484281 mE / 3777179 mN;
- L3. Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)
 See attached Continuation Sheet

- L4. Dimensions:** (In feet for historic features and meters for prehistoric features)
- a. **Top Width** See Figure L4e for details.
 - b. **Bottom Width** See Figure L4e for details.
 - c. **Height or Depth** See Figure L4e for details.
 - d. **Length of Segment** 2,140 feet (653)

L5. Associated Resources: This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.

L4e. Sketch of Cross Section (include scale) Facing: Northeast
Upper Segment:



- L6. Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.
- L7. Integrity Considerations:** See attached Continuation Sheet.

L8a. Photograph, Map or Drawing



L8b. Description of Photo, Map, or Drawing

Closeup of the middle segment of Feature 4 (1117.jpg). View to the southwest.

L9. Remarks:

L10. Form Prepared by:
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. Date:
 11/20/03

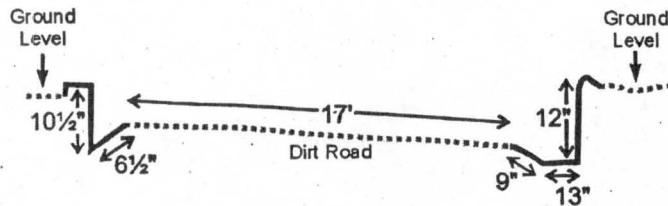
DPR 523A (1/95)

*Required Information

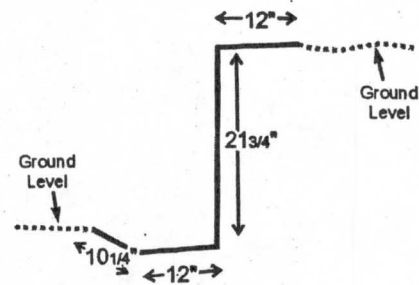
*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/20/03 Continuation Update

L3. Description: Feature 4 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 4 is predominantly a drainage ditch comprised of three distinct segments: a concrete flume; two parallel drainage ditches; and a drainage ditch with an angled lip and retaining wall. The upper segment (northernmost portion) of the ditch is a concrete flume. This segment runs southwest for approximately 780 feet (238 m) where it connects to an underground pipe, crosses an east-west trending dirt road, and merges with the middle segment. The middle segment consists of two parallel split-cobble and concrete drainage ditches with a northeast-southwest trending dirt road between the two ditches. The drainage ditch on the northwest side of the road is V-shaped; it is constructed of split cobbles and concrete. The drainage ditch on the southeast side of the road is flat-bottomed with an angled lip; it is also constructed of split cobbles and concrete. The middle segment of the feature is 1,020 feet (311 m) in length. At Church Avenue, Feature 4 transitions to a flat bottom drainage ditch with an angled lip (lower segment); it is also constructed of split cobbles and concrete. The lower segment is approximately 340 feet (104 m) in length. The southernmost end of Feature 4 merges with Feature 5. Please see diagram for typical cross sections of each of the three segments.

L4e. Sketch of Cross Section (including scale)
 Middle Segment Facing Northeast:



Lower Segment Facing North:



L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Planned development of this parcel will result in the destruction of this feature.

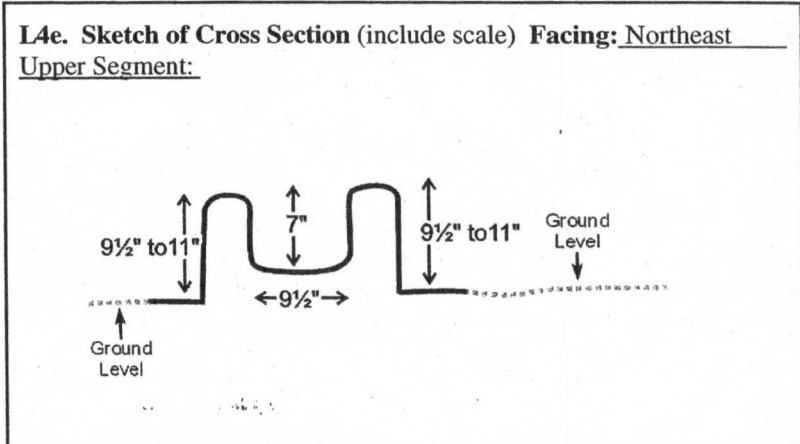
State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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Primary # _____
 HRI # _____
 Trinomial CA-SBR-7051H (update)

Page 14 of 41 *Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

- L1. Historic and/or Common Name:** East Highlands Ranch
- L2a. Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 5
- 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) **Zone** 11 ; 484359 mE / 3777327 mN; **Zone** 11 ; 484060 mE / 3776414 mN;
- L3. Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)
 See attached Continuation Sheet.

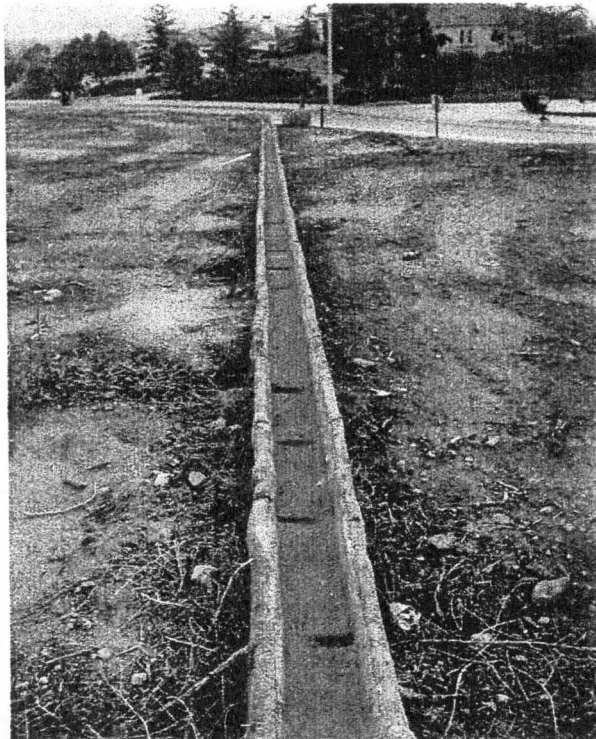
- L4. Dimensions:** (In feet for historic features and meters for prehistoric features)
- a. **Top Width** See Figure L4e for details.
- b. **Bottom Width** See Figure L4e for details.
- c. **Height or Depth** See Figure L4e for details.
- d. **Length of Segment** 3,330 feet (1,015 m)



L5. Associated Resources: This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.

- L6. Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.
- L7. Integrity Considerations:** See attached Continuation Sheet.

L8a. Photograph, Map or Drawing



L8b. Description of Photo, Map, or Drawing
Overview of Feature 5 Upper Segment (1150.jpg). View to the southwest.

L9. Remarks:

L10. Form Prepared by:
 Caprice Harper and Paul Shattuck,
 LSA Associates,
 Inc., 20 Executive
 Park, Suite 200,
 Irvine, CA, 92614

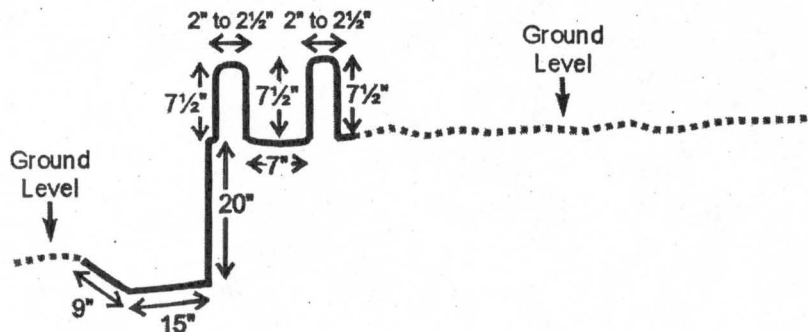
L11. Date:
 11/20/03

*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/20/03 Continuation Update

L3. Description: Feature 5 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 5 consists of two distinct sections: a flume; and a flume with retaining wall and drainage ditch. The upper segment (northernmost section) is a flat-bottom flume constructed of concrete and brick. This segment of the flume is oriented to the south and southwest. Metal gates on either side of the flume allowed water to pass to the orchard. At an east-west trending dirt access road, a concrete distribution receptacle diverts the water flow into an 8-inch-diameter metal pipe that runs underneath the dirt road and connects to a continuation of the flume. The metal pipe may have been added later because the date on the pipe is 1955; it was manufactured by "Pacific States CIP Co., Provo, Utah." A barrel-shaped concrete fertilizer container is also located adjacent to the concrete receptacle. The northern portion of the upper segment connects to Feature 8 via an underground 6.5-inch-diameter pipe at this point. The upper segment of this feature has metal gates to water the orchard to the northwest and southeast; it is 1,880 feet (573 m) in length. The lower segment begins at Church Street. It is a concrete and brick flume situated atop a split-cobble and concrete retaining wall and drainage ditch with angled lip. The southern portion of the lower segment waters the orchard to the southeast and east; it is 1,450 feet (442 m) in length. The lower segment has metal gates along the eastern side of the feature. Feature 5 merges with Feature 7 at the southern end. Please see diagrams for typical cross sections.

L4e. Sketch of Cross Section (including scale)

Lower Segment Facing North:



L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Feature 5 has a few intermittent breaks in the flume that would effectively prevent it from carrying water. Planned development of this parcel will result in the destruction of this feature.

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DEPARTMENT OF PARKS AND RECREATION
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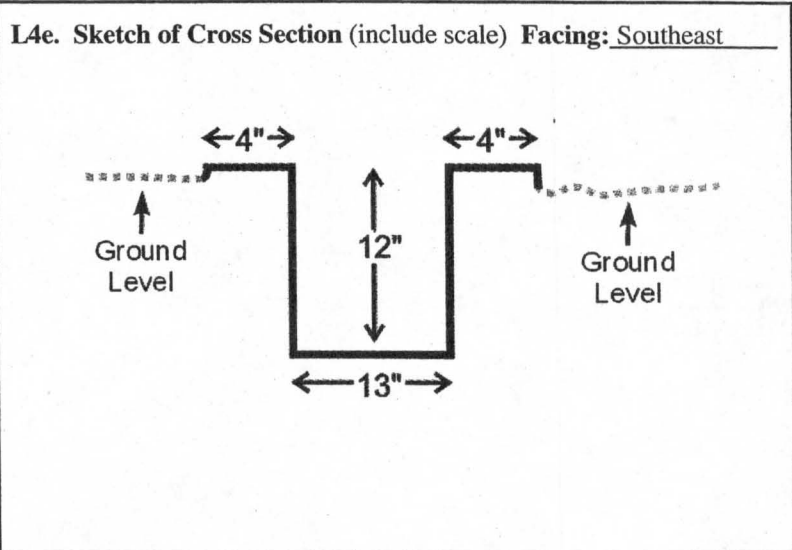
*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

L1. **Historic and/or Common Name:** East Highlands Ranch
 L2a. **Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 6

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) **Zone** 11; 484381 mE / 3777220 mN; **Zone** 11; 484382 mE / 3777080 mN;

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

L4. **Dimensions:** (In feet for historic features and meters for prehistoric features)
 a. **Top Width** 13 inches
 b. **Bottom Width** 13 inches
 c. **Height or Depth** 12 inches
 d. **Length of Segment** 450 feet (137 m)



L5. **Associated Resources:** This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.

L6. **Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.

L7. **Integrity Considerations:** See attached Continuation Sheet.

L8a. **Photograph, Map or Drawing**



L8b. **Description of Photo, Map, or Drawing**
Closeup of Feature 6 (1169.jpg). View to the east.

L9. **Remarks:**
 The scale is in 10 cm units.

L10. **Form Prepared by:**
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. **Date:**
 11/21/03

State of California — The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
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HRI # _____
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*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System - Feature 6

*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/21/03 Continuation Update

L3. Description: Feature 6 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 6 is a split-cobble and concrete flume with a flat bottom. This feature runs almost due south and intersects with Feature 8. This feature is subterranean and has V-shaped openings to allow excess water to filter to the rows of trees on both the east and the west sides of it. Feature 6 is 450 feet (137 m) in length. Please see diagram for a typical cross section.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Feature 6 is heavily overgrown, which would effectively prevent it from carrying water. Planned development of this parcel will result in the destruction of this feature.

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Primary # _____
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 Trinomial CA-SBR-7051H (update)

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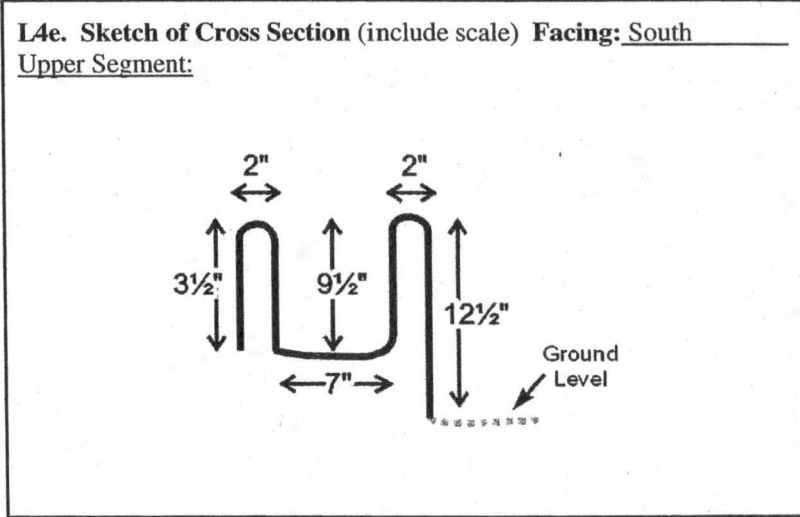
L1. **Historic and/or Common Name:** East Highlands Ranch
 L2a. **Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 7

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) **Zone** 11; 484413 mE / 3777226 mN; **Zone** 11; 484187 mE / 3776284 mN;

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

L4. **Dimensions:** (In feet for historic features and meters for prehistoric features)
 a. **Top Width** See Figure L4e for details.
 b. **Bottom Width** See Figure L4e for details.
 c. **Height or Depth** See Figure L4e for details.
 d. **Length of Segment** 3,700 feet (1,128 m)

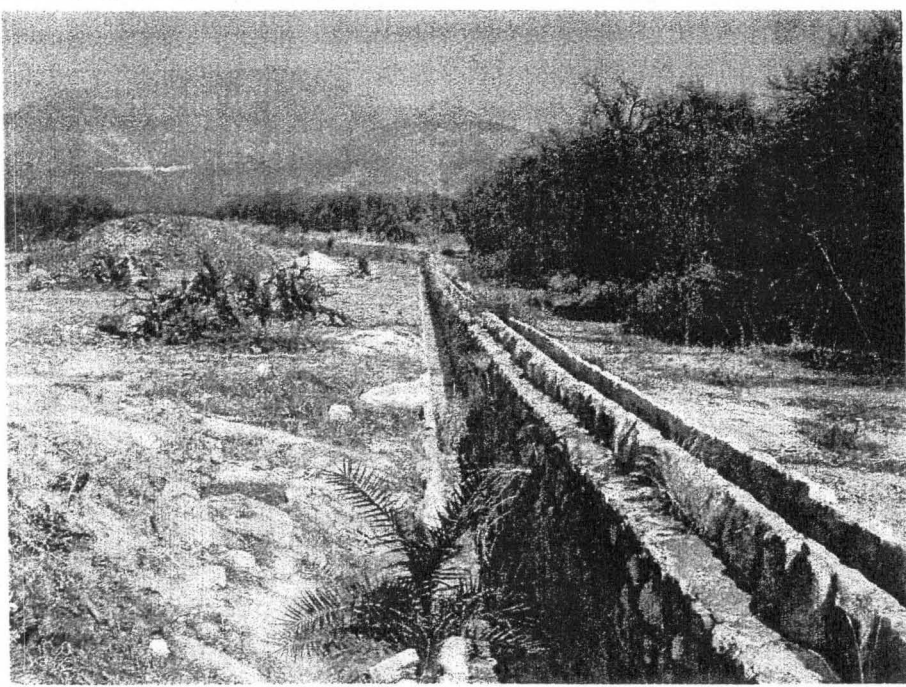
L5. **Associated Resources:** This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.



L6. **Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.

L7. **Integrity Considerations:** See attached Continuation Sheet.

L8a. **Photograph, Map or Drawing**



L8b. **Description of Photo, Map, or Drawing**

Overview of Feature 7 Lower Segment (1178.jpg). View to the northeast.

L9. **Remarks:**

L10. **Form Prepared by:**
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. **Date:**
 11/21/03

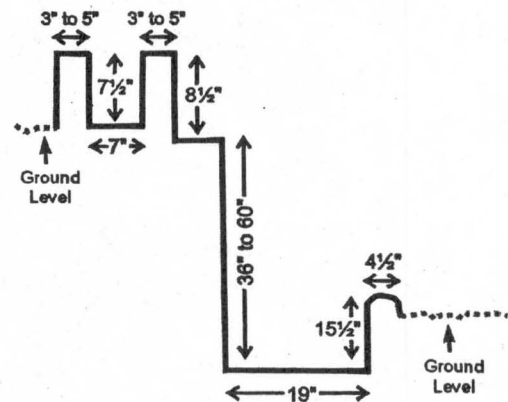
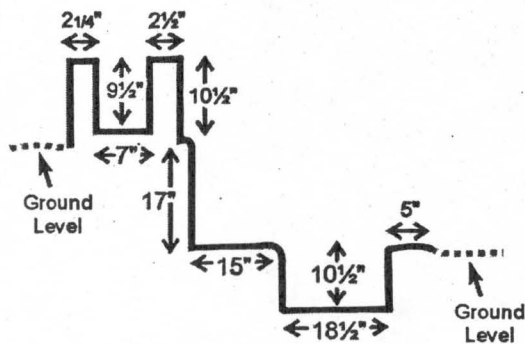
L3. Description:

Feature 7 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 7 consists of three distinct segments: a flume with gates; flume with gates, retaining wall, and a stepped, flat bottom drainage ditch; and a flume with metal gates, retaining wall, and drainage ditch with straight sides. The upper segment is a concrete and brick flume that terminates at the intersection of the east-west trending dirt road; it is 550 feet (168 m) in length. At this point, a concrete water diversion tank diverts the water flow into an 8-inch-diameter metal pipe. This pipe runs underneath the dirt road and connects with the middle segment. This metal pipe appears to have been added later, as the date on the pipe is 1955 and it was manufactured by "Pacific States CIP Co., Provo, Utah." Features 6 and 8 drain into Feature 7 via subterranean pipes. The middle segment begins south of the dirt road and consists of a split-cobble and concrete flume situated on top of a split-cobble and concrete retaining wall and stepped, flat bottom drainage ditch; it is 1,125 feet (343 m) in length. The lower segment of the split-cobble and concrete flume, retaining wall, and drainage ditch continues southwestern to Church Street. The lower segment is characterized by a split-cobble retaining wall that varies from 3 to 5 feet in height; it is 2,025 feet (617 m) in length. The southern end of Feature 7 veers to the east and ends abruptly, but probably originally connected with Features 13, 15, and 16. Please see diagrams for typical cross sections of each of the three segments.

L4e. Sketch of Cross Section (including scale)

Middle Segment Facing South:

Lower Segment Facing Southwest:



L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Feature 7 has a few intermittent breaks, which would effectively prevent it from carrying water. The resource was also damaged during recent fire prevention activities due to the October 2003 wildfires. Planned development of this parcel will result in the destruction of this feature.

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

Primary # _____

HRI # _____

Trinomial CA-SBR-7051H (update)

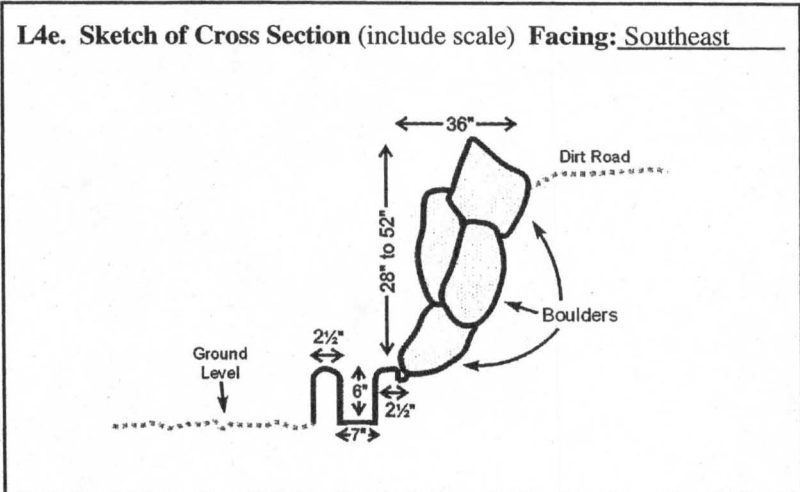
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*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

- L1. Historic and/or Common Name:** East Highlands Ranch
- L2a. Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 8
- 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) **Zone** 11 ; 484326 mE / 3777134 mN; Zone 11 ; 484399 mE / 3777051 mN;
- L3. Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)
 See attached Continuation Sheet.

- L4. Dimensions:** (In feet for historic features and meters for prehistoric features)
- a. Top Width 12 inches
 - b. Bottom Width 7 inches
 - c. Height or Depth 6 inches
 - d. Length of Segment 375 feet (114 m)

L5. Associated Resources: This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.



- L6. Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.
- L7. Integrity Considerations:** See attached Continuation Sheet.

L8a. Photograph, Map or Drawing



L8b. Description of Photo, Map, or Drawing
Overview of Feature 8 (1168.jpg). View to the west.

L9. Remarks:
 The scale is in 10 cm units.

L10. Form Prepared by:
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. Date:
 11/21/03

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*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/21/03 Continuation Update

L3. Description: Feature 8 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 8 is a concrete flume with metal gates along its northern side. The flume is situated on the north side of an adjacent east-west trending dirt road. Construction of this flume is marked by the presence of a stacked boulder retaining wall. A concrete water diversion box is located at the western end of the feature and is fed by Feature 5 via an underground pipe. This feature is situated below grade and is 375 feet (114 m) in length. Please see diagram for typical cross section of this feature.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Planned development of this parcel will result in the destruction of this feature.

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 Trinomial CA-SBR-7051H (update)

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*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

L1. **Historic and/or Common Name:** East Highlands Ranch
 L2a. **Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 9

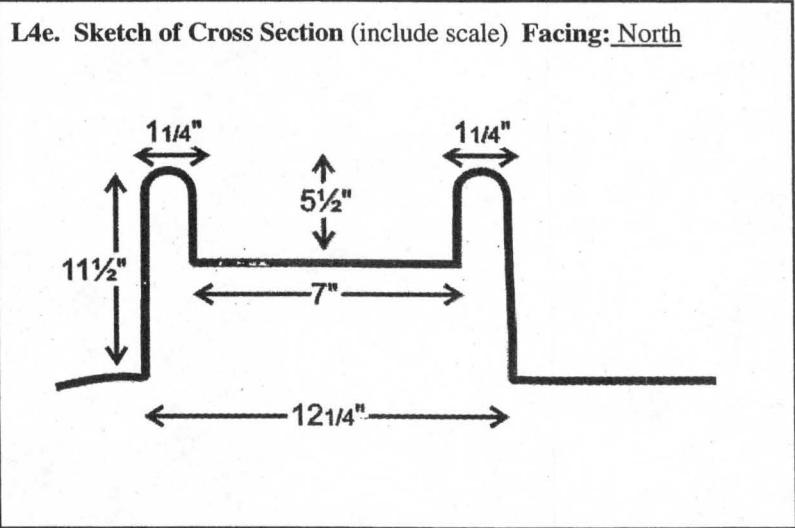
b. **Location of point or segment:** (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) **Zone** 11 ; 484354 mE / 3777429 mN; Zone 11 ; 484240 mE / 3777204 mN;

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

L4. **Dimensions:** (In feet for historic features and meters for prehistoric features)

- a. **Top Width** See Figure L4e for details.
- b. **Bottom Width** See Figure L4e for details.
- c. **Height or Depth** See Figure L4e for details.
- d. **Length of Segment** 960 feet (293 m)

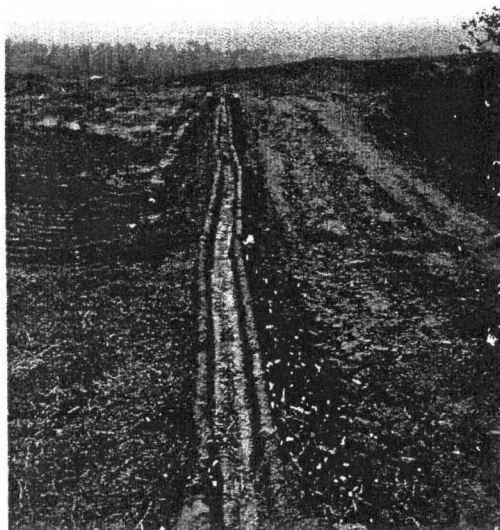
L5. **Associated Resources:** This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.



L6. **Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.

L7. **Integrity Considerations:** See attached Continuation Sheet.

L8a. **Photograph, Map or Drawing**



L8b. **Description of Photo, Map, or Drawing**
Overview of
Feature 9
(1123.jpg).
View to the
southwest.

L9. **Remarks:**

L10. **Form Prepared by:**
 Caprice Harper
 and Paul Shattuck,
 LSA Associates,
 Inc., 20 Executive
 Park, Suite 200,
 Irvine, CA, 92614

L11. **Date:**
 11/20/03

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*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System - Feature 9

*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/20/03 Continuation Update

L3. Description: Feature 9 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 9 is a concrete flume with a flat bottom that is situated at the upper end of the orange grove along the west side of the reservoir. Metal gates along the southeast side of the feature allowed water to drain east and southeast to the adjacent rows of trees. A rectangular, concrete and cobble lined box lies at the southern end of this feature. A date of "1968-PETT" is stamped into the concrete, thereby indicating that this feature may have had more recent maintenance than other features on site. The feature is 960 feet (293 m) in length. Please see diagram for a typical cross section of this feature.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Feature 9 has a few intermittent breaks in the flume that would effectively prevent it from carrying water. Planned development of this parcel will result in the destruction of this feature.

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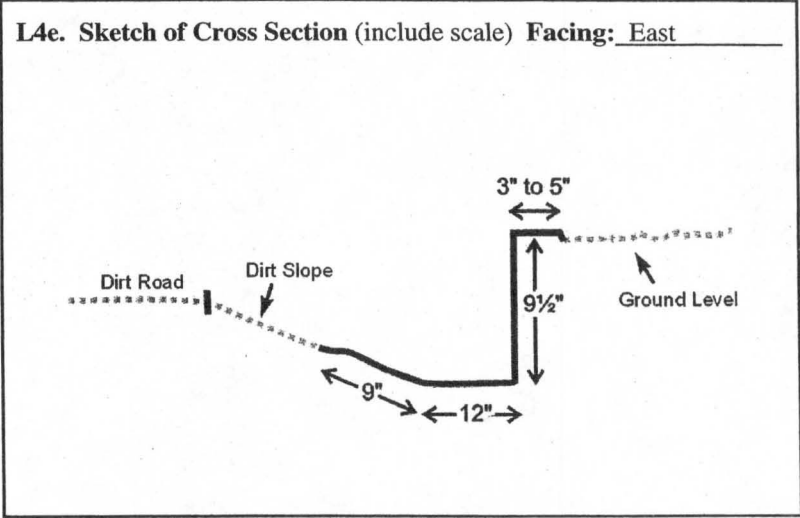
L1. Historic and/or Common Name: East Highlands Ranch
L2a. Portion Described: Entire Resource Segment Point Observation **Designation:** Feature 10

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) **Zone** 11 ; 484445 mE / 3777030 mN; **Zone** 11 ; 484483 mE / 3776946 mN;

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

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
 a. **Top Width** 24 inches
 b. **Bottom Width** 12 inches
 c. **Height or Depth** 9 1/2 inches
 d. **Length of Segment** 275 feet (84 m)

L5. Associated Resources: This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.



L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.

L7. Integrity Considerations: See attached Continuation Sheet.

L8a. Photograph, Map or Drawing



L8b. Description of Photo, Map, or Drawing
 Overview of Feature 10 (1182.jpg). View to the east.

L9. Remarks:
 The scale is in 10 cm units.

L10. Form Prepared by:
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. Date:
 11/21/03

DPR 523A (1/95)

*Required Information

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*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System - Feature 10

*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/21/03 Continuation Update

L3. Description: Feature 10 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 10 is a split-cobble and concrete drainage ditch with a flat bottom and angled lip. It runs southeast along the south side of an east-west trending dirt road. It appears that this drainage ditch was designed to catch runoff from Feature 7. At the eastern end of the feature, the ditch connects to an underground pipe that drains into Feature 2. The feature is 275 feet (84 m) in length. Please see diagram for a typical cross section of this feature.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Planned development of this parcel will result in the destruction of this feature.

