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FINAL
ARCHAEOLOGICAL SURVEY REPORT

Lincoln40 Student Housing Project
City of Davis, Yolo County, California



Prepared for:

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Prepared by:

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Tremaine & Associates, Inc.
1220 Smith Court, Dixon, CA 95620

January 2017

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SUMMARY OF FINDINGS

Tremaine & Associates, Inc. (TREMACHINE) prepared this Archaeological Survey Report (ASR) for the Lincoln40 Off-Campus Student Housing Project in Yolo County. The investigation for this ASR consisted of a records search and literature review, and an intensive pedestrian survey of the Area-of-Potential Effects (APE), approximately 5.92 acres.

The records search identified one previously recorded historic archaeological deposit associated with the Terminal Hotel Site on the northeast corner of 2nd and G streets. No previously recorded prehistoric resources were identified within ¼-mile radius. Furthermore, the Native American Heritage Commission found no known sacred lands within the APE.

An intensive pedestrian survey was conducted on October 8, 2016. One cultural resource, an historic cork oak tree row planted in 1915, was identified and recorded. Two of the trees, at 1225 and 1233 are within the APE. The resource is recommended eligible for listing to the California Register of Historic Places according to Criterion 1 for its association with events that make a significant contribution to broad patterns of local, state, and national history. On the *local and state level*, the planting effort was made by the Cooperative Extension system and Agricultural Experiment Stations of the University of California, which was heavily engaged in studying the varying qualities of cork, its rate of growth, and the response to harvesting, with an eye toward advancing California's agricultural sector, promoting innovation, scientific discovery, and diffusing research results and expertise. The harvesting records for the cork oaks on Olive Drive, after 25 and 30 years of maturation, contributed to the understanding of yield as well as recovery following events of stripping in 1940 and 1945.

At a *national level*, the harvesting results of the trees on Olive Drive helped guide an aggressive nation-wide campaign to develop plantations for future reserves when cork became classified during World War II by the U.S. Army and Navy Munitions Board as one of 15 critical materials that placed our country at risk should European sources of procurement disintegrate.

The resource is also recommended eligible for listing to the California Register according to Criterion 2 for its association with the life of a person important at the local, state, and national level, Woodbridge Metcalf. Mr. Metcalf was one of the nation's first forester specialists with the University of California Agricultural Extension Service, one of the founders the School of Forestry, and a lead promoter of the propagation of *Quercus suber*. His photographs of the cork oaks on Olive Drive (Lincoln Highway), taken in 1940 and 1945 at the time of stripping, are housed in the Fritz-Metcalf Photograph Collection at the U.C. Berkeley Bancroft Library.

Impact to the cork oaks will be limited to pruning to accommodate proposed walls and buildings. This pruning will not alter the ability of these trees to convey their historical significance, and therefore, will not cause a substantial adverse impact. The project will also not alter the immediate surroundings of the trees in such a way that the significance of the trees would be materially impaired, as it is an infill project surrounded by existing development, including apartments, single family units, and retail uses. In addition, the proposed bicycle/pedestrian path along the project's Olive Drive frontage will not result in a substantial adverse change to the cork oaks because the proposed path alignment has been designed to meander around the trees. Lastly,

these trees will be preserved and protected in accordance of the City of Davis Landmark Tree Ordinance, Article 37.03.

As an advisory note, it recommended that the history of the cork oaks be shared by the City with the community via various forms of public outreach/education. Possibilities include: adding these trees to the Treewalk, a self-guided tour showcasing of the Landmark Trees of Davis; adding a webpage to the City of Davis Urban Forestry Division website; and developing an educational brochure to be made available at the UC Davis Arboretum.

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INTRODUCTION

HighBridge Properties proposes to develop the Lincoln40 Project consisting of 130 student apartment units along Olive Drive, in Davis, California (Figure 1). Tremaine & Associates, Inc. (TREMACHINE) prepared this Archaeological Survey Report to document cultural resources as required by the California Environmental Quality Act and per the Gateway/Olive Drive Specific Plan relating to the East Olive Drive Subsection (Davis Community Development Department 2002).

Project Location and Description

The proposed project is slated to redevelop a 5.92-acre property – a combination of eleven parcels, located on the north side of Olive Drive east of Richards Boulevard, bordering the south side of the Union Pacific Railroad tracks, straddling both sides of Hickory Drive in Davis, California. It includes the following addresses: 115 and 118 Hickory Lane; and 111, 1165, 1185, 1207, 1225, and 1233 Olive Drive (Assessor's Parcel Numbers 070-280-10, 12, 13, 14, 15, 16; & 070-290-001, 002, and 004). Further, it is situated within the Northeast ¼ of the Northeast ¼ of Section 15, Township 8 North, Range 2 East of the Davis 7.5-minute USGS quadrangle.

The development will include a new 130-unit, three, four and five story student-oriented housing with a mix of 2-bedroom to 5-bedroom fully furnished living units. These units will range in size from approximately 1,024 square feet to 1,797 square feet. All units will have a kitchen, dining area and secure bedrooms each complete with a private bathroom. There will be 473 bedrooms with 235 of these bedrooms designed specifically for double occupancy.

The community will include, but not be limited to, a swimming pool, fitness center, indoor and outdoor lounge areas, outdoor barbecues, cabanas, and private study areas complete with wireless internet, charging stations and desks. It will also include a total of 240 surface parking spaces. A portion of these parking spaces will also be dedicated to offering convenient and reliable ride share programs. Lincoln40 will be designed to incentivize bike usage by offering bike parking for each resident and on-site repair facilities.

Area of Potential Effects

The APE is largely an existing triangular shaped greyfield with eleven parcels currently occupied by aging single-family residential homes and an old lodging facility that is being utilized as an apartment community (Figure 2). Ground-disturbing impacts will occur from the following activities: the demolition of existing structures, the removal of buried utilities that will affect the project layout, clearing and grubbing (including ~93 trees), some cutting for the building foundation on the east side of the site, excavation associated with building construction and for a swimming pool, trenching for utilities, and construction of a bike/pedestrian tunnel beneath the railroad tracks at the northwest corner of the APE.

