

FINAL

ARCHAEOLOGICAL MONITORING PLAN FOR THE LĀHAINĀ PIER IMPROVEMENT PROJECT WAINE‘E AHUPUA‘A, LĀHAINĀ DISTRICT, ISLAND OF MAUI [TMK: (2) 4-6-001:001]

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LĀHAINĀ PIER IMPROVEMENT PROJECT
WAINE‘E AHUPUA‘A, LĀHAINĀ DISTRICT,
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May 2010

ABSTRACT

Pacific Legacy, Inc., under contract to EKNA Services, Inc. has prepared this archaeological monitoring plan for the Lāhainā Pier Improvement Project located in the *ahupuaʻa* of Waināne, Maui on lands owned by State of Hawaii Department of Land and Natural Resources – Division of Boating and Ocean Recreation (DLNR – DOBOR) (TMK: 4-6-001:001). This project is being proposed by DLNR-DOBOR and is being partially funded by the Federal Transit Administration (FTA) and is thus an “undertaking” as defined in 36 CFR 800.16(y). The current investigations are being conducted to fulfill the federal agency’s (FTA) obligations under Section 106 of the National Historic Preservation Act of 1966, as amended, following recommendations in the archaeological inventory survey report and comments by the State Historic Preservation Division (SHPD) review of said report.

The Lāhainā Historic District is listed as a National Landmark because it is associated with the “Whaling Era” of the 19th century. In 2008, controlled archaeological excavation of one test unit within the project area boundaries and archival research was undertaken to gather information about the Lāhainā area. SHPD concurred with the Pacific Legacy, Inc. recommendation for archaeological monitoring during the construction phase of the proposed improvements.

The specific area in which the project will occur includes contributing properties of the Lāhainā Historic District. In the immediate vicinity is a subsurface feature found during the archaeological inventory survey; a possible *loʻi* retaining wall (Site 50-50-3-6491). This *loʻi* feature is in the area that is interpreted as the “King’s Taro Patch” because of its association with Kamehameha I residence here in 1802. A single radiocarbon date from this *loʻi* feature suggest a much greater antiquity. This feature was probably built in the 15th to 17th centuries A.D. and is being assessed as potentially significant under criteria “B” and “D” of the National Historic Preservation Act of 1966 (as amended). This feature has the potential to yield important information on the history of Lāhainā.

Potential findings during the monitoring program consist primarily of buried cultural deposits and artifacts, possibly including stained areas, refuse pits, fire hearths, and portable artifacts. It is predicted that the anticipated remains will date to the historic era, although there is the possibility of encountering pre-Contact materials as well. This archaeological monitoring plan contains the eight specifications as outlined in the Hawaii Administrative Rules 13§13-279 Governing Minimal Standards for Archaeological Monitoring Studies.

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Frontispiece: The Project Area and the Pioneer Inn viewed from Lāhainā Harbor.

1.0 INTRODUCTION

Pacific Legacy, Inc., under contract to EKNA Services, Inc. has prepared this archaeological monitoring plan for the Lāhainā Pier Improvement Project located on roughly 0.4 acres of Lāhainā waterfront (TMK: 2-4-6-01:01) in the *ahupua‘a* of Waine‘e on the island of Maui (Figure 1). The “land-side” improvements are comprised of four new parking stalls, construction of a new Lāna‘i and Moloka‘i ferry ticket booth, and the planting of two new trees on State lands. Other improvements are cosmetic, such as division of the existing road with planters strategically located between lanes, extension of the sidewalk and placement of removable bollards. The upgrade to the existing pier consists of construction of a new administrative office building within the existing building footprint. The improvements necessitate archaeological monitoring along Papelekane Street (Figure 2). Finally, a new Ferry pier and new gangway will be constructed to the southwest of the existing pier. The project is proposed by the State Department of Land and Natural Resources – Division of Boating and Ocean Recreation (DLNR-DOBOR) to improve the harbor facilities at Lāhainā, and is being partially funded by the Federal Transit Administration (FTA) and is thus an “undertaking” as defined in 36 CFR 800.16(y). To fulfill the federal agency’s (FTA) obligations under Section 106 of the National Historic Preservation Act of 1966, as amended, an additional archaeological testing was previously conducted (Mooney *et al.* 2008), to be followed by this proposed archaeological monitoring program.

1.1 ENVIRONMENTAL SETTING

The Lāhainā Pier Improvement Project is in Waine‘e Ahupua‘a, District of Lāhainā on the island of Maui, Hawai‘i (TMK: 2-4-6-01:01). Maui is the second largest island in Hawai‘i and formed by two volcanoes, Haleakalā and Hale Mahina. Lāhainā is on the west coast of Maui, one of the drier regions of the island, and receives the lowest amount of average annual rainfall, at 15 inches per year (Juvik and Juvik 1998). During the winter months it is common for the trade winds to cease, producing heavy humidity and storms from the south (Klieger *et al.* 1995a).

The town of Lāhainā is generally situated on alluvial deposits of Pulehu silt loam (PpA), with 0 to 3 percent slopes (Sato *et al.* 1972: map 94, p. 116). The project area is positioned at ca. 0-1.75m above mean sea level (AMSL) on the central coast of Lāhainā Town, extending from the sea wall of Lāhainā Boat Harbor to ca. 30.5 meters (100 feet) inland. Natural coastline substrate can be described as a calcareous sand and basalt pebble matrix with large boulder scatters. Currently, project surface is fully graded with fill-soils up to ca. 0.5 meters deep that are retained by north-south oriented sea walls and either paved with concrete and asphalt, developed with structures, or landscaped.

Vegetation in the area consisted of introduced plants which included: coconut (*Cocos nucifera*), seaberry palm (*Coccothrinax* sp.), areca (*Chrysalidocarpus lutescens*), indian almond (*Terminalia catappa*), *milo* (*Thespesia populnea*), banyan (*Ficus* sp.), crown flower (*Calotropis gigantea*), and hibiscus (*Hibiscus* sp.). Currently, project area vegetation consists of an exotic grass lawn with large banyan (*Ficus* sp.) and exotic weeds.

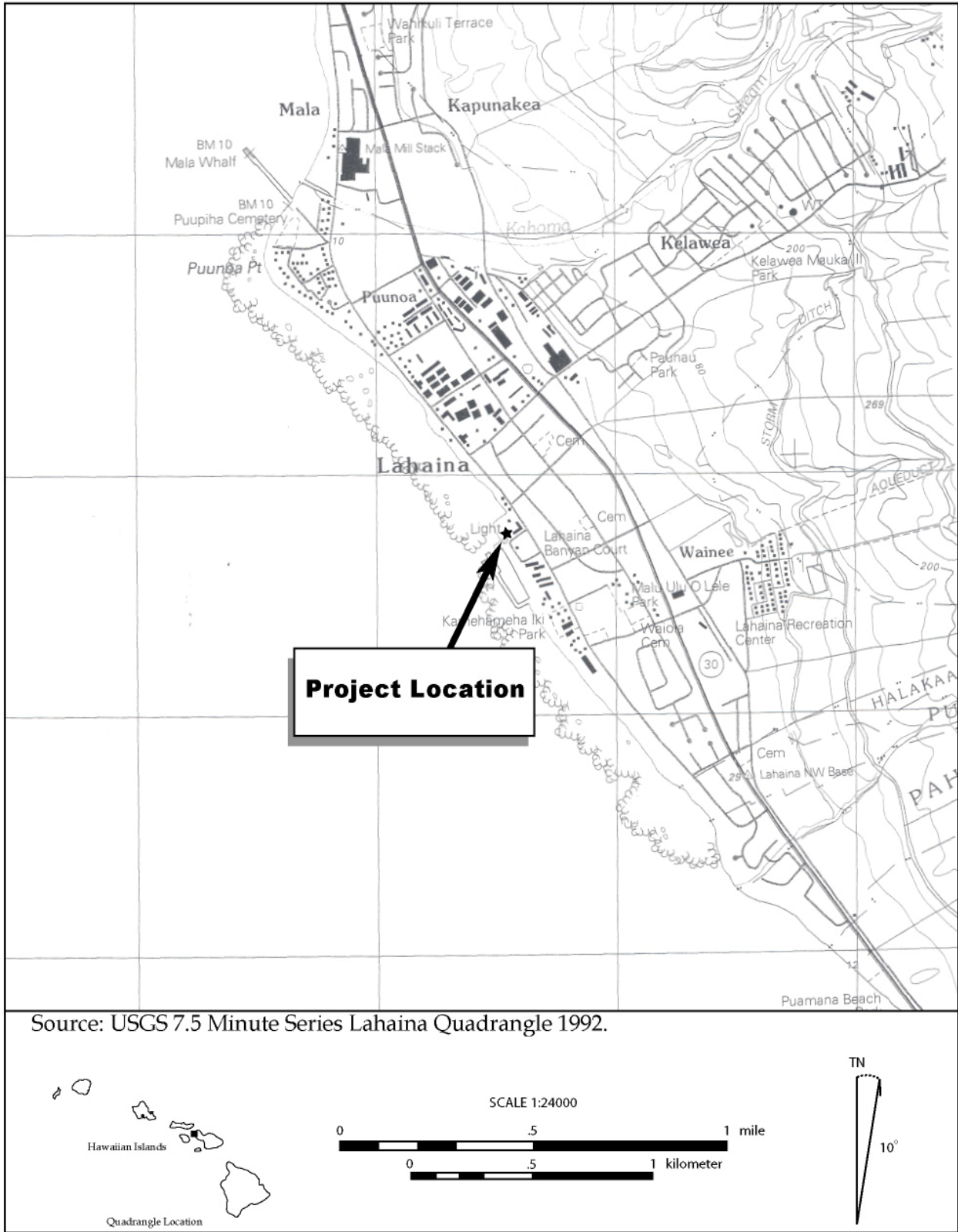


Figure 1. Project location map.

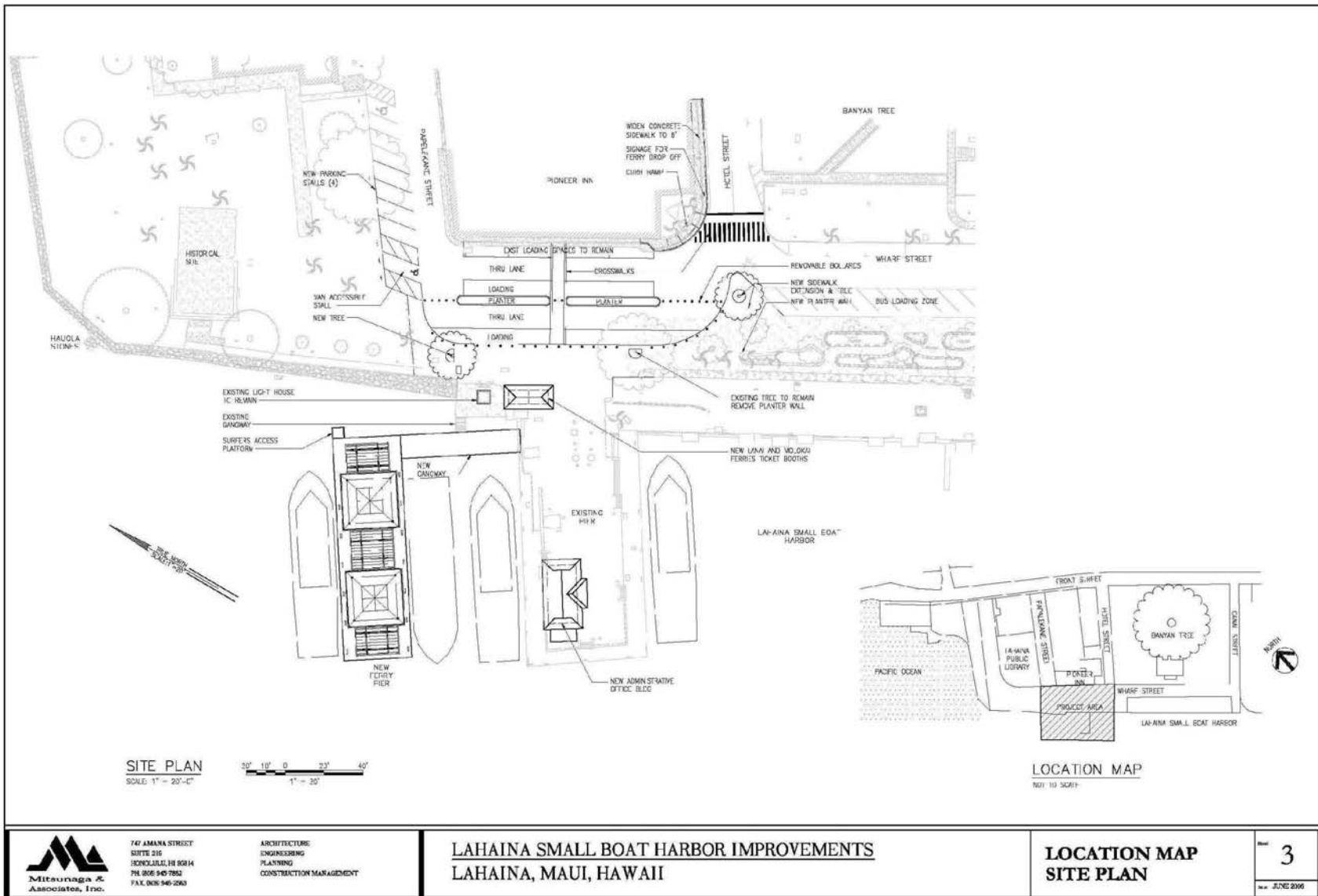


Figure 2. Project area map.