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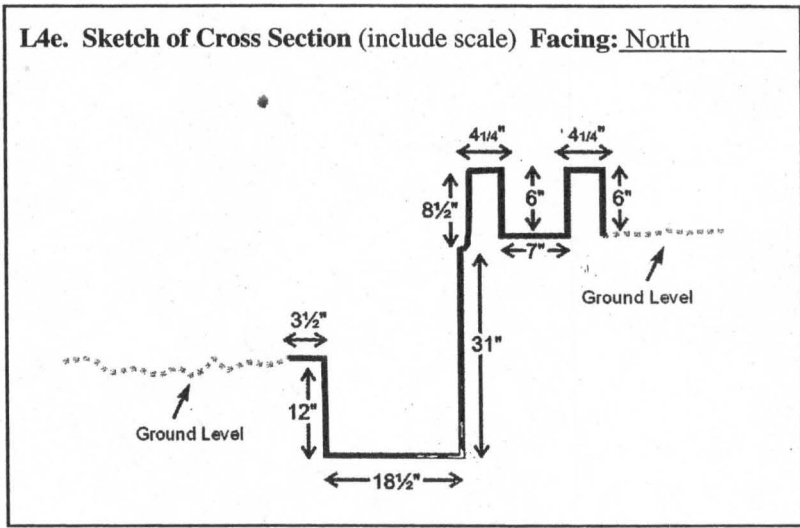
L1. **Historic and/or Common Name:** East Highlands Ranch
 L2a. **Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 11

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) **Zone** 11 ; 484341 mE / 3777107 mN; **Zone** 11 ; 484168 mE / 3776697 mN;

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

L4. **Dimensions:** (In feet for historic features and meters for prehistoric features)
 a. **Top Width** 35 inches
 b. **Bottom Width** 7 to 18.5 inches
 c. **Height or Depth** 6 to 39.5 inches
 d. **Length of Segment** 1,480 feet (451 m)

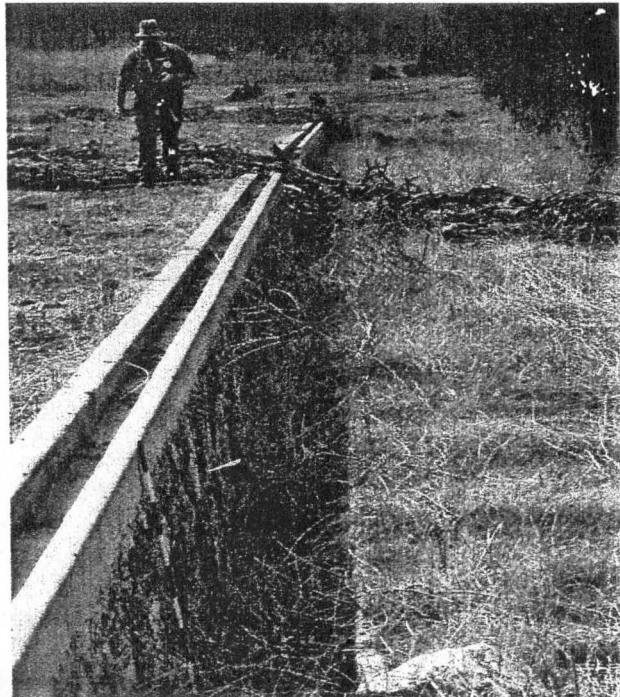
L5. **Associated Resources:** This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.



L6. **Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet

L7. **Integrity Considerations:** See attached Continuation Sheet

L8a. **Photograph, Map or Drawing**



L8b. **Description of Photo, Map, or Drawing**
 Overview of Feature 11 to the south (1160.jpg)

L9. **Remarks:**
 The scale is in 10 cm units.

L10. **Form Prepared by:**
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. **Date:**
 11/21/03

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*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System - Feature 11

*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/21/03 Continuation Update

L3. Description: Feature 11 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 11 is a concrete and brick flume situated on a split-cobble and concrete retaining wall and drainage ditch. The drainage ditch has a flat bottom and straight sides. This feature runs southwest and south and has metal gates along the eastern side to water the rows of trees to the east of the feature. The flume portion of this feature was fed by Feature 8 and the drainage ditch portion was designed to capture water overflow from Feature 5. A split-cobble and concrete water collection box is located at the northern end of the feature. At the southern end of the feature, the flume and the ditch connect to underground pipes that drain into Feature 7. An east-west trending dirt access road bisects the feature at its mid-section; it may be a recent dirt road or fire break. The feature is 1,480 feet (451 m) in length. Please see diagram for a typical cross section of this feature.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Planned development of this parcel will result in the destruction of this feature.

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*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

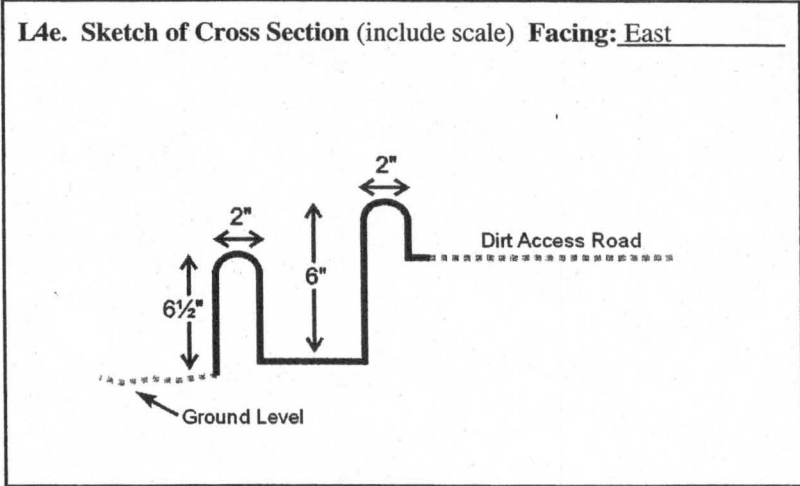
L1. **Historic and/or Common Name:** East Highlands Ranch
 L2a. **Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 12

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) **Zone** 11 ; 484401 mE / 3777049 mN; Zone 11 ; 484494 mE / 3776945 mN;

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

L4. **Dimensions:** (In feet for historic features and meters for prehistoric features)
 a. **Top Width** 11-12 inches
 b. **Bottom Width** 7 inches
 c. **Height or Depth** 6 inches
 d. **Length of Segment** 1,480 feet (451 m)

L5. **Associated Resources:** This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1-16, 77, and 78.



L6. **Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.

L7. **Integrity Considerations:** See attached Continuation Sheet.

L8a. **Photograph, Map or Drawing**



L8b. **Description of Photo, Map, or Drawing**
Overview of Feature 12 (1181.jpg) View to the east.

L9. **Remarks:**

L10. **Form Prepared by:**
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. **Date:**
 11/21/03

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*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/21/03 Continuation Update

L3. Description: Feature 12 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 12 is a concrete flume situated on the north side of an east-west trending dirt access road. The feature is characterized by a series of metal gates at each row of trees. Water pressure from Features 6, 7, and 8 would have expelled the water in Feature 12 through these gates, thus watering the trees to the east of the feature. At the eastern end of the feature, the ditch connects to an underground pipe that drains into Feature 2. The feature is 350 feet (107 m) in length. Please see diagram for a typical cross section of this feature.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Planned development of this parcel will result in the destruction of this feature.

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*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

L1. **Historic and/or Common Name:** East Highlands Ranch
 L2a. **Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 13

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) **Zone** 11; 484339 mE / 3776739 mN; Zone 11; 484214 mE / 3776308 mN;

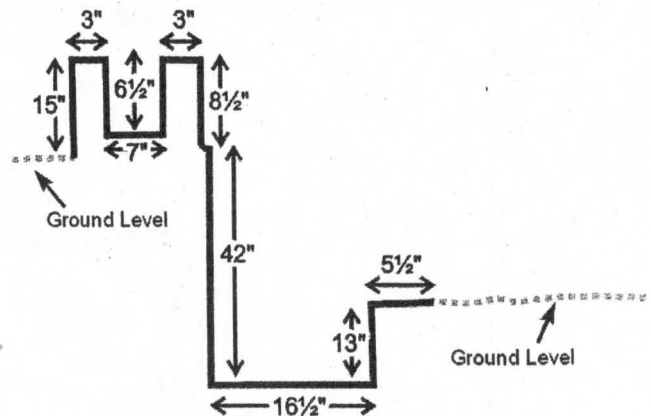
L3. **Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)
 See attached Continuation Sheet

L4. **Dimensions:** (In feet for historic features and meters for prehistoric features)

- a. **Top Width** See Figure L4e for details
- b. **Bottom Width** See Figure L4e for details
- c. **Height or Depth** See Figure L4e for details
- d. **Length of Segment** 1.350 feet (412 m)

L5. **Associated Resources:** This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1–16, 77, and 78.

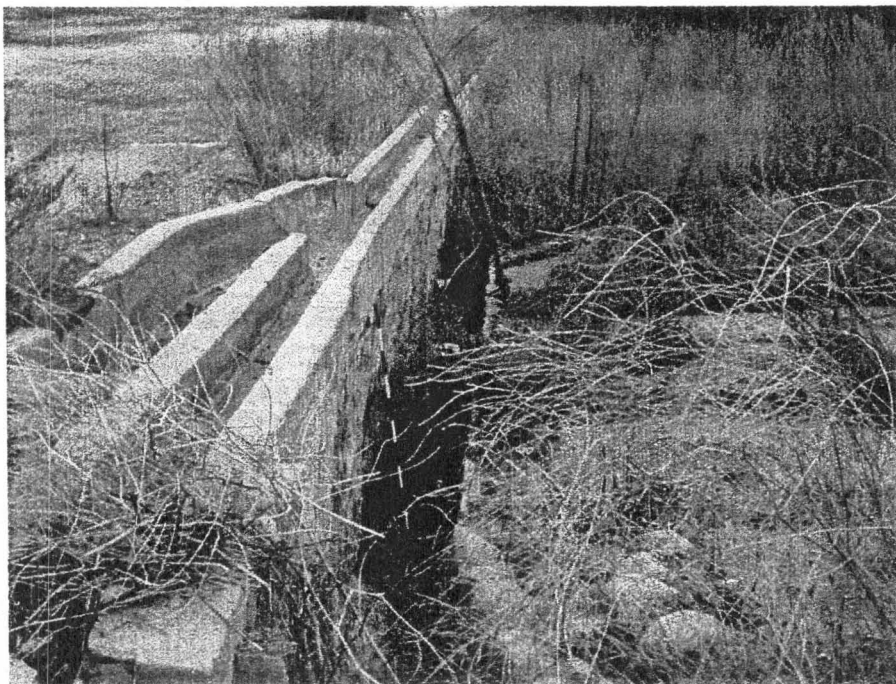
L4e. **Sketch of Cross Section (include scale) Facing:** South



L6. **Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.

L7. **Integrity Considerations:** See attached Continuation Sheet.

L8a. **Photograph, Map or Drawing**



L8b. **Description of Photo, Map, or Drawing** (view, scale, etc.)
Overview of Feature 13 to the south (1207.jpg)

L9. **Remarks:**
 The scale is in 10 cm units.

L10. **Form Prepared by:**
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. **Date:**
 11/21/03

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*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/21/03 Continuation Update

L3. Description: Feature 13 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 13 is a concrete and brick flume situated on top of a split-cobble retaining wall and drainage ditch with straight sides. The feature is oriented to the southwest and is characterized by metal gates along the east and west sides of the flume. These gates allowed water to pass to the rows of trees to the east and west of the feature. An underground pipe and concrete fertilizer barrel are located at the northern end of the feature. It appears that excess water transported in Feature 2 may have been directed to Feature 13. The feature is 1,350 feet (412 m) in length. Please see diagram for a typical cross section of this feature.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Portions of Feature 13 have been destroyed by recent fire prevention activities (October 2003). Planned development of this parcel will result in the destruction of this feature.

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*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

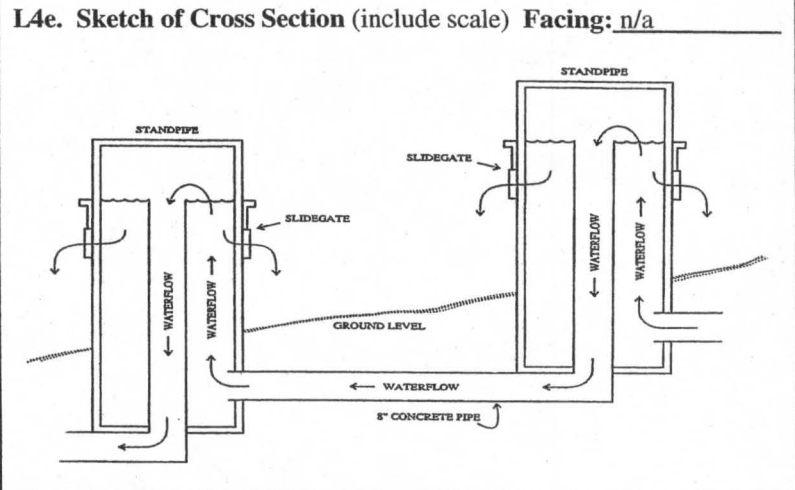
L1. Historic and/or Common Name: East Highlands Ranch
L2a. Portion Described: Entire Resource Segment Point Observation **Designation:** Feature 14

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) **Zone** 11 ; 484190 mE / 3776495 mN; Zone 11 ; 484164 mE / 3776373 mN;

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

L4. Dimensions: (In feet for historic features and meters for prehistoric features)
 a. **Top Width** See Figure L4e for details _____
 b. **Bottom Width** See Figure L4e for details _____
 c. **Height or Depth** See Figure L4e for details _____
 d. **Length of Segment** 425 feet (130 m)

L5. Associated Resources: This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1–16, 77, and 78.



L6. Setting: (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.
L7. Integrity Considerations: See attached Continuation Sheet.

L8a. Photograph, Map or Drawing



L8b. Description of Photo, Map, or Drawing (view, scale, etc.)
Overview of Feature 13 to the south (1214.jpg)

L9. Remarks:
 The scale is in 10 cm units.

L10. Form Prepared by:
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. Date:
 11/21/03

DPR 523A (1/95)

*Required Information

L3. Description: Feature 14 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 14 is a series of 19 concrete irrigation standpipes connected by underground concrete pipe. The standpipes were used to pump water uphill to irrigate the orange groves. The standpipes represent a more recent technology than the gravity-fed flumes that water most of this parcel. The standpipe structures are extremely damaged, in fact, none remained intact. This damage may be due to heavy machinery activity associated with the construction of firebreaks due to the brush fires of October 2003. The feature is 425 feet (130 m) in length. Please see diagram for a typical cross section of this feature.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Portions of Feature 13 have been destroyed by recent fire prevention activities (October 2003). Planned development of this parcel will result in the destruction of this feature.

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

Primary # _____

HRI # _____

Trinomial CA-SBR-7051H (update)

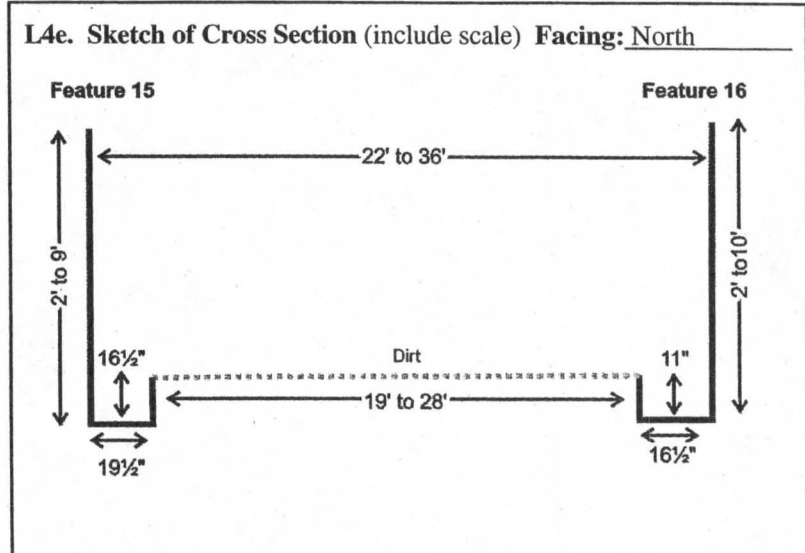
Page 34 of 41

*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

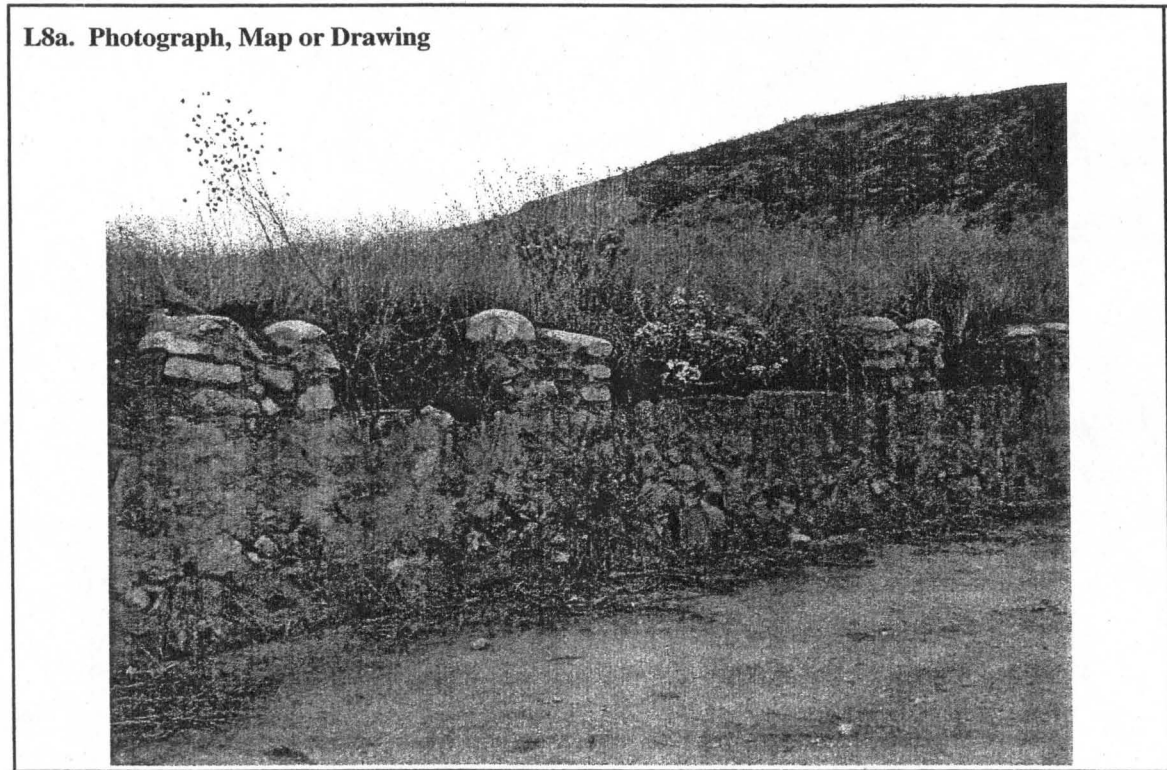
- L1. Historic and/or Common Name:** East Highlands Ranch
- L2a. Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 15
- b. Location of point or segment:** (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map) **Zone** 11; **mE** / 3776607 **mN**; **Zone** 11; **mE** / 3776298 **mN**;
- L3. Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)
 See attached Continuation Sheet.

- L4. Dimensions:** (In feet for historic features and meters for prehistoric features)
- a. **Top Width** 19 1/2 inches
- b. **Bottom Width** 19 1/2 inches
- c. **Height or Depth** 2 to 9 feet
- d. **Length of Segment** 1,150 feet (351 m)

L5. Associated Resources: This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1–16, 77, and 78.



- L6. Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.
- L7. Integrity Considerations:** See attached Continuation Sheet.



L8b. Description of Photo, Map, or Drawing
Overview of Feature 15 curve (1203.jpg). View to the north

L9. Remarks:

L10. Form Prepared by:
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. Date:
 11/21/03

DPR 523A (1/95)

*Required Information

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

Primary # _____
HRI # _____
Trinomial CA-SBR-7051H (update)

Page 35 of 41 *Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System - Feature 15

*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/21/03 Continuation Update

L3. Description: Feature 15 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 15 in conjunction with Feature 16 comprise a large drainage ditch near the southeast end of this portion of the water conveyance system. These features, also known as "Wall Street," are oriented to the south and are constructed of large split-cobble and concrete retaining walls and drainage ditches. An unlined dirt floor separates the two features. Feature 15 is characterized by a high wall with squared openings at the curve located in the northern portion of the feature. The feature is 1,150 feet (351 m) in length. Please see diagram for a typical cross section of this feature.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Planned development of this parcel will result in the destruction of this feature.

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

Primary # _____

HRI # _____

Trinomial CA-SBR-7051H (update)

Page 36 of 41

*Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System

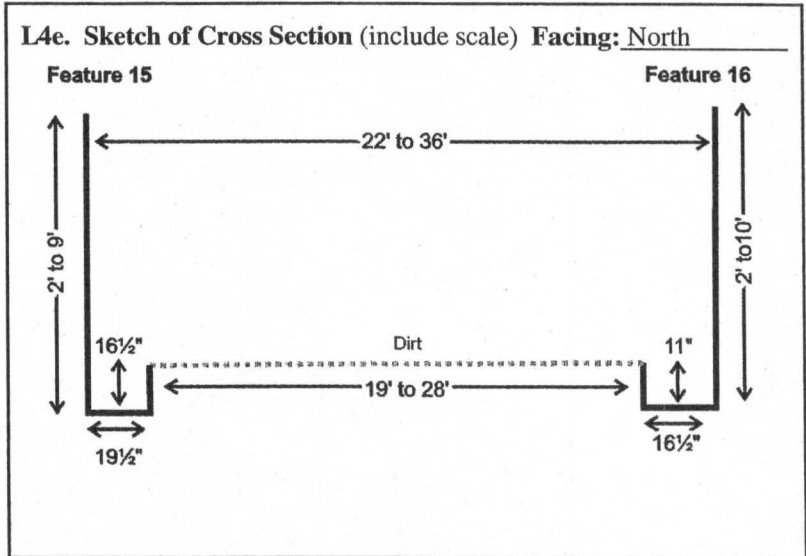
L1. **Historic and/or Common Name:** East Highlands Ranch
 L2a. **Portion Described:** Entire Resource Segment Point Observation **Designation:** Feature 16

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) **Zone** 11 ; 484455 mE / 3776612 mN; **Zone** 11 ; 484393 mE / 3776298 mN;

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

L4. **Dimensions:** (In feet for historic features and meters for prehistoric features)
 a. **Top Width** 16 1/2 inches
 b. **Bottom Width** 16 1/2 inches
 c. **Height or Depth** 2 to 9 feet
 d. **Length of Segment** 1,075 feet (328 m)

L5. **Associated Resources:** This water conveyance feature is part of a greater water conveyance system that provided irrigation water to the orange groves of the East Highlands Ranch. There are 16 linear water conveyance features, one reservoir, and one pump recorded on this parcel. They are designated as Features 1–16, 77, and 78.



L6. **Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.) See attached Continuation Sheet.
 L7. **Integrity Considerations:** See attached Continuation Sheet.

L8a. **Photograph, Map or Drawing**



L8b. **Description of Photo, Map, or Drawing**
Overview of Features 15 and 16 (Feature 16 is on the right). View to the North (1200.jpg)

L9. **Remarks:**

L10. **Form Prepared by:**
 Caprice Harper and Paul Shattuck, LSA Associates, Inc., 20 Executive Park, Suite 200, Irvine, CA, 92614

L11. **Date:**
 11/21/03

DPR 523A (1/95)

*Required Information

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

Primary # _____
HRI # _____
Trinomial CA-SBR-7051H (update)

Page 37 of 41 *Resource Name or #: (Assigned by recorder) Tract 16014 Water Conveyance System - Feature 16

*Recorded by Caprice D. (Kip) Harper and Paul O. Shattuck *Date 11/21/03 Continuation Update

L3. Description: Feature 16 is part of the greater water conveyance system that provided irrigation water for the orange groves of the East Highlands Ranch. Feature 16 in conjunction with Feature 15 comprise a large drainage ditch near the southeast end of this portion of the water conveyance system. These features, also known as "Wall Street," are oriented to the south and are constructed of large split-cobble and concrete retaining walls and drainage ditches. An unlined dirt surface separates the two features. The feature is 1,075 feet (328 m) in length. Please see diagram for a typical cross section of this feature.

L6. Setting: The site is located in the City of Highland, San Bernardino County, California. This parcel was once part of the orange groves belonging to the East Highlands Ranch, located in the foothills of the San Bernardino Mountains. The orange groves are no longer actively watered, and the trees are mostly dead. The water conveyance system described in this form is located on a moderately steep south-facing hillside with a slope of 5 to 20 degrees. The land is occupied primarily by the rows of dead orange trees, although some invasive undergrowth is beginning to encroach on the groves.

L7: Integrity Considerations: The irrigation system for the East Highlands Ranch has been abandoned. Planned development of this parcel will result in the destruction of this feature.

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

Primary # CA-SBR-7051H

HRI# _____

Trinomial CA-SBR-7051H (update)

Page 38 of 41 *Project Name (Assigned by recorder) East Highlands Ranch Development Project: Tract 16014 Year 2003

Camera Format: Nikon Coolpix 995 Roll #: I:SGL330/Photos Lens Size: _____
 Film Type and Speed: Digital Negatives Kept at: LSA Associates Inc., 20 Executive Park, Suite 200, Irvine, CA 92614

Mo.	Day	Time	Exp./ Frame	Subject/Description	View Toward	Accession #
11	20		1107.jpg	Feature 3: Overview	NNE	
11	20		1108.jpg	Feature 3: Closeup	NNE	
11	20		1109.jpg	Feature 3: Closeup at midsection	W	
11	20		1110.jpg	Feature 3: Closeup at catch basin	W	
11	20		1111.jpg	Feature 4: Overview	NNE	
11	20		1112.jpg	Feature 4: Overview showing dirt road	NNE	
11	20		1113.jpg	Feature 4: Closeup of southern end of feature at Church Street	SW	
11	20		1114.jpg	Feature 4: Overview of feature with Feature 3 in background	NNE	
11	20		1115.jpg	Feature 4: Closeup of north side of Feature 4	NW	
11	20		1116.jpg	Feature 4: Overview of feature with Feature 3 in background	NE	
11	20		1117.jpg	Feature 4: Overview	SW	
11	20		1118.jpg	Feature 4: Closeup	SSE	
11	20		1119.jpg	Feature 9: Closeup showing impression (1968-Pete)	NNW	
11	20		1120.jpg	Feature 9: Closeup of catch basin	E	
11	20		1121.jpg	Feature 9: Closeup showing scale	SSE	
11	20		1122.jpg	Feature 77: Overview of reservoir intake	E	
11	20		1123.jpg	Feature 9: Overview	SW	
11	20		1124.jpg	Feature 77: Overview of reservoir	SE	
11	20		1125.jpg	Feature 77: Overview of reservoir	S	
11	20		1126.jpg	Feature 9: Overview	SSW	
11	20		1127.jpg	Feature 9: Closeup	SW	
11	20		1128.jpg	Feature 9: Closeup	NNW	
11	20		1129.jpg	Feature 9: Concrete box at southwest end of feature	N	
11	20		1130.jpg	Feature 1: Overview	SSW	
11	20		1131.jpg	Feature 1: Closeup	W	
11	20		1132.jpg	Feature 1: Overview of boulders at Feature 1 midsection	SW	
11	20		1133.jpg	Feature 1: Overview near boulders	NE	
11	20		1134.jpg	Feature 1: Intersection with Feature 4	S	
11	20		1135.jpg	Feature 4: Overview north of the E/W dirt road (upper segment)	NW	
11	20		1136.jpg	Feature 4: Overview north of the E/W dirt road (upper segment)	SE	
11	20		1137.jpg	Feature 4: Underground pipe at dirt road (upper segment)	SW	
11	20		1138.jpg	Feature 4: Closeup at underground pipe (upper segment)	SW	
11	20		1139.jpg	Feature 5: water collection box on north side of dirt road	SSE	
11	20		1140.jpg	Feature 5: Closeup of water collection box	NNE	

DPR 523I (1/95)

*Required Information

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

Primary # CA-SBR-7051H
 HRI# _____
 Trinomial CA-SBR-7051H (update)

Page 39 of 41 *Project Name (Assigned by recorder) East Highlands Ranch Development Project: Tract 16014 Year 2003

Camera Format: Nikon Coolpix 995 Roll #: I:SGL330/Photos Lens Size: _____
 Film Type and Speed: Digital Negatives Kept at: LSA Associates Inc., 20 Executive Park, Suite 200, Irvine, CA 92614

Mo.	Day	Time	Exp/ Frame	Subject/Description	View Toward	Accession #
11	20		1141.jpg	Feature 5: Closeup of water collection box	W	
11	20		1142.jpg	Feature 5: Closeup of the interior of water collection box	SW	
11	20		1143.jpg	Feature 5: Overview	NE	
11	20		1144.jpg	Feature 5: Closeup	W	
11	20		1145.jpg	Feature 5: Upper segment end of feature	W	
11	20		1146.jpg	Feature 5: Destroyed section	SW	
11	20		1147.jpg	Feature 5: Closeup	E	
11	20		1148.jpg	Feature 5: Detail of feature w/two water collection boxes in bkgd	SW	
11	20		1149.jpg	Feature 5: Overview feature north of the 2 water collection boxes	NE	
11	20		1150.jpg	Feature 5: Near Church Street	NE	
11	20		1151.jpg	Feature 5: Overview at water collection box	SW	
11	21		1152.jpg	Feature 1: Overview at Church Street (middle segment)	N	
11	21		1153.jpg	Feature 1: View of lower segment at rock wall and V-ditch	N	
11	21		1154.jpg	Feature 4: View of rock wall and waste water ditch (flat bottom)	SE	
11	21		1155.jpg	Feature 5: View of rock wall and waste water ditch (flat bottom)	N	
11	21		1156.jpg	Feature 1: View of wall, waste water ditch, and drainage spout	E	
11	21		1157.jpg	Junction of Feature 1 and Feature 5	E	
11	21		1158.jpg	Junction of Feature 1 and Feature 5	NE	
11	21		1159.jpg	Feature 11: View of feature at the northern end of flume with drain pipe	S	
11	21		1160.jpg	Feature 11: View at midsection of flume	S	
11	21		1161.jpg	Feature 11: View at midsection of flume	S	
11	21		1162.jpg	Feature 11: View at midsection of flume	S	
11	21		1163.jpg	Feature 11: Overview from midpoint	N	
11	21		1164.jpg	Feature 11: Overview	S	
11	21		1165.jpg	Feature 8: Overview	E	
11	21		1166.jpg	Feature 8: Closeup of water control box	SE	
11	21		1167.jpg	Feature 8: Closeup of water control box	SE	
11	21		1168.jpg	Feature 8: Overview	W	
11	21		1169.jpg	Feature 6: Closeup	E	
11	21		1170.jpg	Feature 7: Overview at dirt road showing pipeline	S	
11	21		1171.jpg	Feature 7: Overview at dirt road showing pipeline	E	
11	21		1172.jpg	Feature 7: Overview at dirt road showing pipeline	N	
11	21		1173.jpg	Feature 7: Overview south of east/west dirt road	S	
11	21		1174.jpg	Feature 7: Closeup of overflow ditch south of east/west dirt road	N	