SOURCES CONSULTED

Records Search

A records search was conducted by the Northwest Information Center on October 11, 2016, focused on archaeological resources within ¼-mile radius of the project area (NWIC File No. 16-0450, see Appendix A). Built-environment resources were previously addressed by Dahlin (2015) and Historic Resource Associates (2016).

Previous Studies

Six previous studies have been conducted within the project area. The most relevant is an archaeological survey for the Gateway/Olive Drive Specific Plan (Bouey 1995). The others, include documentation of surveys for fiber optic projects, monitoring for a fiber optic project, a PG&E gas line deactivation project, and study of the Central Pacific/Southern Pacific Railroad (Jones & Stokes 2000; Nelson, Carpenter, & Costello 2000; Sikes 2006; Sikes & Arrington 2011; Crull & Hanson 2015). Seven additional studies have been conducted within a ¼-mile radius. Those associated with inventory and mitigation efforts include: the Larchmont Davis Townhouse Development (Kenton 1973); the Richards Boulevard/I80 Interchange Project (Peak 1990); the Davis Bicycle Path Extension Project (Gerry 1993); a telecommunications facility site on 5th Street (Pastron & Brown 1999); the Olive Drive Apartments Development (Armstrong & Tremaine 2002); the City of Davis Cultural Resources Inventory and Context Statement (Architectural Resources Group 1996); and Mishka's Café (Tremaine 2009). In addition, there is a more generalized study of railroads in Yolo County (Crull & Hanson 2015).

Previously Recorded Sites

One previously historic archaeological deposit was identified associated with the Terminal Hotel Site on the northeast corner of 2nd and G streets. No previously recorded prehistoric resources were identified within ¼-mile radius. The Olive Drive Specific Plan reports a prehistoric site, CA-Yol-118, situated at A Street and Rice Lane, on the north side of Putah Creek, 0.6-mile west of the APE. CA-Yol-182, on the south side of Putah Creek within the Solano Park Student Housing Complex, is situated 0.45-mile southwest of the APE (Shapiro & Tremaine 1995).

Literature Review

The potential for historic-period resources was also assessed by inspecting historic maps for past land improvements, the vestiges of which might yet survive. The following maps were reviewed for this purpose:

- 1863, 1865, & 1872 General Land Office Maps;
- 1871 Map of Yolo County by J.S. Henning;
- 1879 Map of Yolo County by De Pue & Company (W.T. Galloway Lithograph);
- 1888 Davisville by Sanborn Map & Publishing Co. (Scale 1:50);
- 1891 Map of Yolo County by H.C. Miller;
- 1891 Davisville by Sanborn Map & Publishing Co. (Scale 1:50);
- 1900 Official Map of Yolo County by P.N. Ashley (Scale 1:47,520);
- 1900 Davisville by Sanborn Map & Publishing Co. (Scale 1:50);
- 1907 Davisville Quadrangle, USGS (Scale 1:62,500);

- 1907 Davisville by Sanborn Map & Publishing Co. (Scale 1:50);
- 1909 Official Map of the County of Yolo by P.N. Ashley (Scale 1:47,520);
- 1911 Davisville by Sanborn Map & Publishing Co. (Scale 1:50);
- 1914 Map of Yolo County by C.F. Weber & Co. (Scale 1:142,560);
- 1915 Official Map of Yolo County by A.G. Proctor (Scale 1:47,520);
- 1926 Official Map of Yolo County by A.G. Proctor (Scale 1:47,520); and
- 1939 Official Map of Yolo County by C.C. Stitt (Scale 1:47,520).

The Sanborn Maps of 1888 through 1891 show the APE within property owned by E.H. Gould who ran a Raisin Drying & Packing Works & Vineyard (Figure 3). Property improvements associated with this operation included a wind mill with elevated water tank, a building for drying fruit and making boxes, two sheds, and another structure presumed to be a barn for sheltering animals (later within a space delineated as a corral). By 1891, Gould had added a separate raisin dryer structure, equipped with a furnace and roof-top water tank. The property continued on as a vineyard/raisin drying & packing works facility through the turn of the century, passing into the hands of J.B. Cohn sometime in the 1890s (Figure 4). It remained in the Cohn family until about 1915.

According to the Yolo County maps of 1926 and 1939, the property belonged to J.W. Marshall. It was subsequently sold to the Callori family. The Callori's, according to Historic Resource Associates (2016), lived at 115 Hickory Lane in the 1930s based on US. Federal Census data. Historic Resource Associates (2016) documents that Robert Jordan, grandson of Giuseppe "Joseph" Callori, remembers a barn, demolished in the 1960s, that once existed behind 113 and 115 Hickory Lane. This barn was likely that of E.H. Gould's dating to the late 1880s.

Native American Consultation

The Native American Heritage Commission (NAHC) was contacted by Raney Planning & Management on behalf of the City of Davis in August, 2016 requesting a search of their Sacred Lands File and list of Native American contacts to consult. The NAHC was subsequently also provided with a Notice of Preparation (NOP) for the project.

The NAHC, on August 12th, 2016, responded to the initial outreach from Raney, notifying them that no sacred lands are known on the property, and providing a list of individuals to consult with. The NAHC, acknowledging receipt of the NOP on September 12, 2016, recommended consulting with California native American tribes that are traditionally and culturally affiliated with the geographic area in regards to Assembly Bill 52 and SB18.

The City of Davis has initiating consultation with the following individuals: Charley Wright, Chairperson of the Cortina Band of Indians; Gene Whitehouse, Chairperson for the United Auburn Community of the Auburn Rancheria; and Leland Kinter, Chairperson for the Yocha Dehe Wintun Nation. To date, two responses have been received from the Yocha Dehe, on August 24th and September 27th, indicating their cultural interest and authority in the proposed project area and their desire to consult with the City regarding the project. They requested a

project timeline, detailed project information, and the latest cultural study for the proposed project.

SETTING

Environmental Context

The project area is situated on the west side of the lower Sacramento Valley at an elevation of 42 feet above sea level. It is set is on relatively level ground approximately 1,280 feet northeast of the North Fork of Putah Creek.

Geology and Soils

The Project area is composed of surficial Holocene alluvial fan deposit described as a mixture of gravel, sand, silt, and clay. The blanketing soil is identified by the National Cooperative Soil Survey as a moderately deep poorly drained silty loam from the Sycamore Series, typically occurring on alluvial fans and toe slopes¹. The depositional setting and relatively deep soil development suggests a landscape suitable for hosting buried archaeological deposits.