2.0 HISTORIC BACKGROUND

It is believed that the town of Lāhainā acquired its name from a traveling chief on his journey through the island of Maui. During his passage, the chief stopped in Lāhainā at noon to rest and commented “*kau keia ka la-haina*”, the literal translation of which means cruel sun (Maui Historical Society 1961). But there are other suggestions as to the origin of the name – that Lāhainā was once known as *Lele* (to jump around) because of the short stays of the *ali‘i* on the island (Klieger et al. 1995). The original spelling was *Lā-hainā*, with *kahakō* over two of the ‘a’s, which elongated the pronunciation of the vowel and a hyphen between La and Haina (Pukui et al. 1976:127).

Kahekili, a well-known chief of Maui and ruler of Maui, Lāna‘i, Moloka‘i, and O‘ahu, made his home and royal court at Lāhainā from 1736 until his death in 1794. Soon after Kahekili’s death, Kamehameha I returned to Maui, where he had ruled for a short time, and established his home and seat of government out of Lāhainā. In 1802, Kamehameha I built a palace for his *punahele* (favorite) wife, Ka‘ahumanu and it was the first western-style house in the islands (Bartholomew and Bailey 1994), made from locally made bricks (Fredericksen and Fredericksen 1965). Kamehameha I was involved in the lucrative sandalwood trade with China (1790’s-1829), in which Lāhainā served as the main Maui port. Kamehameha I died in 1819 and his son Liholiho (1796-1824) assumed the title of Kamehameha II, but shared the rule of the kingdom with Ka‘ahumanu, as *kuhina nui* (prime minister). In 1825, Kauikeaouli (Kamehameha III), younger brother of Liholiho, seceded to the throne and established Lāhainā as the kingdom’s capital from 1820s through 1840 (Bartholomew and Bailey 1994). During his reign, Kamehameha III began construction on a new palace in Lāhainā, which continued after his death in 1854. In 1858, before the construction was complete, a strong wind-storm demolished the structure (Bartholomew and Bailey 1994). Liholiho and Kauikeaouli were unable to sustain the control Kamehameha I had wielded over the kingdom and Lāhainā began to lose its political influence as the seat of the monarchy, and eventually its economic monopoly as the only Maui port capable of accommodating commercial shipping.

In 1819, the first whaling ships arrived at the ports of Honolulu and Lāhainā and rapidly became the economic focus of Maui (Bartholomew and Bailey 1994). Lāhainā was besieged by these ships and their crews, as well as the accompanying miscreant behaviors such as drunkenness and prostitution (Bartholomew and Bailey 1994). At the peak of the whaling boom in 1846, 429 ships arrived in Lāhainā, more than double the arrivals in Honolulu.

It was not until the United States Civil War (1861-1865) that the whaling industry and the town of Lāhainā felt its biggest decline. Beginning in the late 1840s, the city of San Francisco became a ‘Mecca’ for prospectors and entrepreneurs and developed into a bustling city. With the development of the Port of San Francisco and the first transcontinental railroad, it was no longer necessary for whaling ships to sail to the smaller, less accessible ports of the Hawaiian Islands. Lāhainā’s economy flourished until 1860 when the recession of the whaling industry in had a direct negative effect on the town.

In 1861, while Lāhainā’s whaling industry declined, the Lāhainā Sugar Company and Pioneer Mill were established (Monahan 2003). Pioneer Mill’s railroad allowed the sugar to be processed and bagged in Lāhainā and then taken by train to Pu‘u Keka‘a (McGerty and Spear 2003). In 1880, pineapple was successfully planted in Ha‘ikū and grew into an economically successful and important industry by 1920, when Maui exports totaled 73,000 cases. A small section of Honolua Ranch in West Maui was planted with pineapple in 1912. The fruit was processed at the Honokahua cannery and shipped from the Kā‘anapali landing until the Territory of Hawai‘i built Māla Wharf in 1922. This new wharf motivated Baldwin Packers to build a cannery in Lāhainā (Bartholomew and Bailey 1994). By the 1960s the plantations were going into decline and there was a rise in tourism around the Kā‘anapali and Lāhainā area (McGerty and Spear 2003). The presence of golf courses, hotels, resorts and shops continued to increase and bring the tourism industry to the Lāhainā District.

Presently, the core of Lāhainā Town is the resort and tourist destination for the West side of the island and primarily comprised of retail shops, art galleries, and restaurants. Lāhainā provides offshore anchorage for cruise ships and wharf docking for inter-island ferries, resulting in a heavy flow of pedestrian traffic. The Historic District of Lāhainā retains its unique whaling-era atmosphere a few blocks removed from the local Lāhainā community and residential areas.

2.1 LĀHAINĀ HISTORIC DISTRICT

On December 29, 1962 the Lāhainā Historic District (Figure 3) was added to the list of National Historic Landmarks because “Lāhainā preserves the atmosphere of a mid-19th century Hawaiian seaport, when it was a favorite port of call for American whalers. It was also the center of missionary activities” (National Historic Landmark, nd). In 1970, the Lāhainā Historic District was nominated to the National Register of Historic Places (See Appendices A and B). It was listed in on the Hawai‘i Register of Historic Places in 1971 (Appendix C). The district boundaries include an arbitrary rectangular land boundary of 33 acres; the northeast boundary lies above Honoapi‘ilani Highway and includes the Pioneer Sugar Mill, the south boundary is the beginning of the Makila site, the southwest boundary runs into the Pacific Ocean, and the north boundary stops at Pu‘unoa Point. In the National Survey of Historic Sites and Buildings Registration Form, the following eight historic sites and structures were listed as contributing elements to the Historic District (National Register of Historic Places 1970).

The Baldwin House

In 1834, Ephraim Spaulding began the construction of what is now known as the Baldwin House. The house is located on Front Street at Dickenson Street. The two-story house is constructed from coral blocks and sits on 42,360 square feet of property (National Register of Historic Places 1970). The Spauldings took possession of the home in 1835; however, they only resided in the house until 1836 when Dr. Dwight Baldwin and his family moved in to replace the Spauldings. The Baldwin’s lived in the home until 1868 when Dr. Baldwin was transferred to Honolulu. Along with being a government physician for the islands of Maui, Moloka‘i, and

Lāna‘i, Dr. Baldwin’s positions also included pastor of the Hawaiian church of Lāhainā, seamen’s chaplain, and a medical doctor. It was also his duty to greet guests to the Lāhainā Mission and the nearby Lāhaināluna Seminary. With all of Dr. Baldwin’s company and business affairs, he expanded the house in 1847-1849 to include a dispensary and office.

Dr. Baldwin and his wife had their son Henry P. Baldwin in their Lāhainā home and when Henry married, he and his wife became very involved on the island of Maui. Mrs. Henry P. Baldwin used the home to sponsor a community center in which the house acted as the center for a kindergarten, night-school, circulating library, language school, and high school. These activities helped establish the house as a center for Hawaiian social and cultural development. At the time the National Registration Form was filed the home was no longer being used for any community purpose but remained in “excellent condition” (National Register of Historic Places 1970). Currently, it is a museum open to the public and presents a fascinating picture of the busy Sandwich Isles life as lived by a missionary who was both a physician and a constructive community force.

Old Spring House

The Old Spring House is a small stone building located south of the Baldwin House, off Front Street. Constructed by Rev. William Richards in 1823, the spring house served as a water supply to the Richard’s residence, the entire township, as well as for merchant and whaling ships anchored at the Lāhainā Pier.

Court House

The Court House as it now stands is not the original court house. In 1858, the original court house was destroyed by forceful winds from Kaua‘ula Valley. A request for funds to support the reconstruction of all the government offices affected by the storm was made to the Interior Department. Lāhainā was given an appropriation of \$6,000.00 for the Lāhainā Court and Custom House and Government Offices to be repaired. The Court House was rebuilt again in 1925 and incorporates part of the older structure. The Court House was determined eligible to be included in the Lāhainā Historic District because of its links to the kingdom. Located in back (or *mauka*) of the Court House is “Hawai‘i’s largest” banyan tree (National Register of Historic Places 1970).

Old Prison (Hale Pa‘ahao)

Located on the corner of Prison Road and Waine‘e Street, the Old Prison was built of heavy planks enclosed by a coral wall. During the whaling era the prison detained many reprobate seamen along with the criminal citizenry of Lāhainā. Most wrongdoers were put in jail for not obeying the sundown curfew. In 1852, at the request of the prison’s physician, a new sleeping facility for the prisoners was constructed. The physician believed the old sleeping arrangements were unhealthy and many illnesses could be prevented if the prisoners had better sleeping quarters. The original cell house burnt down in 1958 and in its place a wooden gate house was constructed in 1959. The prison now serves as a historic tourist site.

Waine‘e Church and Cemetery (Waiola)

The present church on Waine‘e Street between Chapel and Shaw Streets was constructed in 1953. The church and adjoining cemetery are owned by the Waiola Protestant Church. When

the missionaries first arrived, services were held in temporary structures until 1832 when the stone church ordered by chief Hoapili was finished. The original church was destroyed in a strong storm, rebuilt and destroyed again, this time by a fire, in 1894. The current church was dedicated in 1953 and renamed Waiola.

Unlike the church, the cemetery has remained in its same location even with all the structural changes to the church. It is believed to date to 1823 when the missionaries first arrived. It contains the bodies of Hawaiian *ali'i* (royalty) such as Keōpūolani, wife of Kamehameha I; King Kaumuali'i of Kaua'i; Princess Nāhi'ena'ena; Queen Kalakua; Governor Hoapili; and Governess Liliha. Also, Rev. William Richards, the pioneer missionary who advised the Hawaiian monarchy, is buried in the Waiola Cemetery (National Register of Historic Places 1970).

Hale Aloha

Known as the first stone church in the islands, Hale Aloha is situated on Waine'e Street and is said to have been built in 1823. The property is owned by Waiola Protestant Church. The church was rebuilt in 1855-1858. After reconstruction it was "the largest sectional meeting house of its time" (National Register of Historic Places 1970:7).

United States Marine Hospital

The United States Marine Hospital is owned by the Bernice P. Bishop Estate and sits on the northeast side of Front Street, between Kenui and Baker Streets. The hospital's date is uncertain but there are references to it by 1843 from Herman Melville (Maui Historical Society 1961). The two-story coral block building was sold to three nuns of Society of the Holy Trinity who turned the hospital into the St. Cross School for girls. Once the school was moved to O'ahu the church housed the Episcopal Minister but was later abandoned in 1908. The building's significance is its connection with the maritime days of Lāhainā (National Register of Historic Places 1970).

Roman Catholic Church (Maria Lanakila - "Our Lady of Victory")

The site of Maui's first Roman Catholic Church is on the corner of Waine'e and Dickenson Streets. The original church was built in 1846, but by 1858 had been destroyed and a second church constructed on the same property. In 1928 the church was renovated and said to contain parts of the original 1846 church, such as the ceiling (National Register of Historic Places 1970).

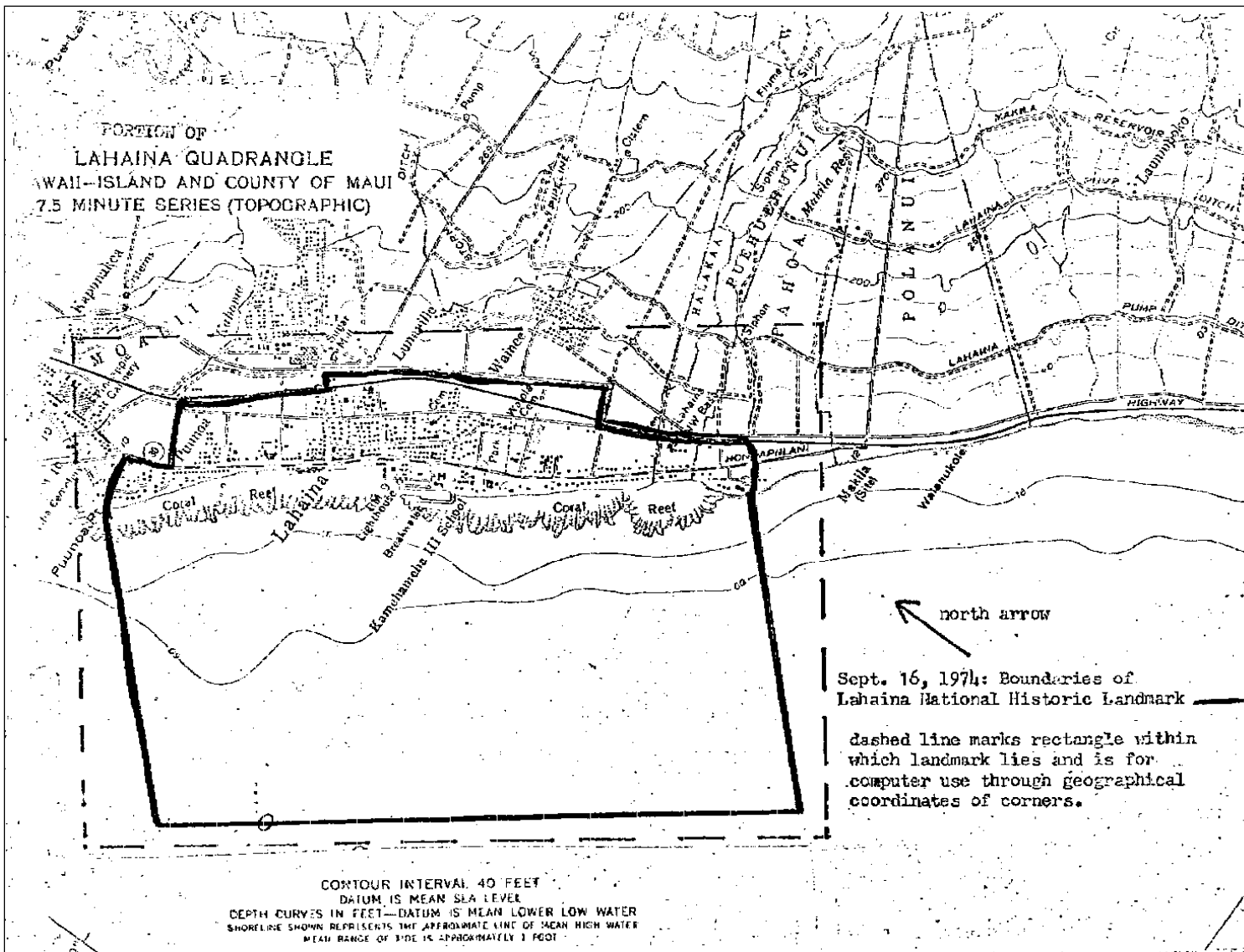


Figure 3. Lāhainā Historic District Boundaries (from National Register of Historic Places).

