

**Figure 65:** Completed excavation of Test Pit 13, looking west. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 58 and table 6 for description and interpretation of the stratigraphic profile.

the underlying soil is Lahaina silty clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.



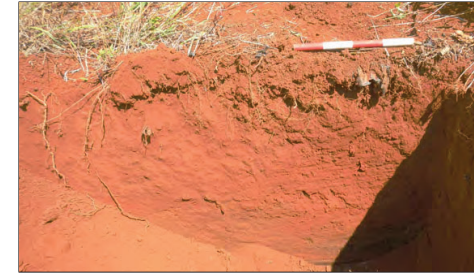
**Figure 66:** Excavation of Test Pit 14, looking west.

Excavation to a depth of 110 cm below surface exposed two layers (fig. 67). The upper layer, Context 31, a dark reddish brown plow zone with pieces of black plastic mulch, extends to a depth of 45 cm below surface. Context 31 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lāna'i. The lower layer, Context 32, is a natural dark reddish brown *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 12 excavation.

#### 4.2.15 Test Pit 15

Test Pit 15 was located near the southwestern corner of the proposed Hōkū-ao 201-H Residential Project (see fig. 38). The vegetation here is dominated by tall grasses (fig. 68) and the underlying soil is Lahaina silty clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.

**Figure 67:** Completed excavation of Test Pit 14, looking west. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 58 and table 6 for description and interpretation of the stratigraphic profile.



**Figure 68:** Excavation of Test Pit 15, looking south.

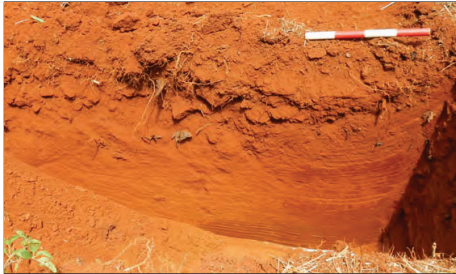


Excavation to a depth of 120 cm below surface exposed two layers (fig. 69). The upper layer, Context 33, a dark reddish brown plow zone with pieces of black plastic mulch, extends to a depth of 45 cm below surface. Context 33 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lāna'i. The lower layer, Context 34, is a natural dark reddish brown *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 15 excavation.

#### 4.2.16 Test Pit 16

Test Pit 16 was located near the southwestern corner of the proposed Hōkū-ao 201-H Residential Project (see fig. 38). The vegetation here is dominated by tall grasses (fig. 70) and the underlying soil is Lahaina silty clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.

Excavation to a depth of 120 cm below surface exposed two layers (fig. 71). The upper layer, Context 35, a dark reddish brown plow zone with pieces of black plastic mulch, extends to a depth of 55 cm below surface. Context 35 is a twentieth-century cultural

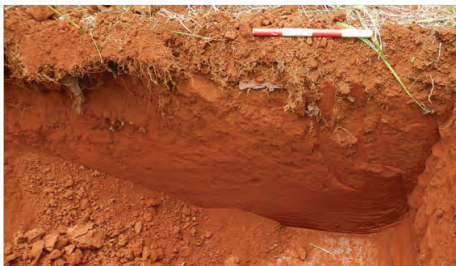


**Figure 69:** Completed excavation of Test Pit 15, looking west. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 58 and table 6 for description and interpretation of the stratigraphic profile.



**Figure 70:** Excavation of Test Pit 16, looking west.

deposit formed in the 70 years that pineapple was cultivated on Lāna'i. The lower layer, Context 36, is a natural dark reddish brown *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 16 excavation.



**Figure 71:** Completed excavation of Test Pit 16, looking north. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 58 and table 6 for description and interpretation of the stratigraphic profile.

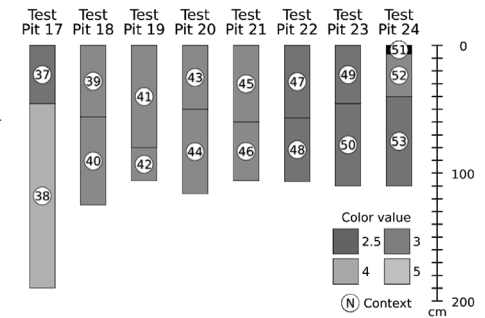
#### 4.2.17 Test Pit 17

Test Pit 17 is an extant trash pit located near the southern end of the proposed Hōkū-ao 201-H Residential Project (see fig. 38). The vegetation here is dominated by tall grasses and the underlying soil is Lahaina silty clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the trash pit is located in a former pineapple field.

Two layers were exposed in the trash pit, which had been excavated to a depth of 190 cm below surface (fig. 72). The upper layer, Context 37, a dark reddish brown plow zone with pieces of black plastic mulch, extends to a depth of 45 cm below surface. Context 37 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lāna'i. The lower layer, Context 38, is a natural red *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 17 excavation.



**Figure 72:** Test Pit 17, an extant trash pit, looking west. Note the black plastic pieces in the upper stratum and the modern trash at the base of the pit. The scale is marked in 10 cm increments. See fig. 73 and table 7 for description and interpretation of the stratigraphic section.