Flora & Fauna

The Project area is situated within the Sacramento Valley bioregion in former oak savannah habitat and California prairie grasslands (Küchler 1977; Barbour and Major 1977). Historically, much of the Sacramento Valley was inhabited by several large game mammals including black-tailed deer; tule elk; pronghorn; and grizzly bears (Ingles 1965; Zeiner et al. 1990). Among the carnivores were coyotes; gray foxes; raccoons; ringtails; weasels; badgers; skunks; river otters; bobcats; and mountain lions. Abundant lagomorphs (hares and cottontails) and rodents (tree and ground squirrels; chipmunks; pocket mice; kangaroo rats gophers; beaver; wood rats; cricetid mice and voles; and porcupines) were also found (Ingles 1965; Zeiner et al. 1990). Many of the plant and animal taxa inhabiting these environs were economically, as well as ritually, important to past and present Native Californians.

Cultural Context

Prehistory

The prehistory of central California is broadly divisible into a broad framework of five temporal periods: Paleo-Indian; Lower Archaic; Middle Archaic; Upper Archaic; and Emergent.

Paleo-Indian Period

Little is known about prehistoric occupations in the Central Valley during this early period (12,000-8000 B.P.), as evidence is limited. Early Holocene components have been identified in several sites in the San Francisco Bay area (Moratto 1984). Several flaked stone tools associated with the early part of this period have been found elsewhere in northern California, including Clovis-like large fluted dart or spear points believed to have been used in the pursuit of large

¹ http://casoilresource.lawr.ucdavis.edu/soil_web/kml/mapunits.kml
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game. These people likely traveled in relatively small groups, were highly mobile, and settled around wetlands (e.g., lakes and rivers) (Moratto 1984).

Lower Archaic Period

Like the previous period, the Lower Archaic (8000-5000 B.P.) is poorly understood. Few sites have been found due to the fact that evidence from this time period is largely buried, given the depositional environment. Meyer and Rosenthal (1997) discovered a buried component in the Kellogg Creek drainage, at the toe of Mount Diablo, at a depth of about 13 feet below surface. It yielded a sparse but diverse assemblage, including traces of freshwater mussel, low to moderate densities of faunal material (primarily artiodactyls and small mammals), handstones, millingslabs, large cobble-core tools, and large projectile points and biface fragments (including large wide-stem variants of Napa obsidian). Tremaine (2008) encountered a site from this period, in downtown Sacramento, ranging from 10 to 20 feet below the surface.

Middle Archaic Period

The Middle Archaic Period (5,000-2,200 B.P.), corresponding to the *Early Horizon*, is identified as one that emphasized hunting, evidenced by the relative proportions of tools representative of hunting, fishing, and gathering activities. Artifacts characteristic of this period include distinctive shell ornaments and charmstones, large projectile points with concave bases and stemmed points, baked clay balls (used for cooking), and milling tools. Net weights, bonefish hooks, and bone spear tips provide evidence for fishing (Bennyhoff 1950; Ragir 1972). Burials of this period, in the Sacramento – San Joaquin Delta Region, tend to be extended, oriented towards the west, and often contain grave goods such as baked clay balls, charmstones, shell beads, and exotic minerals.

Upper Archaic Period

Sites associated with the Upper Archaic Period (2,200-1,000 B.P.), corresponding to the *Middle Horizon*, contain substantial midden deposits with shell, mammal and fish bone, charcoal, milling tools, and other artifacts. The number of mortars and pestles increases during this time, suggesting a greater reliance on acorn and nuts. Greater densities of obsidian artifacts and shell beads are thought to indicate a greater complexity of exchange networks and social stratification. Burials are more often flexed, as opposed to extended, with varied orientations and notably fewer grave offerings, generally involving limited numbers of utilitarian items or ornamental objects (Frederickson 1974).

Emergent Period

The Emergent Period dates between 1,000 B.P. and the arrival of the Spanish in central California (i.e., 1770s) corresponding to the *Late Horizon* (Frederickson 1973). This period involves a dramatic change in general economy, characterized by large village sites situated on high ground, increased evidence of acorn and nut processing, introduction and use of the bow and arrow and use of clamshell disc beads as the primary medium of exchange. During the latter part of the period, cremation became a common mortuary practice. Sites from the latter portion of this period sometimes include items of Euro-American manufacture, such as glass trade beads or worked bottle glass.

Ethnography

The project area lies within the ethnographic territory of the Patwin, or the Southern Wintuan linguistic speakers (Johnson 1978). The following is summarized from Johnson (1978) and Kroeber (1925). Patwin territory included the southern portion of the Sacramento River Valley, from the Sacramento River westward to the lower foothills of the Coast Range east of Clear Lake, and extending north to the present town of Princeton and southward to San Pablo and Suisun Bays.

Only a few early historical accounts and studies document the traditional lifeways of the Patwin. Briefly, the communities lived in semi-permanent settlements. They built two kinds of houses that suggest both long and short-term habitation: substantial earth-covered dwellings and thatch or bark huts used in camping. While their settlement patterns remain relatively unknown, communities tended to be located near creeks in valley settings separated by several miles (Kroeber 1932). The major villages had large ceremonial lodges or dance houses (semi-subterranean earth-covered structures) to host community events. Permanent villages were established along stream courses. The nearest Patwin tribelet living along lower Putah Creek in the vicinity of Davis was the *Puttoy*, also possibly referred to as the *Ansactoy* (Milliken 2005; Milliken and Shapiro 2006). An associated village is thought to correspond with prehistoric sites in the vicinity of UC Davis mentioned in the Records Search subsection above.

History

This section discusses the regional and local history of the area.

Spanish Exploration

The first Spanish infiltration into the Sacramento Valley occurred in the early 1800s. Between 1806-1808 Gabriel Moraga led several expeditions to the Central Valley (Cook 1960; Cutter 1957). In the Fall of 1821, military Captain Luis Arguello and Father Blas Ordaz from Mission Dolores of San Francisco, journeyed through the west side of the lower Sacramento Valley, encountering several Patwin villages along the way (Milliken 2005). One named village, *Libayato*, on the bank of Putah Creek near Winters, was noted housing upwards of 400 people.