DPR 523I (1/95)

*Required Information

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

Primary # CA-SBR-7051H
 HRI# _____
 Trinomial CA-SBR-7051H (update)

Page 40 of 41 *Project Name (Assigned by recorder) East Highlands Ranch Development Project: Tract 16014 Year 2003

Camera Format: Nikon Coolpix 995 Roll #: I:SGL330/Photos Lens Size: _____
 Film Type and Speed: Digital Negatives Kept at: LSA Associates Inc., 20 Executive Park, Suite 200, Irvine, CA 92614

Mo.	Day	Time	Exp./ Frame	Subject/Description	View Toward	Accession #
11	20		1175.jpg	Feature 7: Overview of feature 7 south of east/west dirt road	SE	
11	20		1176.jpg	Overview of grove from intersection of EW dirt road and Feature 4	SW	
11	20		1177.jpg	Overview of grove from intersection of EW dirt road and Feature 4	SW	
11	20		1178.jpg	Feature 7: Overview of feature from the south end near Church St.	NE	
11	20		1179.jpg	Feature 7: Closeup of south end of feature near Church Street	SW	
11	20		1180.jpg	Feature 12: Closeup of clay pipe at west end of feature	E	
11	20		1181.jpg	Feature 12: Overview	E	
11	20		1182.jpg	Feature 10: Overview of feature on south side of the road	E	
11	20		1183.jpg	Feature 10: Closeup	S	
11	20		1184.jpg	Feature 10: View of east end of waste water ditch at pipe	E	
11	20		1185.jpg	Feature 2: Overview of eastern portion of the waste water ditch	SW	
11	21		1186.jpg	Feature 2: Intersection with Feature 10	NE	
11	21		1187.jpg	Feature 2: Closeup of feature north of the dirt road	S	
11	21		1188.jpg	Overview of Chinese barracks	E	
11	21		1189.jpg	Overview of Chinese barracks	NE	
11	21		1190.jpg	Overview of Chinese barracks	E	
11	21		1191.jpg	Overview of rear side of Chinese barracks	N	
11	21		1192.jpg	Overview of the troughs at the rear of Chinese barracks	S	
11	21		1193.jpg	Feature 77: Inlet from pipeline to reservoir	N	
11	21		1194.jpg	Feature 77: Inlet from pipeline to reservoir	W	
11	21		1195.jpg	Feature 77: Overview of reservoir	SW	
11	21		1196.jpg	Feature 77: Inlet from pipeline to reservoir	S	
11	21		1197.jpg	Overview of the west side of the orange grove	SE	
11	21		1198.jpg	Overview of the west side of the orange grove from Church St.	SE	
11	21		1199.jpg	Overview of project area with Feature 7 and intersection with Feature 5 in view	N	
11	21		1200.jpg	Features 15 and 16: Overview of "Wall Street"	N	
11	21		1201.jpg	Features 15 and 16: Overview of "Wall Street" at Highland Ave.	S	
11	21		1202.jpg	Features 15 and 16: Overview of "Wall Street" at crossing	S	
11	21		1203.jpg	Features 15: View of northwest side of "Wall Street" curve	NW	
11	21		1204.jpg	Features 15 and 16: Closeup of "Wall Street" curve	S	
11	21		1205.jpg	Feature 15: Closeup of runoff side of "Wall Street" curve	NW	
11	21		1206.jpg	Feature 16: Northern end (upper) of waste water ditch	S	
11	21		1207.jpg	Feature 13: Overview	S	

DPR 523I (1/95)

*Required Information

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

Primary # CA-SBR-7051H
 HRI# _____
 Trinomial CA-SBR-7051H (update)

Page 41 of 41 *Project Name (Assigned by recorder) East Highlands Ranch Development Project: Tract 16014 Year 2003

Camera Format: Nikon Coolpix 995 Roll #: I:SGL330/Photos Lens Size: _____
 Film Type and Speed: Digital Negatives Kept at: LSA Associates Inc., 20 Executive Park, Suite 200, Irvine, CA 92614

Mo.	Day	Time	Exp/ Frame	Subject/Description	View Toward	Accession #
11	20		1208.jpg	Feature 13: Closeup at concrete fertilizer barrel	N	
11	20		1209.jpg	Feature 13: Overview of flume at midsection	NE	
11	20		1210.jpg	Feature 78: Overview of pumping station	S	
11	20		1211.jpg	Feature 78: Overview of subterranean concrete box	N	
11	20		1212.jpg	Feature 78: Closeup of subterranean concrete box	W	
11	20		1213.jpg	Feature 78: Closeup of subterranean concrete box	N	
11	20		1214.jpg	Feature 78: Closeup of subterranean concrete box	N	
11	20		1215.jpg	Feature 78: Closeup of subterranean concrete box	N	
11	20		1216.jpg	Feature 14: Closeup of concrete pipe	N	
11	20		1217.jpg	Feature 14: Closeup of concrete pipe	N	
11	20		1218.jpg	Feature 14: Closeup of concrete pipe	N	
11	21		1219.jpg	Feature 14: Closeup of concrete pipe	N	
11	21		1220.jpg	Feature 14: Closeup of concrete pipe	N	
11	21		1221.jpg	Feature 14: Closeup of concrete pipe	N	
11	21		1222.jpg	Feature 14: Closeup of concrete pipe	N	
11	21		1223.jpg	Feature 14: Closeup of concrete pipe	N	
11	21		1224.jpg	Feature 14: Closeup of concrete pipe	N	
11	21		1225.jpg	Feature 14: Closeup of concrete pipe	N	
11	21		1226.jpg	Feature 14: Closeup of concrete pipe	N	

DPR 523I (1/95)

*Required Information

update 4/95

PRIMARY RECORD

California Department of Parks and Recreation
Office of Historic Preservation

Primary #: 36-007051
HRI #:
Trinomial: CA-SBR-7051H
NRHP Status Code:
Other Listings:

Page 1 of 20 Review Code _____ Reviewer _____ Date _____

P1. Property Name/Temporary No.: LSA-EH-1

P2. Location: County (Address and parcel number OR UTM coordinates and location map required.) This site borders Church Street, Baseline Road and Highland Avenue. Refer to Location Map (page 3).

County: San Bernardino

a. Address:

City:

Zip:

b. Parcel Number:

c. UTM:1 Zone 11: 484,388 mE /	3,777,460	mN Harrison Mtn.
UTM:2 Zone 11: 484,040 mE /	3,776,400	mN Harrison Mtn.
UTM:3 Zone 11: 485,660 mE /	3,775,405	mN Redlands
UTM:4 Zone 11: 486,268 mE /	3,775,245	mN Redlands
UTM:5 Zone 11: 486,050 mE /	3,774,900	mN Redlands
UTM:6 Zone 11: 486,780 mE /	3,775,000	mN Redlands

USGS Quad: Redlands 7.5' dated 1967/1980

USGS Quad: Harrison Mtn. 7.5' dated 1967/1988

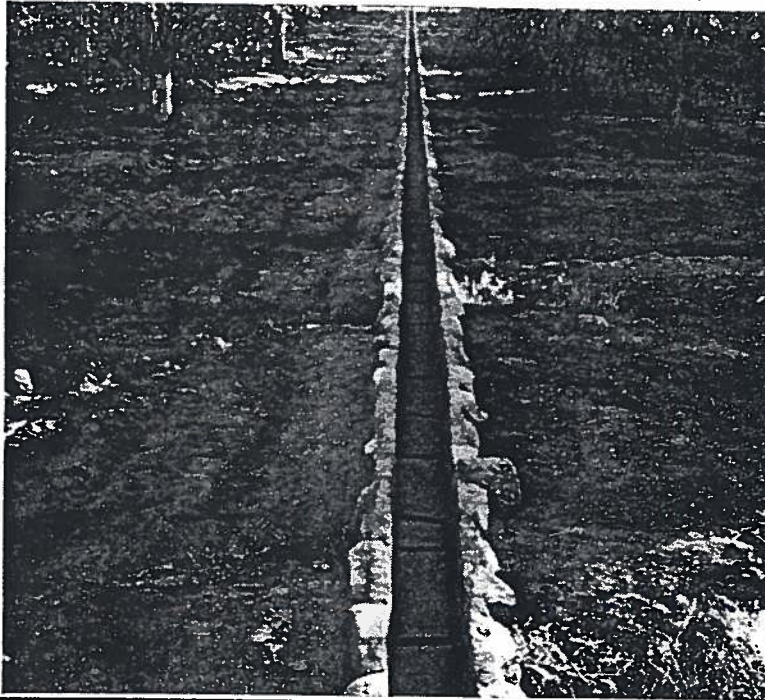
d. Other Locational Data: (Provide legal description, directions to resource, and/or other locational information if appropriate.) This site is located on the Redlands 7.5 minute USGS topographic quadrangle in Sections 1 and 35, and on the Harrison Mountain 7.5 minute USGS topographic quadrangle in Sections 26 and 35. See Location Map, page 3 of 20.

P3. Description: (Describe resource and its major elements. Include design, materials, condition, size, setting, and boundaries as relevant.) The site consists of agricultural features, including multi-terraced landscape, granitic split cobble and mortar irrigation flumes, associated distribution receptacles, reservoir tank, and granitic cobble and mortar retaining walls. The site measures approximately 2,560 m (8,400 ft) N/S by 2,926 m (9,600 ft) E/W. The site extends beyond the surveyed area.

P4. Resources Present: _____ Building Structure _____ Object _____ Site _____ District _____
_____ Element of District

P5. Resource Attributes: (List relevant attributes and codes)
HP20 (Irrigation flumes); HP39 (Reservoir tank and associated distribution works); AH3 (Orange grove); AH6 (Water conveyance system)

P6. Photograph or Drawing: (Photograph required for buildings, structure, and objects.)



Feature 23, Split Cobble and Mortar Flume. View is to the southwest.

PRIMARY RECORD - continued
California Department of Parks and Recreation
Office of Historic Preservation

Page 2 of 20

Primary #:
HRI #:
Trinomial: CA-SBR-7051H
NRHP Status Code:
Other Listings:

Property Name/Temporary No.: LSA-EH-1

P7. Date Constructed/Age:
 Prehistoric Historic Both

P8. Owner: (Name & Address): East Highlands Ranch, Inc., 3401 Centrelake Drive,
Suite 480, Ontario, California 91764

P9. Recorded by: Mari Pritchard-Parker, Antonina Delu, Holly Peterson
Project No.: EHR403

LSA Associates, Inc.
One Park Plaza, Suite 500
Irvine, CA. 92714

P10. Date recorded: September 15, 1994

P11. Type of Survey:
 Intensive
 Reconnaissance
 Other

Describe: Survey completed prior to residential development of project area.

P12. Report citation: (Provide full citation or enter "none.")
Cultural Resources Assessment for 278.4 Acres within East Highlands Ranch, San Bernardino County, California, prepared by Deborah McLean and Brad Sturm, LSA Associates, Inc., Irvine, CA
prepared for East Highlands Ranch, Inc., Ontario, CA
May, 1995.

Attachments: None
 Location Map
 Building, Structure, and Objection Record
 Linear Resource Record
 Archaeological Record
 District Record
 Milling Station Record
 Rock Art Record
 Artifact Record
 Photograph Record
 Other: (List) Three pages of photographs

ARCHAEOLOGICAL SITE RECORD
California Department of Parks and Recreation
Office of Historic Preservation

Primary #: _____
Trinomial: CA-SBR-7051H

Page 4 of 20

A1. Temporary No./Name: LSA-EH-1

A2. Dimensions: a. Length 2,560 m (8,400 ft) (EW) x b. Width 2,926 m (9,600 ft) (NS)
Method of measurement: Paced Taped Visual estimate Other Blueline Map
Method of determination: (Check all that apply) Artifacts Features Soil Vegetation
 Topography Cut bank Animal burrow Excavation Property boundary
 Other: (Explain): These measurements reflect dimensions within the project boundaries. The irrigation and citriculture features extended beyond the project boundaries and, therefore, could not be measured in their entirety.

Reliability of determination: High Low Explain: Existing features were visible.

Limitations: (Mark any that apply) Restricted access Paved/built over Disturbances Site limits incompletely defined Other: (Explain) See explanation above regarding project boundaries. Some features were over grown with vegetation and could not be observed in their entirety.

A3. Depth: _____ None Unknown Method of Determination: No excavation.
The presence of subsurface features is possible.

A4. Human Remains: Present Absent Possible Unknown (Explain): No excavation.

A5. Features: (Number, briefly describe, indicate size, list associated cultural constituents, and show location of each feature on sketch map) This site is composed of numerous agricultural features. Each has been assigned a feature number and is described below. Refer to the attached East Highlands Ranch Cultural Resources Map for the location of each feature.

- Feature 1: Split cobble retaining wall/canal.
- Feature 2: Split cobble irrigation flume, with retaining wall.
- Feature 3: Mortar flume atop granitic cobble wall.
- Feature 4: Split cobble and mortar irrigation flume.
- Feature 5: Mortar flume with distribution receptacles.
- Feature 6: Split cobble and mortar flume.
- Feature 7: Mortar flume.
- Feature 8: Mortar flume lined with granite cobbles.
- Feature 9: Mortar flume.
- Feature 10: Split cobble flume.
- Feature 11: Mortar flume running parallel to split cobble trench.
- Feature 12: Mortar flume.
- Feature 13: Brick and mortar flume running parallel to split cobble trench.
- Feature 14: Distribution receptacles. Water runs underground to distribution cylinders.
- Feature 15: Split cobble and mortar retaining wall and irrigation flume (west side of road).
- Feature 16: Split cobble and mortar retaining wall and irrigation flume (east side of road).
- Feature 17: Split cobble and mortar flume - partially destroyed.
- Feature 18: Split cobble irrigation flume.
- Feature 19: Concrete form flume.
- Feature 20: Cobble retaining wall in disrepair.

ARCHAEOLOGICAL SITE RECORD
California Department of Parks and Recreation
Office of Historic Preservation

Primary #: _____
Trinomial: CA-SBR-7051H

Page 5 of 20

Temporary No./Name: LSA-EH-1

- Feature 21: Split cobble and mortar flume.
- Feature 22: Split cobble and mortar flume - recessed into the ground for drainage.
- Feature 23: Split cobble and mortar flume - partially destroyed.
- Feature 24: Split cobble and mortar retaining wall (8-10 feet) with mortar.
- Feature 25: Split cobble and mortar flume (parallel to Feature 26).
- Feature 26: Split cobble and mortar flume.
- Feature 27: Mortar flume on finger ridge.
- Feature 28: Cobble and mortar flume at the bottom of the finger ridge.
- Feature 29: Cobble and mortar flume buried with fiberglass overlay.
- Feature 30: Split cobble and mortar wall (1 1/2 to 2 1/2 feet) topped by brick and mortar flume.
- Feature 31: Cobble irrigation canal.
- Feature 32: Split cobble flume with five distribution tanks and five connecting pipes.
- Feature 33: Split cobble irrigation flume.
- Feature 34: Split cobble retaining wall.
- Feature 35: Split cobble irrigation flume.
- Feature 36: Split cobble irrigation flume.
- Feature 37: Split cobble and mortar irrigation flume.
- Feature 38: Split cobble and mortar irrigation flume.
- Feature 39: Split cobble and mortar irrigation flume, with 8" aluminum pipe projecting from end to the west. Repaired area dated "malex 8-20-41", repaired with corrugated sheet metal and wood, used as slats for concrete.
- Feature 40: Split cobble and mortar irrigation flume.
- Feature 41: Split cobble and mortar channel in deteriorated state, at the northern end it becomes exclusively mortar.
- Feature 42: Mortar irrigation flume, north end terminates in circular mortar distribution receptacle and rectangular receptacle.
- Feature 43: Split cobble and mortar flume.
- Feature 44: Split cobble and mortar flume atop a small wall in some areas, at north end begins with rectangular distribution receptacle, there is also a circular receptacle with a 2' diameter sewer pipe extending east and west.
- Feature 45: Mortar L shaped distribution receptacle at north end, with split cobble and mortar irrigation flume.
- Feature 46: Split cobble and mortar irrigation flume that also begins at distribution receptacle (Feature 45).
- Feature 47: Split cobble wall 2-3 feet high with a mortar gutter, with the north end terminating in a concrete pool leading into 2.5' diameter pipe.
- Feature 48: 3 mortar distribution receptacles and 8 ceramic irrigation pipes.
- Feature 49: Split cobble and mortar flume.
- Feature 50: Split cobble and mortar base with mortar flume on top.
- Feature 51: Split cobble and mortar flume.
- Feature 52: Cobble retaining wall.
- Feature 53: Mortar flume with distribution receptacle turns from E/W to N/S into a split cobble and mortar wall with flume atop.
- Feature 54: Split cobble and mortar flume that connects to Feature #55.
- Feature 55: Split cobble and mortar flume that attaches to Feature #54 with a distribution receptacle.
- Feature 56: At least 4 cobble retaining walls along a terraced hill. They curve N/S-S/W.

ARCHAEOLOGICAL SITE RECORD
California Department of Parks and Recreation
Office of Historic Preservation

Primary #: _____
Trinomial: CA-SBR-7051H

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Temporary No./Name: LSA-EH-1

- Feature 57: Split cobble and mortar flume.
- Feature 58: Split cobble and mortar flume.
- Feature 59: Split cobble irrigation flume.
- Feature 60: Concrete distribution receptacle
- Feature 61: Concrete distribution receptacle
- Feature 62: North-south oriented split cobble and mortar flume
- Feature 63: East-west oriented split cobble and mortar flume with attached concrete distribution receptacle
- Feature 64: North-south oriented split cobble and mortar flume
- Feature 65: East-west oriented mortar flume
- Feature 66: Northeast-southwest oriented split cobble and mortar flume
- Feature 67: East-west oriented retaining wall and trench
- Feature 68: Covered reservoir tank recessed in the ground, measuring 50 feet (15.2 meters) north-south by 20 feet (6.1 meters) east-west.
- Feature 69: Cobble and mortar tank wall, measuring three feet above ground surface.
- Feature 70: Wood roof with asphalt tile, covering Feature #68.
- Features 71 & 72: Approximately 20 feet (6.1 meters) south of the southeast corner of Feature 68 are two holding tanks with pipe connectors to the reservoir. The mortar on the more elevated (east) tank is incised with "67 Joker." The tank appears to have been repaired in 1967, although both tanks appear to have been constructed at an earlier date.
- Feature 73: A 7 ft. (2.1m) deep concrete water storage tank.
- Feature 74: An 8 ft. (2.4m) shed, constructed of wood, wire and corrugated metal, sitting on top of Feature 73.
- Feature 75: A 3 ft. (.9m) wide cobble and mortar distribution receptacle, extending almost the entire length of Feature 73 and leading to an underground pipe.
- Feature 76: A second similar receptacle is adjacent to and east of Feature 75. They are separated by a small wall.

- A6. Cultural Constituents:** (Describe and quantify artifacts, ecofacts, cultural residues, etc., not associated with features)
A variety of isolated broken household items is scattered throughout the orange groves. Ceramics include stoneware, porcelain, and fiestaware. Glass fragments included brown, green, blue, white, red, and aqua.

ARCHAEOLOGICAL SITE RECORD (PART 2)

California Department of Parks and Recreation
Office of Historic Preservation

Primary #: _____
Trinomial: CA-SBR-7051H

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Temporary No./Name: LSA-EH-1

- A7. Were Specimens Collected? No Yes (If yes, attach Artifact Record or catalog)
- A8. Site Condition: Good Fair POOR (Describe disturbances):
Most features are in good condition. Many have repaired sections, and some are in need of repair.
- A9. Nearest Water: (Type, distance, and direction) Bledsoe Gulch and Elder Gulch flow through the site.
- A10. Elevation: 1,600 - 2,000 feet above MSL.
- A11. Environmental Setting: (Describe vegetation, fauna, soils, geology, landform, slope, aspect, exposure, etc., as appropriate)
The site is situated on old deeply eroded alluvial fans at the base of the San Bernardino Mountains. Historically, the site has been used for citriculture and is planted with orange trees.
- A12. Historical Information: (Note sources and provide full citations in Field A15 below)
These features are part of the East Highland Ranch Irrigation System. For historical background of project area, see *Archaeological and Historical Investigations of the Cram School Site and Tentative Tracts 13551 and 15554, East Highlands, San Bernardino County, California*; prepared by Brad Sturm, Deborah McLean, William McCawley, Steven Conkling and Mari A. Pritchard-Parker; LSA Associates, Inc., Irvine, CA; 1995; prepared for East Highlands Ranch, Ontario, CA.
- A13. Age: Prehistoric Pre-Colonial (1500-1769) Spanish/Mexican (1769-1848)
 Early American (1848-1880) Turn of Century (1880-1914)
 Early 20th Century (1914-1945) Post WWII (1945+) Undetermined
Factual or estimated dates of occupation (explain):
Irrigation systems on East Highlands Ranch were constructed as early as 1858 and were used as recently as the 1980s. See reference in A15 for detailed account.
- A14. Remarks and Interpretations: (Discuss scientific, interpretive, ethnic, and other values of site, if known)
See A13.
- A15. References: (Give full citations including the names and addresses of any persons interviewed, if possible)
Archaeological and Historical Investigations of the Cram School Site and Tentative Tracts 13551 and 15554, East Highlands, San Bernardino County, California; prepared by Brad Sturm, Deborah McLean, William McCawley, Steven Conkling and Mari A. Pritchard-Parker; LSA Associates, Inc., Irvine, CA; 1995; prepared for East Highlands Ranch, Ontario, CA. On file at the San Bernardino Archaeological Information Center.
- A16. Photographs: (List camera format, lens focal length, film type and speed, subjects, and accession numbers or attach a Photograph Record)
Photograph Record attached.
- A17. Form Prepared By: Mari Pritchard-Parker, Antonina Delu, Holly Peterson Date: September 15, 1994

Affiliation and address: LSA Associates, Inc.; One Park Plaza, Suite 500; Irvine, CA 92714

Project No.: EHR403

LOCATION MAP

CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

Primary # _____

HRI#/Trinomial: CA-SBR-7051H

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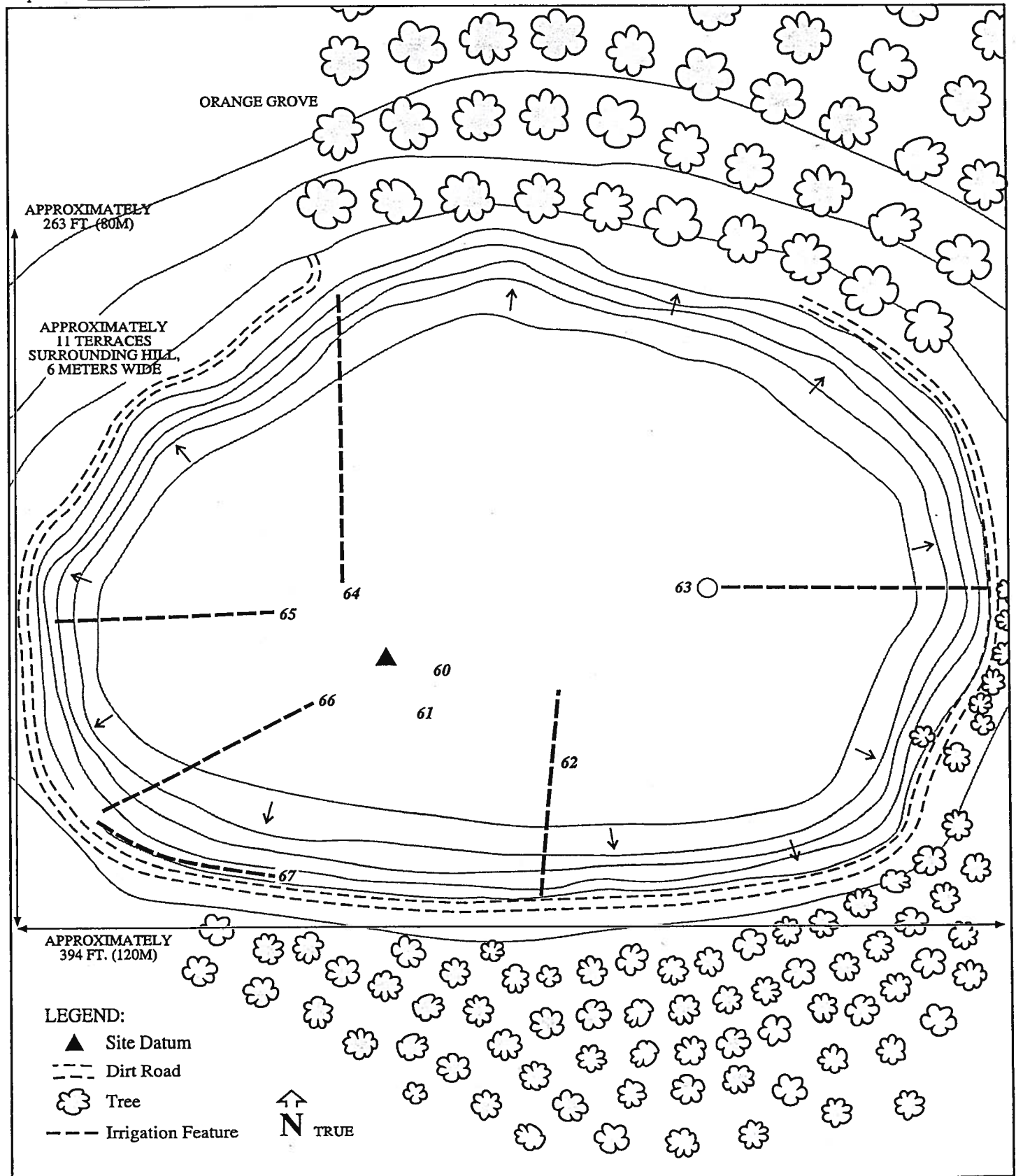
Note: Include bar scale and north arrow on map.

Property Name/Temporary No.: LSA-EH-1

Map Name: Features 60-67

Scale: Not to Scale

Date: 9/15/94



LOCATION MAP

CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

Primary # _____

HRI#/Trinomial: CA-SBR-7051H

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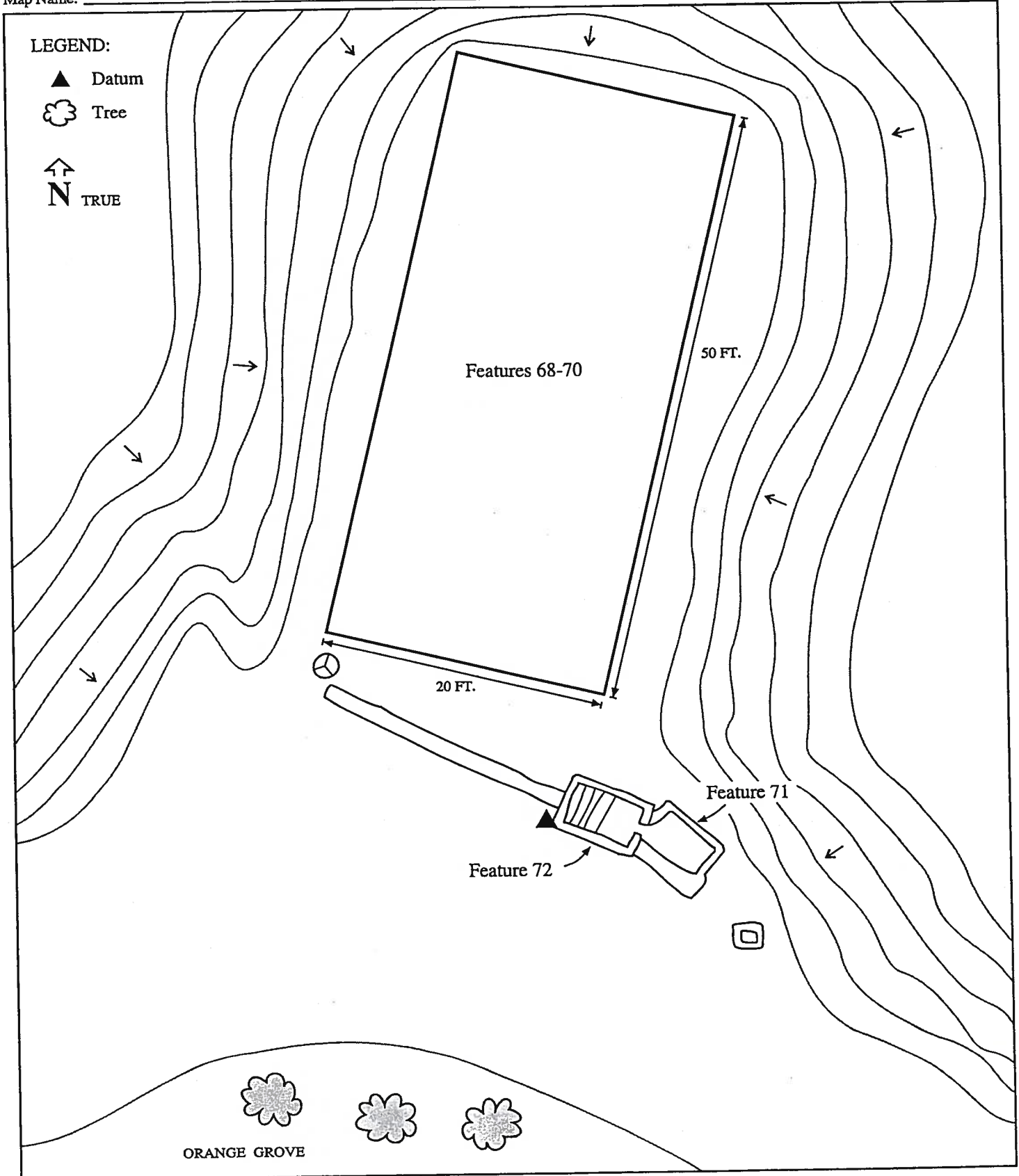
Note: Include bar scale and north arrow on map.