2.1.1 Non-contributing Sites

The Lāhainā Historic District is comprised of the above described eight historic sites listed on the Lāhainā Historic District Nomination Form. Confusing the issue is the State Historic Preservation Division's Historic Register, listed on the State Historic Preservation Division Web page (<http://www.hawaii.gov/dlnr/hpd>). This register lists the Lāhainā Historic District as being comprised of approximately 60 sites. It is not clear what these sites are. However, there are several additional sites that have been recorded within the boundary of the Lāhainā Historic District that must be considered as non-contributing elements until such time as they are formally evaluated by the SHPD. These sites are described below.

Hauola Stone (Site 50-50-03-1202)

The Hauola Stone, also known as, Pōhaku Hauola, still exists today in its original location (Figure 4). The Hauola Stone is a large couch shaped boulder, located in shallow water on the north side of the Lāhainā Pier. Legend says a woman trying to escape from her enemies was saved by the gods, when they turned her into stone (James 2001). Tradition states that the stone contains healing properties. It is believed to cure labor pains and rejuvenate health. The Hauola Stone is also a sacred place where the umbilical cords of new born children are placed. During the time of chiefs, it was thought that by hiding the umbilical cord in the rocks crevices, the child would grow up to be a chief (Maui Historical Society 1961).

Kamehameha I's Brick Palace (Site 50-50-03-2951)

Kamehameha I's Brick Palace is located on Wharf Street between Market Street and Papelekane Street. In 1802, Kamehameha I built a palace for his *punahele* (favorite) wife, Ka'ahumanu. It was constructed from locally made bricks (Fredericksen & Fredericksen 1965) and the first western-style house in the islands (Bartholomew and Bailey 1994). Kamehameha I resided in this palace for a little over a year while he collected taxes on Maui, Lāna'i, Moloka'i, and Kaho'olawe (Maui Historical Society 1961; Fredricksen et al. 1988). It is unclear when the structure was destroyed.

Aus Site (Site 50-50-03-1797)

The "Aus Site" is located at 731 Waine'e Street on the west side of Seaman's Hospital. The site consists of three refuse pits. Artifacts recovered from the three pits include a variety of glass shards, a probable adze fragment, grooming tools, leather, batteries, and other historic artifacts. These artifacts are from the late 19th or early 20th century (Frederickson et al. 1988).

Site 50-50-03-2968

The State Historic Preservation Division had no description for site 50-50-03-2968 (State Historic Preservation Division, GIS).

Human Remains (Site 50-50-03-3550)

Site 50-50-03-3550 is a single human burial. Associated artifacts with the burial included volcanic glass shards (State Historic Preservation Division 2004).

Heiau

Before 1823, a *heiau* existed on what would be the future site of the Lāhainā Wharf. After 1823, the stones from the *heiau* were removed and used to surround the tomb of Keōpūolani. Keōpūolani was the sacred wife of Kamehameha I and mother of Kamehameha II and III (Community Planning Inc. 1961).

Taro Patch

The land where the public library now exists adjacent to the Pioneer Inn and incorporating the “brick palace” was an irrigated taro patch in the 19th century. This taro patch, according to the Lāhainā Restoration Foundation’s interpretive sign, was named “‘Āpuakēhau” and was Kamehameha I’s taro patch. This taro patch is shown on S. E. Bishop 1884 map of Lāhainā (Bishop 1884).



Figure 4. Hauola Stone at high tide.

2.2 LAND COMMISSION AWARDS

In 1848, the lands of Hawai‘i were divided under Kamehameha III in a land reformation event called the Māhele ‘Āina. Land titles, or Land Commission Awards (LCA), were granted by the Board of Commissioners also known as the Land Commission (Chinen 1958). LCA for the Lāhainā Historic District (see Table 1) and the proposed project area can be found on the Tax Map Key 4-6-09. The Lāhainā Historic District is in the *ahupua‘a* of Pola Nui, Pāhoa, Pūehuehu Nui and Waine‘e. The proposed project in the Lāhainā Harbor, is in the *ahupua‘a* of Waine‘e. In the *ahupua‘a* of Waine‘e, several Land Commission Awards were granted and awarded as follows:

Table 1. Land Commission Awards in the Lāhainā Historic District

LCA No.	Award Owner
241	S.O. Burrows
322	Kaipō
484.3	Kaihe‘ekai
752	A.M. Birch
3425.1B	Alu
4533.2	Ualo
4878-FF1	Po‘opu‘u
4878.1	Makaiole
4878.2	Olala
5207B.2	R. Kalaipaihala
5207B.3	R. Kalaipaihala
6218.1	Maunae
6784.1	Na‘ai
6784.2	Na‘ai
6786	Kamohomoho
6787.1	Hanaumua
6795	Kaluahine Nui
6869.2	Kawaioahu
7713:26	V. Kamamalu
8559	C. Kanaina

The general area proposed for parking upgrades and within which the archaeological inventory survey testing was conducted is located within LCA 8559 (Land Court Application 190) and adjacent to LCA 7713:26 (Figure 5). Charles Kanaina was awarded LCA 8559 in 1848, which contained four coconut trees and eight breadfruit trees at the time of the Māhele (Waihona ‘Āina 2008). LCA 7713:26, one of many awarded to Victoria Kamamalu, is located just north of the project area.

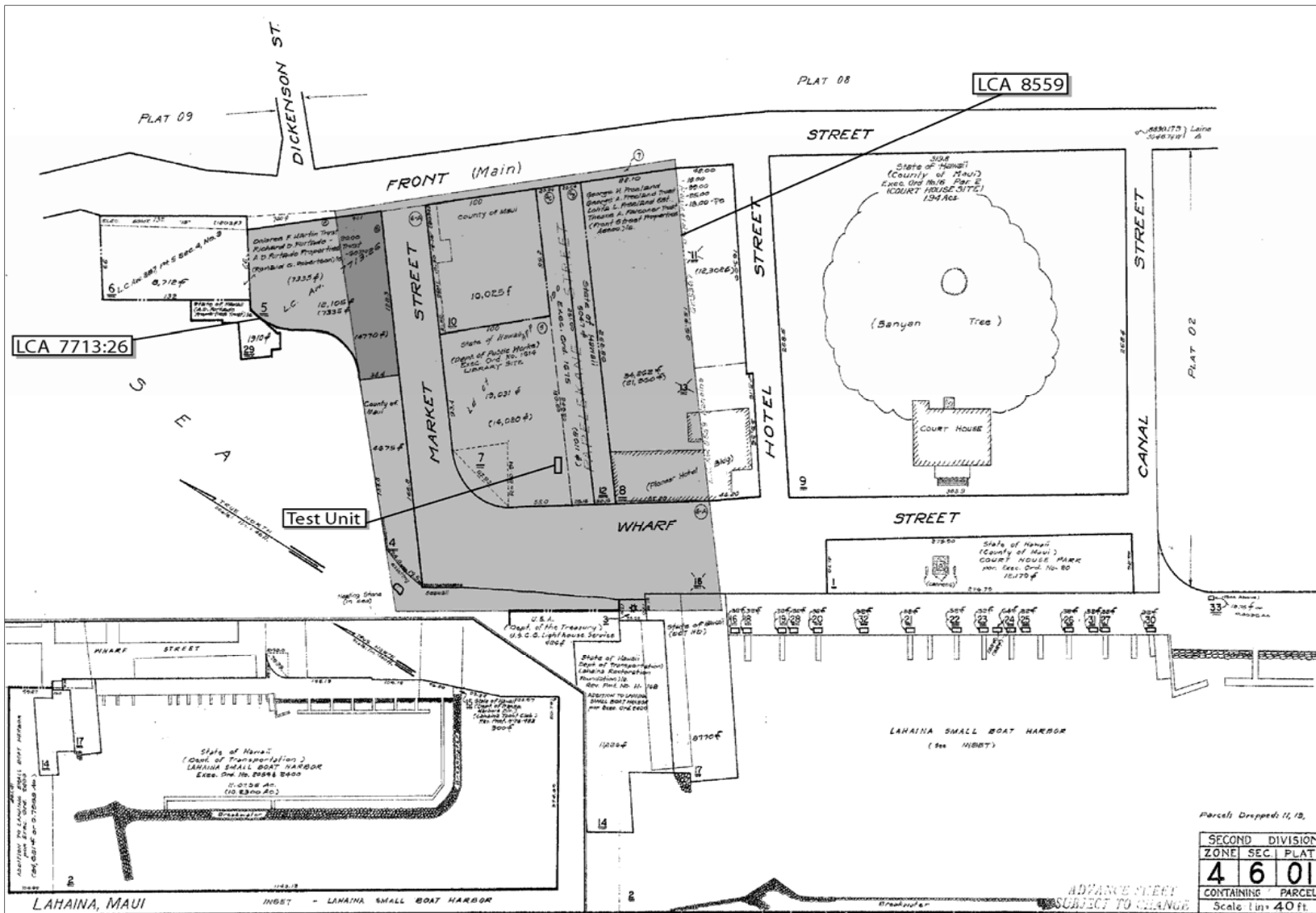


Figure 5. TMK 4-6-001:001 map with Test Unit and LCA's shaded.

3.0 PREVIOUS ARCHAEOLOGY

The earliest investigations in Lāhainā District were performed by Walker (1931), where several *heiau* were found and recorded. It was not until the mid-1960s that Lāhainā Town and surrounding areas had been subject to modern archaeological methods (Figure 6).

The first archaeological investigation using modern methods in Lāhainā was performed in 1965; 2 of 6 test trenches being located less than 10 meters distant from the test trench excavated during the inventory survey for the current project (Fredericksen & Fredericksen 1965). From December 1964 to February 1965, Fredericksen and Fredericksen excavated an area of Wharf Street adjacent to Lāhainā Harbor to determine: the location of Kamehameha I's "brick palace;" what material was used in construction; and the structure's actual dimensions. A total of 6 exploratory trenches were excavated and the features encountered included a dry masonry wall that served to retain a mound or platform; a wall-like structure made of coral; brick detritus thought to be the remains of a collapsed brick wall; and a modern kiln-fired brick and cement mortared structure. The research and excavation support that the brick building excavated is probably the palace of Kamehameha I; it was built of locally made brick and include sand and coral in the matrix; its' dimensions are 15' wide x 41' long and constructed on a mound or platform, most likely paved with small, water-worn pebbles. The artifact assemblage contained both traditional Hawaiian and Historic period artifacts but was "not conclusive in providing further relevant data with regard to the palace" (Fredericksen & Fredericksen 1965:18).

A surge of archaeological investigations in Lāhainā area occurred in the 1970s. Hommon (1973), Connolly (1974), Joerger and Kaschko (1979) and Ahlo and Morgenstein (1980) conducted investigations on the Kahoma Stream area, which is located ca. 1.5 kilometers northwest of the project area. In these studies, agricultural features were discovered in the area as well as a rock shelter and petroglyph complex. Located a little over 1.5 kilometers northwest of the project area, the locale formerly known as Māla Wharf was studied by Davis (1974), Sinoto (1975), and Hammatt (1978) where pre- and post-Contact remains were discovered. Later, Haun (1988) performed investigations in the old Māla Wharf finding that the area was inhabited and utilized from ca. AD 1260 to ca. AD 1640. Additionally, mostly Historic burials were noted by Haun (1988) on and near the beach at Māla Wharf.

In March of 1975, Paul L. Cleghorn carried out a series of test excavations at the Seamen's Hospital also known as United States Marine Hospital in Lāhainā (Bishop Museum Site No. 50-Ma-D5-10). The purpose of the excavation was to expose portions of the hospital foundation. During Phase I, the features encountered included a possible old roadway, the foundation of a wall (1819), a mortar slab, a human burial, and 1,229 artifacts. While most of the artifacts were Historic period artifacts, some were traditional Hawaiian artifacts (Cleghorn 1975).

A resurgence in archaeological investigations of Lāhainā District occurred in the late 1980s and into the early 1990s. Kennedy (1989) performed subsurface testing in a parcel located ca. 500 meters southeast of the project area. In this report, Kennedy (1989) found that the substrate was swampy, a condition conducive to wetland crop cultivation. Although he found Historic

cultural remains, he admitted that there was a high level of construction disturbance in the area. At around the same time, Fredericksen et al. (1988, 1989a-c) performed a series of investigations near to the project area. On a privately owned lot (TMK 4-6-09:21) ca. 600 meters northeast of the project area, Fredericksen et al. (1988, 1989b) performed an archaeological inventory survey followed by data recovery. These investigations yielded archaeological finds referred to as the Aus Site (Site #50-50-03-1797), which represented a period from a Contact era transitional phase to late Historic times. Ten refuse pits containing artifacts described as a mix of midden, portable traditional items, and Historic imported goods were discovered during these investigations. Fredericksen et al. (1989a) excavated eight backhoe trenches and carried out twenty-seven auger tests for an extension of the Plantation Inn in Lāhainā, which is located ca. 650 meters northeast of the project area. Both forms of testing yielded scant cultural remains, leading Fredericksen et al. (1989a) to believe that the property was not significantly exploited in pre-Contact times and that it was used in post-Contact times for agriculture. Later, Fredericksen and Fredericksen (1990) performed archaeological monitoring for the Plantation Inn remodeling project finding some traditional artifacts, however, they were not found *in situ* and no features were found. Fredericksen and Fredericksen (1993) conducted an inventory survey ca. 700 meters northeast of the project area that yielded some Historic artifacts but no new features or sites.