Fur Trappers

English and American fur trappers and mountain men began exploring the Sacramento Valley as early as 1826, leading the way for Euro-American settlement along the Sacramento River. In 1827 Jediah Smith and his party of fur trappers followed the Sacramento River north into northwestern California (Morgan 1953; Sullivan 1934). Alexander McLeod led the first Hudson's Bay "fur brigade" to the Sacramento Valley in 1829, passing along the Sacramento River (Nunis 1968). During 1832-1833, a Hudson Bay Company's exploration party, led by John Work, traveled the Sacramento River (Maloney 1945). In 1833 a probable malaria epidemic thought to have been introduced by members of Work's party killed approximately 20,000 Central Valley Native Americans (Cook 1955).

Mexican Land Grants

Mexico began ruling California in 1821 following its victory with Spain during the War of Independence. Large tracts of lands, formerly held by the Spanish-era missions or government were subsequently granted to individuals to settle during the mid-1830s through the late-1840s. Several were established west of the Sacramento River before the American conquest. Following the peace treaty of Guadalupe Hidalgo in 1848, Marcos Vaca and Victor Prudon apparently fraudently claimed a 47,600-acre tract called Rancho Laguna de Santo Calle, situated on the north side of Putah Creek, encompassing future Davisville (Vaught 2009).

Yolo County & Davisville

Yolo County was established soon after statehood in 1850 (Hoover et al. 2002). Joseph B. Chiles, that year, purchased a portion of Rancho Laguna de Santo Calle before it was determined by the Land Commission in 1856 that the original claim documents had been forged. Mr. Chiles subsequently sectioned off 8,000 acres for his son-in-law, Jerome C. Davis (Larkey 1969; Larkey and Walters 1987; Milliken and Shapiro 2006; Vaught 2003). In 1868, Mr. Davis sold 3,000 acres to a group of investors, founding the town of Davisville at the site of a railroad depot along the newly developed California Pacific Railroad passing through the property that linked Sacramento with San Francisco (Larkey 1969; Larkey and Walters 1987; McGowan 1961). The town quickly became a hub for storage, processing, and shipping of agricultural products.

Goulds Raisinworks

By 1872, Davisville had risen to become one of three raisin centers in the State (Hittell 1882). E[ugene].H. Gould started out with a 115-acre vineyard of Muscatel grapes that once encompassed the APE (Hittell 1882), having first worked as a superintendent for his prominent neighbor, Mr. Briggs to the southwest. Mr. Briggs, by 1881, was touted as the largest raisin producer in California. The process of making raisins, described by Gould in the Pacific Rural Press, provides an excellent snapshot into the industry at that time (Pacific Rural Press, 25 June 1881). Mr. Briggs later elaborated on the enterprise (Pacific Rural Press, 28 January 1882). The following is a compilation of the two descriptions:

The grapevines were set 10x10 in square blocks of about 400 vines each, making up about one acre. Each acre reportedly yielded 150 boxes of raisins weighing 20 pounds each. The grapes were picked upon ripening, usually in two crops, one at the end of August and the other, at the beginning of October. Upon picking, the grapes were immediately placed on wooden trays about 30-inches square. Each tray held about 25 pounds. Curing involved placing the inclined trays facing to the south to get the full benefit of the sun. When half-dried, the grapes were turned by placing an empty tray over them and turning them over, leaving them on the empty tray. Two good men were able to turn from 3,000 to 4,000 trays a day. Drying time took about 15 days. Fire heat from the drying house (32 x 220 feet in area and about 16 feet high) was sometimes necessary to finish drying them. When deemed dry enough, the raisins were then placed into sweat boxes, 28 x 36 x 7 inches in size, holding about 100 pounds. After four days of the sweating process, they were packed into forms holding about five pounds each. Packers averaged about seven boxes a day, with four layers of five pounds separated by paper in each box. The packing house, 80 x 130 feet long with lower and upper floor, was conveniently situated adjacent the railroad. One train car could be loaded with raisins in 30 minutes. These were then shipped to large eastern cities and sold on commission.

In 1880, Mr. Briggs reported producing 1,000,000 pounds of raisins (Pacific Rural Press, 28 January 1882). During the busiest season, he was said to have employed about 35 to 45 white men and about 200 China-men (Pacific Rural Press, 25 June 1881). Board and lodging was provided. Wages for white men ranged from \$20 per month during the summer to \$15 per month in the winter. Chinamen, paid 7.5 cents per hour.

Mr. Gould's Raisin Drying and Packing Works, documented on the 1888 Sanborn Map, no doubt operated in a similar manner. His facility, at that time, was situated 185 feet south of the Central Pacific Railroad tracks, featuring a dual purpose structure for raisin packing and box making, a raisin dryer with furnace, two sheds, a windmill, raised water tank, and a corral. In an 1886, having expanded his operation to Malaga in Fresno County, Mr. Gould reportedly packed 10,000 boxes, half from his vineyard in Davisville (Los Angeles Herald, 14 November 1886). In 1890, he reported packing 35,000 to 40,000 boxes from the Davisville vineyard alone (Sacramento Daily Union, 7 December 1890).

May Gould, likely his widow, is shown on the 1891 Yolo County Map owning the property. Five years later, the vineyard was advertised for sale (Sacramento Daily Union, 117 August 1896). The property was subsequently acquired by E.G. Cohen. The Sanborn Maps through 1911 refer to the J.B. Cohn Raisin Drying, Packing Works, and Vineyard. The property eventually passed out of the Cohen [Cohn] family, being purchased by J.W. Marshall sometime prior to 1915.

Note: for later history of the project area and the Callori family, post-1920, see built environment reports (Dahlin 2015 & Historic Resource Associates 2016).

FIELD METHODS

Kim Tremaine and Elizabeth Fernandez conducted an intensive pedestrian survey of the APE on October 8, 2016. The survey accomplished 100% coverage of the project APE. Ground visibility ranged from very poor to fair, depending upon the context. Approximately 30% of the surface was covered with existing residences and landscaped yards. The remaining 70% was open terrain covered with dried grass ranging. Patches of exposed dirt provided fair visibility of the surface. Hoes were used to periodically clear vegetation. One hand excavated hole was observed behind the residence at 113 Hickory Lane. It revealed sterile soil to a depth of about two feet. Previously disturbances to the area stem from the construction of rental cottages between 1937 and 1944, as well as later infill with residences in the 1950s, and the construction of the Kober Motel in 1962.