Property Name/Temporary No.: LSA-EH-1

Map Name: Features 68-72

Scale: Not to Scale

Date: 9/15/94



LOCATION MAP

CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

Primary # _____

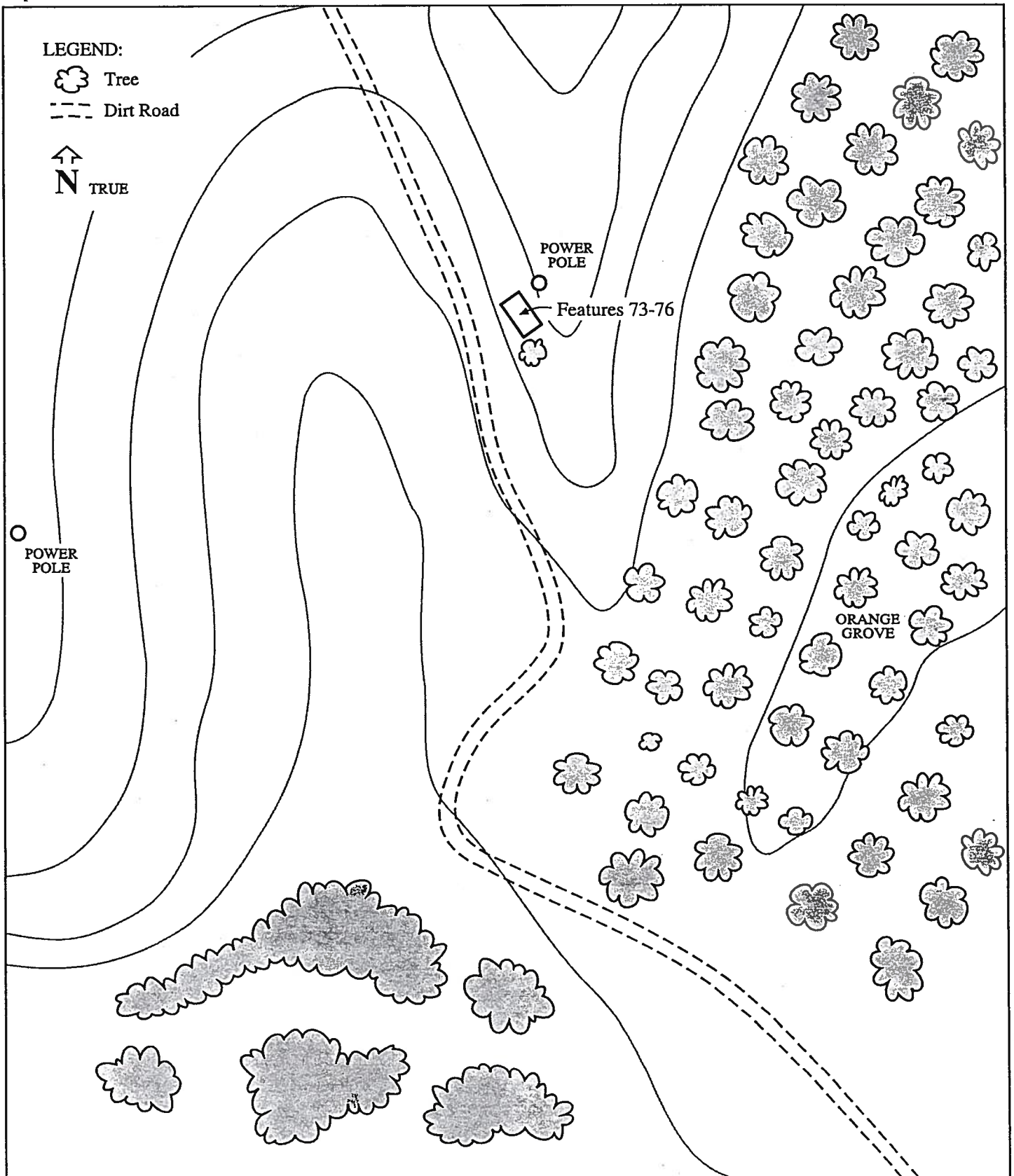
HRI#/Trinomial: CA-SBR-7051H

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Note: Include bar scale and north arrow on map.

Property Name/Temporary No.: LSA-EH-1

Map Name: Features 73-76 Scale: Not to Scale Date: 9/15/94



LOCATION MAP

CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

Primary # _____

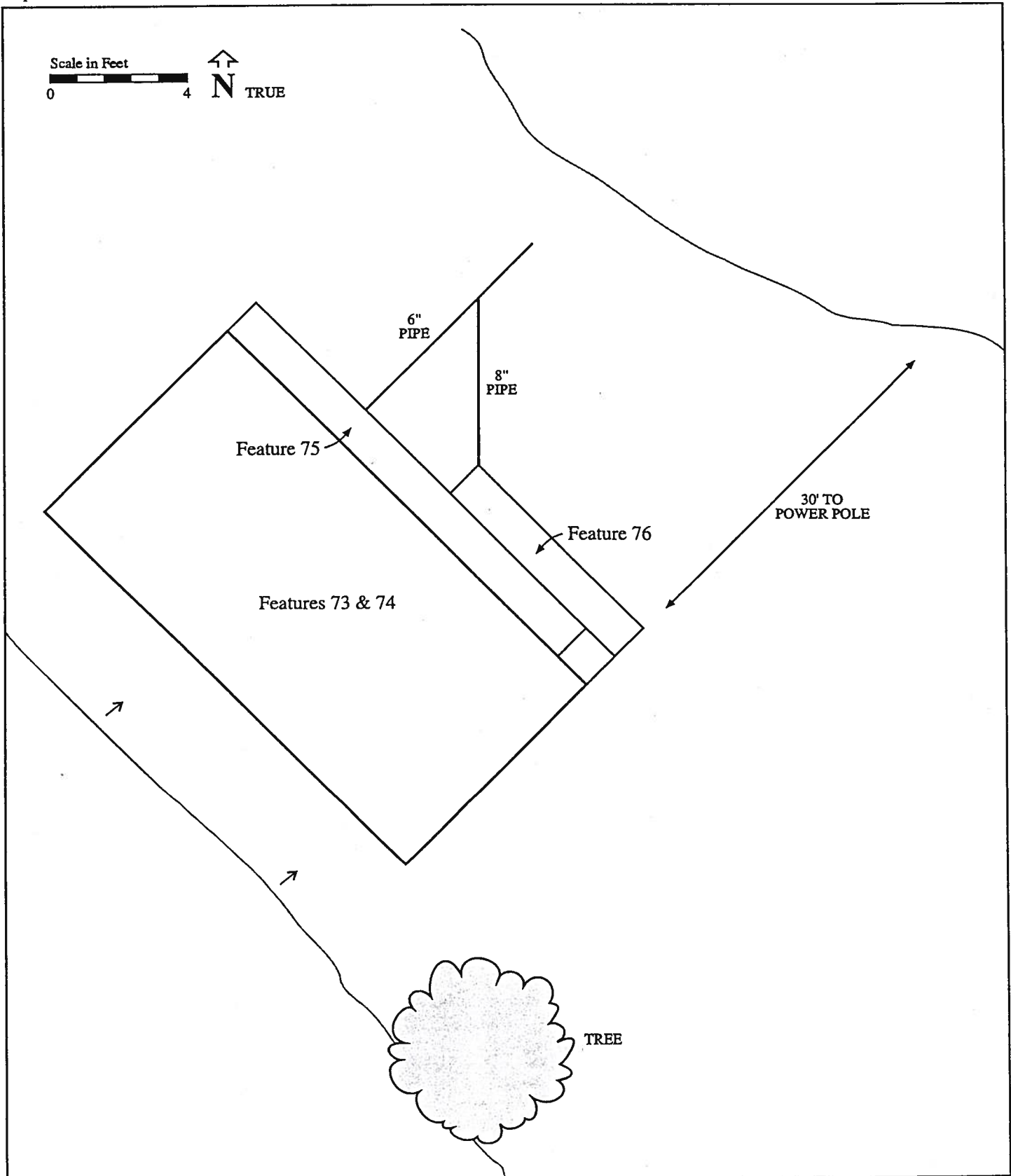
HRI#/Trinomial: CA-SBR-7051H

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Note: Include bar scale and north arrow on map.

Property Name/Temporary No.: LSA-EH-1

Map Name: Features 73-76 Scale: 1" = 4' Date: 9/15/94



CONTINUATION SHEET

CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

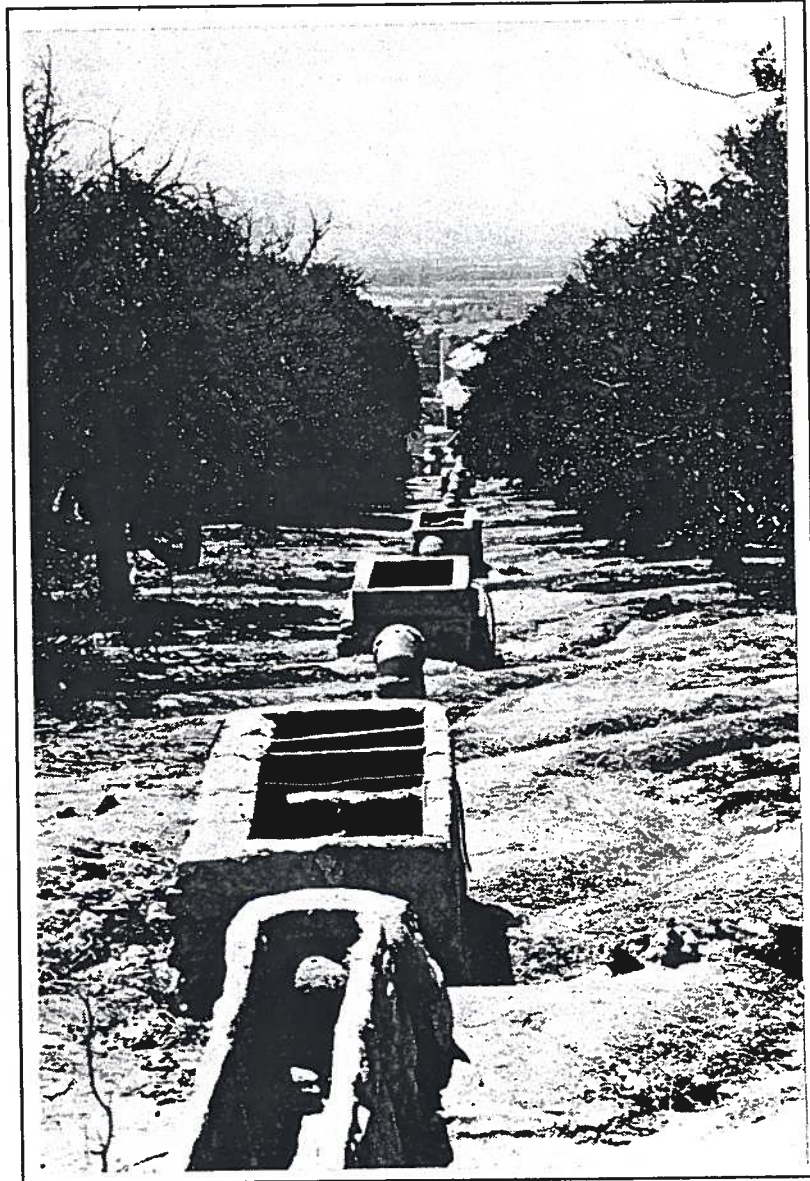
Primary # _____

HRI#/Trinomial: CA-SBR-7051H

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UPDATE Continuation

Property Name/Temporary No.: LSA-EH-1



Feature 32. Overview, split cobble flume with five distribution tanks and five connecting pipes. View is to the south.

CONTINUATION SHEET

CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

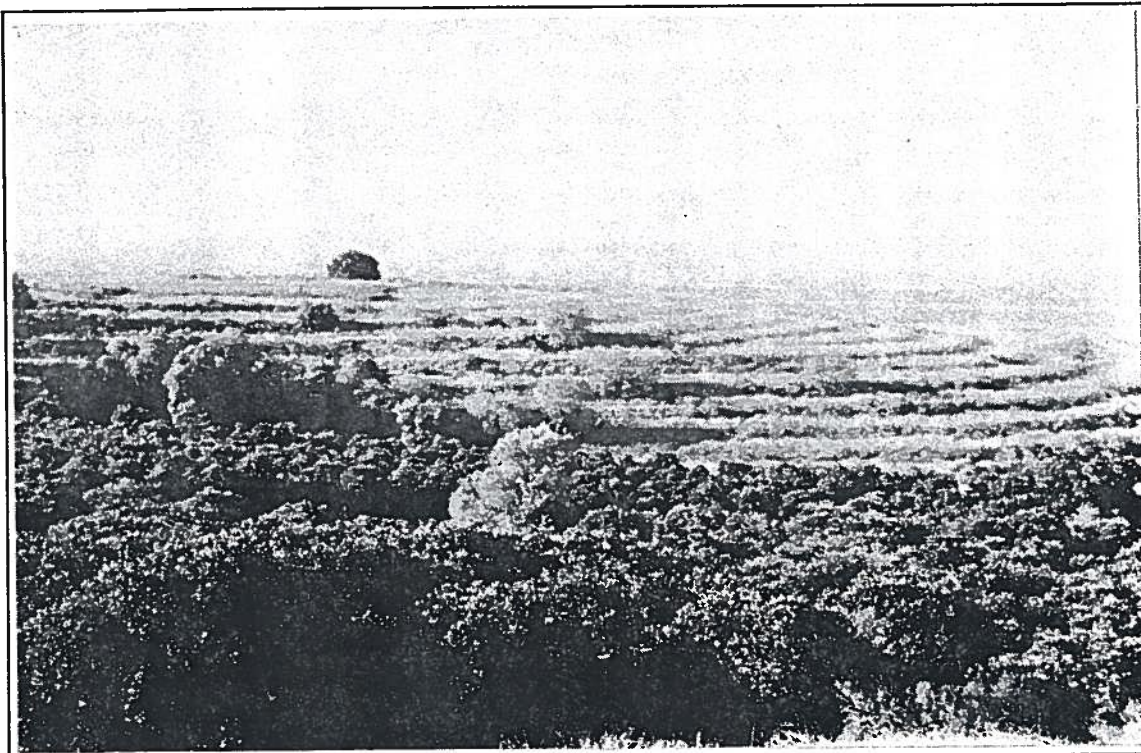
Primary # _____

HRI#/Trinomial: CA-SBR-7051H

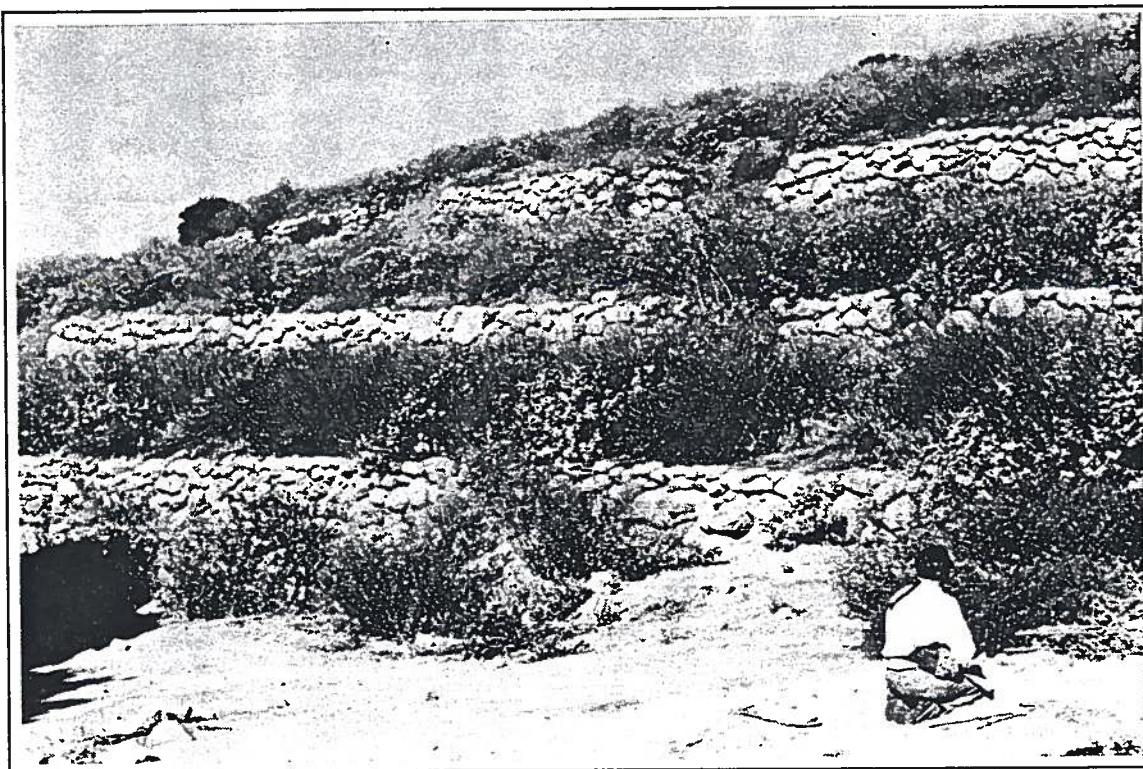
Page 13 of 20

UPDATE Continuation

Property Name/Temporary No.: LSA-EH-1



Features 60-67, Overview. View is to the south.



Features 60-67, Overview. View is to the west.

CONTINUATION SHEET

CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

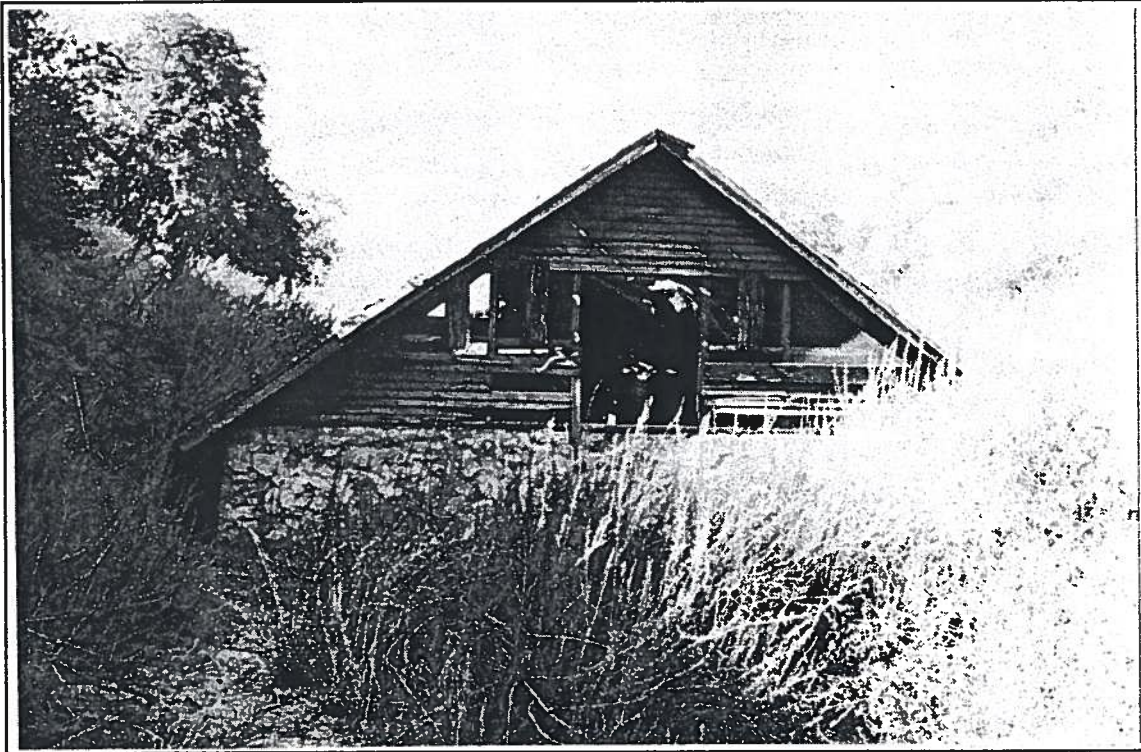
Primary # _____

HRI#/Trinomial: CA-SBR-7051H

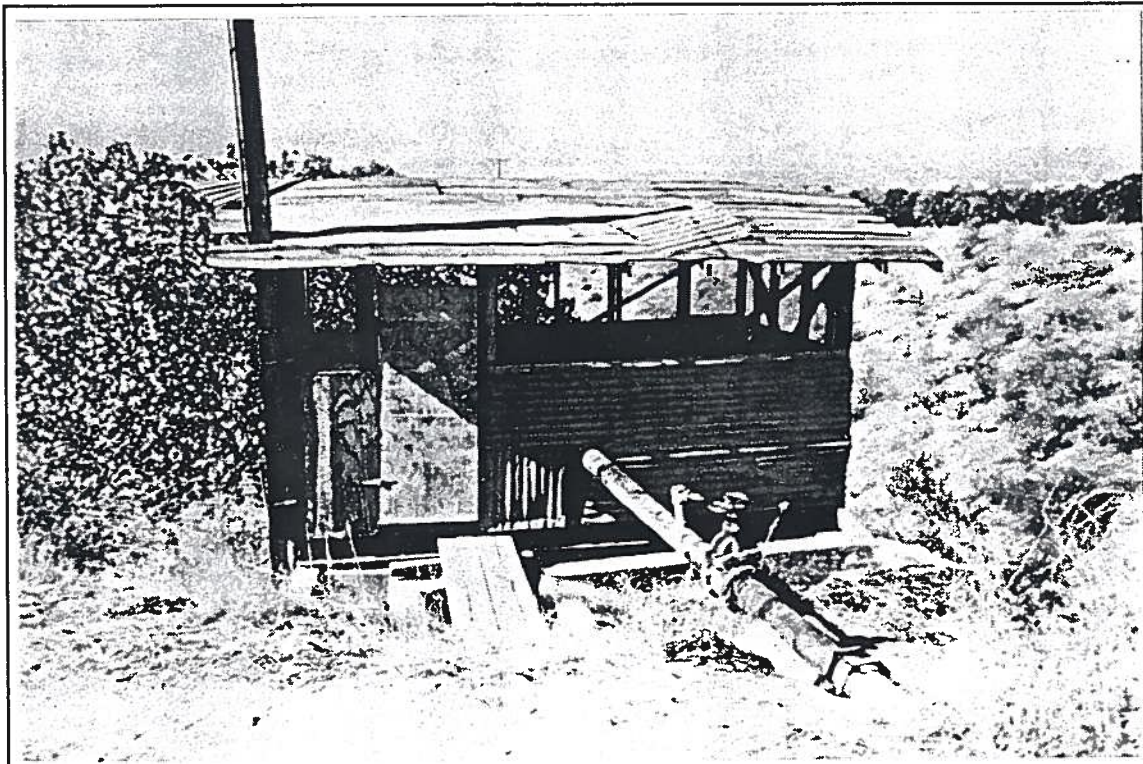
Page 14 of 20

UPDATE Continuation

Property Name/Temporary No.: LSA-EH-1



Features 69 & 70, Covered reservoir tank. View is to the south.



Features 73-76, Covered water storage tank.

PHOTOGRAPHIC RECORD
CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

Primary # _____
 Trinomial/HRI # CA-SBR-7051H

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Property or Project Name/Temporary No.: E. Highlands Ranch Assessmt #2 (EHR403)/LSA-EH-1,-4
 Camera Format: Nikon Lens Size: 35-70 mm zoom
 Film Type and Speed: Kodak Plus - X pan 125 Year: 1994
 Negatives kept at: LSA Associates, Inc. Roll #EHR403-1

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
9	14	0840	1	SBR-7051H - Terraced Hill	S	
9	14	0900	2	SBR-7051H - Terraced Hill	SE	
9	14	0915	3	North Fork Canal Overview CA-SBR-6544H	W	
9	14	0915	4	North Fork Canal Overview CA-SBR-6544H	N	
9	14	0930	5	SBR-7051H - Flume	N	
9	14	0930	6	SBR-7051H - Terraced Hill	W	
9	14	1150	7	SBR-7051H - Irrigation Feature 60 - Concrete Distribution Receptacle	E	
9	14	1150	8	SBR-7051H - Irrigation Feature 61 - Concrete Distribution Receptacle	E	
9	14	1155	9	SBR-7051H Feature 62 - Connecting Flume	NW	
9	14	1209	10	SBR-7051H Feature 63 - Concrete Distribution Receptacle	N	
9	14	1209	11	SBR-7051H Feature 63 - Concrete Distribution Receptacle	SW	
9	14	1212	12	SBR-7051H Feature 64 - Split Cobble and Mortar Flume	S	
9	14	1212	13	SBR-7051H Feature 64 - Terrace Canal Overview	S	
9	14	1215	14	SBR-7051H Feature 65 - Brick and Mortar Flume	N	
9	14	1215	15	SBR-7051H Feature 65 - Brick and Mortar Flume	W	
9	14	1230	16	SBR-7051H Feature 67 - Wall and Trench	N	
9	14	1230	17	SBR-7051H Feature 66 - N-S Flume	NW	
9	15	0755	18	SBR-6073H Locus 3 - Close up of Artifacts	E	
9	15	0755	19	SBR-6073H Locus 3 - Overview	E	
9	15	0755	20	SBR-6073H Locus 3 - Location	N	
9	15	0815	21	SBR-6073H Locus 4	SW	
9	15	0835	22	SBR-6073H Locus 5	E	
9	15	1025	23	SBR-7051H - Feature 59	S	

PHOTOGRAPHIC RECORD

CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

Primary # _____
Trinomial/HRI # CA-SBR-7051H

Property or Project Name/Temporary No.: E. Highlands Ranch Assessmt #2 (EHR403)/LSA-EH-1
Camera Format: Nikon Lens Size: 35-70 mm zoom
Film Type and Speed: Kodak Plus - X pan 125 Year: 1994
Negatives kept at: LSA Associates, Inc. Roll #EHR403-1

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
9	15	1035	24	SBR-7051H Feature 30 Exten.	S	
9	15	1050	25	SBR-7051H Feature 35	S	
9	15	1055	26	SBR-7051H Feature 36	S	
9	15	1100	27	SBR-7051H Feature 31	NE	
9	15	1300	28	SBR-7051H Feature 32 - Overview	S	
9	15	1300	29	SBR-7051H Feature 32 - Distribution Tank	SW	
9	15	1300	30	SBR-7051H Feature 32 - Connecting Pipe	SW	
9	15	1310	31	SBR-7051H Feature 34 - Retaining Wall	NW	
9	15	1320	32	SBR-7051H Feature 33 - Flume	N	
9	15	1420	33	SBR-7051H Feature 15 - West Wall	NW	
9	15	1430	34	SBR-7051H Feature 16 - East Wall	SE	
9	16	0720	35	SBR-7051H Feature 21	N	
9	16	0730	36	SBR-7051H Feature 22	SW	
9	16	0740	37	SBR-7051H Feature 23	SW	

PHOTOGRAPHIC RECORD
CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

Primary # _____
 Trinomial/HRI # CA-SBR-7051H

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Property or Project Name/Temporary No.: E. Highlands Ranch Assesmt #2 (EHR403)/LSA-EH-1
 Camera Format: Nikon Lens Size: 35-70 mm zoom
 Film Type and Speed: Kodak Plus - X pan 125 Year: 1994
 Negatives kept at: LSA Associates, Inc. Roll #EHR403-2

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
9	16	0900	1	SBR-7051H Feature 17	N	
9	16	0940	2	SBR-7051H Feature 58	NE	
9	16	1000	3	SBR-7051H Feature 18	NE	
9	16	1030	4	SBR-7051H Feature 20	NE	
9	16	1043	5	SBR-7051H Feature 19	NE	
9	19	0720	6	SBR-7051H Feature 1 - Retaining Wall/Flume	NE	
9	19	0740	7	SBR-7051H Feature 2 - Irrigation Trench	N	
9	19	0745	8	SBR-7051H Feature 4 - Irrigation Flume	S	
9	19	0750	9	SBR-7051H Feature 5 - Irrigation Flume	S	
9	19	0800	10	SBR-7051H Feature 7 - Irrigation Flume	S	
9	19	0805	11	SBR-7051H Feature 6 - Irrigation Flume	S	
9	19	0815	12	SBR-7051H Feature 9 - Irrigation Flume	S	
9	19	0825	13	SBR-7051H Feature 8 - Irrigation Flume	S	
9	19	0845	14	SBR-7051H Feature 12 - Irrigation Flume	SE	
9	19	0846	15	SBR-7051H Feature 10 - Irrigation Flume	S	
9	19	0925	16	SBR-7051H Feature 7 - Extension	S	
9	19	0930	17	SBR-7051H Feature 11 - Mortar Flume	S	
9	19	0945	18	SBR-7051H Feature 3 - Mortar Flume/Wall	S	
9	19	0950	19	SBR-7051H Feature 13 - Drainage Gutter	S	
9	19	1135	20	SBR-7051H Feature 13 Irrigation Flume - Split Cobble Trench	N	
9	19	1155	21	SBR-7051H Feature 14 - Distribution Receptacle	N	
9	19	1155	22	SBR-7051H Feature 14 - Overview	S	
9	19	1200	23	SBR-7051H Feature 15 - Distribution Cylinder	S	
9	20	0715	24	SBR-7051H Feature 16 - Underground Irr. Ditch	S	

PHOTOGRAPHIC RECORD
CALIFORNIA Department of Parks and Recreation
Office of Historic Preservation

Primary # _____
 Trinomial/HRI # CA-SBR-7051H

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Property or Project Name/Temporary No.: E. Highlands Ranch Assessmt #2 (EHR403)/LSA-EH-1
 Camera Format: Nikon Lens Size: 35-70 mm zoom
 Film Type and Speed: Kodak Plus - X pan 125 Year: 1994
 Negatives kept at: LSA Associates, Inc. Roll #EHR403-2

Mo.	Day	Time	Exp./Frame	Subject/Description	View Toward	Accession #
9	20	0755	25	SBR-7051H Feature 30 - Split Cobble Retaining Wall/Irrigation Flume	NE	
9	20	0805	26	SBR-7051H Feature 24 - Retaining Wall	NE	
9	20	0825	27	SBR-7051H Feature 26 - Irrigation Flume	S	
9	20	0830	28	SBR-7051H Feature 25 - Irrigation Flume	S	
9	20	0855	29	SBR-7051H Feature 27 - Irrigation Flume	SE	
9	20	0900	30	SBR-7051H Feature 28 - Irrigation Flume	S	
9	20	0920	31	SBR-7051H Feature 29 - Flume	N	
9	20	0925	32	SBR-7051H Features 70-72 - Reservoir Tank	N	
9	20	0930	33	SBR-7051H Features 70-72 - Reservoir Tank	N	
9	20	0945	34	SBR-7051H Features 69-70 - Reservoir Tank	S	
9	20	1030	35	SBR-7051H Feature 50 - Irrigation Flume	S	
9	20	1035	36	SBR-7051H Feature 52 - Retaining Wall	S	
9	20	1035	37	SBR-7051H Feature 51 - Irrigation Flume	S	

ARCHAEOLOGICAL SITE RECORD

PAGE: 1 OF 10
DATE OF ORIGINAL RECORD: N/A
DATE OF THIS FORM: 12/21/90

PERMANENT TRINOMIAL: CA-SBR-7051A
TEMPORARY NUMBER: R-FEH #14
AGENCY DESIGNATION:

- 1. COUNTY: San Bernardino
- 2. USGS QUAD: Redlands 7.5' 1967 REVISED: 1988
- 3. UTM COORDINATES: ZONE 11; 486520 mm E; 3775200 mm N (X)
- 4. TOWNSHIP 1S RANGE 3W, SW 1/4, NW 1/4, NW 1/4, NE 1/4, of N 1/2 of N 1/2
- Section 1 BASE MER. SBM
- 5. MAP COORDINATES: 27 mm S 399 mm E
- 6. ELEVATION: 1700 - 1800 ft.