**Figure 73:** Schematic stratigraphic sections, Test Pits 17-24. See table 7 for sediment descriptions.

**Table 7: Sediment descriptions for Test Pits 17–24**

| Context     | Depth*  | Description  | Interpretation              |
|-------------|---------|--|-----------------------------|
| Test Pit 17 |         |  |                             |
| 37          | 0–45    | Dark reddish brown (2.5YR 2.5/4) terrestrial sandy loam                      | Cultural deposition process |
| 38          | 45–190+ | Red (2.5YR 4/8) terrestrial clay loam; base of excavation                    | Natural deposition process  |
| Test Pit 18 |         |  |                             |
| 39          | 0–54    | Dark reddish brown (5YR 3/4) terrestrial sandy loam                          | Cultural deposition process |
| 40          | 54–125+ | Dark red (2.5YR 3/6) terrestrial loam; base of excavation                    | Natural deposition process  |
| Test Pit 19 |         |  |                             |
| 41          | 0–80    | Dark brown (7.5YR 3/3) terrestrial sandy loam                                | Cultural deposition process |
| 42          | 80–105+ | Dark yellowish brown (10YR 3/4) terrestrial silt loam; base of excavation    | Natural deposition process  |
| Test Pit 20 |         |  |                             |
| 43          | 0–50    | Dark reddish brown (5YR 3/2) terrestrial silty clay loam                     | Cultural deposition process |
| 44          | 50–115+ | Dark reddish brown (5YR 3/3) terrestrial silty clay loam; base of excavation | Natural deposition process  |
| Test Pit 21 |         |  |                             |
| 45          | 0–60    | Dark reddish brown (5YR 3/2) terrestrial loam                                | Cultural deposition process |
| 46          | 60–105+ | Dark reddish brown (5YR 3/3) terrestrial sandy loam; base of excavation      | Natural deposition process  |
| Test Pit 22 |         |  |                             |
| 47          | 0–55    | Dark reddish brown (5YR 2.5/2) terrestrial sandy loam                        | Cultural deposition process |
| 48          | 55–108+ | Dark reddish brown (5YR 2.5/2) terrestrial silty clay; base of excavation    | Natural deposition process  |
| Test Pit 23 |         |  |                             |
| 49          | 0–45    | Dark reddish brown (5YR 2.5/2) terrestrial sandy clay loam                   | Cultural deposition process |
| 50          | 45–110+ | Dark reddish brown (5YR 2.5/2) terrestrial silty clay; base of excavation    | Natural deposition process  |
| Test Pit 24 |         |  |                             |
| 52          | 5–40    | Dark reddish brown (5YR 3/2) terrestrial sandy loam                          | Cultural deposition process |
| 53          | 40–110+ | Dark reddish brown (2.5YR 2.5/4) terrestrial silty clay; base of excavation  | Natural deposition process  |

\* Centimeters below surface.

#### 4.2.18 Test Pit 18

Test Pit 18 was located near the southern end of the proposed Hōkū-ao 201-H Residential Project (see fig. 38). The vegetation here is dominated by grasses and the underlying soil is Lahaina silty clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.

Excavation to a depth of 125 cm below surface exposed two layers (fig. 74). The upper layer, Context 39, a dark reddish brown plow zone with pieces of black plastic mulch, extends to a depth of 54 cm below surface. Context 39 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lāna'i. The lower layer, Context 40, is a natural dark red *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 18 excavation.

**Figure 74:** Completed excavation of Test Pit 18, looking east. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 73 and table 7 for description and interpretation of the stratigraphic profile.



#### 4.2.19 Test Pit 19

Test Pit 19 was located near the western end of the proposed Hōkū-ao 201-H Residential Project (see fig. 38). The vegetation here is dominated by grasses and the underlying soil is Lahaina silty clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.

Excavation to a depth of 105 cm below surface exposed two layers (fig. 75). The upper layer, Context 41, a dark brown plow zone with pieces of black plastic mulch, extends to a depth of 80 cm below surface. Context 41 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lāna'i. The lower layer, Context 42, is a natural dark yellowish brown *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 19 excavation.

#### 4.2.20 Test Pit 20

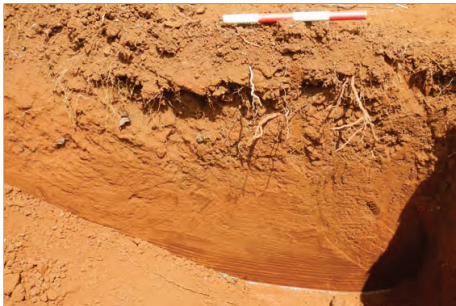
Test Pit 20 was located near the western end of the proposed Hōkū-ao 201-H Residential Project (see fig. 38). The vegetation here is dominated by grasses and Christmas berry trees and the underlying soil is Waihuna clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.