STUDY FINDINGS AND CONCLUSIONS

Prehistoric Resources

No evidence of any prehistoric sites were found in the areas that were surveyed. As previously stated, however, approximately 30% of the ground surface could not be examined, being situated beneath existing residences and landscaped yards. In addition, there is a possibility that buried

archaeological deposits are present given the project setting within an alluvial fan and moderately deep soil development.

Construction personnel should receive cultural resources sensitivity training and be provided instruction on what to do in the event of a discovery. If cultural resources are discovered during construction, all ground disturbances within a 100-foot radius should be temporarily halted until the find can be assessed by a qualified archaeologist for eligibility to the CRHP. If a discovery is determined to be eligible and adverse effects cannot be avoided, then treatment should be implemented in the form of data recovery before construction resumes. If human remains are encountered, the Yolo County Coroner should be immediately notified. The coroner, as required by the California Health and Safety Code (Section 7050.5) will make the final determination whether the remains constitute a crime scene or are Native American in origin. If coroner will contact the NAHC if the remains are determined to be Native American. The NAC will immediately designate and contact the most likely descendant (MLD) who must make recommendations for the treatment of the remains within about 48 hours from completion of their examination of the finds, as required by PRC 5097.98(a). Construction can resume once the remains have been appropriately and legally treated.

Historic Resources

Gould's Raisin Works

Portions of an *in situ* concrete slab were observed beneath a thin layer of soil in front of the residences at 113 and 115 Hickory Lane. This *may* represent what remains of the Gould/Callori barn, said to have been demolished in the 1960s according to Callori's grandson, Robert Jordan. No evidence of the raisin drying or packing facility was found. The Sanborn maps suggest the sheds, raisin packing house and the raisin drying building, were once situated edging Olive Drive. Thus, if subsurface deposits associated with these structures/activities remain, they are likely beneath the existing occupied residences. There is a low likelihood that any significant remnants of the raisin works have survived.

Cork Oak Tree Row

An historic row of cork oak trees was noted lining Olive Drive, once Lincoln Highway. Two trees, among nine trees designated by the Urban Forestry Division of the City of Davis as Landmark Trees, are situated within the APE at 1225 and 1233 Olive Drive (Figures 5 & 6). Their status appears to have been based on size, age, and unusual species, *Quercus suber*. Department of Parks & Recreation forms for the resource can be found in Appendix C.

Historical Context

The historical context behind the appearance of cork oaks in Davis was developed as part of this study in an effort to assess the importance of the tree row and evaluate its eligibility to listing on the California Register of Historic Places.

In 1915, cork oak seedlings were planted along former Lincoln Highway east of Davis (Metcalf 1947). Some of these rose to be the magnificent trees now found lining Olive Drive. They represented the fourth generation of cork oaks in California, derived from acorns first imported

into the State in 1858. The original acorns were distributed by the U.S. Patent Office in an attempt to foster a new branch of rural economy, cork oak husbandry. The impetus behind this effort was to induce the forming of plantations to ensure future cork reserves rather than rely on foreign supplies.

In 1876, the U.S. Department of Agriculture initiated a forestry research program. As part of this effort, Dr. Franklin Hough, hired by the Federal government, proposed the establishment of Experimental Stations for Forest Culture in 1882. He went on to recommend the development of a California facility devoted to studying the introduction of nonnative species, including the cork oak (Godfrey 2013). It was in this era that the Agricultural Department of the University of California apparently started a second generation of cork oaks from the acorns of the first generation in 1885, distributing them to nearly all parts of the State². Annual Reports of the Agricultural Experiment Station note that between 1886 and 1891 a total of 803 cork oak seedlings were distributed to land owners throughout California (Metcalf 1947). In 1904, a third generation of cork oaks, 300 in number, were planted at the Chico Forestry Experiment Station in Butte County³.

The cork oaks along Olive Drive were among the first known to be planted in Yolo County. Later, in the 1930s and 1940s, the State Division of Forestry Nursery at Davis, part of the University of California Agricultural Extension, cultivated 74 lots of cork oaks in gallon cans (Figure 7). During this period 2,864 trees were planted on school grounds, along highways, and the grounds of state and county institutions (Metcalf 1947). The fifteen trees along Olive Drive were eventually stripped in 1940, after maturing for 25 years, yielding over 1,000 pounds of cork (Figure 8). One of these trees was later re-stripped in 1945 (Figure 9).

Over the next six years, 200,000 seedling trees were grown and distributed under a cooperative project that began in 1941 between the Agricultural Extension Service of the University of California, the State Division of Forestry, the U.S. Forest Service, and the Crown Cork & Seal Company. This ambitious public-private cooperative project was aimed at studying the growth characteristics of the tree, the quality of cork produced using existing trees, and determining the optimum conditions for cultivation (Brooks 1997). Two major studies were completed in the 1940s, assessing the potential success of growing cork oaks in California (Murray and Munns 1943; Ryan 1948). As part of this effort, the program launched a nation-wide planting campaign to develop a domestic source for cork (Brooks 1997). Later, Metcalf (1947) calculated that it would require up to 2 million acres of cork oak forest to meet the nations' demand (200,000 tons per year). The cooperative project was ultimately doomed to fail. With the investment in time, and labor being so costly and advances in synthetic alternatives, the cooperative project was ultimately doomed to fail, discouraging further pursuit of a domestic cork oak industry.

California Register Eligibility Evaluation

The California Register of Historical Resources program designates resources of architectural, historical, archaeological, and cultural significance based on the following criteria:

² Article: The Cork Oak in California, Pacific Rural Press, 08 May 1909

³ Article: New Industry Develops with Harvest of First Cork Crop, Chico Enterprise-Record, 16 July 1940

- (1) Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States;
- (2) Associated with the lives of persons important to local, California or national history;
- (3) Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; and/or
- (4) Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Criterion 1. The cork oak tree row lining Olive Drive is found eligible for listing on the California Register under Criterion 1, being clearly associated with events that make a significant contribution to broad patterns of local, state, and national history. On the *local and state level*, they represent the beginnings of the statewide Cooperative Extension system and Agricultural Experiment Stations associated with the University of California. This system and the associated experiment stations became heavily engaged in studying the varying qualities of cork, its rate of growth, and the response to harvesting, with an eye toward advancing California's agricultural sector, promoting innovation, scientific discovery, and diffusing research results and expertise.