7. LOCATION: From east bound Greenspot Road, turn left onto paved access road approximately 0.2 mile east of KCAL radio towers. Proceed along this road to Three Palms Road (Private) and turn right. Site is in orchards and terraced hills above.

8. PREHISTORIC HISTORIC X PROTOHISTORIC

9. SITE DESCRIPTION: Irrigation complex in active citrus orchard. Active structures include flumes, weirs, canals, standpipes, retaining walls, and an elevated canal section. Construction is of concrete, split cobble, dressed stone, and plastered brick.

10. AREA: 1300 m (length) x 500 m (width); m²
Method: Topographic map sheet

11. DEPTH: unknown METHOD: N/A

12. FEATURES: Unmortared retaining walls on terraces. Mortared dressed stone drains. Plastered brick flumes. Concrete weirs. Concrete/mortar lined canals. (X)

13. ARTIFACTS: Recent trash.

14. NON-ARTIFACTUAL CONSTITUENTS: Citrus and pepper trees.

15. DATE OF ORIGINAL RECORD: N/A DATE OF THIS FORM: 12/21/90

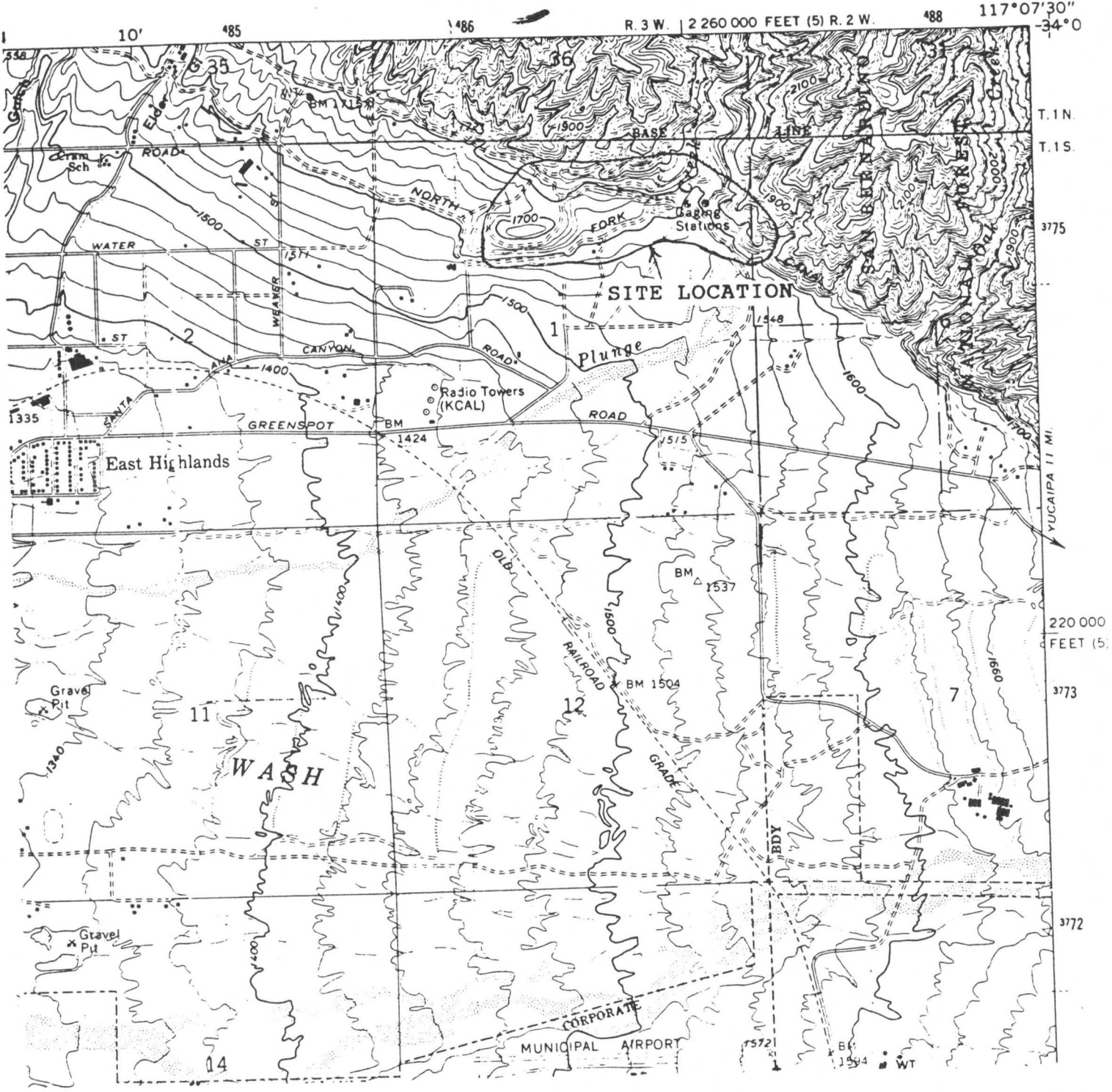
16. RECORDED BY: James J. Schmidt, Gwendolyn Romani, June Schmidt, and Bruno Texier.

17. AFFILIATION: Greenwood and Associates, 725 Jacon Way,
725 Jacon Way, Pacific Palisades, CA 90272
(213) 454-3091

ARCHAEOLOGICAL SITE LOCATION MAP

PAGE:3 OF 10
DATE OF ORIGINAL RECORD:
DATE OF THIS FORM: 12/21/90
U.S.G.S. 7.5' QUADRANGLE: Redlands

PERMANENT TRINOMIAL: 582-72514
TEMPORARY NUMBER: R-FEH #14
AGENCY DESIGNATION:



ARCHAEOLOGICAL SITE MAP

PAGE: 4 OF 10

DATE OF ORIGINAL RECORD:

DATE OF THIS FORM: 12/21/90

PERMANENT TRINOMIAL:








TEMPORARY NUMBER: R-FEH #14

AGENCY DESIGNATION:

882-7514

MAP KEY

KEY:

-  DIRT ROAD
-  CANAL
-  FLUME
-  DITCH
-  WEIR
-  BUILDING
-  STONE RETAINING WALL

ARCHAEOLOGICAL SITE MAP

PAGE:5 OF 10

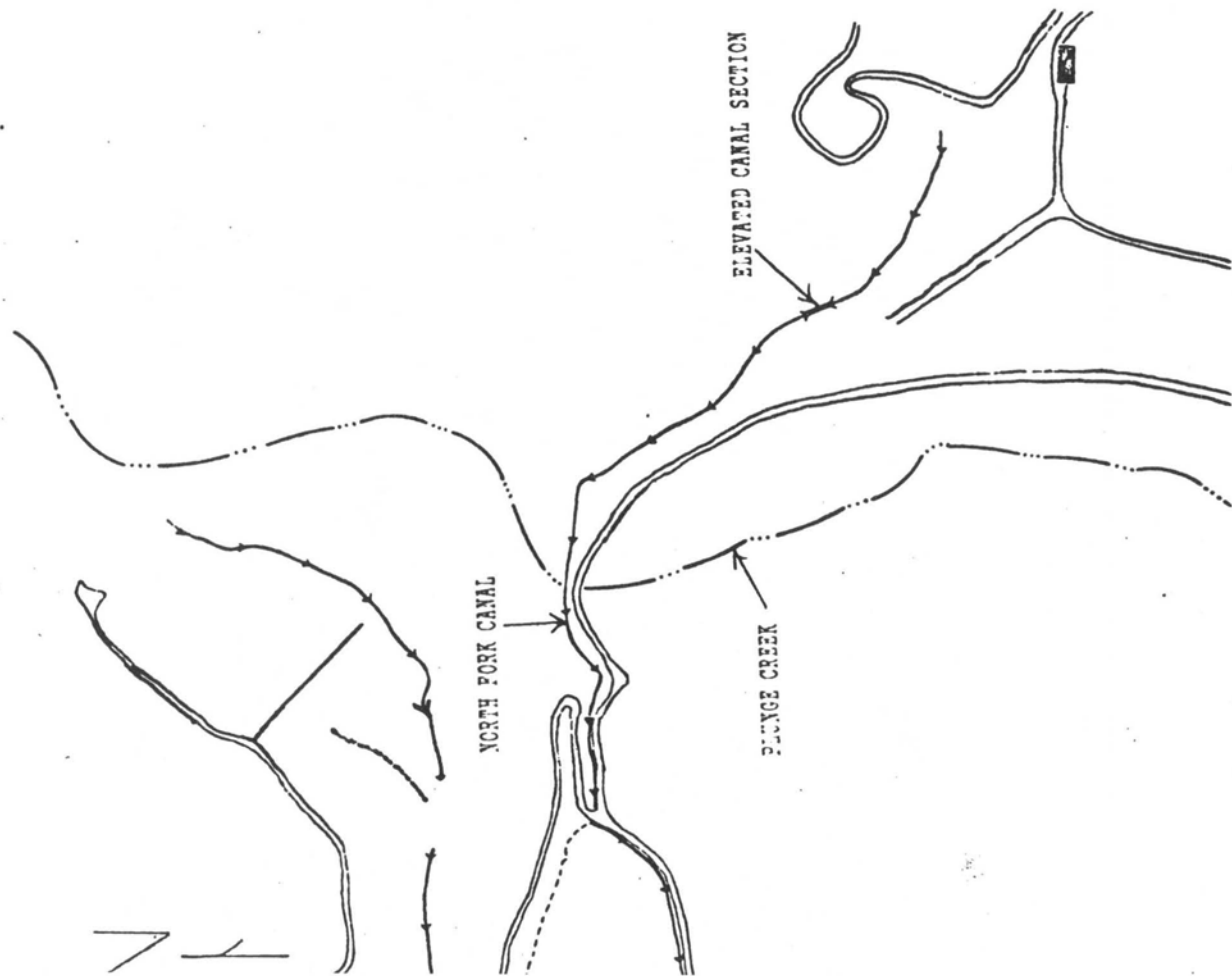
DATE OF ORIGINAL RECORD:

DATE OF THIS FORM: 12/21/90

PERMANENT TRINOMIAL: 583-17514

TEMPORARY NUMBER: R-FEH #14

AGENCY DESIGNATION:



ARCHAEOLOGICAL SITE RECORD - CONTINUATION

PAGE: 6 OF 10

PERMANENT TRINOMIAL: *SEA-2251H*

DATE OF ORIGINAL RECORD:

TEMPORARY NUMBER: R-FEH #14

DATE OF THIS FORM: 12/21/90

AGENCY DESIGNATION:

CONTINUATION

ITEM NO.

(3.) 486100 mm E; 3774900 mm N, 486300 mm E; 3775280 mm N, 487000 mm E; 3775300 mm N, 487380 mm E; 3774860 mm N.

(12.) There are four features atop the stepped/terraced hill. This area is an abandoned orchard with all trees removed or cut down. Weedy vegetation now covers the area.

Feature #1 is a shallow concrete flume with small flow regulator gates at about 60 cm. intervals on both sides. The flume is fed by an underground pipe and exists toward the western end of the hill (38 cm wide x 12.5 cm deep with 7.5 cm thick walls). Inside it has a series of angled up sections (3 cm high) every 84 cm. These slightly block the flow back into 1/4" wire mesh which covers the metal flow regulator gates.

Feature #2 is a filled in split cobble flume that extends to the north slope.

Feature #3 is a three sectioned plastered brick weir.

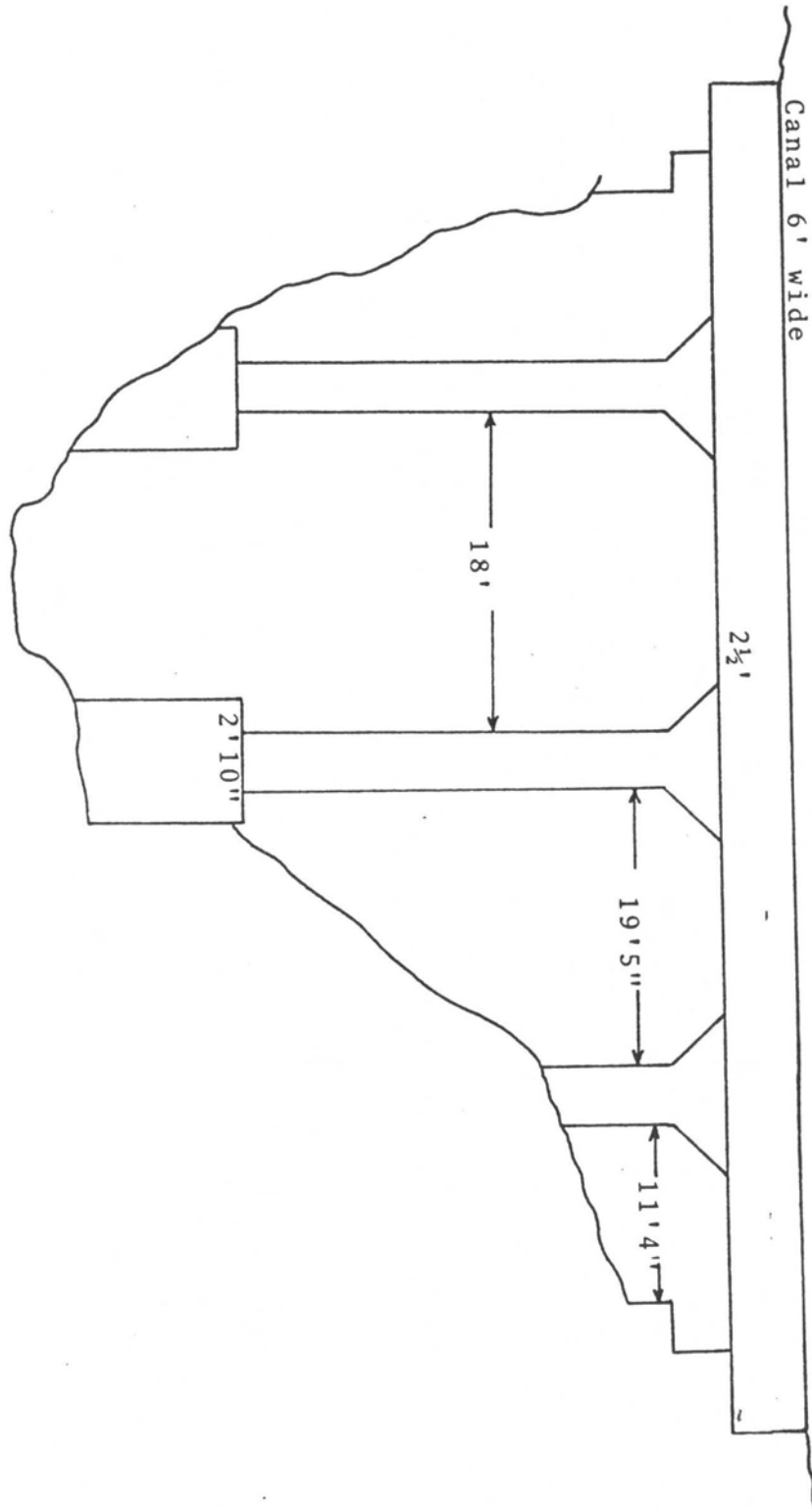
Feature #4 is a three sectioned concrete weir and metal pipe connected to a split cobble flume with angled bottom blocking the flow back into meshed area over gates (similar to #1). It is 25.5 cm wide and 28 cm deep.

Terraces are man-made cuts approximately 3 meters wide, 1 meter high with small furrows near the edge. Some areas to north of hill have dry-laid stone retaining walls.

ARCHAEOLOGICAL SITE
FEATURE ILLUSTRATION

PAGE: 7 OF 10
DATE OF ORIGINAL RECORD:
DATE OF THIS FORM: 12/21/90

PERMANENT TRINOMIAL: S36-7051 H
TEMPORARY NUMBER: R-FEH #14
AGENCY DESIGNATION:



Not to scale

ARCHAEOLOGICAL SITE
FEATURE ILLUSTRATION

PAGE: 8 OF 10

DATE OF ORIGINAL RECORD:

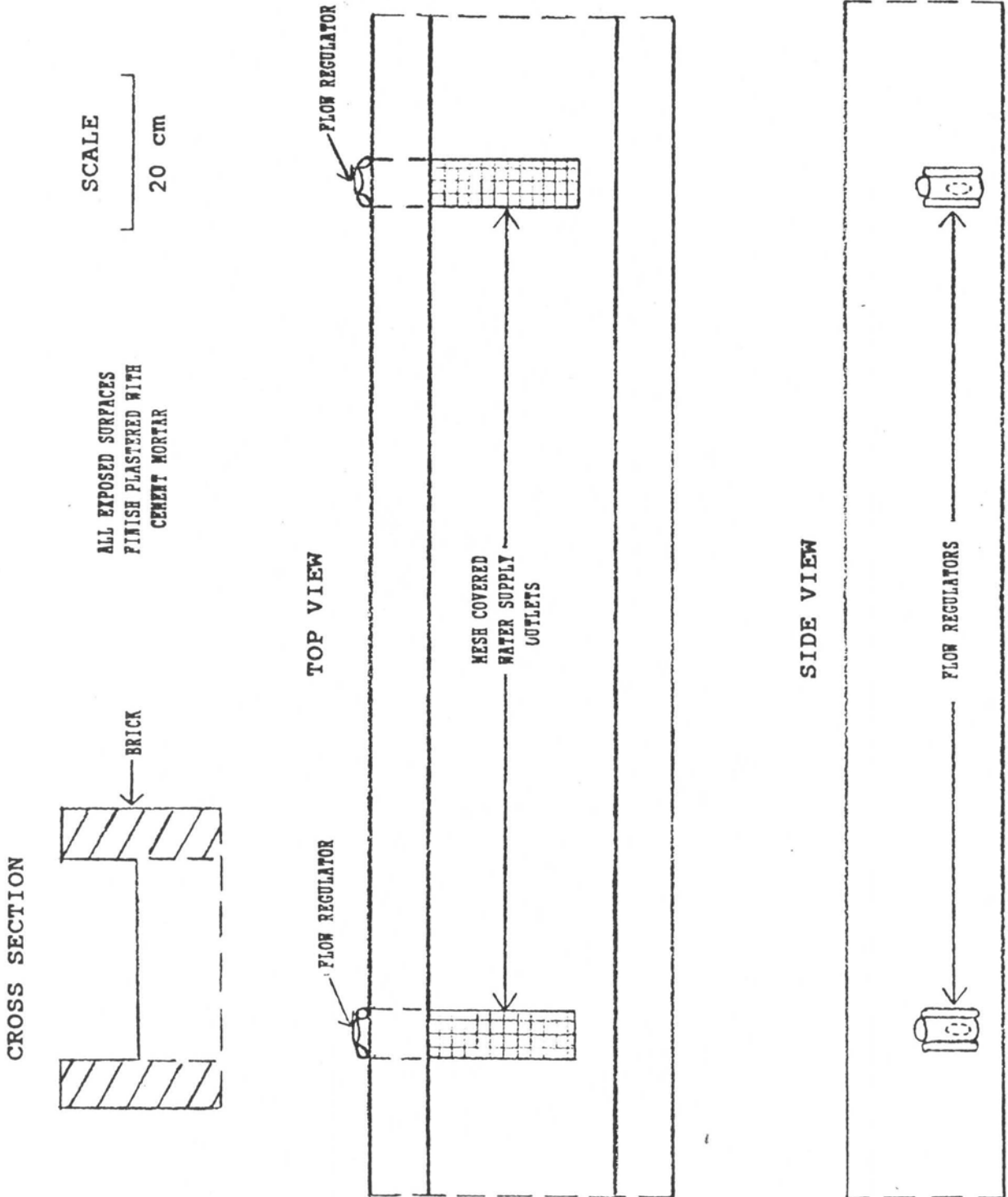
DATE OF THIS FORM: 12/21/90

PERMANENT TRINOMIAL: SBZ-7051H

TEMPORARY NUMBER: R-FEH #14

AGENCY DESIGNATION:

TYPICAL FLUME DETAIL



ARCHAEOLOGICAL SITE
FEATURE ILLUSTRATION

PAGE: 9 OF 10

DATE OF ORIGINAL RECORD:

DATE OF THIS FORM: 12/21/90

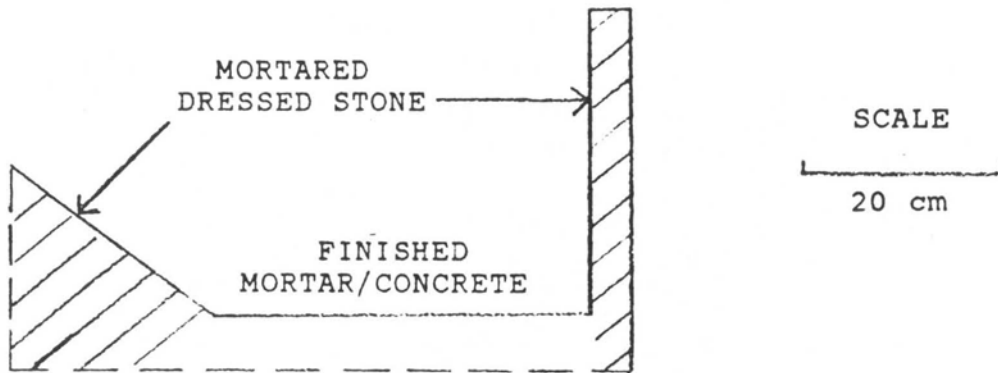
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TEMPORARY NUMBER: R-FEH #14

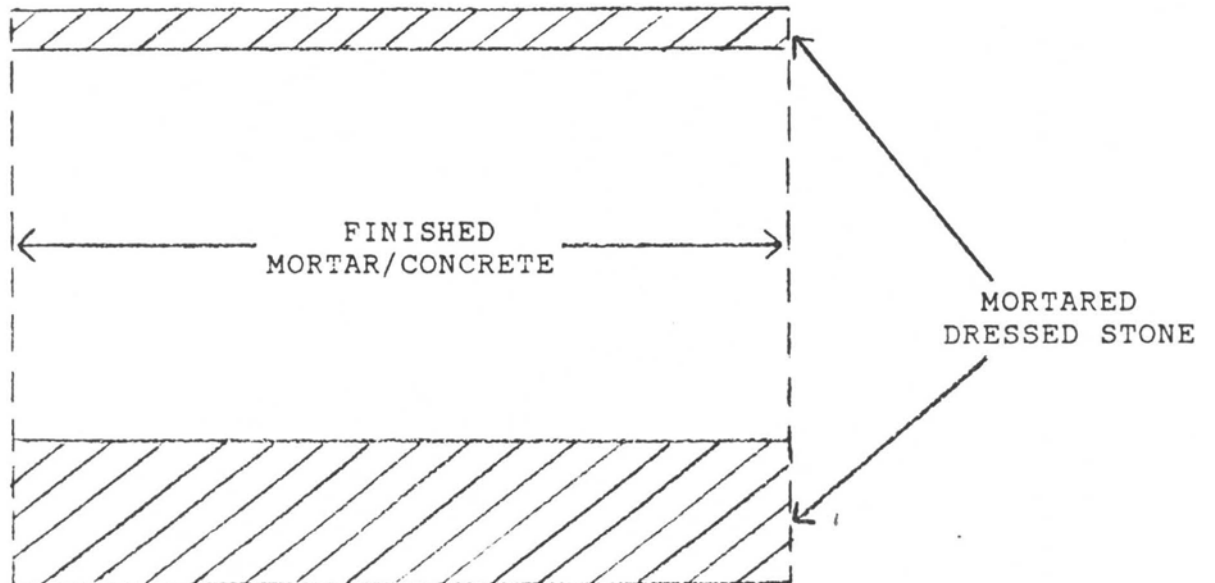
AGENCY DESIGNATION:

TYPICAL DRAIN DETAIL

CROSS SECTION



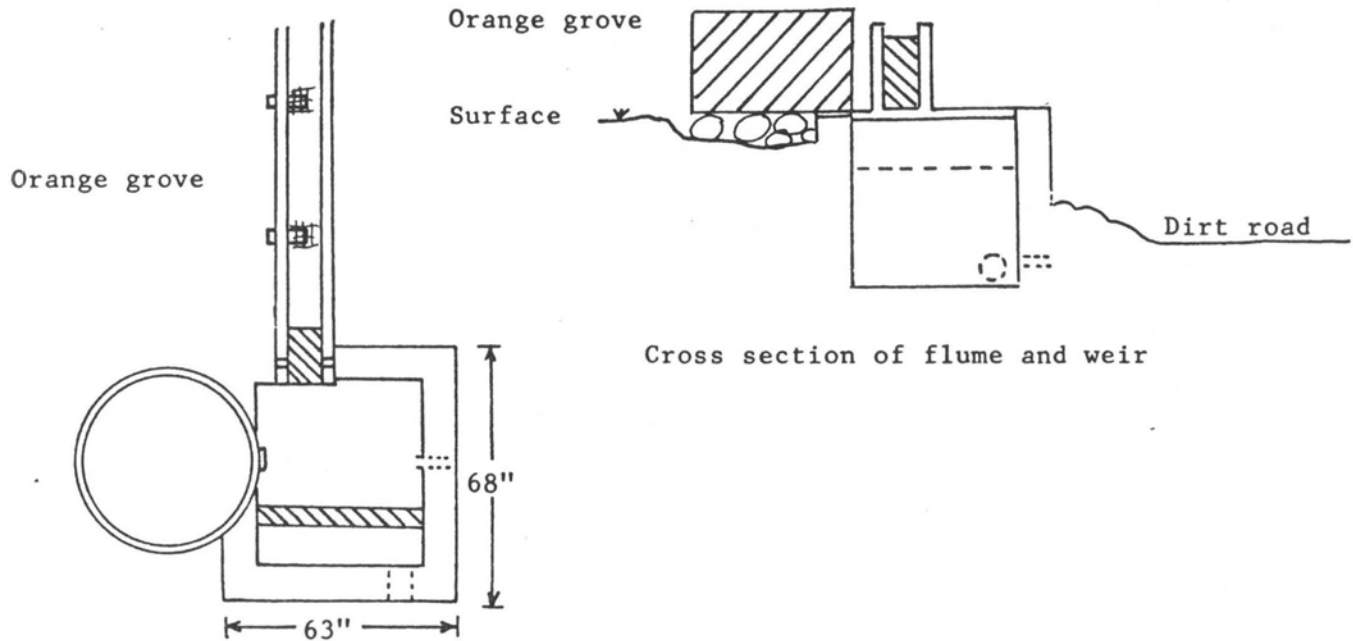
TOP VIEW



ARCHAEOLOGICAL SITE
FEATURE ILLUSTRATION









PAGE:10 OF 10
DATE OF ORIGINAL RECORD:
DATE OF THIS FORM: 12/21/90

PERMANENT TRINOMIAL: 532-0051H
TEMPORARY NUMBER: R-FEH #14
AGENCY DESIGNATION:



Plan view of flume and weir

Legend

-  42" exterior diameter concrete cylinder, 26" high with flow regulator directed into weir. (This is obviously not part of original system. It is not fixed in place but merely sitting on edge of weir.)
-  Rock and concrete weir. Top of walls and interior finished concrete walls 9.5" thick. Interior dividing wall 13" below top of weir, 4.5" thick. 2" metal pipe on east wall near bottom. 6" diameter opening in south wall at bottom.
-  9" interior width rock, brick and concrete flume. 14.5" exterior width. Flume above weir +20". Water enters weir via 23" sloped ramp. 2" wide, rectangular, 1/8" mesh covered drain holes spaced 32"-40" apart. 1/8" mesh is concreted in place, most as part of original construction, some have been replaced and mesh sizes vary from 1/16" - 1/2". Flow regulators on the exterior 2" x 1" openings. Construction: mortared rock as base, brick flume side walls. Upper 5" of exterior and all interior covered with finished concrete. (+7m N. of weir, flume blocked with 8" wide block of concrete with part of wood form still in place.)
-  Areas recessed, lower or set back
-  Concrete
-  Pipes or openings set into wall of weir
-  Interior, lower wall inside weir
-  Wire mesh

Not to scale

PSBR-10-H

PHOTOS

Roll #1



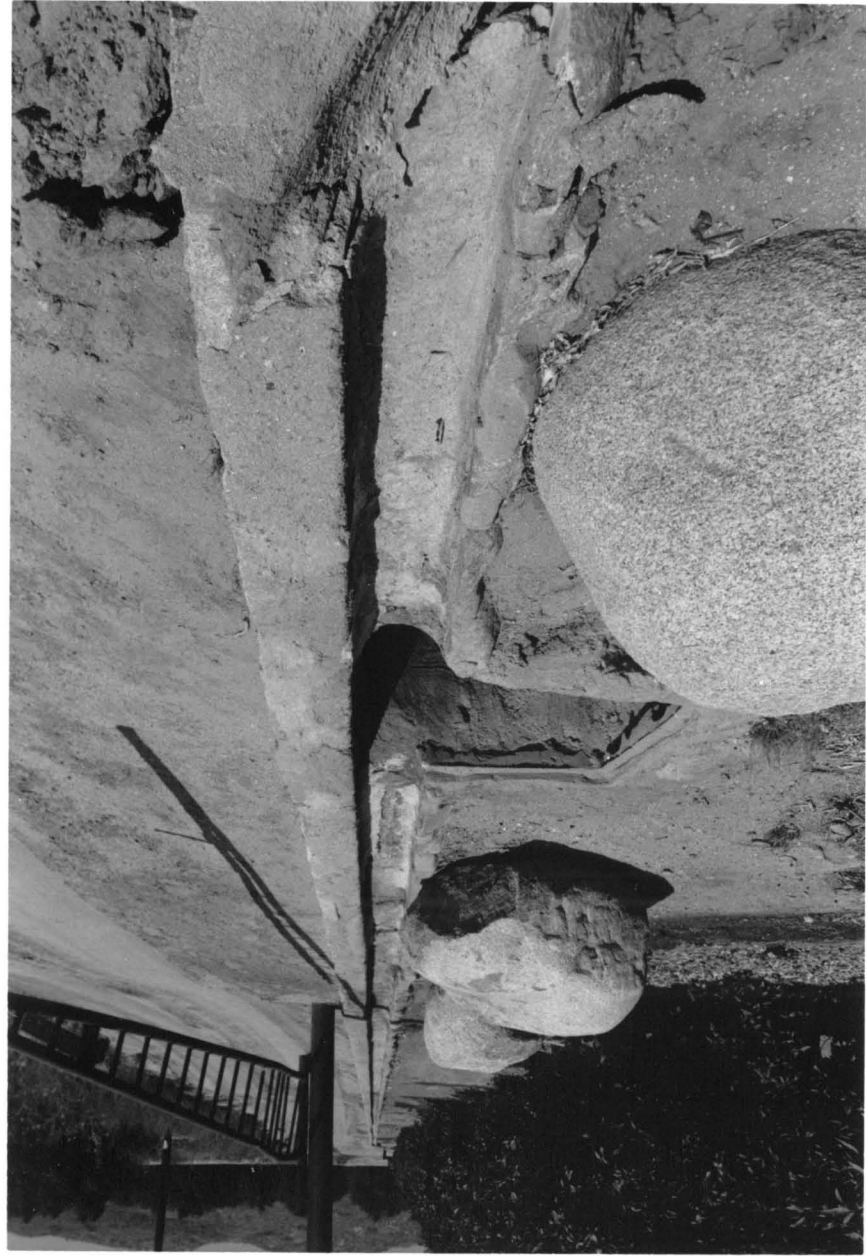
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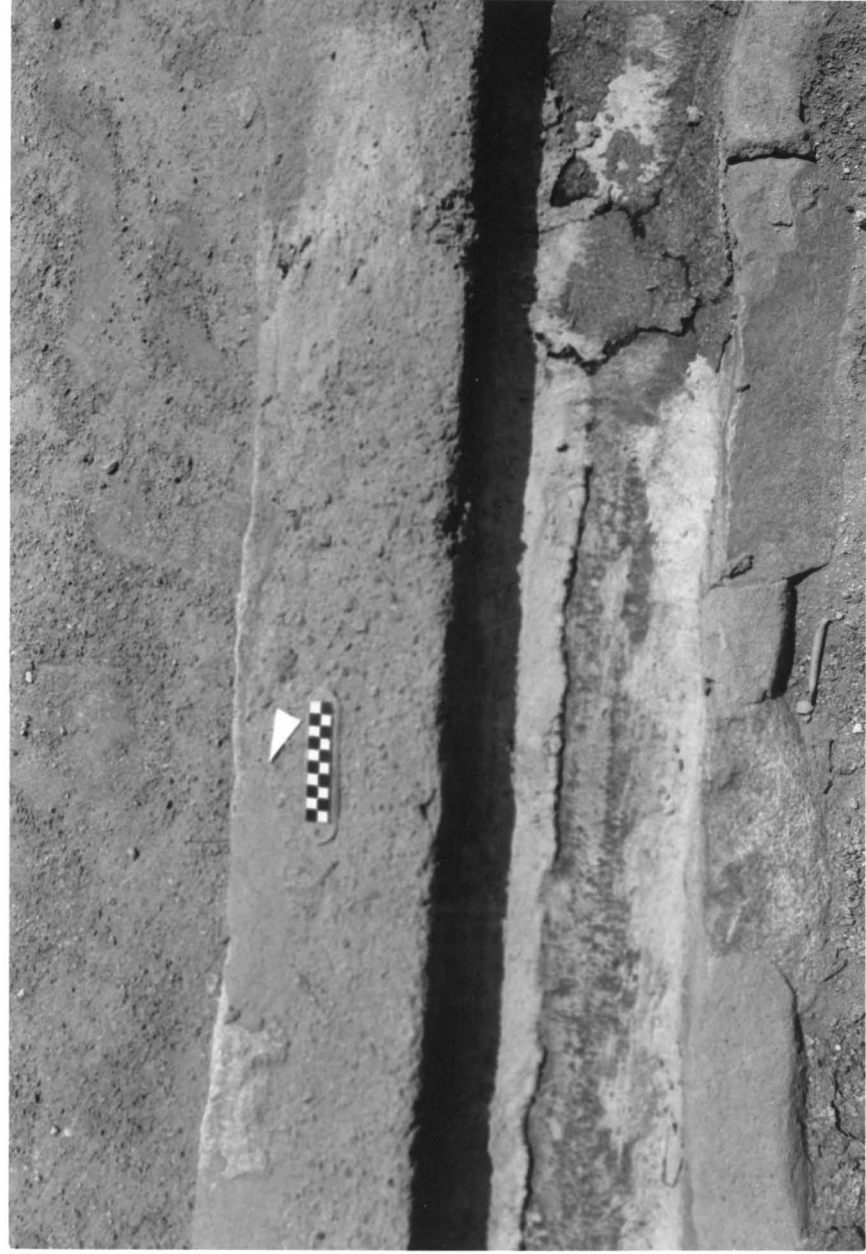
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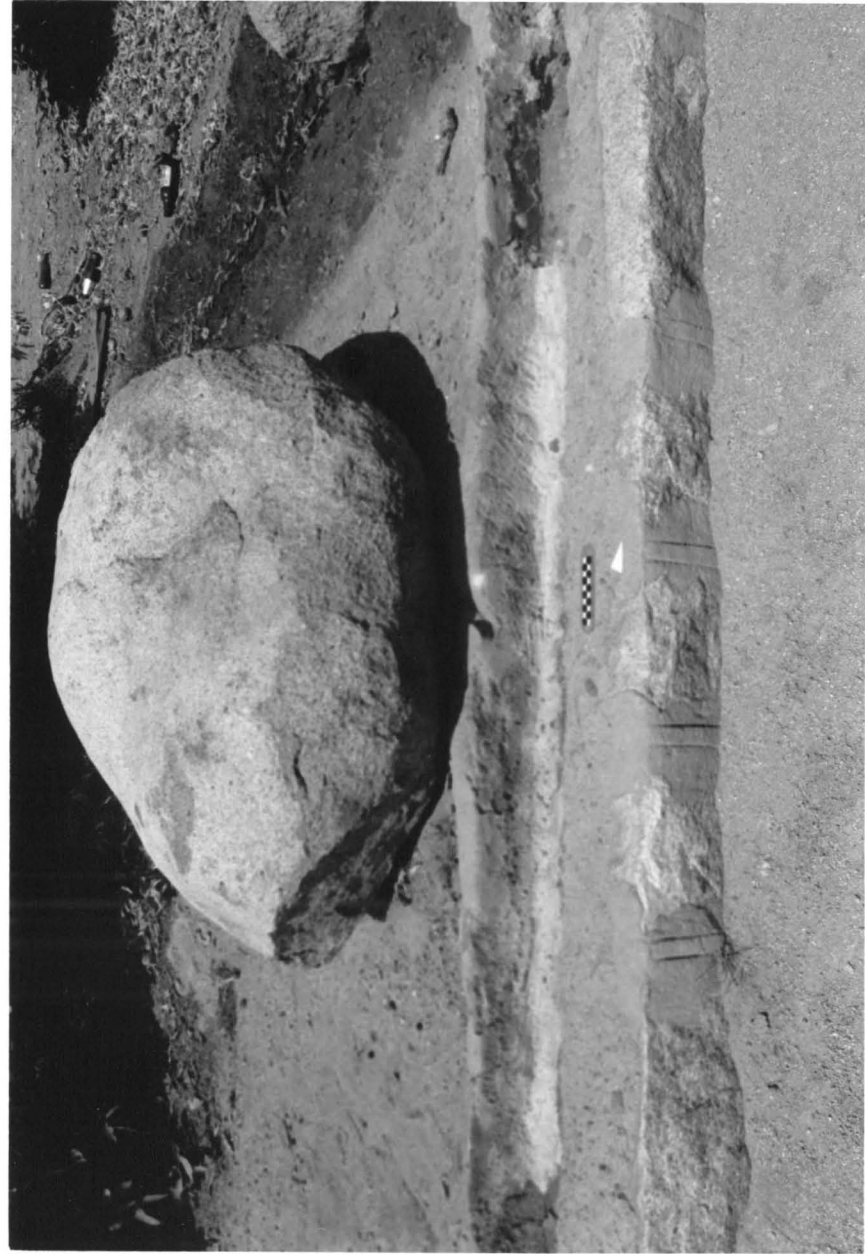
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1/5



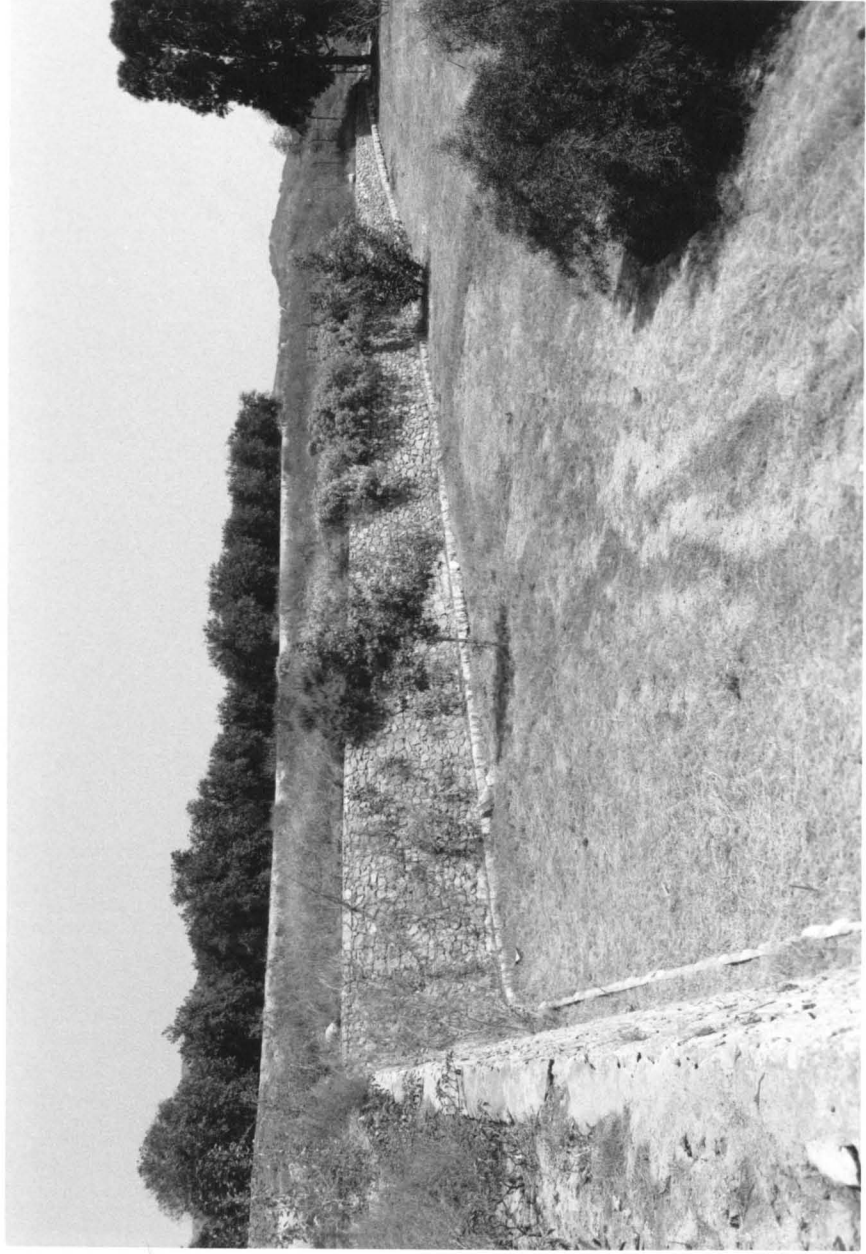
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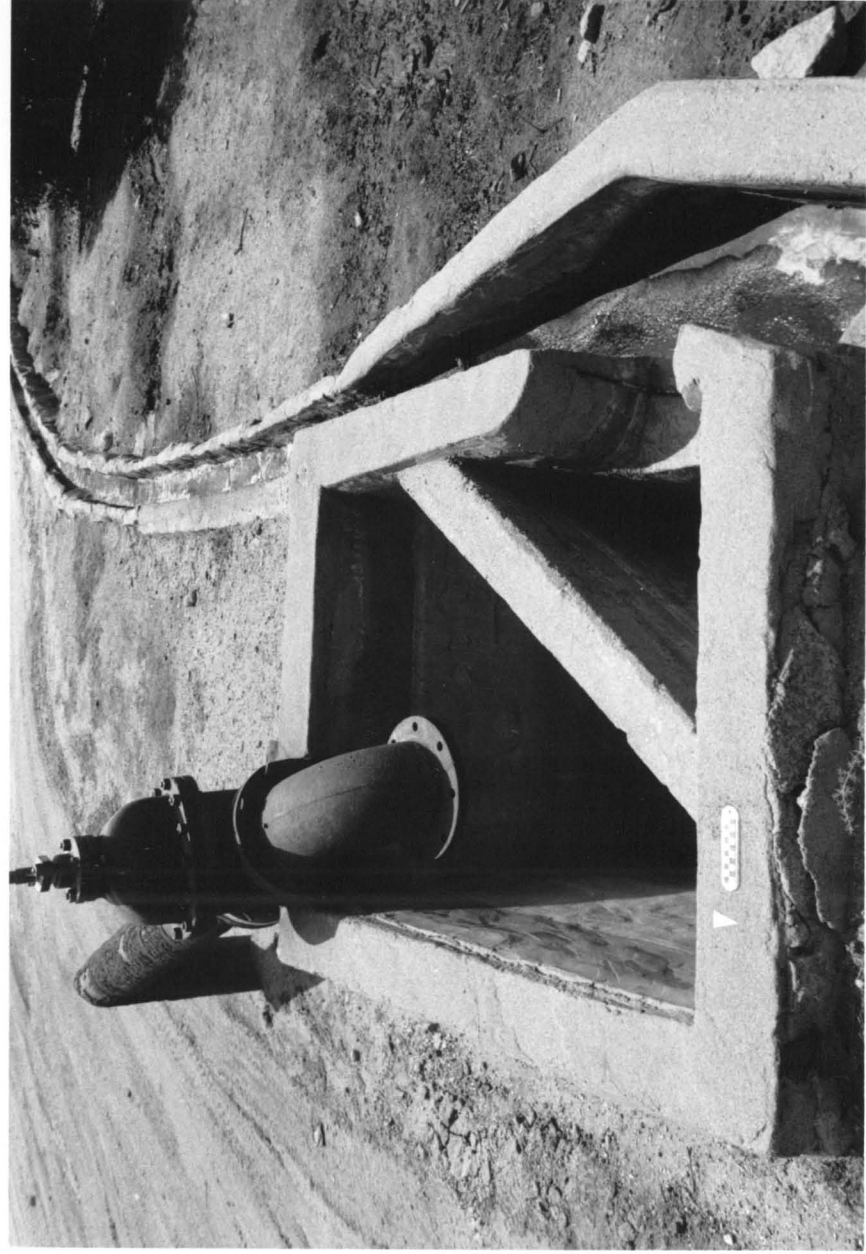
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1/8