From the late 1980s to mid-1990s, a series of studies were performed in and around Malu‘ulu-o-Lele Park, located ca. 300 meters southeast of the project area, which was once a 17-acre spring-fed lake named Loko Mokuhinia (Fredericksen et al. 1989c; Donham 1993; Heidel et al. 1994; Klieger et al. 1995a, 1995b; and Major & Klieger 1995). In 1992 Bishop Museum received a research contract from the County of Maui and administered by the Lāhainā Restoration Foundation. The purpose of the research was to focus on the private residence of King Kamehameha III, Moku‘ula, an island within the former fishpond, Loko o Mokuhinia (Site 50-03-2967). Klieger et al. (1995a) describe the extensive findings on Moku‘ula and its relation to the royal family. Before the project began it was unclear if the location of the King’s Palace was correct, but after excavations it was confirmed that the palace did lie under the Malu‘ulu o Lele Park and some architectural features still remain. The Moku‘ula site was determined to be eligible for listing in the National Register of Historic Places under criterion “a”, “b”, and “d.” Before the Kamehameha dynasty the site was home to *mō‘ī* Pi‘ilani, a ruling chief of Maui, Moloka‘i, Lāna‘i, and Kaho‘olawe. A stone tomb on the site housed the remains of the royal family of Maui and the Kamehameha lineage until it was moved to Waianā‘e Cemetery, sometime after Kamehameha III’s death in 1854. The palace site was also used for taro production. It is believed that Moku‘ula functioned as a residence for the Kamehameha family from late pre-Contact to 1837. However, evidence does not suggest the site was the primary home for the Kamehameha family. The collection of artifacts and lack of midden suggest it was only used on occasions. The site was listed on the State Register of Historic Places in 1994 and on the National Register of Historic Places in 1997. Just outside of the area, Donham (1993) recorded an inadvertently discovered burial at Hale Pi‘ula on the south side of Malu‘ulu-o-Lele Park. The next year, an archaeological inventory survey was performed by Heidel et al. (1994) at Waiola Church, immediately east of Malu‘ulu-o-Lele Park. Heidel et al. (1994) did not discover any additional sites or features.

During the months of June and July of 1991, Paul H. Rosendahl, Ph.D., Inc. (PHRI) completed a survey of the Lāhainā Bypass Section of the Honoapi‘ilani Highway Realignment Project for the Department of Transportation of the State of Hawai‘i. The inventory survey documented four archaeological sites, three of which (Sites 2484, 2489, and 2490) had previously been recorded. Site 2847 was the newly discovered site. This site is a walled enclosure (Rosendahl 1991).

In 1994, Berdena Burgett and Robert L. Spear completed an archaeological inventory survey of an 8.8 acre parcel in the land of Kainehi, where a single human burial (Site 50-50-03-3550) was identified (Burgett & Spear 1994). No other associated materials, burials, or cultural deposits were found during the archaeological inventory survey.

In the late 1990’s, three studies were carried out within 700 meters of the project area (Fredericksen 1997; Hammatt & Shideler 1998; and Fredericksen & Fredericksen 1999). In 1997, the Pioneer in required archaeological monitoring for the excavation of a new swimming pool (Fredericksen 1997). No cultural remains were unearthed in this excavation. Later, Hammatt and Shideler (1998) identified a pre-Contact cultural deposit as well as numerous Historic refuse pits and a dog burial during the monitoring of a Lāhainā Courthouse renovation project. Fredericksen and Fredericksen (1999) performed an inventory survey between Malu-‘ulu-o-Lele Park and the project area, where a wall and several pre-Contact habitation features were discovered dating from 1475-1665.

Archaeological investigations continued into the new millennium in Lāhainā Town within 1 kilometer of the project area (Fredericksen et al. 2000; Haun & Henry 2001; Calis 2002; Fredericksen 2002; Fredericksen & Fredericksen 2002; Monahan 2003). In the summer of 2000, Xamanek Researches conducted archaeological monitoring at Kamehameha III Elementary School. Four sites were identified during the monitoring phase: 50-50-03-4982, 4983, 4984, and 5174. Human burials were encountered at sites 4982 and 4984. Three probable human burial features were encountered in 4982 and 12 human burial features were encountered at site 4984. The burials were encountered in a brown sandy clay loam in the middle to south region of the school (Fredericksen & Fredericksen 2001). Fredericksen and Fredericksen (2002) discovered a complex of trash pits and waterworn pavement (Site No. 50-50-03-5203) dating from the early to mid-20th century approximately 250 meters to the northeast of the project area. Also worthy of note, Monahan (2003) identified one Historic cobble-lined cylindrical pit dating from the late 19th to early 20th century (Site No. 50-50-03-5485) while monitoring ca. 200 meters northeast of the project area.

More recently, Guerriero and Pantaleo (2005) conducted an inventory survey report on a coastal parcel a little less than 1000 meters south of the project area. In this survey, nine backhoe trenches were excavated yielding a site (Site No. 50-50-03-5643) with two Historic features, including a sea wall and cesspool (Guerriero & Pantaleo 2005). Morawski and Dega (2005) performed an inventory survey just 800 meters north east of the project area. In this investigation, one historic site comprised of two trash pits and one trash scatter was discovered (Site No. 50-50-04-5701).

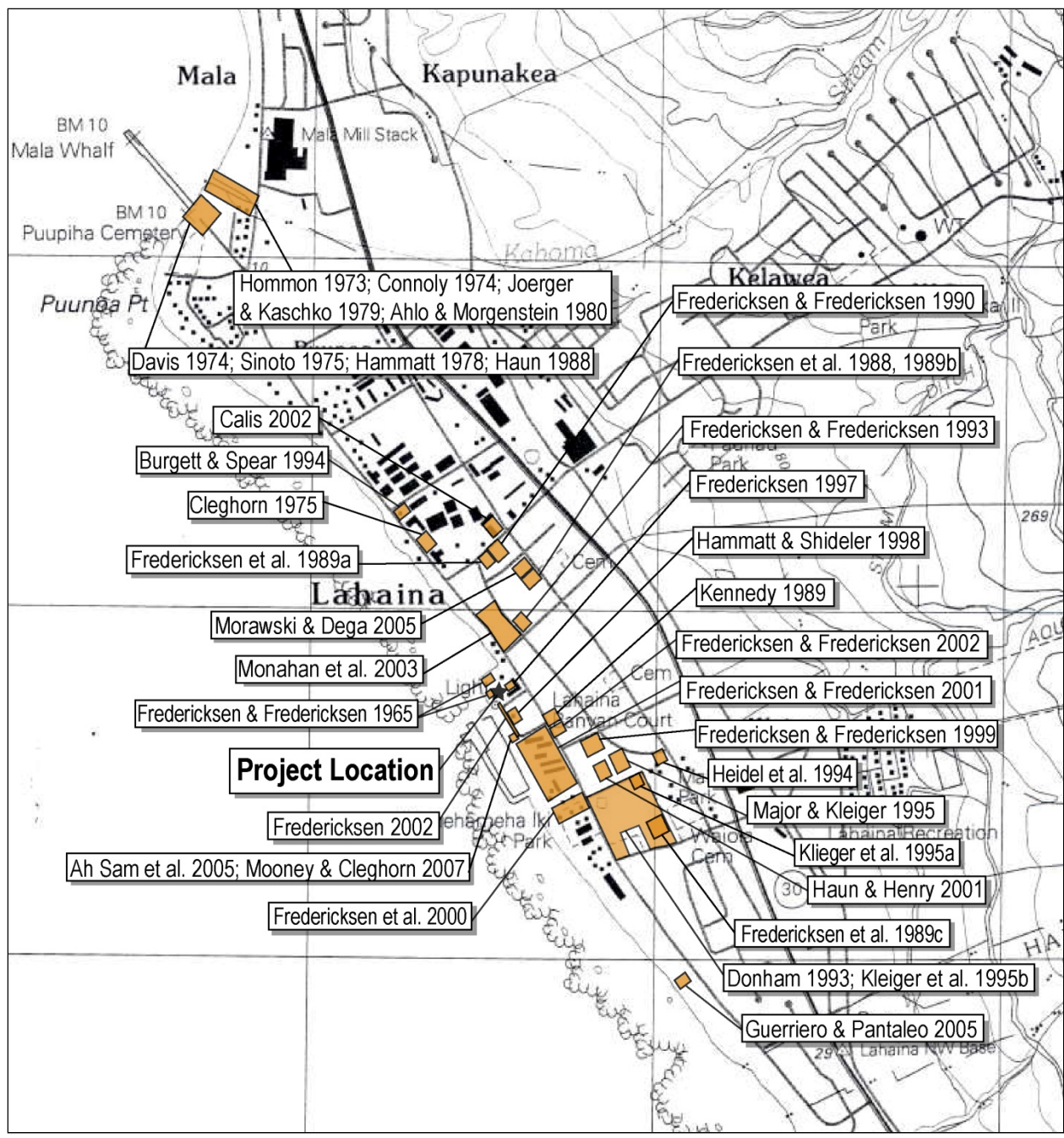


Figure 6. Previous Archaeological Investigations in the Lāhainā area.

4.0 SUMMARY OF ARCHAEOLOGICAL INVENTORY SURVEY FOR THE PROPOSED PROJECT

This section summarizes the results of the archaeological inventory survey for the Lāhainā Pier Improvement Project. The Lāhainā Pier Improvement Project, as proposed by the State Department of Land and Natural Resources – Division of Boating and Ocean Recreation and calls for the creation of four new parking stalls and the planting of two new trees along Papelekane Street, which required archaeological test excavations and monitoring. The purpose of these activities was to investigate the history of land use in this portion of the Lāhainā Historic District. The background research was conducted through archival research at the State Historic Preservation Division (SHPD) library and the State Library and Archives, the results of which have been presented above in the section Historic Background and Previous Archaeology.

To complete the archaeological inventory survey Kimberly M. Mooney, B.A. and Paul L. Cleghorn, Ph.D. conducted archaeological test excavations during the week of 12 November 2007. Paul L. Cleghorn, Ph.D. served as principal investigator. As the project area is located within a fully developed, urban area that has seen multiple phases of modern development, this archaeological investigation was limited to one 1 m x 2 m test unit within an area of the project that will be impacted by subsurface disturbances related to the proposed project. The following summary provides additional background to the currently proposed archaeological monitoring.

The sites listed on the Lāhainā Historic District nomination form are located across Wharf Street from the proposed development area. These sites include Baldwin House, the Old Spring House, the Court House, the Old Prison, Wainē Church and Cemetery, Hale Aloha, United States Marine Hospital, and Maria Lanakila Church. In 1970, these sites and approximately 60 other sites (SHPD) were collectively listed on the National Register of Historic Places as the Lāhainā Historic District (Site 50-03-3001). None of the sites listed on the Lāhainā Historic District Nomination Form will be affected.

Two known sites that are non-contributing properties within the Lāhainā Historic District are the Hauola Stone and King Kamehameha I's Palace. These sites are in the immediate vicinity of the proposed project area, but will not be directly affected by the proposed project.

The Hauola stone is a traditional Hawaiian site that is renowned for its healing qualities. It is located in the inter-tidal zone along the shoreline adjacent to the project area. It is believed to cure labor pains when the pregnant woman rests atop the couch-shaped stone. It is also believed to rejuvenate health of the ill, and was the location for hiding umbilical cords of newborn children.

Kamehameha I built a two storied “brick palace” in Lāhainā between 1778 and 1802. He lived in this structure in 1802 when he resided in Lāhainā. It appears that this “brick palace” was constructed of locally made bricks that were fired, so that they were red in color. This “palace” was built atop an earthen mound within several taro patches. These taro patches are currently

interpreted as the “King’s Taro Patch” in Lāhainā. This “palace” remained standing until at least 1825 and possibly as late as 1870. Its use as a residence ended with Kamehameha I’s reign; afterwards it was used as a store house.

The subsurface deposit (Site 50-50-3-6491) discovered during the archaeological inventory survey in November of 2008 (Mooney *et al.* 2008) appears to represent a prehistoric *lo‘i*, or irrigated taro patch. Charcoal from the bottoms of the basal stones that appeared to form the *lo‘i* retaining wall provided a calibrated age range of A.D. 1470 – 1660. This indicates that irrigated agricultural production had its start in coastal Lāhainā by at least the 15th to 17th centuries A.D. In other words, this irrigated agricultural area was being used between c. 150 to 300 years before Kamehameha built his “brick palace.” While the termination date for this *lo‘i* is not known, it may have been used for upwards of three centuries.

Traditional artifacts were present throughout the stratigraphic profile of the site with the highest concentration in Layer I, the most recently utilized layer. Historic artifacts were in evidence throughout all levels of the excavated unit, with the exception of the lowest level, Level 12 (110-175 cmbs).