Two major studies were completed in the 1940's, assessing the potential success of growing cork oaks in California (Brooks 1997). Harvesting records from the trees along Olive Drive contributed to these major studies. Murray and Munns (1943) concluded that cork oak did best in deep gravelly or sandy soils that were granitic in origin, but that they also did well in sandy loams or rocky soils with moderate acidity. A study by Ryan (1948) was comprehensive in bringing together soil, rainfall, and temperature data. Both studies concluded that California had several regions capable of supporting cork oak, including, but not limited to, a large part of the Central Coast Region. Interestingly, a recent comparison was made between the Dehesas of Spain⁴ and the ranchlands of California, noting many similarities (Campos et al. (2013).

On a *national level*, the public-private cooperative with the Crown Cork & Seal Company was conducted as a strategic defense initiative during World War II. This occurred at a time when cork was classified by the U.S. Army and Navy Munitions Board as one of 15 critical materials that placed our country at risk should European sources of procurement disintegrate (Faubel 1941). To aid in planting efforts, the Davis Nursery program enlisted high school boys and girls, civic organizations, garden clubs, and chambers of commerce in planting 10,000 seedlings (Cooke 1941). Later, in 1945, Metcalf reported more than 850,000 California cork oak acorns were distributed to eight Southern States (including Arizona, New Mexico, Louisiana, Mississippi, and Florida) in an attempt to develop a domestic supply of cork (Fairburn 1967)⁵.

Criterion 2. The cork oak tree row is also found eligible under Criterion 2, being clearly associated with the life of a person important at the local, state, and national level. Woodbridge Metcalf, one of the nation's first forester specialists with the University of California Agricultural Extension Service, and one of the founders the School of Forestry, was heavily

⁴ *Dehesas* are essentially oak woodland working landscapes found in the marginal lands of southern and central Spain and southern Portugal. They represent anthropogenically modified Mediterranean forests that economically support rural populations across 20,000 square kilometers of the Iberian Peninsula. The people of this region have adapted by relying upon an agro-silvo-pastoral system (a type of agroforestry) where the primary source of income derives from the harvesting of cork and the grazing of cattle (see <https://en.wikipedia.org/wiki/Dehesa>).

⁵ Article: Cork Oak Acorns Coast to Coast, Extension Service Review, 1945

involved in the drive to promote the propagation of *Quercus suber*. Under the auspices of the Forest History Society, an autobiographic interview was obtained from Mr. Metcalf in 1969, and published by the Regional Oral History Office of the University of California at Berkeley (Fairburn 1969). His many records and photographs, preserved for posterity in the Woodbridge Metcalf Papers Archive and the Fritz-Metcalf Photograph Collection, can be found at the U.C. Berkeley Bancroft Library (www.oac.cdlib.org). Among the photographs he took are those of the trees along Olive Drive during cork-stripping expeditions.

Potential Resource Impacts

CEQA guidelines, Section 15064.5(b) states that a project with an effect that may cause a substantial adverse change in the significance of an historic resource is a project that may have a significant effect on the environment. Substantial adverse change, in this case, means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. Demolition or material impairment is further defined as actions that would alter in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justifies its inclusion in or eligibility for inclusion in the CRHR.

Impact to the cork oaks will be limited to pruning to accommodate proposed walls and buildings. This pruning will not alter the ability of these trees to convey their historical significance, and therefore, will not cause a substantial adverse impact. The project will also not alter the immediate surroundings of the trees in such a way that the significance of the trees would be materially impaired, as it is an infill project surrounded by existing development, including apartments, single family units, and retail uses. In addition, the proposed bicycle/pedestrian path along the project's Olive Drive frontage will not result in a substantial adverse change to the cork oaks because the proposed path alignment has been designed to meander around the trees. Lastly, these trees will be preserved and protected in accordance of the City of Davis Landmark Tree Ordinance, Article 37.03.

Advisory Note

While no mitigation measures are required, it is recommended that the history of the cork oaks in Davis be shared by the City with the community via various forms of public outreach/education. Possibilities include: adding these trees to the Treewalk, a self-guided tour showcasing of the Landmark Trees of Davis; adding a webpage to the City of Davis Urban Forestry Division website; and developing an educational brochure to be made available at the UC Davis Arboretum.