1/9

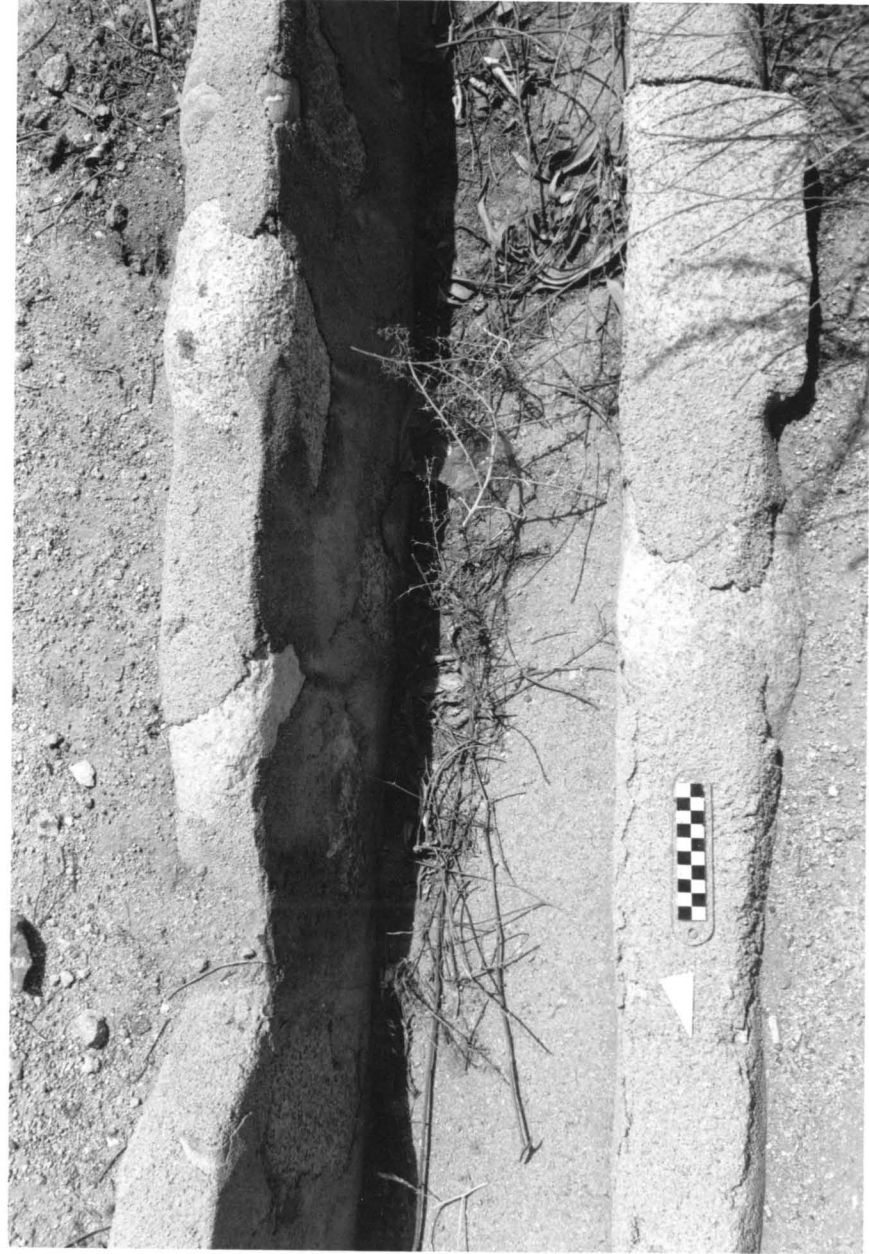


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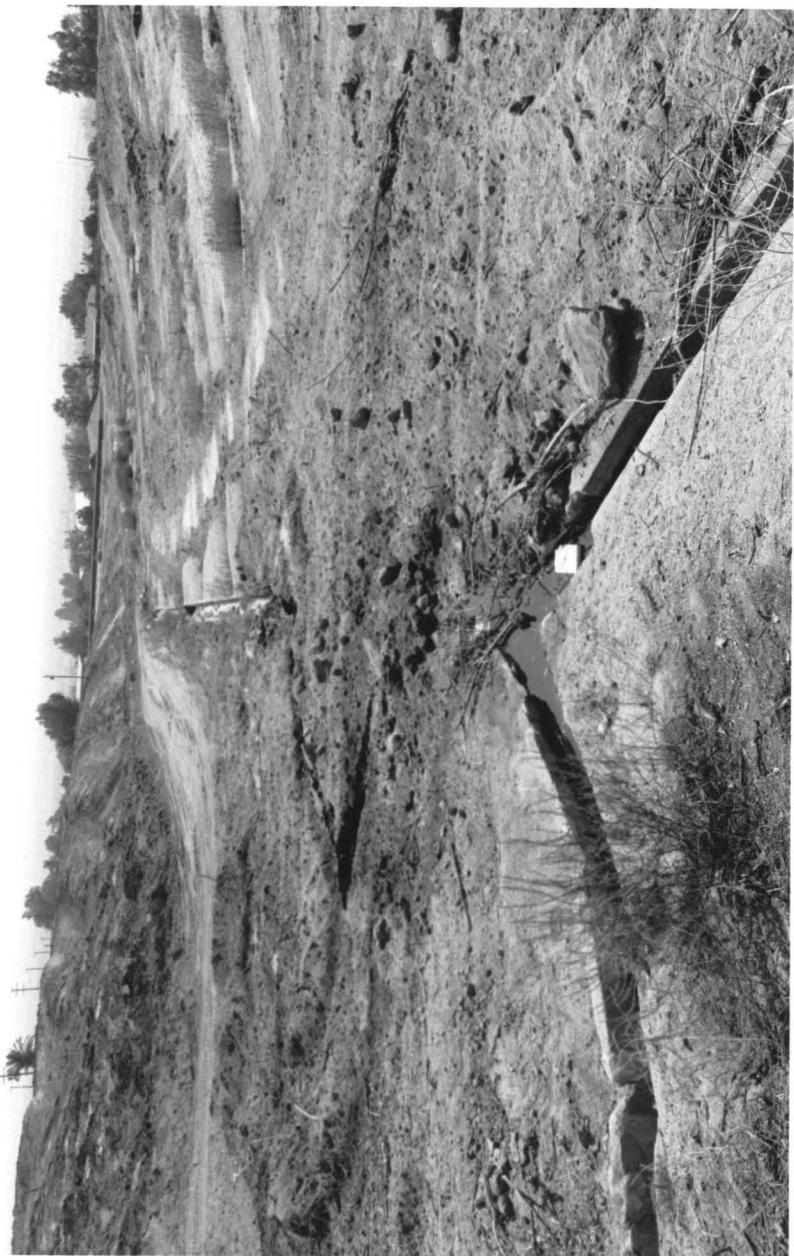
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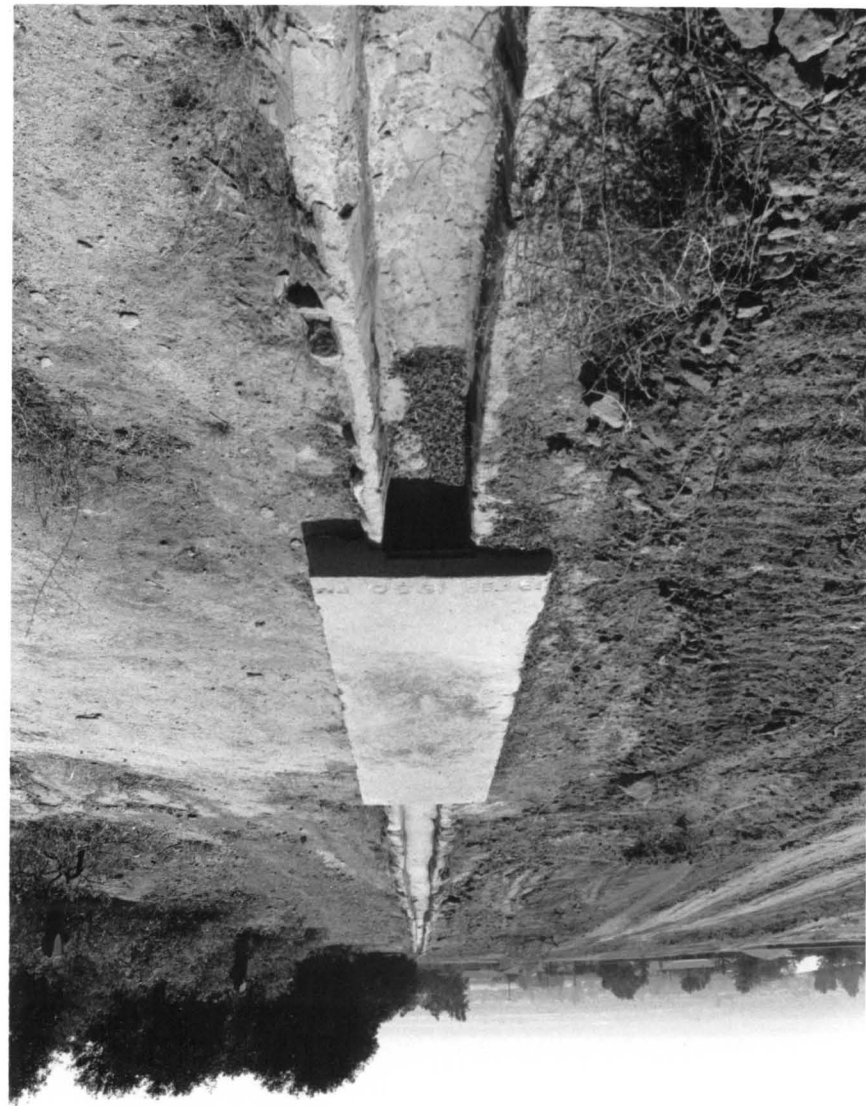
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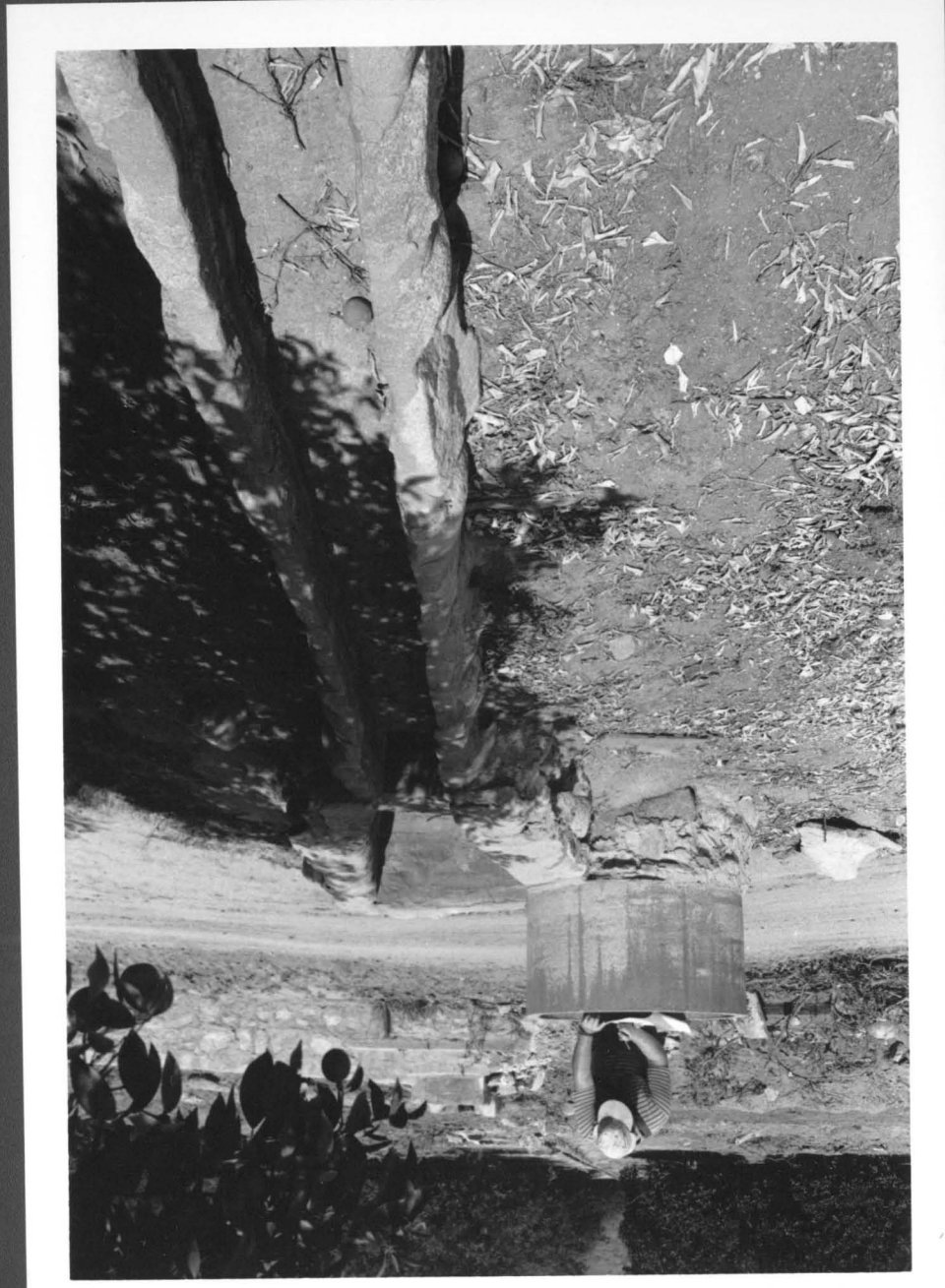
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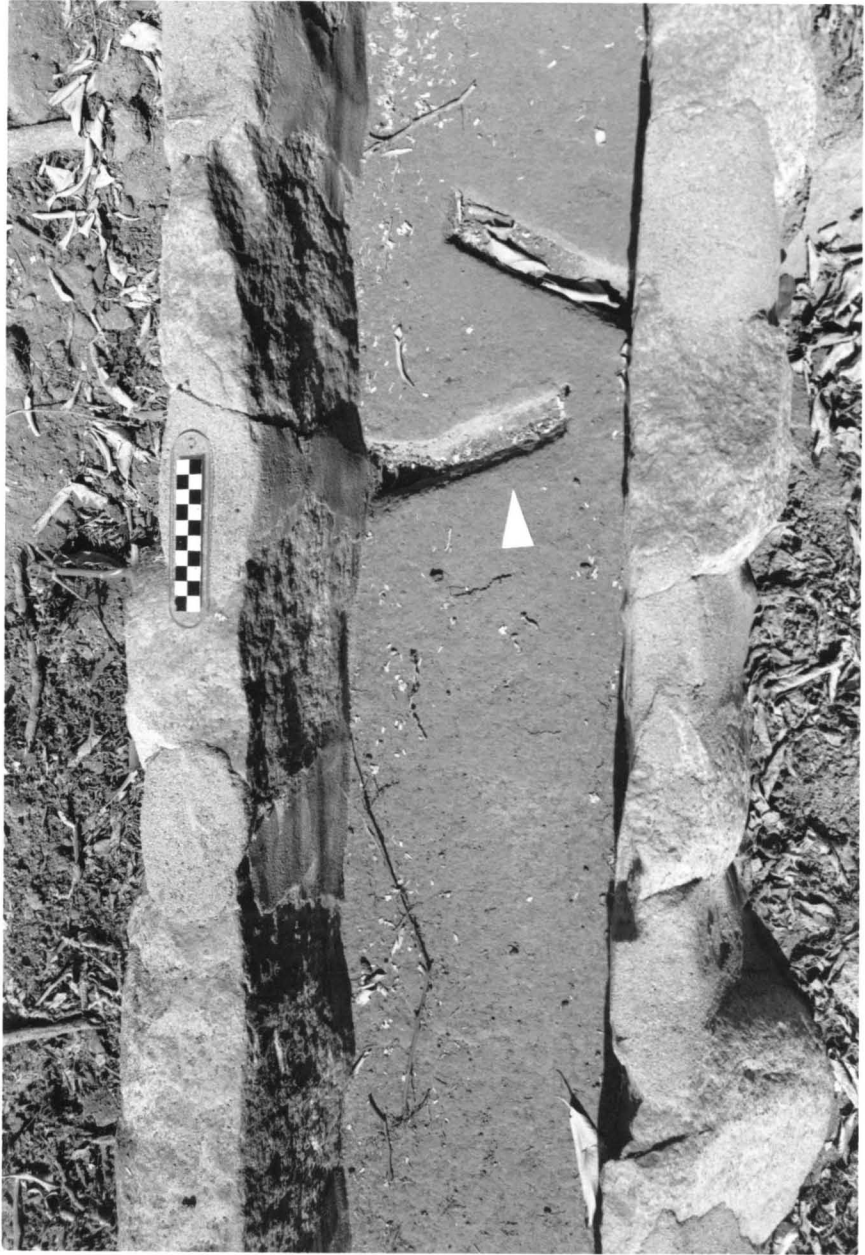
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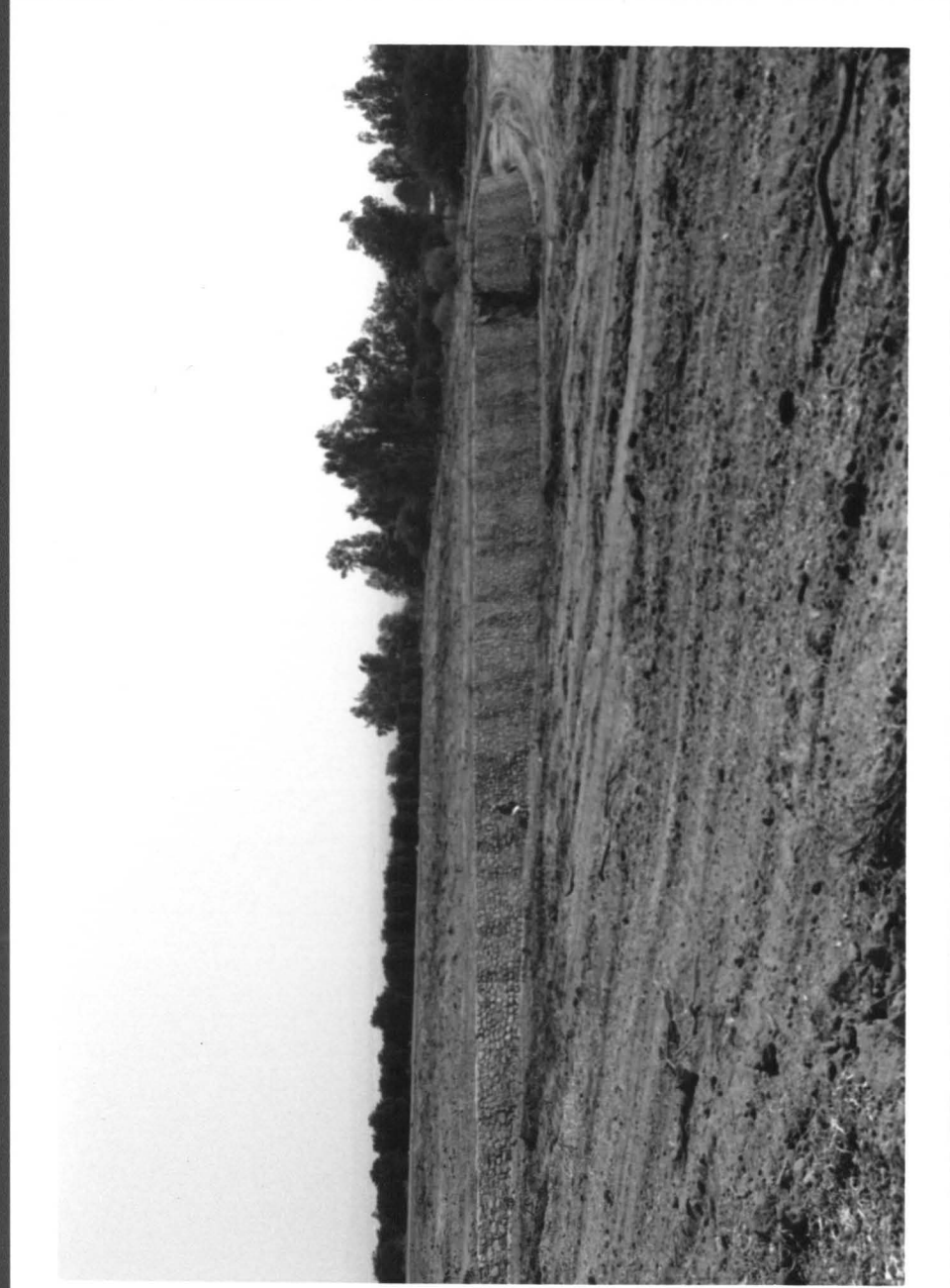
PSBR-10-H
PHOTOS
ROLL #2



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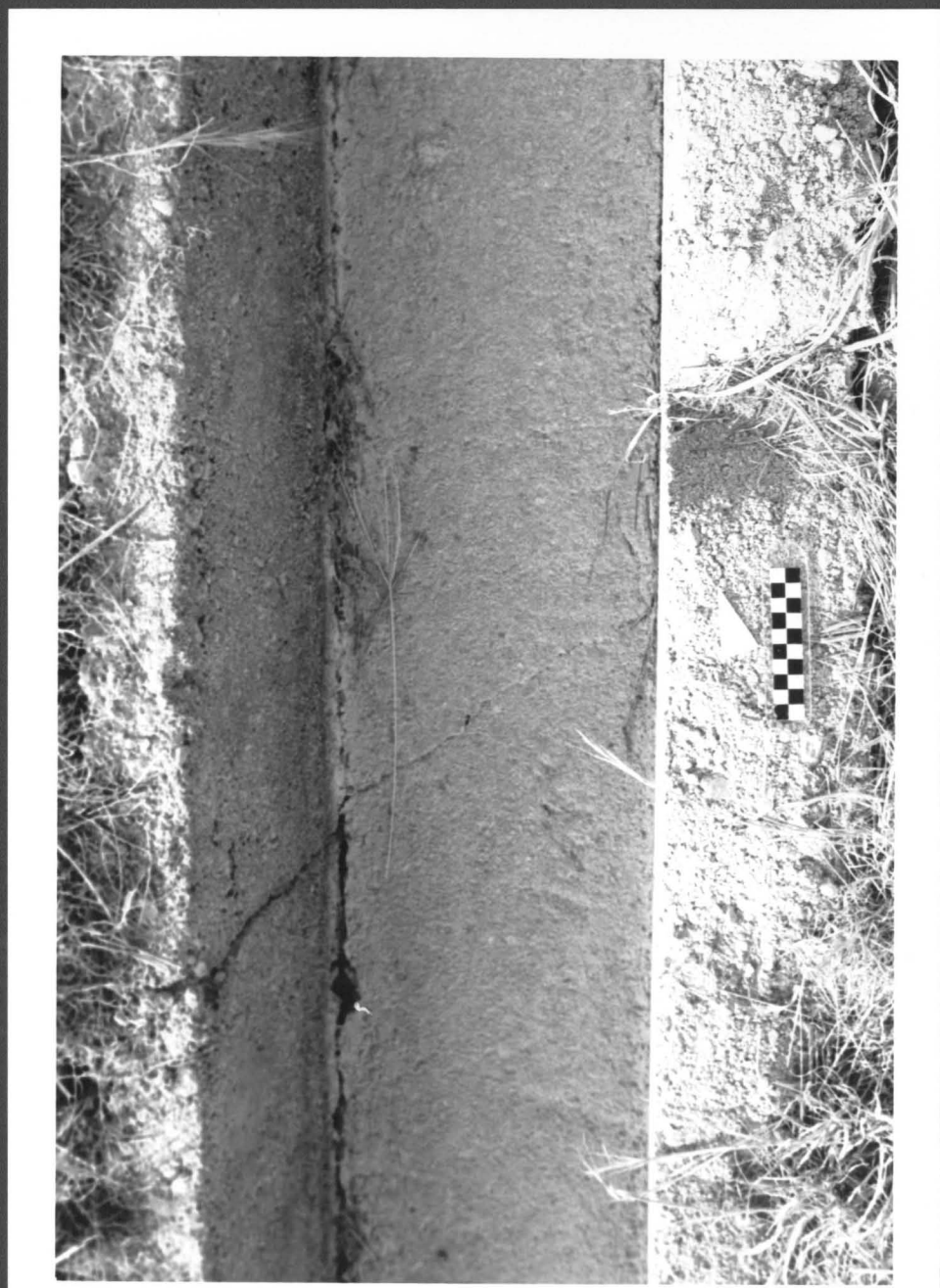


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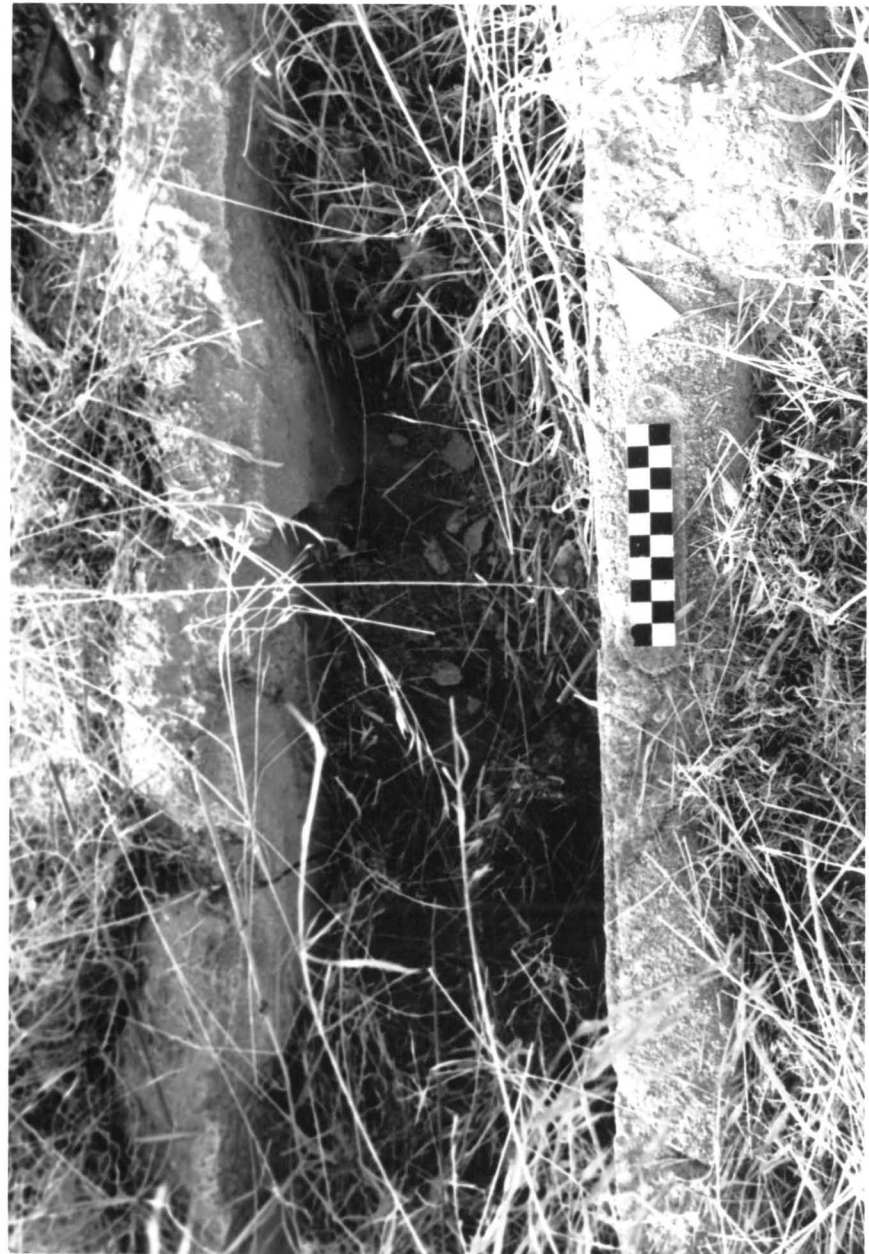
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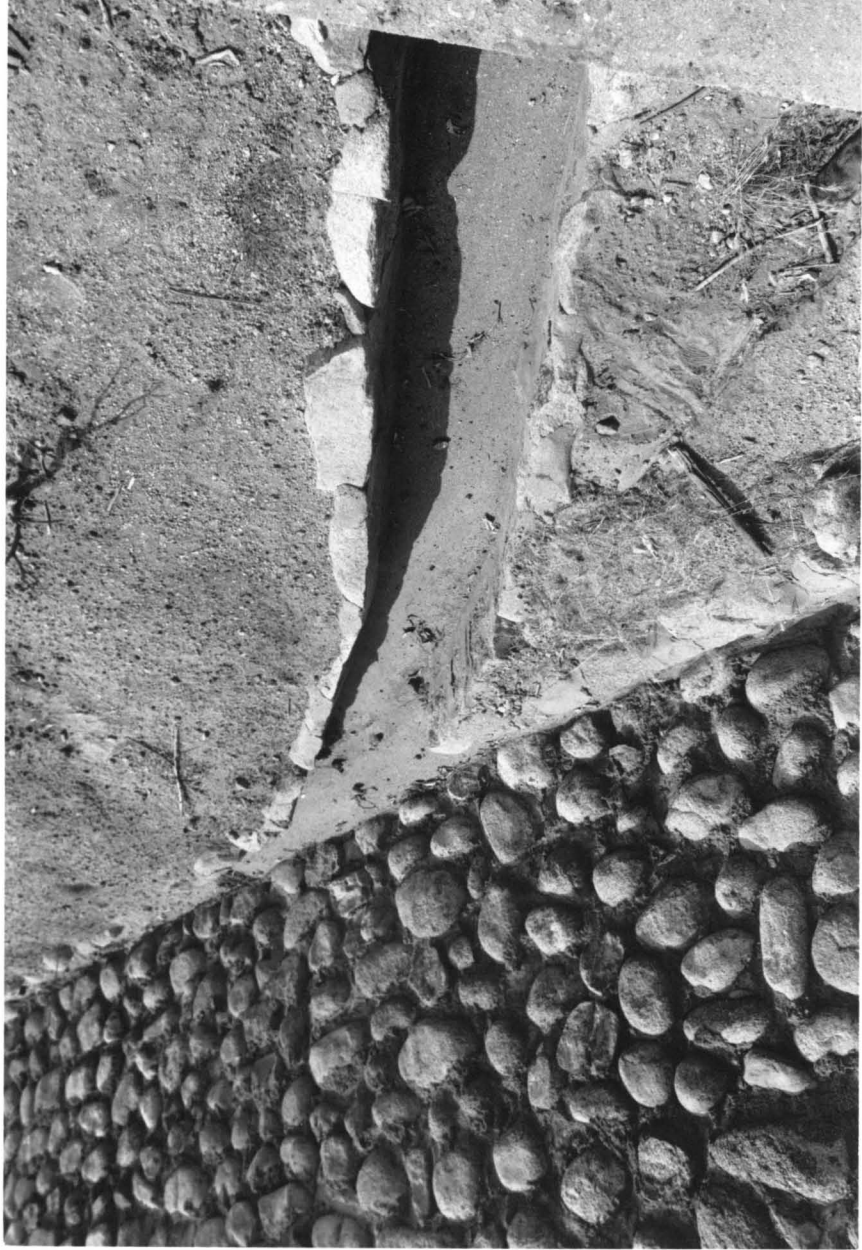
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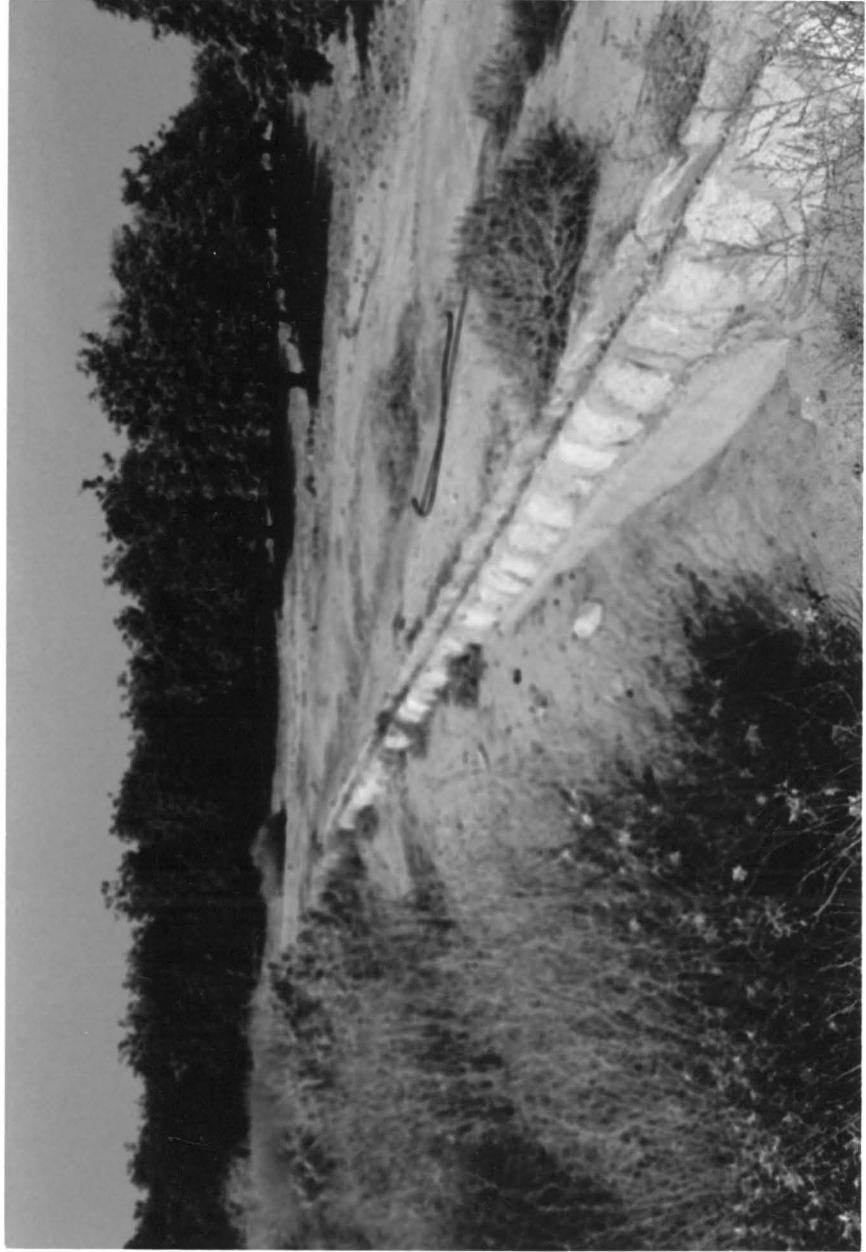
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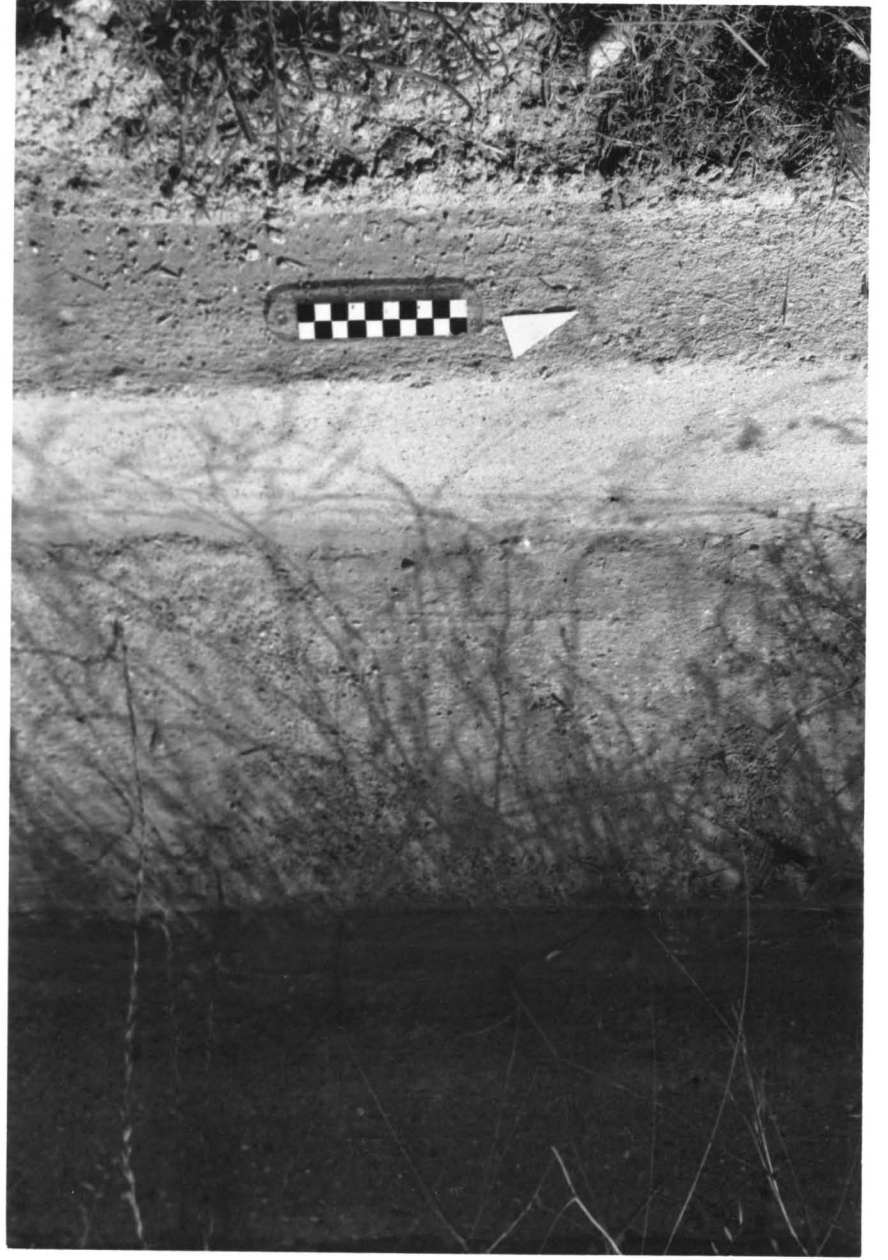