**Figure 75:** Completed excavation of Test Pit 19, looking northwest. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 73 and table 7 for description and interpretation of the stratigraphic profile.

Excavation to a depth of 115 cm below surface exposed two layers (fig. 76). The upper layer, Context 43, a dark reddish brown plow zone with pieces of black plastic mulch, extends to a depth of 50 cm below surface. Context 43 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lānaʻi. The lower layer, Context 44, is a natural dark reddish brown *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 20 excavation.



**Figure 76:** Completed excavation of Test Pit 20, looking east. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 73 and table 7 for description and interpretation of the stratigraphic profile.

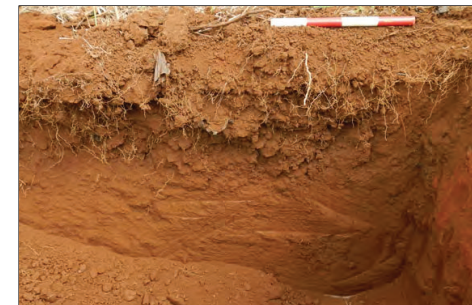
#### 4.2.21 Test Pit 21

Test Pit 21 was located near the northwest corner of the proposed Hōkū-ao 201-H Residential Project (see fig. 38). The vegetation here is dominated by grasses and Christmas berry trees (fig. 77) and the underlying soil is Waihuna clay (see fig. 7). According to data held in the State of Hawaiʻi GIS (see fig. 5), the test pit is located in a former pineapple field.



**Figure 77:** Excavation of Test Pit 21, looking southeast. The backhoe operator is Terrence Sarme.

Excavation to a depth of 105 cm below surface exposed two layers (fig. 78). The upper layer, Context 45, a dark reddish brown plow zone with pieces of black plastic mulch, extends to a depth of 60 cm below surface. Context 45 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lānaʻi. The lower layer, Context 46, is a natural dark reddish brown *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 21 excavation.



**Figure 78:** Completed excavation of Test Pit 21, looking east. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 73 and table 6 for description and interpretation of the stratigraphic profile.



#### 4.2.22 Test Pit 22

Test Pit 22 was located near the northwestern corner of the proposed Hōkū-ao 201-H Residential Project about 60 m east of Test Pit 21 (see fig. 38). The vegetation here is dominated by grasses and Christmas berry trees (fig. 79) and the underlying soil is Waiuhuna clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.



**Figure 79:** Excavation of Test Pit 22, looking southeast.

Excavation to a depth of 108 cm below surface exposed two layers (fig. 80). The upper layer, Context 47, a dark reddish brown plow zone with pieces of black plastic mulch, extends to a depth of 55 cm below surface. Context 47 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lāna'i. The lower layer, Context 48, is a natural dark reddish brown *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 22 excavation.



**Figure 80:** Completed excavation of Test Pit 22, looking east. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 73 and table 7 for description and interpretation of the stratigraphic profile.

#### 4.2.23 Test Pit 23

Test Pit 23 was located near the northern end of the proposed Hōkū-ao 201-H Residential Project (see fig. 38). The vegetation here is dominated by grasses and Christmas berry trees (fig. 81) and the underlying soil is Waiuhuna clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.



**Figure 81:** Excavation of Test Pit 23, looking south.

Excavation to a depth of 110 cm below surface exposed two layers (fig. 82). The upper layer, Context 49, a dark reddish brown plow zone with pieces of black plastic mulch, extends to a depth of 45 cm below surface. Context 49 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lāna'i. The lower layer, Context 50, is a natural dark reddish brown *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 23 excavation.



**Figure 82:** Completed excavation of Test Pit 23, looking east. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 73 and table 7 for description and interpretation of the stratigraphic profile.

#### 4.2.24 Test Pit 24

Test Pit 24 was located near the northern end of the proposed Hōkū-ao 201-H Residential Project in an area that was used recently for industrial purposes (see fig. 38). The vegetation here is dominated by grasses and herbs (fig. 83) and the underlying soil is Waihuna clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.



**Figure 83:** Excavation of Test Pit 24, looking south. Note the asphalt under the backhoe bucket. The backhoe operator is Terrence Sarme.

Excavation to a depth of 110 cm below surface exposed two sediment layers capped at the surface by Context 51, a 5 cm thick pad of asphalt (fig. 84). The upper sediment layer, Context 52, a dark reddish brown plow zone with pieces of black plastic mulch, extends to a depth of 40 cm below surface. Context 52 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lāna'i. The lower layer, Context 53, is a natural dark reddish brown *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 24 excavation.



**Figure 84:** Completed excavation of Test Pit 24, looking east. Note the asphalt at the surface and the black plastic pieces in the stratum beneath it. The scale is marked in 10 cm increments. See fig. 73 and table 7 for description and interpretation of the stratigraphic profile.

#### 4.2.25 Test Pit 25

Test Pit 25 was located near the northeastern end of the proposed Hōkū-ao 201-H Residential Project (see fig. 38). The vegetation here is dominated by grasses and herbs (fig. 85) and the underlying soil is Waihuna clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.