The rock wall segment (Feature 1) was been interpreted as a *lo‘i* or agricultural wall rather than part of a habitation site because of several factors. The unsystematic placement, both horizontally and vertically, of artifacts and ecofacts within a homogenous clay matrix is consistent with rubbish and midden randomly discarded into a pond or wetland environment, where the artifacts and ecofacts were left to settle at varying depths, which was dictated by the time period of discard as well as the weight, shape, and size of the object. The fact that these mostly household artifacts and ecofacts occur without any horizontal trend, nor within a compacted layer indicative of a living or habitation surface, and do not appear to be concentrated in a manner consistent with a privy, midden, or trash pit, suggests that the specific area was not used for habitation nor designated as a dumping area. On the contrary, given that the charcoal flecked clay matrix containing the wall feature and randomly scattered artifacts and ecofacts matches that of pond or *lo‘i* sediment, this wall feature is more likely a *lo‘i* rather than a habitation feature as the artifact assemblage might suggest. Further upholding this presumption, the ethnographic and historic background of the area agree that the area surrounding Kamehameha I’s “brick palace,” which is located a mere 15 meters to the north, was an irrigated taro field *lo‘i*. Thus, given that the site area was probably an irrigated *lo‘i* composed of saturated mud, it seems reasonable that heavy artifacts such as nails, pieces of metal, ceramics and bottle glass could migrate downward in the wet sediment. The existence of historic period artifacts in prehistoric deposits does not seem that difficult to understand given the nature of the soils present.

The date of analyzed charcoal sample, taken from Layer III/Level 8, indicates that coastal portion of Lāhainā was occupied by the mid-15th to 17th centuries AD. The earliest utilization of the area was most likely associated with agricultural activities and occurred 150 to 300 years before Kamehameha I built his brick palace in 1802.

The archaeological inventory survey investigations provided significant contributions to our knowledge of the settlement and use of Lāhainā. Ethno-historic information indicates that

irrigated taro fields were present in the area in the early 1800s. This information has been used for public interpretation of the area as being the “King’s Taro Patch.” The results of the current work indicate that the use of this area extends much further back in time, possibly as much as another 300 years. It is quite possible that the earliest utilization of this coastal area is even earlier.

Recovered cultural materials, soil samples, and carbon samples as well as field notes, maps, and photographs are currently curated in Pacific Legacy’s Kailua laboratory until a permanent repository is secured by the State Department of Land and Natural Resources – Division of Boating and Ocean Recreation (DLNR-DOBOR).

Based on these previous archaeological investigations in the immediate vicinity, the likelihood of encountering Historic and pre-Contact cultural remains during the archaeological monitoring phase is relatively high. However, this theory is limited by the depth of past subsurface disturbances related to current landscaping, existing utilities, and road construction. While these activities have undoubtedly disturbed upper levels of sediment in the area, it is likely that large pockets of intact cultural remains exist below the disturbed levels. Additionally, the close proximity of the subject area to the “brick palace” and associated agricultural features once belonging to Kamehameha I, which are undeniably historically and culturally significant, increase the importance of mitigating impacts to archaeological remains in the area. Archaeological remains predicted include pre- and post-Contact features related to infrastructure, agriculture, and habitation as well as Historic features related to the “brick palace” complex of Kamehameha I.

5.0 ARCHAEOLOGICAL MONITORING METHODS AND PROCEDURES

5.1 PRE-CONSTRUCTION MEETING

Prior to the initiation of the construction project, the archaeological monitor will meet with the project construction manager and the construction crew to discuss the archaeological monitoring procedures. It will be explained to the construction crew that the archaeological monitor has the authority to halt construction activities in the immediate vicinity of the finding of cultural material (including human remains). The construction crew will also be notified that all encountered cultural material, including historic glass bottles, are the property of the land owner and may not be collected by anyone other than the archaeological monitor unless a written and signed permit has been issued by the land owner authorizing collecting.

5.2 ARCHAEOLOGICAL MONITORING

An archaeological monitor will be present during all ground disturbing and excavation activities that take place in the project area as specified by SHPD in response to permit application requests for comments forwarded from the County of Maui to SHPD. During the course of archaeological monitoring excavated soil material will be closely inspected. Exposed sidewalls of the excavation areas will be likewise examined for the presence of intact cultural deposits, features, or artifacts.

The purpose of archaeological monitoring is to ensure that; (1) exposed cultural features will be recorded; (2) artifacts encountered are documented and/or collected; and (3) if human remains are encountered, that they are treated appropriately. A daily Archaeological Monitoring Log (AML) will be completed every day that archaeological work is conducted on site (Figure 7). The AML will form the official record of archaeological activities performed and shall specify who was working on site, times of work, and what was done. In addition, data will be recorded regarding all subsurface features encountered. The following procedures will be followed:

5.2.1 Intact Cultural Deposits and Features

Upon discovery of potentially significant cultural features, SHPD archaeological staff will be notified and the extent, content, and associations of the discovery. The potential significance of the discovery will be agreed upon and mitigation needs, as appropriate for non-burial sites, will be discussed and resolved with the SHPD archaeological staff. Notes, scaled maps, and photographic documentation will be recorded of cultural features that are encountered during excavations. The stratigraphic context of the deposit or features will be determined, and any important associations with other natural or cultural strata will be noted. Where appropriate, samples for further analyses will be collected. The data recorded in the field, combined with documentary data will be used to assess the significance of the finding as per Hawaii Administrative Rules Chapter 13-275-6. These significance assessments will be presented in the draft and final reports.

5.2.2 Artifacts

All traditional Hawaiian artifacts that are encountered will be collected for further analysis. Diagnostic historic artifacts that are more than 50 years old will likewise be collected for further analysis. Non-diagnostic and recent historic artifacts will be documented in the field. The provenience of the finds will be plotted on a project map of the area, and any observed associations with cultural or natural strata will be noted.

5.2.3 Human Skeletal Remains

If human remains are inadvertently encountered during excavation, all work in the immediate vicinity will cease and the State Historic Preservation Division will be notified. Burial finds will be treated according to HRS 6E-43.6, and Hawaii Administrative Rules 13-300, and the SHPD staff will be consulted regarding the context of the discovery and its significance. Utmost care will be taken to ensure that any associated items or stratigraphic context are not further disturbed. No remains will be removed or further disturbed without SHPD determination. Any associated materials with the inadvertent human burial will be treated according to SHPD determination. SHPD will assume the lead in consulting with recognized descendents and the Maui Island Burial Council.

5.3 TREATMENT OF RECOVERED REMAINS

All recovered artifactual remains and associated samples will be transported to Pacific Legacy's Office and Laboratory in Wailuku on the island of Maui. Laboratory processing will consist of cleaning, sorting, identifying, and documenting the materials collected. A project catalogue shall be generated and presented in the final report.

Artifacts collected will be identified and recorded by sketching, measuring, and photographing. Midden material recovered shall be identified minimally by major class and recorded on standard laboratory forms by weight. This material will be presented in table format in the final report. All recovered samples (soil, charcoal, etc.) will be initially processed and catalogued in Pacific Legacy's laboratory before being sent to specialist laboratories for detailed analyses.

Should human remains be encountered, and further investigations warranted, these investigations will be guided through SHPD consultations. No human remains will be removed from the site without SHPD approval.

5.4 CURATION

Suitable temporary curation facilities for archaeological samples collected during field investigations will be provided by Pacific Legacy. Final curation of recovered materials shall be determined at a later date after consultation with the Department of Land and Natural Resources.

5.5 REPORTING

Brief verbal progress reports on completion of field investigations, laboratory analyses, report preparation, and on the discovery of significant findings shall be provided to the SHPD and the property owner. The following shall be submitted:

- Letter Report at the completion of fieldwork.
- Draft Report within 90 days of completion of monitoring fieldwork.
- Final Report within 30 days of receipt of SHPD review comments.

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- No Author Listed
1999 *Emeryville Shellmound Park Historic Deposit: Public Information Report - Results of 1999 Archaeological Investigation* (on-line). Accessed on June 11, 2008 at http://www.ci.emeryville.ca.us/shellmound/public_html/public_info/investigation/shellmount_park.htm.
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APPENDIX A

NATIONAL REGISTER OF HISTORIC PLACES LĀHAINĀ HISTORIC DISTRICT

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

(Type all entries - complete applicable sections)

STATE: Hawaii	
COUNTY: Maui	
FOR NPS USE ONLY	
ENTRY NUMBER	DATE

1. NAME
COMMON:
Lahaina
AND/OR HISTORIC CL:
Lahaina Historic District

2. LOCATION
STREET AND NUMBER:
CITY OR TOWN:
Lahaina
STATE:
Hawaii
CODE:
COUNTY:
Maui
CODE:

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP	STATUS	ACCESSIBLE TO THE PUBLIC
<input checked="" type="checkbox"/> District <input type="checkbox"/> Site <input type="checkbox"/> Object	<input type="checkbox"/> Public <input type="checkbox"/> Private <input checked="" type="checkbox"/> Both	Public Acquisition: (partial) <input checked="" type="checkbox"/> In Process <input type="checkbox"/> Being Considered	<input type="checkbox"/> Occupied <input type="checkbox"/> Unoccupied <input checked="" type="checkbox"/> Preservation work in progress
			Yes: <input type="checkbox"/> Restricted <input checked="" type="checkbox"/> Unrestricted No: <input type="checkbox"/> No

PRESENT USE (Check One or More as Appropriate)

<input type="checkbox"/> Agricultural	<input type="checkbox"/> Government	<input checked="" type="checkbox"/> Park	<input type="checkbox"/> Transportation	<input type="checkbox"/> Comments
<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> Industrial	<input type="checkbox"/> Private Residence	<input type="checkbox"/> Other (Specify)	
<input checked="" type="checkbox"/> Educational	<input type="checkbox"/> Military	<input checked="" type="checkbox"/> Religious		
<input type="checkbox"/> Entertainment	<input checked="" type="checkbox"/> Museum	<input type="checkbox"/> Scientific		

4. OWNER OF PROPERTY
OWNER'S NAME:
Multiple ownership
STREET AND NUMBER:
CITY OR TOWN:
STATE:
CODE:

5. LOCATION OF LEGAL DESCRIPTION
COURTHOUSE, REGISTRY OF DEEDS, ETC:
Maui County Courthouse
STREET AND NUMBER:
CITY OR TOWN:
Weihoku
STATE:
Hawaii
CODE:

6. REPRESENTATION IN EXISTING SURVEYS
TITLE OF SURVEY:
Town of Lahaina Map
DATE OF SURVEY: 1884
 Federal State County Local
SURVEY DIVISION OR OFFICE:
Survey Division, State of Hawaii
CITY OR TOWN:
Honolulu
STATE:
Hawaii
CODE:

STATE
COUNTY
ENTRY NUMBER
DATE
FOR NPS USE ONLY

12/29/62 NPS designate NL.
Boundaries established by NPS

7. DESCRIPTION	
CONDITION	(Check One) <input checked="" type="checkbox"/> Excellent <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Deteriorated <input type="checkbox"/> Ruins <input type="checkbox"/> Unexposed (Check One)
	(Check One) <input checked="" type="checkbox"/> Altered <input type="checkbox"/> Unaltered <input type="checkbox"/> Moved <input checked="" type="checkbox"/> Original Site (Check One)
DESCRIBE THE PRESENT AND ORIGINAL (if known) PHYSICAL APPEARANCE	
<p>Steady progress, albeit somewhat slow due to state and county commitments, is being made by the Lahaina Restoration Foundation and the Maui Historic Commission. Work on restoration of the Seaman's Hospital has been started. Foundations of the King's home have been exposed and are being interpreted by signs on the plexiglass shields covering the excavations.</p> <p>The district still contains a number of incompatible structures but interest in the area has grown and successful battles have been fought to keep a high-rise structure off the main waterfront.</p>	

SEE INSTRUCTIONS



3. SIGNIFICANCE			
PERIOD (Check One or More as Appropriate)			
<input type="checkbox"/> Pre-Columbian	<input type="checkbox"/> 16th Century	<input type="checkbox"/> 18th Century	<input type="checkbox"/> 20th Century
<input type="checkbox"/> 15th Century	<input type="checkbox"/> 17th Century	<input checked="" type="checkbox"/> 19th Century	
SPECIFIC DATE(S) (If Applicable and Known)			
AREAS OF SIGNIFICANCE (Check One or More as Appropriate)			
<input type="checkbox"/> Aboriginal	<input checked="" type="checkbox"/> Education	<input checked="" type="checkbox"/> Political	<input type="checkbox"/> Urban Planning
<input type="checkbox"/> Prehistoric	<input type="checkbox"/> Engineering	<input checked="" type="checkbox"/> Religion/Philosophy	<input type="checkbox"/> Other (Specify)
<input type="checkbox"/> Historic	<input type="checkbox"/> Industry	<input type="checkbox"/> Science	_____
<input type="checkbox"/> Agriculture	<input type="checkbox"/> Invention	<input type="checkbox"/> Sculpture	_____
<input type="checkbox"/> Architecture	<input type="checkbox"/> Landscape Architecture	<input type="checkbox"/> Socio/Humanitarian	_____
<input checked="" type="checkbox"/> Art	<input type="checkbox"/> Literature	<input type="checkbox"/> Theater	_____
<input type="checkbox"/> Commerce	<input type="checkbox"/> Military	<input type="checkbox"/> Transportation	_____
<input type="checkbox"/> Communications	<input checked="" type="checkbox"/> Music		
<input type="checkbox"/> Conservation			
STATEMENT OF SIGNIFICANCE			
(See original submission)			

SEE INSTRUCTIONS

9. MAJOR BIBLIOGRAPHICAL REFERENCES

(See original submission)

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY				U R	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES				
CORNER	LATITUDE		LONGITUDE		LATITUDE		LONGITUDE		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NW	21°			157°					
NE	21°			156°					
SE	20°			156°					
SW	20°			157°					

APPROXIMATE ACREAGE OF NOMINATED PROPERTY:

LIST ALL STATES AND COUNTIES FOR PROPERTY OR OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:	CODE	COUNTY	CODE

11. FORM PREPARED BY:

NAME AND TITLE:
Lynn H. Thompson, Superintendent

ORGANIZATION: Haleakala National Park

DATE: 09/03/70

STREET AND NUMBER:
P. O. Box 456

CITY OR TOWN: Kahului, Maui

STATE: Hawaii 96732

12. STATE LIAISON OFFICER CERTIFICATION

As the designated State Liaison Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service. The recommended level of significance of this nomination is:

National State Local

Name (already included) _____

Title _____

Date _____

13. NATIONAL REGISTER VERIFICATION

I hereby certify that this property is included in the National Register.