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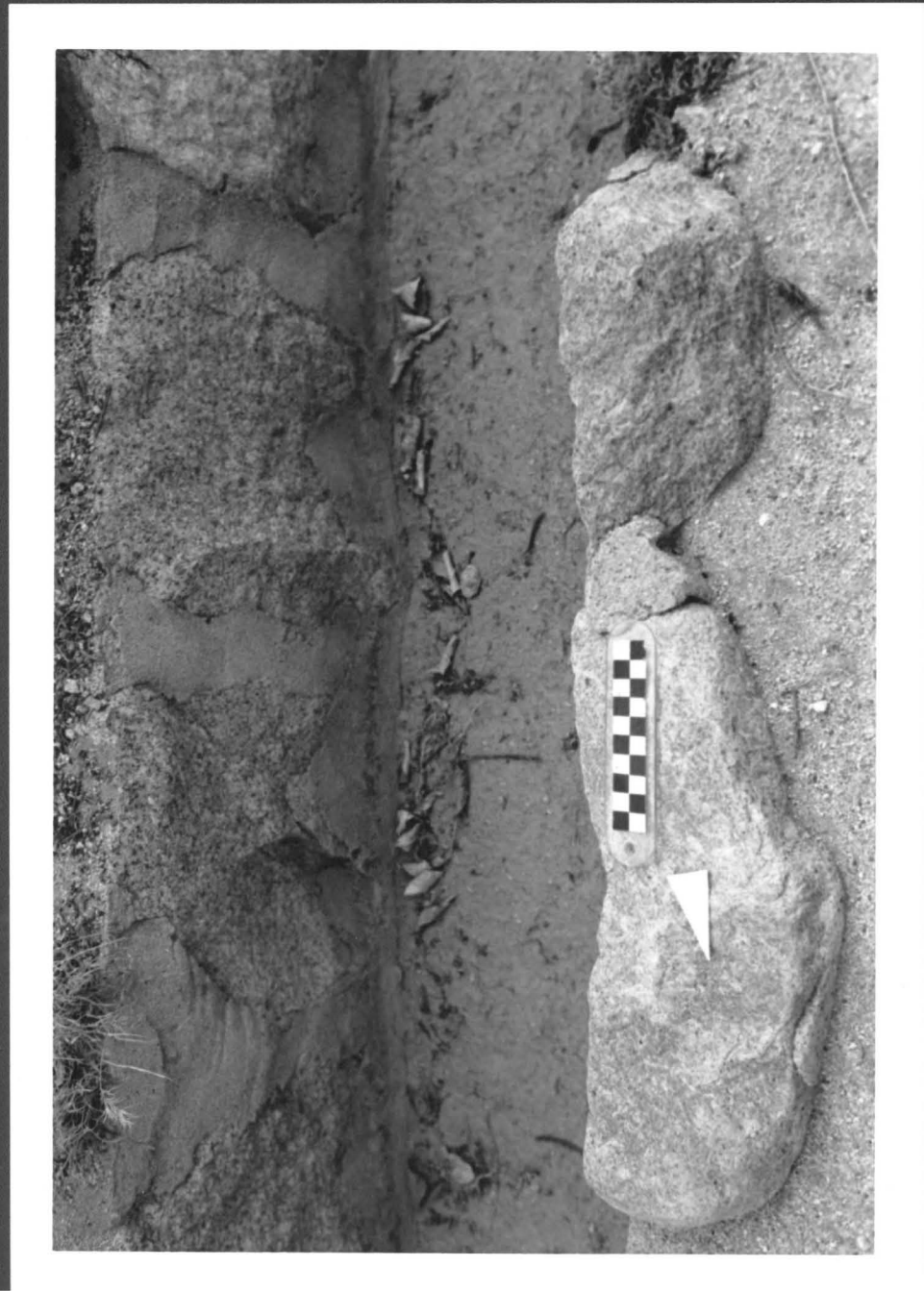
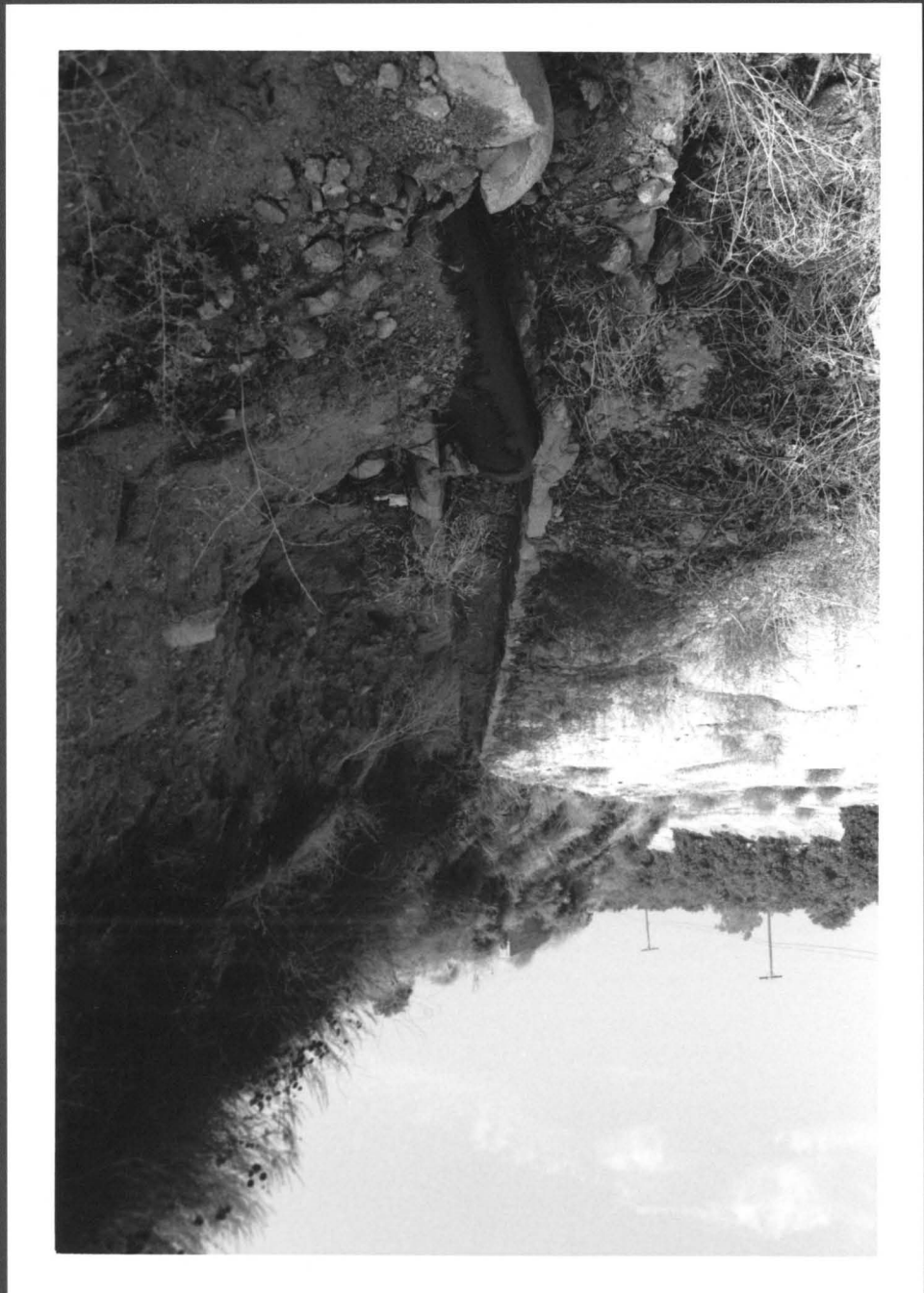


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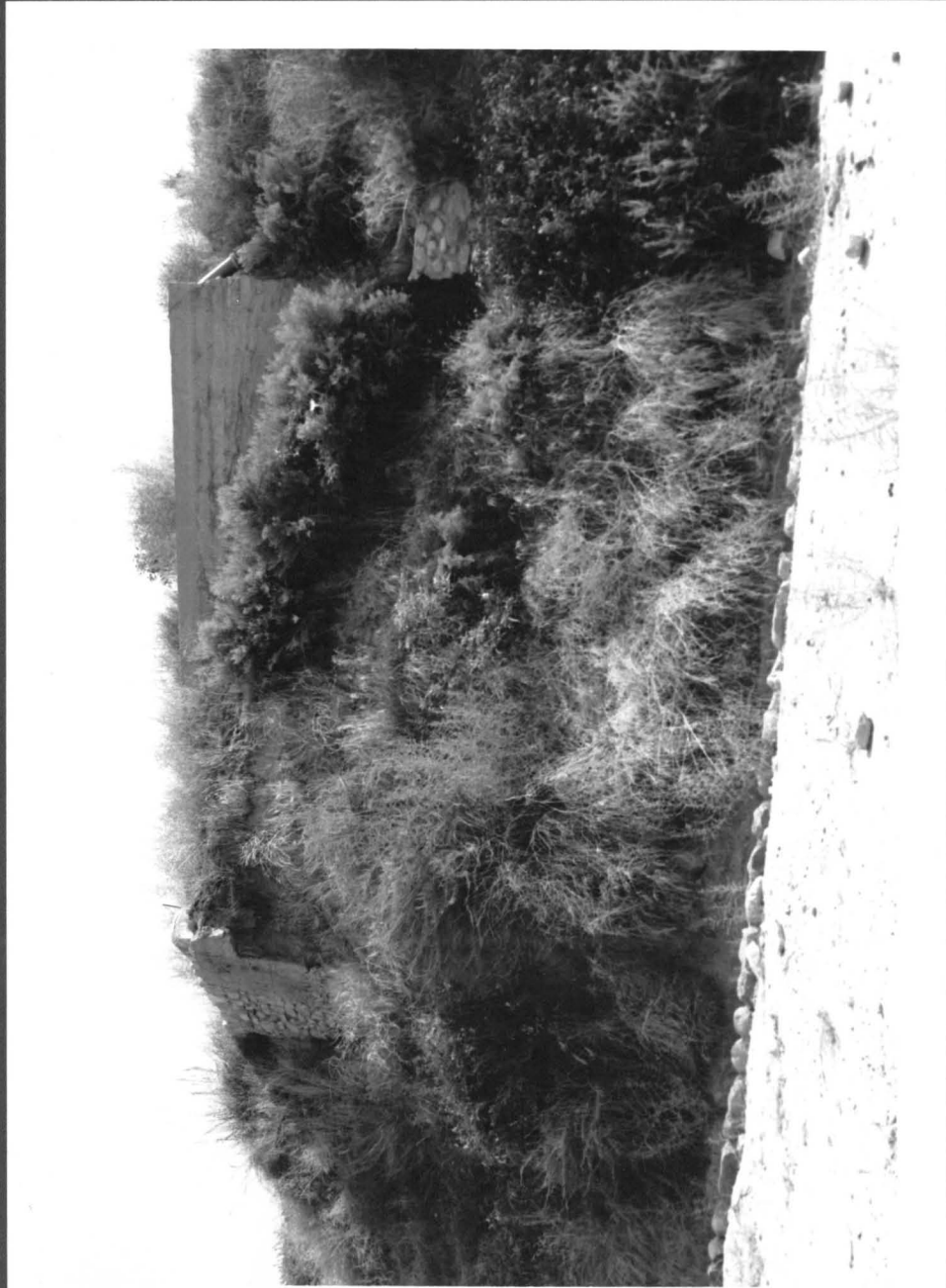
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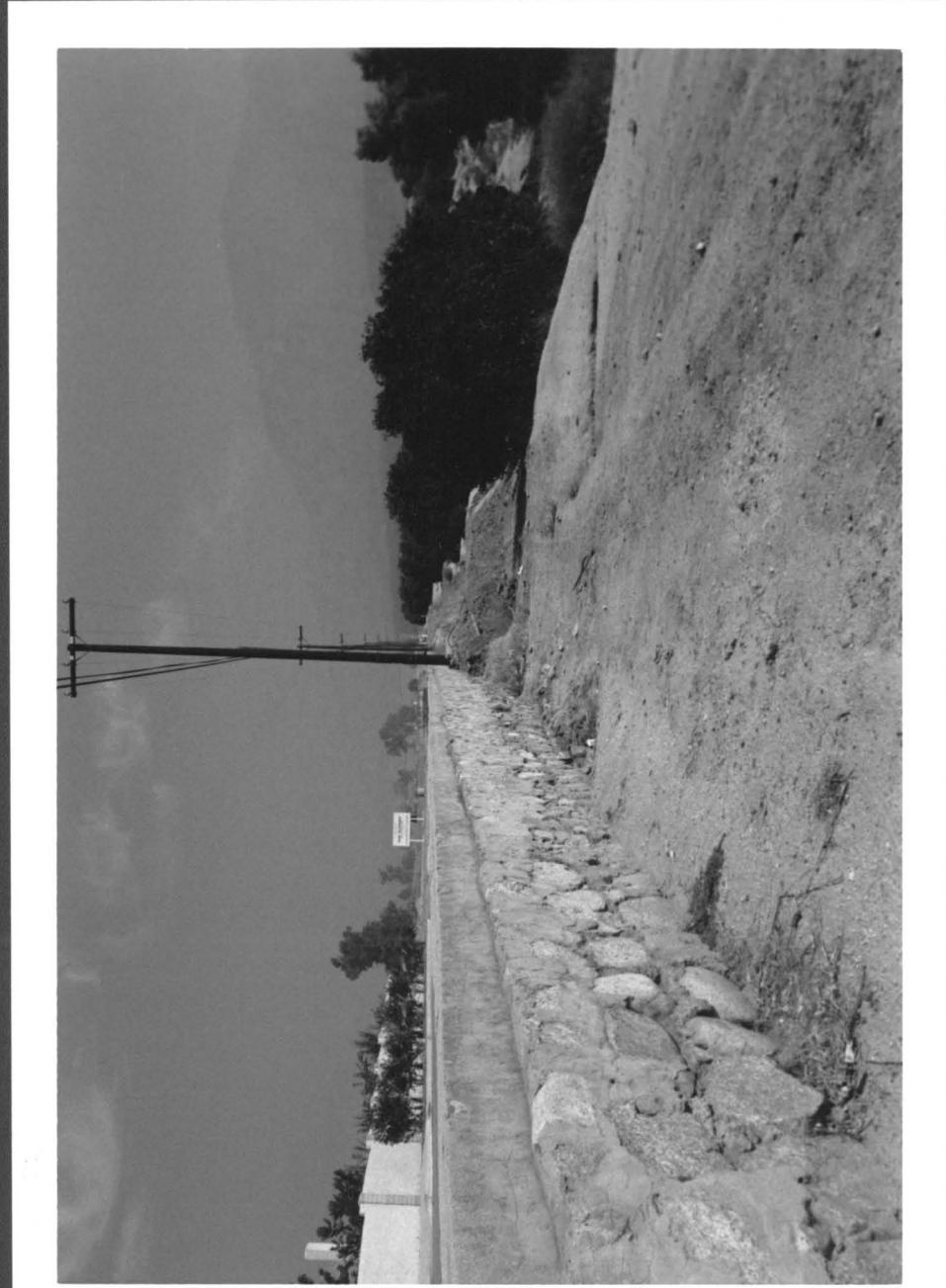
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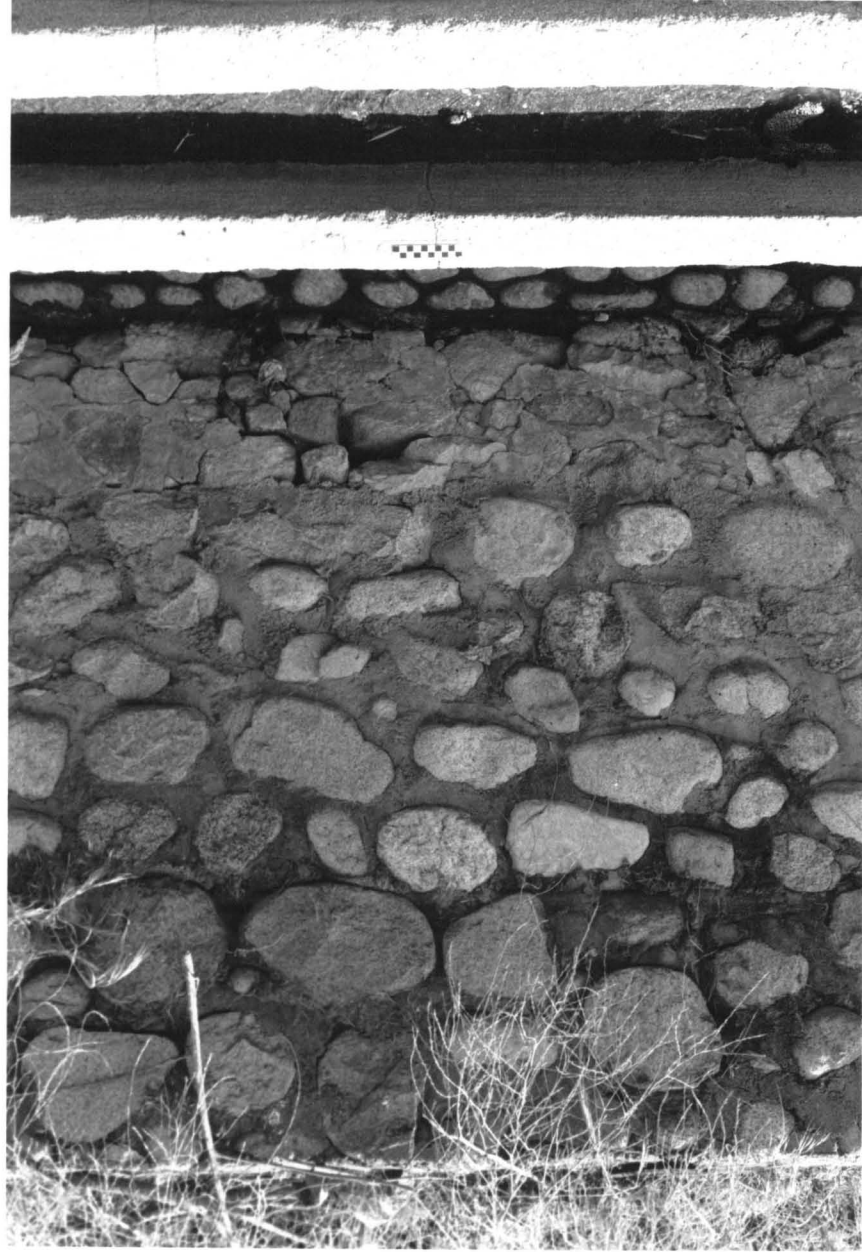




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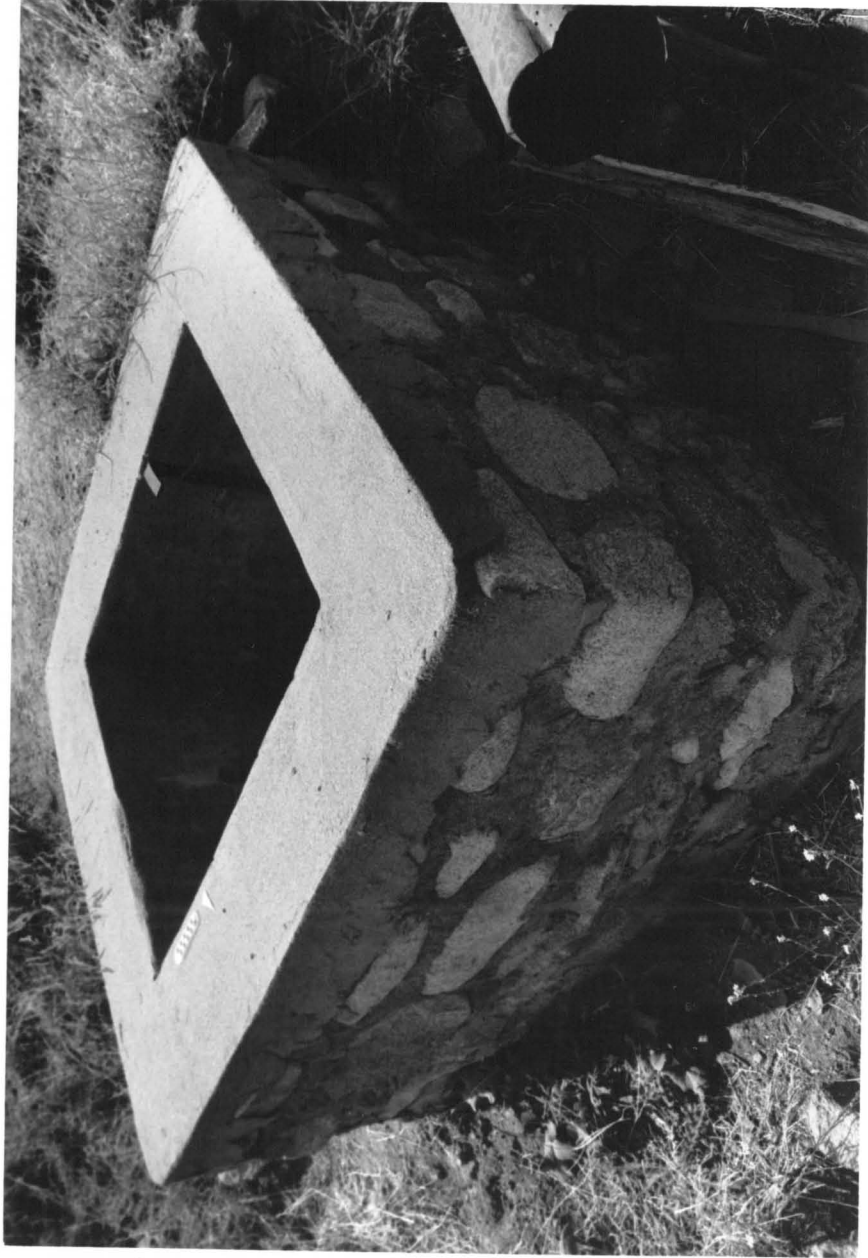


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PHOTOS

TRON #3

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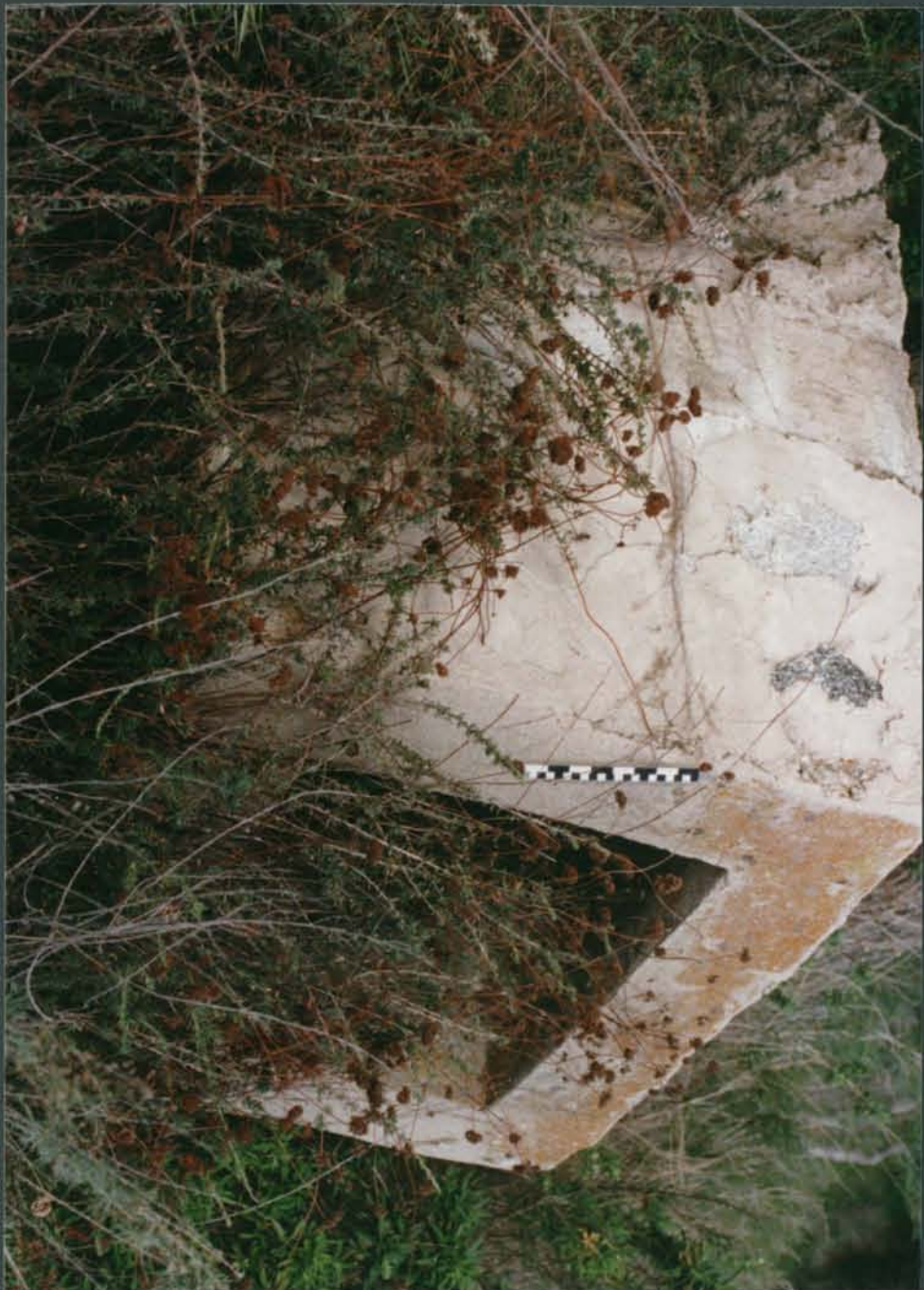
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PSBR - 10 - H

PHOTO NEGATIVES

SEVEN WALKER
*8203R Third Cut

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EAST HIGHLANDS RANCH PARCELS 19 AND 22
PHOTOGRAPHIC LOG, ROLL NUMBER 1
-JOHN ELLIOTT, PHOTOGRAPHER
CAMERA: NIKON FG

FRAME	DESCRIPTION/SUBJECT	DIRECTION	DATE	TIME
1	No Shot	---	-----	-----
2	R22-1, WD22-1	NE	9/14/87	11:00
3	W22-1 General	E	9/14/87	11:00
4	WD22-1 Close-up	E	9/14/87	11:00
5	F22-1A, W22-2	N	9/14/87	11:00
6	F22-1A Close-up	E	9/14/87	11:00
7	F22-1A Side view	W	9/14/87	11:00
8	WD22-2 Close-up	W	9/14/87	11:30
9	WD22-2 General	N	9/14/87	11:30
10	W22-3 General	S	9/14/87	11:30
11	D22-1A General	E	9/14/87	12:00
12	D22-1A Close-up	E	9/14/87	12:00
13	D22-1B General	SE	9/14/87	12:00
14	D22-1B Close-up	W	9/14/87	12:30
15	D22-1 Junction	S	9/14/87	12:30
16	D22-1 Close-up	W	9/14/87	12:30
17	F22-2 General	S	9/14/87	13:00
18	F22-2 Close-up	W	9/14/87	13:00
19	WD22-3 General	S	9/14/87	13:15
20	WD22-3 Close-up	E	9/14/87	13:30
21	F22-3, W22-4	S	9/14/87	13:30
22	F22-3, W22-4	N	9/14/87	13:30
23	F22-3 Close-up	W	9/14/87	13:30
24	WD22-4 General	S	9/14/87	14:00
25	WD22-4 Close-up	E	9/14/87	14:00

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EAST HIGHLANDS RANCH PARCELS 19 AND 22
PHOTOGRAPHIC LOG, ROLL NUMBER 2
JOHN ELLIOTT, PHOTOGRAPHER
CAMERA: NIKON FG

FRAME	DESCRIPTION/SUBJECT	DIRECTION	DATE	TIME
1	No Shot	---	-----	-----
2	F22-4, W22-5	S	9/15/87	14:30
3	F22-4 Close-up	W	9/15/87	14:30
4	WD22-5 General	SE	9/15/87	14:30
5	WD22-5 Close-up	E	9/15/87	14:30
6	D22-2 Close-up	SE	9/15/87	14:30
7	F22-5 General	N	9/15/87	14:30
8	F22-5 Close-up	W	9/15/87	14:30
9	NFC22-1 General	N	9/15/87	15:00
10	NFC22-1 Close-up	W	9/15/87	15:00
11	F19-1 General	SW	6/16/87	9:00
12	F19-1 Close-up	E	9/16/87	9:00
13	D19-1 General	SW	9/16/87	9:30
14	D19-1 Close-up	E	9/16/87	9:30
15	D19-2 General	SW	9/16/87	9:30
16	D19-2 Close-up	E	9/16/87	9:30
17	WD19-1 General	SE	9/16/87	9:30
18	D19-3 General	N	9/16/87	10:00
19	D19-3 Close-up	E	9/16/87	10:00
20	WD19-1 General	NE	9/16/87	10:00
21	WF19-1 General	N	9/16/87	10:00
22	WF19-1 Close-up	W	9/16/87	10:00
23	WFWD19-1 General	W	9/16/87	10:30
24	WFWD19-1 General	E	9/16/87	10:30
25	WFWD19-1 Close-up	S	9/16/87	10:30
26	W19-1 General	N	9/16/87	10:30
27	W19-2 General	SE	9/16/87	10:30
28	W19-3 General	S	9/16/87	16:30
29	D19-4 General	N	9/16/87	16:30
30	D19-4 Close-up	W	9/16/87	16:30
31	F19-2 General	S	9/16/87	16:30
32	F19-2 Close-up	W	9/16/87	17:00
33	NFC19-1 General	W	9/16/87	17:30
34	NFC19-1 General	W	9/16/87	17:30
35	W19-4, F19-3	NE	9/16/87	18:00
36	NFC19-1 General	NE	9/16/87	18:00

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EAST HIGHLANDS RANCH: CANAL ZONE RESERVOIR
PHOTOGRAPHIC LOG, ROLL NUMBER *X3*
JAMES BROCK, PHOTOGRAPHER
CAMERA: OLYMPUS OM10

FRAME	DESCRIPTION/SUBJECT	DIRECTION	DATE	TIME
02	WCZR-2 (WEIR)	S	27JAN88	13:00
03	WCZR-2 (WEIR)	S	27JAN88	13:00
04	WCZR-1 (WEIR)	SE	27JAN88	13:30
05	WCZR-1 (WEIR)	NE	27JAN88	13:35
06	DCZR-1 (DRAIN)	SW	27JAN88	13:45
07	DCZR-1 (CLOSE-UP)	W	27JAN88	13:45
08	SWDCZR-1	SE	27JAN88	14:00
09	ILCZR-1 (OUTLET)	S	27JAN88	14:15
10	ILCZR-1 (OUTLET)	E	27JAN88	14:20
11	GENERAL VIEW	SW	27JAN88	14:30
12	WCZR-3 (WEIR)	N	27JAN88	14:45