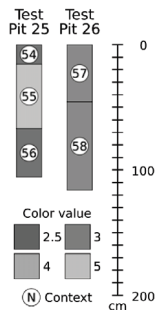


**Figure 85:** Excavation of Test Pit 25, looking southwest. Note the propane gas tanks in left background.

Excavation to a depth of 107 cm below surface exposed three layers (fig. 86). The upper layer, Context 54, an application of very dusky red fill material that includes pieces of black plastic mulch, extends to a depth of 15 cm below surface. The black plastic mulch indicates that this fill material was deposited sometime after pineapple cultivation was established on the island in the twentieth century. The middle layer, Context 55, represents multiple applications of fill material, including a reddish gray *sand* that appears to be imported from outside the proposed Hōkū-ao 201-H Residential Project. It extends to 65 cm below surface. The lowest layer, Context 56, is a natural dark reddish brown *B* horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 25 excavation.



**Figure 86:** Completed excavation of Test Pit 25, looking southwest. Note the banded fill material near the middle of the stratigraphic section. The scale is marked in 10 cm increments. See fig. 87 and table 8 for description and interpretation of the stratigraphic profile.



**Figure 87:** Schematic stratigraphic sections, Test Pits 25 and 26. See table 8 for sediment descriptions.

**Table 8:** Sediment descriptions for Test Pits 25 and 26

| Context            | Depth*  | Description  | Interpretation                   |
|--------------------|---------|--|----------------------------------|
| <b>Test Pit 25</b> |         |  |                                  |
| 54                 | 0-15    | Very dusky red (2.5YR 2.5/2) terrestrial clay loam                               | Fill material deposition process |
| 55                 | 15-65   | Reddish gray (5YR 5/2) terrestrial sand  | Fill material deposition event   |
| 56                 | 65-107+ | Dark reddish brown (2.5YR 2.5/4) terrestrial silty clay loam; base of excavation | Natural deposition process       |
| <b>Test Pit 26</b> |         |  |                                  |
| 57                 | 0-45    | Dusky red (10R 3/4) terrestrial silty clay loam                                  | Cultural deposition process      |
| 58                 | 45-115+ | Dusky red (10R 3/4) terrestrial silty clay loam; base of excavation              | Natural deposition process       |

\* Depth in cm below surface.

**4.2.26 Test Pit 26**

Test Pit 26 was located near the middle of the proposed Hōkū-ao 201-H Residential Project, west of the Pūlama Lāna'i Nursery (see fig. 38). The vegetation here is dominated by grasses (fig. 88) and the underlying soil is Waihuna clay (see fig. 7). According to data held in the State of Hawai'i GIS (see fig. 5), the test pit is located in a former pineapple field.

Excavation to a depth of 115 cm below surface exposed two layers (fig. 89). The upper layer, Context 57, a dusky red plow zone with pieces of black plastic mulch, extends to a depth of 45 cm below surface. Context 57 is a twentieth-century cultural deposit formed in the 70 years that pineapple was cultivated on Lāna'i. The lower layer, Context 58, is a natural dusky red B horizon that is found to the base of excavation. No potentially significant cultural materials were found in the Test Pit 26 excavation.



**Figure 88:** Excavation of Test Pit 26, looking west.



**Figure 89:** Completed excavation of Test Pit 26, looking southwest. Note the black plastic pieces in the upper stratum. The scale is marked in 10 cm increments. See fig. 87 and table 8 for description and interpretation of the stratigraphic profile.

**5 Summary and Conclusions**

At the request of Pūlama Lāna'i, T. S. Dye & Colleagues, Archaeologists has completed an archaeological inventory survey for the proposed Hōkū-ao 201-H Residential Project, located at Kamoku, Lāhaina District, Lāna'i Island. A review of the historical background indicates the entire 105 ac. project area was modified by heavy equipment during the establishment of Lāna'i City and commercial pineapple fields in the 1920s. Previous archaeological inventory surveys on portions of the proposed Hōkū-ao 201-H Residential Project and on lands adjacent to it failed to find traditional Hawaiian historic sites.

The archaeological inventory survey included surface survey and test excavations with a backhoe. Three potentially significant historic properties were identified during the surface survey, all of which are historic-era artifacts that were transported into the project area for preservation. Two wood-frame buildings from the Kō'ele School complex, in poor condition a decade ago, have now been overgrown by vegetation and lack the integrity of condition to be listed on the Hawai'i Register of Historic Places. A pineapple harvester, "Machine 1," in the possession of the Lāna'i Culture & Heritage Center, possesses sufficient integrity to be significant under Criterion "a" due to its association with the commercial pineapple fields that for seven decades were the primary economic pursuit on the island. It is recommended that "Machine 1" be moved to a sheltered location away from the proposed Hōkū-ao 201-H Residential Project prior to any construction activities and that funds for its restoration and interpretive display be pursued.