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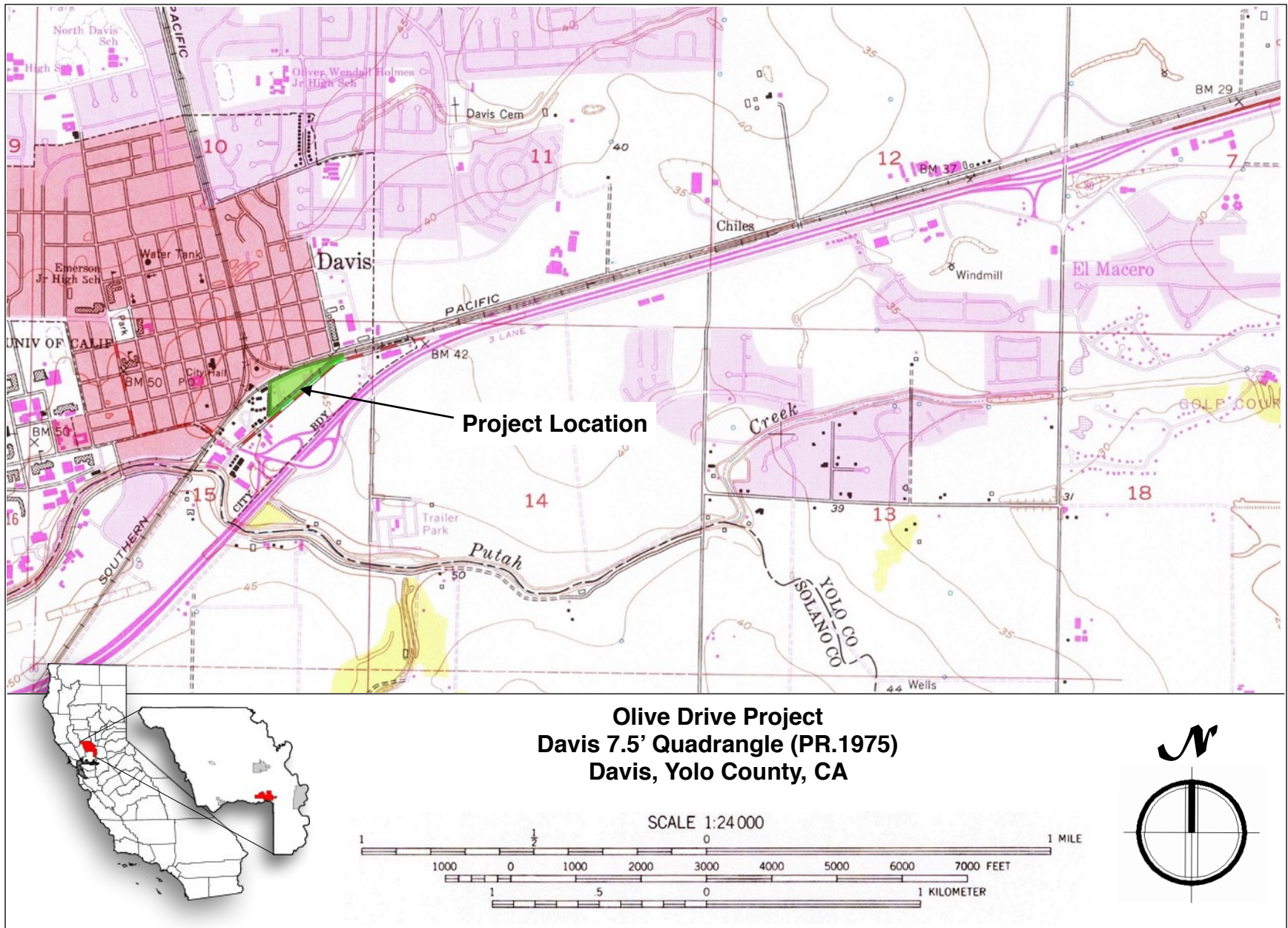


Figure 1. Project Location

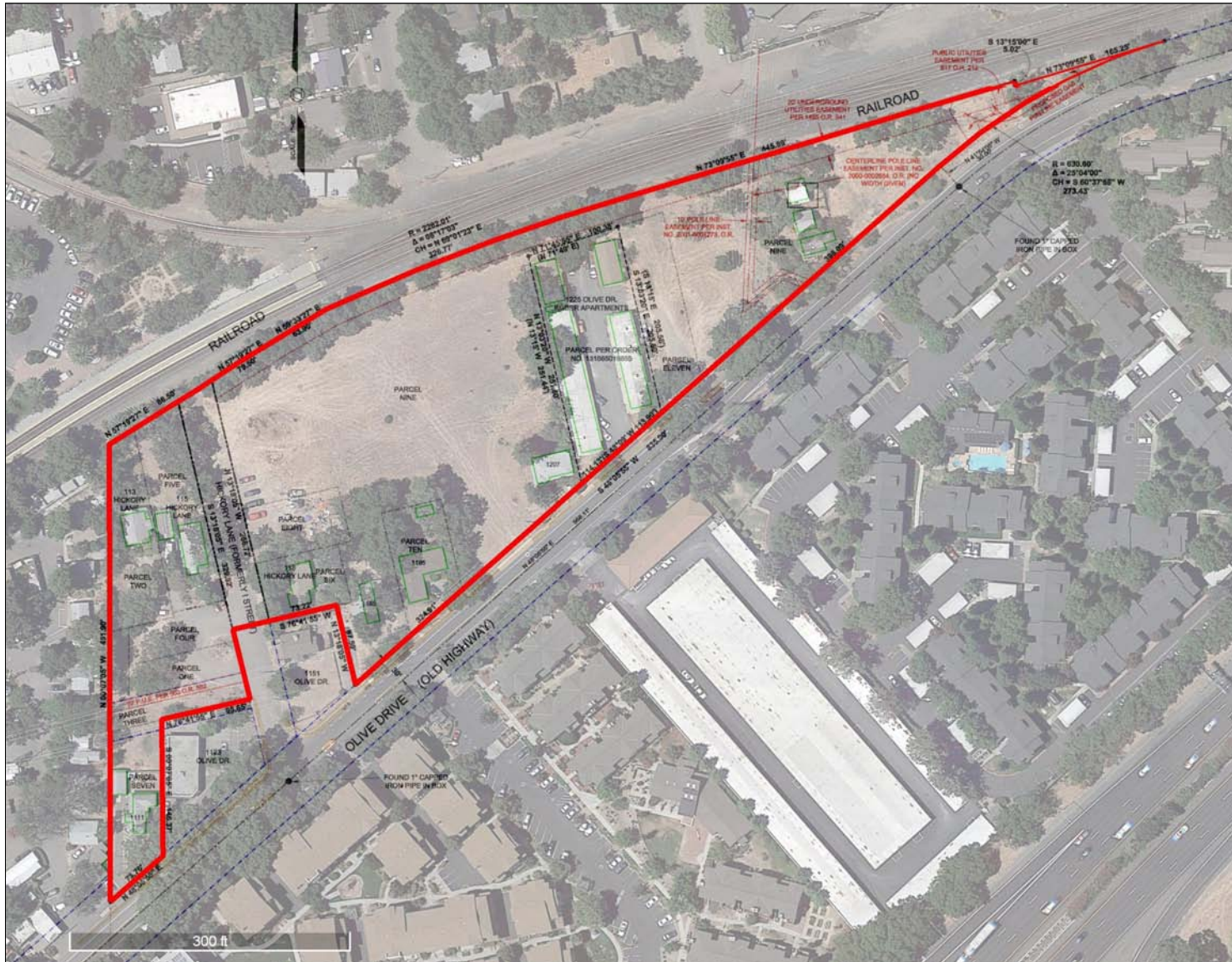
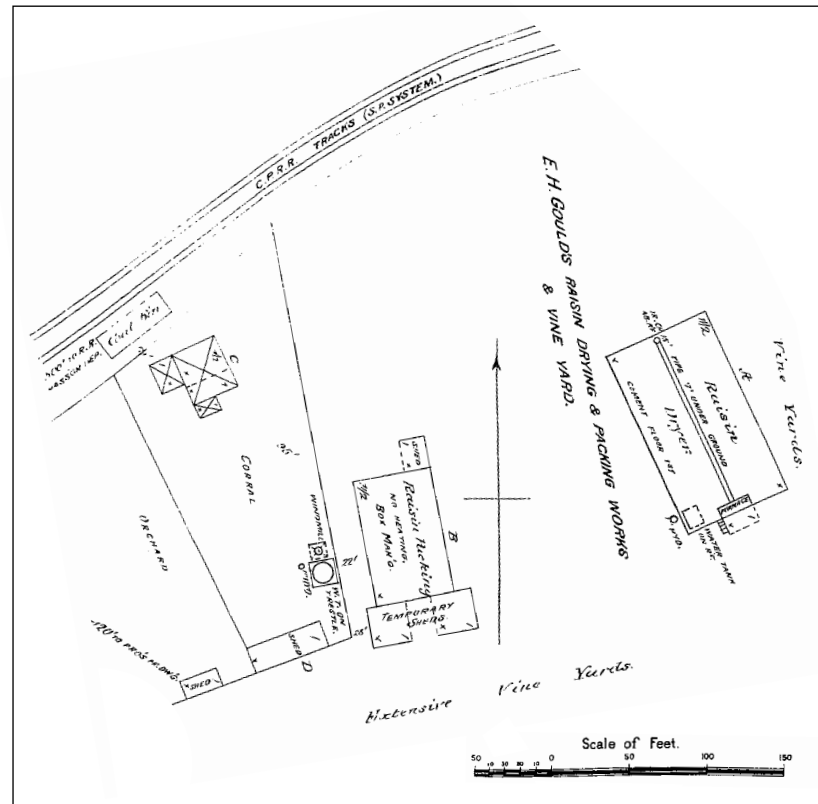