Chief, Office of Archaeology and Historic Preservation

Date _____

ATTEST:

Keeper of The National Register

Date _____

SEE INSTRUCTIONS



APPENDIX B

NATIONAL SURVEY OF HISTORIC SITES AND BUILDINGS
SUPPLEMENTARY SHEETS
(ATTACHED TO THE NATIONAL REGISTER OF HISTORIC PLACES NOMINATION FORM,
LĀHAINĀ HISTORIC DISTRICT)

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
NATIONAL SURVEY OF HISTORIC SITES AND BUILDINGS

1. STATE Hawaii	2. THEME(S). IF ARCHEOLOGICAL SITE, WRITE "ARCH" BEFORE THEME NO. Theme XXI. Special Study - Hawaii History
3. NAME(S) OF SITE Lahaina	(About 33 acres are recommended as historic district by 33 acres private consultants, plus site of Marine Hospital)
4. APPROX. ACREAGE	
5. EXACT LOCATION (County, township, roads, etc. If difficult to find, sketch on Supplementary Sheet) Lahaina is a town on the west coast of the Island of Maui	
6. NAME AND ADDRESS OF PRESENT OWNER (Also administrator if different from owner) The property within the proposed historic district is owned by a number of public agencies, organizations, and private corporations and individuals (see discussions of individual sites below). However, the Court House Square, a logical place to erect a landmark plaque, is owned by the State of Hawaii, and is administered, evidently, by the Department of Accounting and General Services, Division of Public Works, State Office Building, 465 South King Street, Honolulu 13, Hawaii.	

7. Importance and Description.

Significance: Perhaps no island town so well preserves the atmosphere of a mid-19th century Hawaiian seaport as does Lahaina; and thus it seems to be the key site for illustrating and commemorating one of the broad factors which resulted in the Americanization of Hawaii and which helped lead eventually to the annexation of the islands by the United States -- the whaling industry. From about 1830 to about 1860 the semi-annual visits of the American whaling fleet to Lahaina and other Hawaiian ports constituted the dominant force in island economy, stimulating a diversified agriculture and a general trade which helped spread Western technology among the Hawaiian people. Also, the thirsting of thousands of seamen for liquor and women resulted in annual struggles with the authorities attempting to enforce the missionary induced "blue laws," a long campaign which the forces of law and order eventually won, with important effects upon the social and political conditions in the islands. The vital and long-continued need of the whalers for bases in the islands was one of the primary factors bringing Hawaii to the attention of the United States Government. In addition, Lahaina was the royal residence and capital during much of the critical period when Hawaii was changing from a feudal autocracy to a constitutional monarchy, and it was associated with many of the key events of that transition.

According to tradition, Lahaina was from time immemorial a favorite residence of Maui kings and chiefs and a convenient port for inter-island travelers. The powerful Kahekili, ruler of all the islands except Hawaii, lived here until his death in 1794;

8. BIBLIOGRAPHICAL REFERENCES (Give best sources; give location of manuscripts and rare works) Mary Charlotte Alexander, <u>Dr. Baldwin of Lahaina</u> (Berkeley, Calif., 1953); Maui Historical Society, "Historical Sites of West Maui" (mimeographed, n.p., May 20, 1958); Maui Historical Society, <u>Lahaina Historical Guide</u> (Honolulu, n.d.); Albert Pierce Taylor, "Lahaina: the Versailles of Old Hawaii," in <u>Thirty-Seventh Annual Report of the Hawaiian Historical Society . . . 1928</u> (Honolulu, 1929), 34-68.			
9. REPORTS AND STUDIES (Mention best reports and studies, as, NPS study, I.I.B.S., etc.) Community Planning, Inc., <u>Proposal for the Historical Restoration and Preservation of Lahaina . . .</u> (Honolulu, May, 1961); State of Hawaii, Commission on Historical Sites, Mrs. Beatrice Savage, compiler, "Historical Sites on Maui Which Should Be Preserved" (typewritten, Feb. 1, 1960).			
10. PHOTOGRAPHS* ATTACHED: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	11. CONDITION Poor to excellent	12. PRESENT USE (Museum, farm, etc.) Various	13. DATE OF VISIT April 19, 21, 1962
14. NAME OF RECORDER (Signature) John A. Hrusby	15. TITLE Regional Historian	16. DATE July 17, 1962	

* DRY MOUNT ON AN 8 X 10 IN. SHEET OF FAIRLY HEAVY PAPER. IDENTIFY BY VIEW AND NAME OF THE SITE, DATE OF PHOTOGRAPH, AND NAME OF PHOTOGRAPHER. GIVE LOCATION OF NEGATIVE. IF ATTACHED, ENCLOSE IN PROPER NEGATIVE ENVELOPES.

(IF ADDITIONAL SPACE IS NEEDED USE SUPPLEMENTARY SHEET, 10-317a, AND REFER TO ITEM NUMBER)

U. S. GOVERNMENT PRINTING OFFICE 10-74010-1

NATIONAL SURVEY OF HISTORIC SITES AND BUILDINGS
SUPPLEMENTARY SHEET

This sheet is to be used for giving additional information or comments, for more space for any item on the regular form, and for recording pertinent data from future studies, visitations, etc. Be brief, but use as many Supplement Sheets as necessary. When items are continued they should be listed, if possible, in numerical order of the items. All information given should be headed by the item number, its name, and the word (cont'd), as, O. Description and Importance (cont'd) . . .

57472	NAME(S) OF SITE
Hawaii	Lahaina

7. Importance and Description (continued)

and Kamehameha the Great landed here to begin his final conquest of Maui. By that time the port had become a well-known point of call for trading and exploring vessels, whose captains found the open roadstead a safe and convenient anchorage. For a couple of decades after 1812 it was an important shipping point for the sandalwood trade.

A new era of prominence and activity for Lahaina began in December, 1819, when Kamehameha II moved his residence here for several months. From then until 1843 Lahaina was a frequent, though not continuous, royal residence and capital. In 1819, also, the first American whaling ships reached the islands, and by 1822 there were 34 whalers making Hawaii a base of refreshment. From that time the number increased rapidly. Although Honolulu was originally the port most favored by the whalers, Lahaina often surpassed it in the number of recorded visits, particularly from about 1840 to 1855. Another event which was to have much effect upon the growth and social structure of Lahaina was the arrival of the first missionaries in the islands during 1820. The first missionaries to become established at Lahaina, the Rev. C. S. Stewart and the Rev. William Richards, arrived in 1823 accompanied by Queen Mother Keopuolani. These three factors -- political prominence, visits of whaling ships, and the development of a particularly influential mission under the protection of some of the most powerful chiefs of the land, resulted, as one writer has somewhat exuberantly said, in starting Lahaina "off to a historical romp that probably will never be equalled."

The great event of 1823 was the death of Keopuolani at Lahaina. Within an hour before "Join the Great Majority" she had been baptized as a Christian, an occurrence which proved a great stimulus to increasing the influence of the missionaries. King Kamehameha II was, at his special request, buried beside Keopuolani in 1824. The bodies of Kamehameha II and his queen were brought back from London in 1825 and interred at Lahaina until they were later moved to the royal tomb in Honolulu. When Kamehameha III ascended the throne, he settled upon Lahaina as his home and seat of government.

Meanwhile, the missionaries were making rapid advances, drawing thousands of Hawaiians to worship and persuading the chiefs, especially the able governor of Maui, Chief Hoapili, to institute regulations against the sale of liquor and against visits to ships by island women. These restrictions were considered too rigorous by the "sea-bittered" sailors who swarmed ashore seeking pleasure, and in 1825 the crew of the English whaler Daniel rioted through the town for three days, twice threatening the lives of the Rev. Richards and his wife. Two years later the crew of another English whaler, the John Palmer, actually fired their cannons at the Richards house to force

-2-

U. S. GOVERNMENT PRINTING OFFICE 10-76200-1

NATIONAL SURVEY OF HISTORIC SITES AND BUILDINGS
SUPPLEMENTARY SHEET

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STATE Hawaii	NAME(S) OF SITE Lahaina
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7. Importance and Description (continued)

the release of their American captain who had been detained by the authorities in an effort to obtain the return of four "base women" who had been illegally enticed aboard the vessel. These difficulties with unruly seamen lasted as long as Lahaina remained a whaling port, but the Hawaiians, by controlling liquor and enforcing curfews, maintained the upper hand, and Lahaina was known as a more orderly port than Honolulu. Even so, one minister in the late 1840's described the town as "one of the breathing-holes of hell."

Lahaina, as the island capital, was associated with many of the most important political developments in the kingdom during the reigns of Kamehameha II and Kamehameha III. Here Kaahumanu, Queen Regent, promulgated the famous laws based on the Ten Commandments. Here the first Hawaiian Legislatures met in 1840, and the first written constitution was promulgated at Lahaina during the same year. Since much of this evolution from feudalism was undertaken upon the advice of the Rev. Mr. Richards, it perhaps is not too much of an exaggeration to say that Lahaina at this time was "the cradle of Hawaiian democracy." But after the seizure of the islands by the British during 1843, it was decided that the capital should be at Honolulu, and Lahaina was relegated to the position of an occasional royal residence.

Lahaina was at the height of its prosperity as a whaling port about 1846, at which time about 400 ships a year visited the town to replenish their water and supplies. In that year the population of Lahaina numbered 3,557 persons, of whom 212 were foreigners. There were 1096 houses, mostly strung out along the kukui-shaded main street, 10 schools, a seamen's chapel, 1 main church with 5 or 6 district churches, and a number of public buildings. "About 500 native families," it was reported, "eat at the table in the style of civilization."

By 1862 the whaling industry was in a definite and permanent decline. The effect on Lahaina was marked. Prosperity ended, prices fell, cattle and crops were a drag on the market, and ship chandleries and retail stores began to wither. The town subsided to a lower level of economic importance, and life revolved around the sugar mill, later known as the Pioneer Mill Company, which was established about 1860-1861, and around several other mills and plantations which sprang up from time to time in the vicinity. By 1889, when Charles Warren Stoddard visited Lahaina, the town was "a charming, drowsy and drowsy village."

The principal historic structures and sites still visible include the following:

NATIONAL SURVEY OF HISTORIC SITES AND BUILDINGS
SUPPLEMENTARY SHEET

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STATE Hawaii	NAME(S) OF SITE Lahaina
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7. Importance and Description (continued)

1. Baldwin House. This handsome two-story home, built of coral blocks, with a two-story wing, is located on Front Street at Dickenson Street; it and the 42360-square-foot lot on which it stands are owned by the H. P. Baldwin Estate.

The missionaries at Lahaina were given a tract of land for residence purposes by the local nobility in 1823, and the Rev. William Richards moved into a two-story stone dwelling (since destroyed) there in 1827. In 1832 Ephraim and Julia Spaulding arrived in Lahaina to join the mission staff, and in 1834 Spaulding started construction of the main section and "cook house" of the present Baldwin House adjoining the Richards dwelling. Completed early in 1835, the house was occupied by the Spauldings until 1836, when they left Lahaina due to poor health. Dr. Dwight Baldwin and his family moved into the house when the Spauldings left and occupied it until Dr. Baldwin was transferred to Honolulu in 1868 (some sources say the Baldwins lived in the house until 1871). During this long occupancy the structure became known as the "Baldwin House."

Dr. Baldwin, in addition to serving as pastor of the Hawaiian church at Lahaina and, for a time, as seamen's chaplain, was a medical doctor; and he was government physician for the islands of Maui, Molokai, and Lanai. It was his duty to greet visitors to the Lahaina mission and the nearby Lahainaluna Seminary; and guests were thus frequent. He renovated the structure extensively in 1847-1849 and added the right wing as a dispensary and office.

Dr. Baldwin's son, Henry P. Baldwin, was born in this house and later acquired extensive interests on the Island of Maui. The house has remained in the Baldwin family to the present time. It served an important part in Hawaiian social and cultural development when Mrs. Henry P. Baldwin sponsored a community center there which included a kindergarten, night-school, circulating library, language school, and high school. Used until lately as a community center, clinic, and Girl Scout headquarters, it now (April, 1962) appears to be closed but is kept in excellent condition. It is one of the oldest and best preserved missionary dwellings.

2. Old Spring House. Located 200 feet south of the Baldwin House and set well back from Front Street at the rear of a later frame structure, this small stone building is privately owned.

It is said to have been built by the Rev. William Richards in 1823 to enclose a spring to supply water not only for his own dwelling nearby but for the entire community and for ships anchored off the town. According to local tradition, a hand

-b-

U. S. GOVERNMENT PRINTING OFFICE 16-74022-1

NATIONAL SURVEY OF HISTORIC SITES AND BUILDINGS
SUPPLEMENTARY SHEET

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STATE Hawaii	NAME(S) OF SITE Lahaina
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7. Importance and Description (continued)

pump here was visited by crews of sailors who "constantly rolled huge casks for water." The Spring House apparently is thus one of the few remaining physical links with the whaling era.