No potentially significant historic properties were found in the test excavations. The plow zone with pieces of black plastic mulch that was found throughout the western portion of the proposed Hōkū-ao 201-H Residential Project was actively forming into the 1990s and does not meet the age criterion for a historic property. The negative results of the test excavations are typical for the former pineapple fields.

Once “Machine 1” has been moved away, the proposed Hōkū-ao 201-H Residential Project will have “no effect” on historic properties because the inventory survey failed to find potentially significant historic properties, which are therefore reasonably believed to be absent from the project area.

## Glossary

- A horizon** The surface layer in the soil containing humus, an eluvial layer from which minerals, etc., are leached. See also *horizon*.
- alluvium** Detrital deposits from rivers or streams.
- B horizon** The soil layer underlying the *A* horizon, an illuvial horizon into which minerals, etc., from the *A* horizon are washed. See also *horizon*.
- C horizon** A distinct layer in the soil underlying the *A* or *B* horizons, or the organic or mineral horizons, consisting of the parent material, i.e., the little altered but weathered bedrock, transported glacial or alluvial material, or an earlier soil, from which the soil is formed. See also *horizon*.
- caldera** A caldera is a cauldron-like volcanic feature usually formed by the collapse of land following a volcanic eruption. They are sometimes confused with volcanic craters.
- Christmas berry** The ornamental tree, *Schinus terebinthifolius*, known for its bright red berry-like fruits.
- clastic** Consisting of fragments of rocks or of organic structures that have been moved individually from their places of origin.
- clay** Fine earth particles less than 0.002 mm.
- Contact** A period in Hawaiian history marked by the arrival of Captain James Cook in 1778 and characterized by the social changes that eventually brought about the end of traditional Hawai'i.
- context** A unit of stratification associated with a natural or cultural process or event.
- detritus** Material produced by the disintegration and weathering of rocks that has been moved from its site of origin, or a deposit of such material.
- fee simple** An estate of inheritance, held without limitation to a particular class of heirs; unconditional inheritance.
- fill** Any sediment deposited by any agent so as to fill or partly fill a valley, sink, or other depression.
- habit** A botanical term used to describe the general appearance, growth form, or architecture of a plant.
- historic property** According to Hawai'i Administrative Rules §13-198-2, an “historic property” is any building, structure, object, district, area, or site, including underwa-

ter site, that is significant in the history, architecture, archaeology, or culture of the state of Hawai'i, its communities, or the nation.

**horizon** A subdivision of soil.

**ironwood** A historically introduced large tree, *Casuarina equisetifolia*.

**lantana** A historically introduced shrub, *Lantana camara*.

**paleosol** A soil of the past, often buried.

**pre-contact** Prior to AD 1778 and the first written records of the Hawaiian Islands made by Captain James Cook and his crew.

**project** The archaeological investigation, including laboratory analyses and report preparation.

**rood** A land area unit equal to 1/4 acre.

**sand** Detrital material ranging in size from 0.5 mm to 2 mm in diameter. See also *detritus*.

**scarp** An escarpment, cliff, or steep slope along the margin of a plateau, mesa, terrace, or bench.

**significance** A quality of a historic property that possesses integrity of location, design, setting, materials, workmanship, feeling, and association. The qualities are set out in SHPD administrative rule §13-275-6, *Evaluations of Significance*.

**silt** A clastic sediment ranging in size from 0.002 mm to 0.5 mm in diameter. See also *clastic*.

**site** The fundamental unit of archaeological investigation, a location that exhibits material evidence of past human activity.

**stone** Rock fragment ranging from 250 mm to less than 600 mm.

**subangular blocky** A type of soil structure characterized by polyhedral shapes with sub-rounded and planar faces, lacking sharp angles.

**sugarcane** A grass, *Saccharum officinarum*, widely grown in warm regions as a source of sugar. See also *kō*.

**tree** A perennial woody plant with a single main stem, or trunk, typically taller than 5-6 m at maturity. See also *habit*.

**very plastic** A 2 mm diameter roll of soil will support itself if held on end.

**very sticky** Soil adheres to both fingers after release of pressure. Soil stretches greatly on separation of fingers.

## Hawaiian Terms

**ahu** Heap, pile; altar, shrine, cairn.

**ahupua'a** Traditional Hawaiian land division, usually extending from the uplands to the sea.

**'āina** Land, earth.

**akua** God, goddess, spirit, ghost, devil, image, corpse.

**'alae** A bird, *Fulica americana alae*, the mudhen or Hawaiian gallinule. See also *'alae kea*.

**'alae kea** A bird, *Fulica americana alai*, the Hawaiian coot.

**ali'i** Chief, chiefess, officer, ruler, monarch, peer, head man, noble, aristocrat, king, queen, commander.

**aloha** Love, affection, compassion, mercy, sympathy, etc.

**'apapane** A honeycreeper, *Himatione sanguinea* with crimson body and black wings and tail, found on all the main Hawaiian Islands. Its feathers occasionally were used for featherwork.