Figure 2. APE Map



Source: Official Map of Yolo County, California, 1:47,520 (Miller 1891)

E.H. Goulds Raisin Drying, Packing Works, & Vineyards



Source: 1891 Sanborn Fire Insurance Map

Figure 3. 1891 Maps of Davisville & Project Area

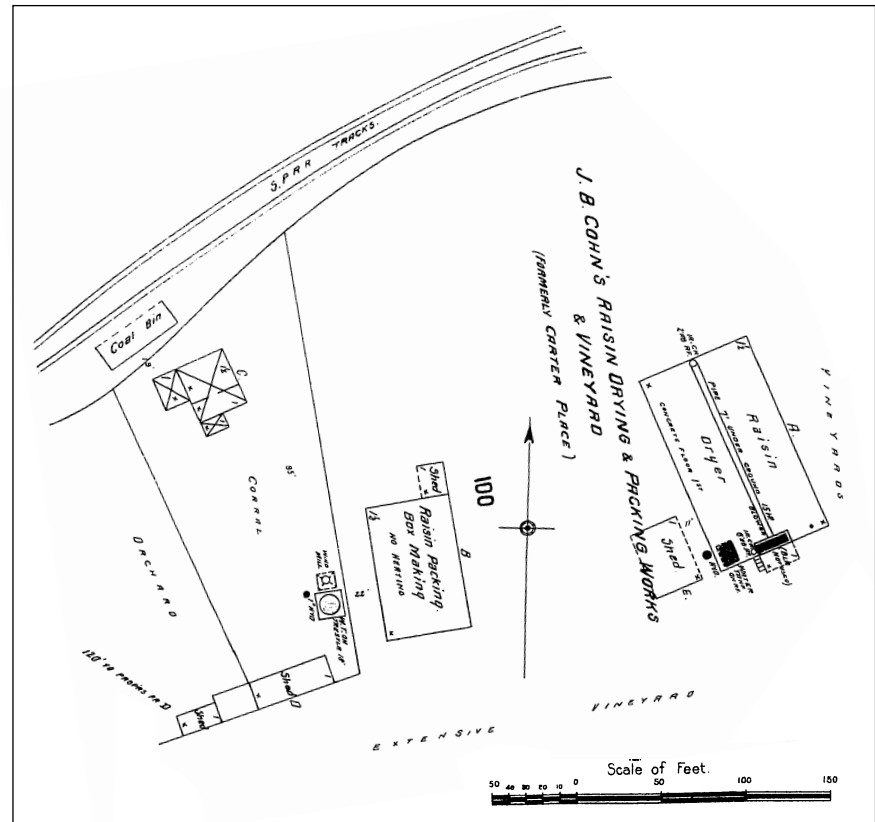


Source: USGS Davisville 15' Topographic Quadrangle (1907)



Source: Official Map of Yolo County, California, 1:47,500 (Ashley 1909)

J.B. Cohn's Raisin Drying, Packing Works, & Vineyard



Source: 1907 Sanborn Fire Insurance Map

Figure 4. 1907 & 1909 Maps of Davisville & Project Area



Figure 5. Cork Oak at 1225 Olive Drive



Figure 6. Cork Oak at 1223 Olive Drive



Bed of Cork Oak Seedlings



Portion of 30,000 Cork Oak Seedlings Transplanted to Cans

Figure 7. 1942 Photographs Showing Cork Oak Seedlings at State Forest Nursery at Davis

Source: The Fritz-Metcalf Photograph Collection, Accession No. 6772



Cork Oak along State Highway east of Davis, Planted in 1915
Photographer: Woodbridge Metcalf

Figure 8. 1940 Photograph Showing Davis Highway Cork Oak Being Stripped



Source: The Fritz-Metcalf Photograph Collection, Accession No. 6769b

Cork Oak along Davis Highway, Planted in 1915, Being Re-Stripped in 1946
Pictured: Ray Doney (Nurseryman) & George Gretna (Western Crown & Cork)
Photographer: Woodbridge Metcalfe

Figure 9. 1946 Photograph Showing 30-Year Old Cork Oak on Davis Highway