3. Court House. This solid, two-story stone building stands on Wharf Street, in the 1.94-acre square bounded by Wharf, Hotel, Front, and Canal Streets; it is owned by the State of Hawaii.

In 1858 a violent windstorm damaged the governor's house and the Hale Puaa, the former palace which housed the government offices. A survey early in that year resulted in a recommendation that a new building to house the customs offices and courts should be built on the site of the old stone fort. Funds were appropriated for the "Lahaina Court and Custom House and Government Offices," and the new building was reported as nearly complete by December, 1859. In addition to the offices mentioned above, it contained the governor's office, post office, and "a room in which to starve the jury into unanimity." The building was extensively rebuilt in 1925, with a considerable change in its appearance. The basic structure remains, however. Still housing about the same types of offices as when it was first erected, it serves as a link with the days of the kingdom. The Court House Square is famed today for its banyan tree, planted by the sheriff of Lahaina in 1873 and proclaimed today as "Hawaii's largest."

4. Old Prison (Hale Paha). This one-story jailhouse, built of heavy planks, stands at the corner of Wainee Street and Prison Road in grounds 0.82 acre in extent surrounded by a high wall of coral blocks. It is owned by the County of Maui.

In addition to ordinary criminals, the authorities at Lahaina generally had on their hands a number of boisterous seamen who had run afoul of the law in one way or another during their periods of "refreshment" ashore. During the 1830's and 1840's prisoners usually were confined in the fort which stood on the seaward side of the present square. The most common cause of incarceration was failure to obey the sun-down curfew. Liberty expired with the setting of the sun when, said one visitor during the 1840's, the sailors, drunk or sober, "must be off to their ships, or into the fort," and he painted a vivid picture of the roasting seamen bustling along to the shore "crossed and hung upon by native girls, who flock here in the ship season, from other parts, to get the ready wages of sin."

In 1851 the fort physician complained that conditions for prisoners were unhealthful, and evidently as a result construction of a new prison was started in 1852.

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U. S. GOVERNMENT PRINTING OFFICE 16-11222-1

(DEPARTMENT OF THE INTERIOR)
NATIONAL PARK SERVICE

NATIONAL SURVEY OF HISTORIC SITES AND BUILDINGS
SUPPLEMENTARY SHEET

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Description and Importance (cont'd) . . .

STATE	NAME(S) OF SITE
Hawaii	Lahaina

7. Importance and Description (continued)

The main cell block, built of planks, was constructed in that year, but the wall around the grounds, built of coral blocks from the old fort, was not erected until about 1854. Prisoners performed much of the labor. The original cell house burned in 1953; and it and the wooden gate house were reconstructed in 1959 and now present a fine appearance. The prison is open to the public as an historical exhibit.

5. Wainae Church and Cemetery (Waiola Cemetery and Church). The present church structure (1953) and the old cemetery occupy a tract of 2.45 acres on Wainae Street, between Chapel and Shaw Streets. The property is owned by the Waiola Protestant Church.

For several years after the American Board missionaries reached Lahaina in 1823, services were held in temporary structures. In 1828 the chiefs, led by Hoapili, proposed to build a new stone church, and the present site was selected. The corner-stone was laid on September 14, 1828, for this "first stone meeting-house built at the Islands." Dedicated on March 4, 1832, this large, two-story, galleried Wainae Church was twice destroyed by Kaula winds and once, in 1894, by a fire of incendiary origin. The present church structure was dedicated in 1953, at which time the name was changed to Waiola.

The adjoining cemetery is said to date from 1823. It contains the body of Keopuolani, wife of Kamehameha the Great and mother of Kamehameha II and Kamehameha III. She was largely responsible for the overthrow of the kapu system, and her early interest in Christianity was of much assistance in the founding of the Protestant missions. She is said to have been the first convert of the missionaries in the islands. Other prominent Hawaiian nobles interred here include Governor Hoapili, King Keumuali, Princess Nahienaena, Queen Kolakua, and Governess Liliha. Here too is buried the Rev. William Richards, the pioneer missionary and advisor to the Hawaiian monarchy. Seeing his grave near that of the nobles, a visitor late in the 1840's was constrained to write, "There they lie in the burying-ground, hard by together, the missionary teacher and the converted heathen."

6. Hale Aloha. This dilapidated stone building stands behind the Episcopal Cemetery in about the center of the large block bounded by Wainae, Hale, and Chapel Streets and Prison Road. It is best reached from Wainae Street. It stands on a 15900-square-foot tract owned by Waiola Protestant Church.

The predecessor of this building, known as the Hale Halewai, or Hale Lai, is sometimes said to have been built as early as 1823; and it, instead of the Wainae

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL SURVEY OF HISTORIC SITES AND BUILDINGS
SUPPLEMENTARY SHEET

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STATE Hawaii	NAME(S) OF SITE Lahaina
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7. Importance and Description (continued)

Church, is occasionally claimed as the first stone church in the islands. At any rate, this "sectional" meetinghouse was in bad condition by 1855, and the church voted to rebuild completely, the walls being "too old fashioned to be tolerated in these go-ahead days." The present building, called "Hale Aloha," was completed in 1858 and was "the largest sectional meeting house of its time." In 1860 the government fitted it out for use as an English Church. The building is now in a ruinous condition.

7. United States Marine Hospital. On the landward side of Front Street, between Kenui and Baker Streets, about 0.6 mile north of the Baldwin House (Dickenson St.). It is owned by the Bernice P. Bishop Estate.

In 1842 Captain John Stetson was appointed first American vice consular agent in Lahaina. Probably it was shortly thereafter that a marine hospital was established for sick and injured American merchant seamen. At any rate, Herman Melville noted that one of his shipmates was discharged from the Achusnet at Lahaina on May 29, 1843, and died in the United States Marine Hospital of a "disreputable disease." The hospital could accommodate about 60 men. In 1865 the structure was sold to the Episcopal Church and became a school for girls, and during the 1870's it was turned into a vicarage and served as such for more than 30 years.

The exterior walls of the two-story stone structure have been covered with shingles, but the front verandahs running the length of both stories still remain, and the building retains its historical integrity. It is used as a residence and is in fair condition. It is an important link with the days of Lahaina's maritime glory.

8. Roman Catholic Church (Marie Lanakila First Catholic Church). At Wainee and Dickenson Streets, this building is still an active Catholic Church. It and the adjoining cemetery occupy a tract of 3.091 acres.

The first resident Roman Catholic priests arrived at Lahaina on April 21, 1846. A church was built on the present site that same year, but it was replaced by a new structure in 1858. The present concrete church, erected in 1927-1928, was built on the same foundation and is almost a replica of the older frame structure; it is said that the original ceiling was retained in the new building.

NATIONAL SURVEY OF HISTORIC SITES AND BUILDINGS
SUPPLEMENTARY SHEET

This sheet is to be used for giving additional information or comments, for more space for any item on the regular form, and for recording pertinent data from future studies, visitations, etc. Be brief, but use as many Supplement Sheets as necessary. When items are continued they should be listed, if possible, in numerical order of the items. All information given should be headed by the item number, its name, and the word (cont'd), as, 6. Description and Importance (cont'd) . . .

STATE Hawaii	NAME(S) OF SITE Lahaina
-----------------	----------------------------

7. Importance and Description (continued)

Built in 1901 and therefore not strictly connected with Lahaina's most significant era, this well-known hotel is nevertheless a key part of the Lahaina scene. The description of the hotel in one guide book - "a large box of a building . . . with a wide balcony and decorative wooden railing" - may be accurate, but it fails to convey the tropical atmosphere of Lahaina's first hotel.

Condition of the Site: Lahaina today is a quiet plantation town which is beginning to stir with new life as recent harbor developments bring additional recreational and commercial boating activity and as nearby newly built resorts increase tourist visits. Despite the fact that surviving historic structures are relatively few, the town preserves much of the atmosphere of a Hawaiian native village and of a mid-19th century island port. The magnificent natural setting, with its backdrop of purple mountains and foreground of blue sea, remains unspoiled; and palms and other trees shade the streets and homes as they did in missionary days. However, paved streets, curbs, new buildings in contemporary architectural styles, and other developments are cumulatively making their effects felt and causing the historic scene to fade.

Recognizing the economic and cultural benefits of the town's historic heritage, the County of Maui and a cooperating organization, the Lahaina Restoration Committee, have obtained by contract from a planning firm a study of the historical values and a program for restoration. The proposal, presented early in 1961, called for a restoration district which covers 31.79 acres, including all of the principal historic sites except the Marine Hospital. On August 18, 1961, the county adopted an interim zoning ordinance which set aside about 8½ acres as the Lahaina Historic District. Within this area are the Court House, Pioneer Hotel, Baldwin House, and the Spring House.

APPENDIX C

HAWAI'I REGISTER OF HISTORIC PLACES CERTIFICATION OF PROPERTY

HAWAII REGISTER OF HISTORIC PLACES
CERTIFICATION OF PROPERTY

Submitted to the Hawaii Places Review Board, Hawaii Foundation
for History and the Humanities on October 8, 1971,
50:03:3001, LAHA'INA HISTORIC DISTRICT,
number name

is hereby placed on the Hawaii Register of Historic Places and
designated as VALUABLE with STATE
significance.

William K. Kikuchi
Archaeologist

William K. Kikuchi

Ralston Nagata
Architect

Ralston Nagata

Frances Jackson
Historian

Frances Jackson

Richard Tagliarante
Hawaiiana Specialist

Richard Tagliarante

Bernhard L. Hormann
Sociologist

Bernhard Hormann

on October 8, 1971

APPENDIX D

RADIOCARBON DATING DATA SHEETS

Dr. Paul Cleghorn

Report Date: 2/27/2008

Pacific Legacy, Incorporated

Material Received: 1/29/2008

Sample Data	Measured Radiocarbon Age	$^{13}\text{C}/^{12}\text{C}$ Ratio	Conventional Radiocarbon Age(*)
Beta - 240545 SAMPLE : LAHAINAPIER1 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (charred material): acid/alkali/acid 2 SIGMA CALIBRATION : Cal AD 1470 to 1660 (Cal BP 480 to 290)	320 +/- 40 BP	-26.3 o/oo	300 +/- 40 BP

CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.3;lab. mult=1)

Laboratory number: **Beta-240545**

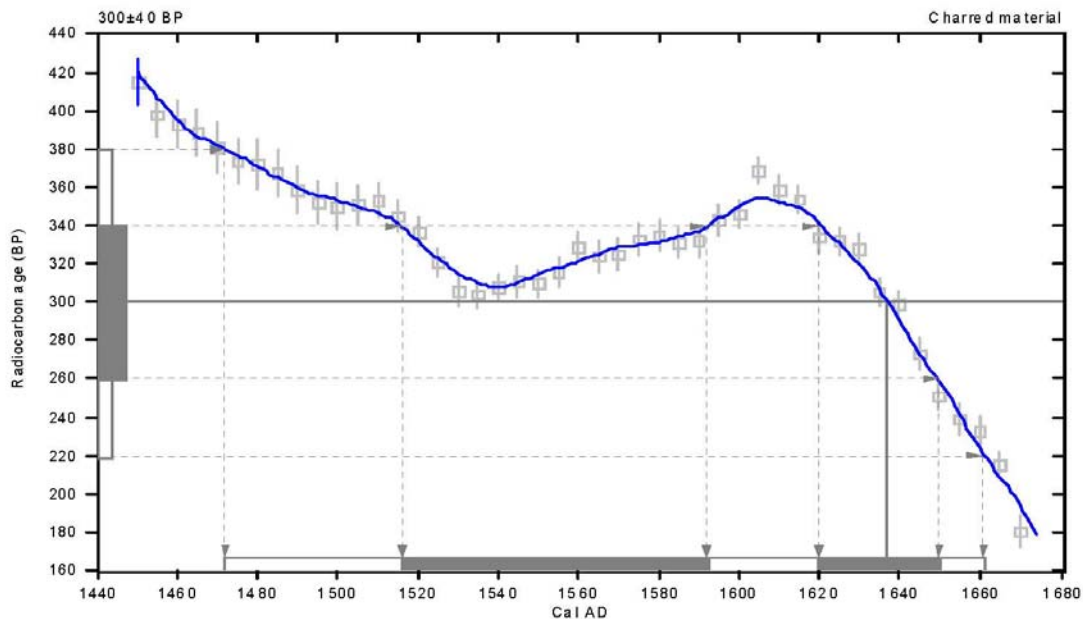
Conventional radiocarbon age: **300±40 BP**

2 Sigma calibrated result: Cal AD 1470 to 1660 (Cal BP 480 to 290)
(95% probability)

Intercept data

Intercept of radiocarbon age
with calibration curve: Cal AD 1640 (Cal BP 310)

1 Sigma calibrated results: Cal AD 1520 to 1590 (Cal BP 430 to 360) and
(68% probability) Cal AD 1620 to 1650 (Cal BP 330 to 300)



References:

Database used

INTCAL04

Calibration Database

INTCAL04 Radiocarbon Age Calibration

IntCal04: Calibration Issue of Radiocarbon (Volume 46, nr 3, 2004).