**'aumakua** Family or personal gods, deified ancestors who might assume the shape of animals, rocks, clouds, or plants.

**'awa** A shrub, *Piper methysticum*, the root of which is the source of a narcotic drink of the same name used in ceremonies, prepared formerly by chewing, later by pounding.

**hala** An indigenous tree, *Pandanus tectorius*, whose leaves were used for mat making, canoe sails, baskets, and thatching.

**hale** House, building, station, hall.

**he'e** Octopus.

**heiau** Traditional Hawaiian place of worship.

**helu** To count, number, compute, take a census, figure enumerate, list, include, impute; to assess, as taxes; to chant a list of names, as of genealogy; including, counting, enumeration, census, list, rate, number, figure, total, inventory; statistics.

**'ili** A land section, next in importance to *ahupua'a*, and usually a subdivision of an *ahupua'a*.

**'iliahi** Native trees and shrubs belonging to the genus *Santalum*, or sandalwood. Traditionally, it was powdered and mixed with coconut oil to make perfume for *kapa*.

**imu** Underground oven.

**'inamona** Relish made of the cooked kernel of *kukui* mashed with salt. See also *kukui*.

**kahakō** Macron, indicating a long vowel.

**Kahiki** Tahiti, foreign land.

**kalo** The taro, *Colocasia esculenta*, was a staple food in traditional Hawai'i and all parts of the plant were used. The rootstock was baked or steamed, then eaten sliced or pounded to make *poi*, raw taro was also grated and mixed with coconut milk to make desserts, the leaves, leaf stems and flowers were also used in cooking. Medicinally the leaves and rootstock were used to treat many ailments. The plant was also used ritually, as bait for fish, glue, and to make dye.

**kama'āina** Native-born, one born in a place, host.

**kapa** Tapa cloth, as made from *wauke* or *māmaki* bark.

**kapu** Taboo, prohibition; special privilege or exemption from ordinary taboo; sacredness; prohibited, forbidden; sacred, holy, consecrated; no trespassing, keep out.

**kauila** A native tree, *Alphitonia ponderosa*, whose hard wood was valued traditionally for spears and tools; it was also used as beams in house construction.

**kāula** Prophet, seer, magician.

**kō** Sugarcane, *Saccharum officinarum*, was introduced to Hawai'i by Polynesian settlers, who cultivated it widely. The stalk was chewed between meals for its sweetness, brought on long journeys to ease hunger, and eaten in times of famine; juice from the stalk was fed to nursing babies, and used as a sweetening agent in medicinal herbal concoctions; the leaves were used as thatching for houses; the leaf midrib was used for plaiting braids that were made into hats; the stem of the flower was used to make darts for a child's game.

**koa** A tree, *Acacia koa*, one of the largest endemic trees in Hawai'i. Wood used for canoes, paddles, and surfboards.

**koa haole** A historically introduced small tree, *Leucaena glauca*.

**konohiki** Head man of an *ahupua'a* land division under the chief; land or fishing rights under control of the *konohiki*. See also *ahupua'a*.

**kou** A native tree, *Cordia subcordata*, with a wood prized for its grain and ease of carving. It was used for carving a wide variety of objects from platters to images of gods; the leaves were made into dye and the flowers were also used in *lei* making.

**kūkini** Runner, swift messenger, as employed by old chiefs, with a premium on their speed.

**kukui** The candlenut tree, *Aleurites moluccana*, introduced to Hawai'i by Polynesian settlers. The outer husk of the fruit or nut was used to make a black dye for tapa and tattooing; sap from the fruit was used as medicine to treat thrush, and used as a purgative; the hard shell of the nut was used in *lei* making; the kernel of the nut was the source of an oil that was burned for illumination and also used as a wood varnish for surfboards and canoes; the kernel was also chewed and spit on rough seas to calm the ocean and baked kernels were mixed with salt and chili pepper to make a relish (*'inamona*); the trunk was used to make canoes and floats for fishing nets; a reddish dye was made from the bark and/or root; a gum exuded from wounded bark was used to treat tapa; the flower was mixed with sweet potato to treat thrush; the leaves were used in a poultice for swelling and infection.

**kula** 1. Plain, field, open country, pasture; land with no water rights; 2. School.

**kuleana** Right, title, property, portion, responsibility, jurisdiction, authority, interest, claim, ownership.

**kupuna** Grandparent, ancestor, relative, or close friend of the grandparent's generation, grandaunt, granduncle.

**lānai** Porch, veranda, booth, shed; temporary roofed construction with open sides near a house.

**lei** Garland, wreath.

**lo'i** A single irrigated taro patch; irrigated terrace, especially for taro.

**lo'i kalo** Irrigated taro patch. See also *lo'i*.

**Māhele** The mid-nineteenth century land division responsible for the introduction of fee simple land title in Hawai'i.

**mai'a** All kinds of bananas and plantains.

**maika** Ancient Hawaiian game suggesting bowling.

**makahiki** Ancient festival beginning about the middle of October and lasting about four months, with sports and religious festivities and taboo on war.

**makai** Seaward.

**māmaki** A small native tree, *Pipturus albidus*, also called *māmaki*; the berry was used as a laxative, a dressing for wounds, and a tonic for general debility; the berry was fed to children to treat thrush; the bark was used to make tapa cloth.

**mauka** Inland, upland, toward the mountain.

**mō'i** King, queen, sovereign, monarch, or a rank of chiefs who could succeed to the government but who were of lower rank than chiefs descended from the god Kāne.

**moku mau'u** Grassland section or pasture upon which livestock could graze.

**mokupuni** Island.

**mo'o** 1. Narrow strip of land, smaller than an *'ili*; 2. Lizard, reptile of any kind, dragon, serpent; water spirit.

**mo'olelo** A story, tale, myth, history, tradition, legend, fable, chronicle, or record.

**naio** A native tree, *Myoporum sandwicense*, with hard, dark, yellow-green wood. The wood was used traditionally for the main timbers of houses.

**naupaka** A native low shrub, *Scaevola sericea*, from which the root was used medicinally and the fruit was occasionally eaten.

**'ohana** Family, relative, kin group.

**olonā** A native shrub, *Touchardia latifolia*, whose bark was valued as the source of a strong, durable fiber for fishing nets, for nets to carry containers, and as a base for ti-leaf raincoats and feather capes.

**pali** Cliff, precipice, steep hill or slope suitable for *olonā* or *wauke*.

**paukū** A land section smaller than a *mo'o*.

**pili** A native grass, *Heteropogon contortus*, whose leaves were used traditionally as house thatch.

**pipi** 1. Hawaiian pearl oyster, *Pinctada radiata*. In songs this is known as the *i'a hāmau leo o 'Ewa*, 'Ewa's silent sea creature—it was believed that talking would cause a breeze to ripple the water and frighten the *pipi*; 2. Cattle.

**poi** The Hawaiian staff of life, made from cooked taro corms, or rarely breadfruit, pounded and thinned with water.

**pueo** Hawaiian short-eared owl, *Asio flammeus sandwichensis*, sometimes regarded as a deity.

**pule** Prayer, magic spell, incantation, blessing.

**'uala** The sweet potato, *Ipomoea batatas*, introduced to Hawai'i by Polynesian settlers, was a staple food. The tuber was cooked whole and eaten or it was made into poi and mixed with coconut milk to make a dessert; it was used as bait for mackerel fishing; and to make a fermented drink called *'uala 'awa'awa*. The vine made a *lei* which was worn by nursing mothers to ensure a good flow of milk; when dried, the vine was also used as padding underneath floor mats. All parts of the plant were used as food for pigs. Kamapua'a was the god of the sweet potato.

**'ua'u** The endangered seabird, *Pterodroma phaeopygia*, or dark-rumped petrel.

**uhu** An adult fish in the family Scaridae. Commonly known as parrotfish.

**'ulu** 1. Discoidal, smooth stone as used in *'ulu maika* game; 2. Breadfruit, *Artocarpus altilis*.

**'ulu maika** Stone used in the *maika* game. See also *maika*.

**wahine** Woman, lady, wife; sister-in-law, female cousin-in-law of a man.

**wauke** A small tree or shrub, *Broussonetia papyrifera*, whose bark was made into *kapa* cloth. The inner bark was used to make cordage, and the shoots were used to treat childhood diseases. The leaves, along with banana and taro leaves, were used ceremonially to wrap the bodies of *ali'i* after death.

## Abbreviations

**ac.** A unit of land area equal to 4,840 square yards (0.405 hectare).

**AD** *Anno Domini*, the Christian era in the Gregorian calendar, starting from the year AD 1 as the calculated year in which Christ was born.

**cm** The centimeter, a derived unit of length in the International System of Units, equal to  $10^{-2}$  m. See also m.

**DLNR** The Hawai'i Department of Land and Natural Resources, a government agency responsible for the management and conservation of the natural, cultural, and historic resources of Hawai'i held in public trust. SHPD is a division of DLNR.

**ft.** A unit of linear measure equal to 12 inches or 0.3048 meter.

**GPS** Global Positioning System, operated by the government of the United States. The term is often used for the unit used to communicate with the GPS.

**LCA** Awards issued by the Board of Commissioners to Quiet Land Titles between 1846 and 1855 to persons who filed claims to land between 1846 and 1848.

**m** The meter, a base unit of length in the International System of Units, equal to the length of the path traveled by light in vacuum during a time interval of  $1/299,792,458$  of a second.

**SHPD** The State Historic Preservation Division of the Hawai'i Department of Land and Natural Resources, a government agency responsible for implementing the National Historic Preservation Act of 1966, as amended, and Chapter 6E of the Hawai'i Revised Statutes.