Mathematics

A Simplified Approach to Calibrating C14 Dates

Talma, A. S., Vogel, J. C., 1993, Radiocarbon 35(2), p317-322

Beta Analytic Radiocarbon Dating Laboratory

4985 S.W. 74th Court, Miami, Florida 33155 • Tel: (305)667-5167 • Fax: (305)663-0964 • E-Mail: beta@radiocarbon.com

APPENDIX E

TRADITIONAL ARTIFACT INVENTORY
HISTORIC ARTIFACT INVENTORY
MIDDEN INVENTORY

TRADITIONAL ARTIFACT INVENTORY

Lab Bag	Layer	Cm Below Surface	Artifact	Material	Quantity	Total Weight (g)	Comments
5a	Layer I	10-20	Flake	Basalt	1	0.2g	
18	Layer I	10-20	Flakes	Basalt	12	136.4g	
41f	Layer III	46-60	Flake	Basalt	1	1.1g	Probably associated w/ Feature 1 (<i>lo'i</i> wall?)
81	Layer III	70-80	Flakes	Basalt	2	12.6g	
123	Layer III	100-110	Flakes	Basalt	2	52.4g	

HISTORICAL ARTIFACT INVENTORY

Lab Bag	Layer	Cm Below Surface	Artifact	Material/ Category	Comments
6a	Layer I	10-20	Bottle Fragment	Glass	Color = green; 1 shard; 4 g
6b	Layer I	10-20	Bottle Fragment	Glass	Color = olive; 1 shard; 0.2 g
6c	Layer I	10-20	Bottle Fragment	Glass	Color = amber; 3 shards; 4.3 g
6d	Layer I	10-20	Bottle Fragment	Glass	Color = clear; 4 shards; 5.4 g
6e	Layer I	10-20	Bottle Fragment	Glass	Color = aqua; 1 shard; 0.2 g
6f	Layer I	10-20	Window Glass	Glass	Color = clear, flat; 1 shard; 1.7 g
7	Layer I	10-20	Unidentifiable Plastic	Plastic	1 flat fragment; 0.1 g
8	Layer I	10-20	Brick and Mortar/Cement	Construction Debris	5 fragments; 8.8 g
9a	Layer I	10-20	Bottle Caps	Metal, household	2 bottle cap fragments w/ synthetic lining or gasket inside; 4.2 g
9b	Layer I	10-20	Soda Can Pop Top	Metal, household	1 pop top; 0.8 g
9c	Layer I	10-20	Aluminum foil	Metal, aluminum	2 pieces; 0.1 g
10	Layer I	10-20	.22 Bullet Casing	Munitions	1 bullet casing with 'U' embossed headstamp; 0.5 g
11	Layer I	10-20	Unidentifiable Metal	Metal, rusted	2 fragments (1 possible nail fragment); 8.2 g
19	Layer I	20-26	Brick and Mortar/Cement	Construction Debris	6 mortar chunks w/ some residual of red brick; 27.8 g
20a	Layer I	20-26	Bottle Fragment	Glass	Color = clear; 10 shards; 21 g

Lab Bag	Layer	Cm Below Surface	Artifact	Material/Category	Comments
20b	Layer I	20-26	Bottle Fragment	Glass	Color = aqua; 3 shards; 0.4 g
21a	Layer I	20-26	Nail	Metal, nails	2 rusted, round nails (3" & 1 1/2"); 11.5 g
21b	Layer I	20-26	Unidentifiable Metal	Metal, rusted	1 fragment; 0.6 g
22	Layer I	20-26	Bottle Caps	Metal, household	2 bottle cap fragments w/ synthetic lining or gasket inside; 3 g
28	Layer II	26-40 cmbs	Composite Material	Construction Debris	1 fragment (possibly roofing & paving material); 1.0 g
29a	Layer II	26-40	Nail	Metal, nails	6 rusted nails and nail fragments; 41.2 g
29b	Layer II	26-40	Unidentifiable Metal	Metal, rusted	4 unidentifiable fragments; 43.6 g
29c	Layer II	26-40	Bottle Caps	Metal, household	3 fragments; 1.9 g
30a	Layer II	26-40	Bottle Fragment	Glass	Color = clear; 11 shards; 14.9 g
30b	Layer II	26-40	Bottle Fragment	Glass	Color = amber; 1 shard; 1.2 g
30c	Layer II	26-40	Bottle Fragment	Glass	Color = aqua; 4 shards; 22.3 g
37a	Layer II	40-46/49	Nails	Metal, nails	8 rusted nails (various sizes 8-5 cm long); 90.3 g
37b	Layer II	40-46/49	Unidentifiable Metal	Metal, other	1 disc-shaped item (ca. 6 cm in diameter); 99.7 g
37c	Layer II	40-46/49	Unidentifiable Metal	Metal, rusted	5 fragments; 11.3 g
38a	Layer II	40-46/49	Probable Button	Metal, other	1 disc-shaped item (1.5 cm diameter X 1 cm thick w/ a 1 cm hole in center); 2.2 g
38b	Layer II	40-46/49	Unidentifiable Metal	Metal, household	1 metal label or embellishment (incised oval w/ undecipherable letters & flowers on either side); 4 x 0.7 cm; 2.7 g
39	Layer II	40-46/49	Composite Material	Construction Debris	105 fragments (possibly roofing & paving materials); 211.6 g
40a	Layer II	40-46/49	Bottle Fragment	Glass	Color = aqua; 5 shards; 21.9 g
40b	Layer II	40-46/49	Window Glass	Glass	Color = clear, flat; 2 shards; 5.6 g
40c	Layer II	40-46/49	Bottle Fragment	Glass	Color = olive; 2 shards; 7.9 g

Lab Bag	Layer	Cm Below Surface	Artifact	Material/Category	Comments
40d	Layer II	40-46/49	Bottle Fragment	Glass	Color = dark green w/ heavy patina; 1 shard; 31 g
40e	Layer II	40-46/49	Bottle Fragment	Glass	Color = amber; 1 shard; 0.5 g
40f	Layer II	40-46/49	Bottle Fragment	Glass	Color = clear; 6 shards; 16.2 g
41a	Layer III	46-60	Nails	Metal, nails	2 square headed nails (11 mm square head, broken shaft = 23 mm; 8 mm square head, broken shaft = 33 mm); 15.2 g. Probably associated w/ Feature 1 (<i>lo'i</i> wall?).
41c	Layer III	46-60	Clay Pipe Fragment	Ceramics, personal	1 clay pipe fragment (36 mm length x 8 mm in diameter; interior hole = 2 mm and is off-set from center; white/light exterior w/ red dirt stains); 3.4 g. Probably associated w/ Feature 1 (<i>lo'i</i> wall?).
41d	Layer III	46-60	Unidentifiable Ceramics	Ceramics, household	2 ceramic fragments (lip piece = interior is blue on white background; floral motif w/ geometric border; significant bleeding of blue onto white, even on the exterior side; white, both interior and exterior); 3.1 g. Probably associated w/ Feature 1 (<i>lo'i</i> wall?).
41e	Layer III	46-60	Bottle Fragment	Glass	Color = dark green; 1 shard; 3.6 g. Probably associated w/ Feature 1 (<i>lo'i</i> wall?).
41h	Layer III	46-60	Clay Marble	Ceramics, personal	1 clay marble (13 mm in diameter); 2.9 g
41i	Layer III	46-60	Button	Shell, marine	1 shell button (11 mm in diameter x 2 mm thick; 2 drilled holes; noticeable iridescence); 0.3 g
46	Layer III	46-60	Unidentifiable Ceramics	Ceramics, household	4 sherds (one has part of plate/saucer 'foot'; 2 = blue and white; 2 = white and white); 4.3 g
47	Layer III	46-60	Button Stud	Metal, other	1 object (largest end = 14 mm in diameter; smallest end = 7mm in diameter; height = 11

Lab Bag	Layer	Cm Below Surface	Artifact	Material/Category	Comments
					mm); 1.1 g
48a	Layer III	46-60	Bottle Fragment	Glass	Color = clear; 35 shards; 63.3 g
48b	Layer III	46-60	Bottle Fragment	Glass	Color = aqua; 13 shards; 64.9 g
48c	Layer III	46-60	Bottle Fragment	Glass	Color = olive; 26 shards; 51 g
48d	Layer III	46-60	Bottle Fragment	Glass	Color = dark green; 6 shards; 36.3 g
48e	Layer III	46-60	Bottle Fragment	Glass	Color = amber; 5 shards; 6.7 g
48f	Layer III	46-60	Bottle Fragment	Glass	Color = milkglass; 1 shard; 1.1 g
48g	Layer III	46-60	Window Glass	Glass	Color = clear, flat; 2 shards; 1 g
53	Layer III	46-60	Composite Material	Construction Debris	385.6 g
54	Layer III	46-60	Unidentifiable Metal	Metal, rusted	34 rusted metal fragments; 282.8 g
55a	Layer III	46-60	Nails	Metal, nails	68 rusted nails and nail fragments; 616.6 g
55b	Layer III	46-60	Nails	Metal, nails	1 rusted square nail fragment; 3.6 g
56	Layer III	46-60	Unidentifiable Construction Debris Fragments	Construction Debris	3 fragments; 19.6 g
57	Layer III	46-60	Composite Material	Construction Debris	2 fragments (possibly roofing material); 6.4 g
58	Layer III	60-70	Brick Fragments	Construction Debris	2 fragments; 37.7 g
60	Layer III	60-70	Nails	Metal, nails	3 rusted nails and nail fragments; 15.7 g
63	Layer III	60-70	Unidentifiable Ceramics	Ceramics, household	1 ceramic sherd w/ blue floral motif on white background; 2.2 g
65	Layer III	60-70	Unidentifiable Metal	Metal, other	3 fragments; 1.6 g
67a	Layer III	60-70	Bottle Fragment	Glass	Color = aqua; 1 shard; 13.2 g
67b	Layer III	60-70	Bottle Fragment	Glass	Color = olive; 5 shards; 6.8 g
67c	Layer III	60-70	Bottle Fragment	Glass	Color = dark green; 6 shards; 10.9 g

Lab Bag	Layer	Cm Below Surface	Artifact	Material/ Category	Comments
67d	Layer III	60-70	Bottle Fragment	Glass	Color = clear; 7 shards; 9.5 g
67e	Layer III	60-70	Chimney Fragment	Glass	Color = clear; 8 shards; 3.0 g
71	Layer III	60-70	Unidentifiable Ceramic	Ceramics, household	2 sherds (one w/ blue leaf motif on white background and white outer surface; one w/ white on both surfaces); 0.9 g. From NW corner with more sandy matrix.
74a	Layer III	60-70	Bottle Fragment	Glass	Color = aqua; 1 shard; 5.7 g. From NW corner with more sandy matrix.
74b	Layer III	60-70	Window Glass	Glass	Color = clear, flat; 2 shards; 0.7 g. From NW corner with more sandy matrix.
74c	Layer III	60-70	Bottle Fragment	Glass	Color = olive; 2 shards; 3.8 g. From NW corner with more sandy matrix.
74d	Layer III	60-70	Bottle Fragment	Glass	Color = amber; 2 shards; 4.6 g. From NW corner with more sandy matrix.
74e	Layer III	60-70	Bottle Fragment	Glass	Color = clear; 6 shards; 12.5 g. From NW corner with more sandy matrix.
75	Layer III	60-70	Nails	Metal, nails	13 rusted nails and nail fragments; 30.1 g. From NW corner with more sandy matrix.
80	Layer III	70-80	Unidentifiable Metal	Metal, other	2 fragments; 5.5 g
82a	Layer III	70-80	Chimney Fragment	Glass	Color = clear; 8 shards; 4.7 g
82b	Layer III	70-80	Bottle Fragment	Glass	Color = olive; 5 shards; 3.7 g
83	Layer III	70-80	Unidentifiable Ceramic	Ceramics, household	4 sherds (3 w/ white on both surfaces; one w/ light blue crosshatch motif on white background); 3.9 g
84	Layer III	70-80	Brick Fragment	Construction Debris	1 fragment; 1.1 g
88	Layer III	70-80	Mortar Fragment	Construction Debris	1 fragment; 0.3 g
89	Layer III	70-80	Brick Fragment	Construction	1 fragment (w/ fresh break);

Lab Bag	Layer	Cm Below Surface	Artifact	Material/Category	Comments
				Debris	2.8 g
93	Layer III	80-90	Unidentifiable Ceramics	Ceramics, household	3 sherds; 2.4 g
94a	Layer III	80-90	Bottle Fragment	Glass	Color = clear; 4 shards; 7.6 g
94b	Layer III	80-90	Bottle Fragment	Glass	Color = olive; 3 shards; 3.3 g
94c	Layer III	80-90	Bottle Fragment	Glass	Color = dark green; 3 shards; 3.6 g
97	Layer III	80-90	Brick fragments	Construction Debris	7 fragments; 8.7 g
103	Layer III	80-90	Unidentifiable Metal	Metal, other	5 fragments (possibly tin); 8.9 g
107a	Layer III	90-100	Bottle Fragment	Glass	Color = clear; 4 shards; 4.8 g
107b	Layer III	90-100	Bottle Fragment	Glass	Color = olive; 2 shards; 1.8 g
107c	Layer III	90-100	Bottle Fragment	Glass	Color = amber; 2 shards; 1 g
107d	Layer III	90-100	Window Glass	Glass	Color = clear, flat; 8 shards; 7.2 g
112	Layer III	90-100	Unidentifiable Ceramics	Ceramics, household	1 sherd; blue on white background; 12.5 g
116	Layer III	90-100	Unidentifiable Metal	Metal, rusted	1 fragment; 18.7 g
118	Layer III	100-110	Unidentifiable Ceramics	Ceramics, household	1 sherd (white); 0.2 g
124a	Layer III	100-110	Bottle Fragment	Glass	Color = clear; 1 shard; 0.1 g
124b	Layer III	100-110	Bottle Fragment	Glass	Color = olive; 1 shard; 1.9 g
129	N. wall collapse	c. 60	Bottle Fragment	Glass	Color = green; 1 bottle base/heel (has push-up; 2 mold seams, irregularly spaced; possible machine-made value mark; smooth pontil/nipple; some air bubbles w/in glass; some faint surface striations; no noticeable embossing or lettering; 58 mm in diameter; body thickness at heel is 5 mm; possible machine-made value mark is 31 mm in diameter); 67.8 g