**SIHP** State Inventory of Historic Places.

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**SUBJECT: End of Fieldwork Report for Field Inspection Conducted for Proposed Hōkūāo 201-H Housing Project, Kamoku Ahupua'a, Lāhaina District, Lāna'i Island, TMK: [2] 4-9-002:061 por., [2] 4-9-002:001 por., and [2] 4-9-002:009 por.**

Aloha Dr. Susan Lebo,

This letter is regarding an impromptu field inspection conducted at the request of Pūlama Lāna'i for the proposed Hōkūāo 201-H Housing Project. The purpose of the current field inspection was to relocate four potentially significant historic properties within the proposed project area (Table 1 and Figure 1). The sites were previously documented during two archaeological inventory surveys, conducted for the Lāna'i Affordable Housing Project in 2009 (Lee-Greig and Hammatt 2009) and the Hōkūāo 201-H Housing Project in 2018 (Dye and Maly 2018, Log No. 2019.00221). The historic properties include two early 1900s historic wood-frame buildings (CSH-2 and CSH-3), a pineapple harvester ("Machine 1"), and a historic culvert headwall (SIHP #50-40-98-6649). A summary of the previously documented sites is presented, followed by a summary of current fieldwork.

#### CSH-2 and CSH-3, Historic Buildings

Two previous AIS reports describe CSH-2 and CSH-3 as two of three or four buildings constructed in the early 1900s that once comprised the Kō'ele School Complex (personal communication by Kepā Maly July 27, 2009 referenced in Lee-Greig and Hammatt 2009:36,55; Dye and Maly 2018). Our supplemental research found a 1927 Land Court Application (LCAp) map (862) labeling an area just northeast of Lāna'i City as "School Lot" and numbered as Lot 16 (see Figure 1). LCAp 862:Map 002 lists Lot 16 as a "Government School Lot at Lanai City". It is likely this area is where these buildings once stood.

CSH-2 was a wood-frame, two-room schoolhouse built in 1927 as the Koele Grammar School (Lee-Greig and Hammatt 2009, Ruzicka 2017a, Dye and Maly 2018). The schoolhouse was originally located about a half mile from the Lāna'i Ranch Headquarters/Koele Ranch Camp (Kō'ele District, SIHP #50-40-98-1004), on current golf course property (Ruzicka 2017a). In 1928, the schools name



was changed to Lanai City School and it included two buildings, a two-room and a four-room building. In 1938, the Lānaʻi High and Elementary School was established near 7<sup>th</sup> Street and Frasier Street in downtown Lānaʻi City and the two buildings of the Lanai City School were moved to the new school campus. In the 1970s, the CSH-2 schoolhouse building was used as a meeting hall for the Lānaʻi City chapter of the Boy Scouts of America (Ruzicka 2017a). Therefore, the building is also referred to as the former Boy Scout Hall (Maly 2008).

CSH-3, also documented as Structure A of the Kōʻele District (SIHP # -1004), was the original Kōʻele single-room school house dismantled and moved to the Kōʻele District in the 1920s (also referred to as the Palawai School and Richardson House) (Wright 1974, Kaschko 1986, Ruzicka 2017b). A HABS survey (Ruzicka 2017b) details that the original schoolhouse structure was constructed in 1910 at Palawai School, approximately two miles south of Kōʻele, and was moved to Kōʻele between 1920-1922. A letter concerning CSH 3, describes that the school building was originally placed southeast of the Kōʻele District (SIHP # -1004) reservoir “in what is presently the seventh green of the golf course” (Morita 1988:3). The letter states around 1922 a larger school was established near the “present golf clubhouse” (Morita 1988:3). In 1927, the CSH-3/Structure A school building was moved within the Kōʻele District and was used as part of the Lānaʻi Ranch Camp where it was lived in by successive workers including John and Hannah Richardson. In 1986, during construction of the Koele Hotel/Four Seasons Resort the subject building was then moved west of Lānaʻi City, near the Lanai Power Plant.

The Kōʻele District (SIHP # -1004) is the location of the former Lānaʻi Ranch Headquarters. None of the original buildings of the ranch or buildings that once contributed to the recorded significance of the site exist in their primary location, instead they have all been either moved within the property or relocated to and from the location. Structures of SIHP # -1004 include five historic wood-frame buildings (Features A-D and F) and a reservoir (Feature E) in what is now known as the Four Seasons Resort at Kōʻele (Wright 1974 and Kaschko 1986). CSH-3 was documented as Structure A, prior to being relocated.

Both CSH-2 and CSH-3 were moved into the Hōkūāo 201-H Housing Project area through efforts of community groups. “Around 1985-1986 and through the efforts of Lanaians for Sensible Growth, Hui Malama Pono o Lānaʻi, and the community of Lānaʻi, the two structures were relocated to the bottom of Ninth Street and intended for preservation, restoration, and incorporation into the landscape at Kōʻele as part of a heritage program through an agreement with Castle and Cooke Resorts” (Lee-Greig and Hammatt 2009:56). Both structures were documented in extreme disrepair during the Lee-Greig and Hammatt (2009) study. However, they were still assessed as eligible for listing on the Hawaiʻi Register of Historic Place (State Register) under Criterion d (Lee-Greig and Hammatt 2009:32).

The two structures, CSH-2 and CSH-3 were documented again during the AIS for the Hōkūāo 201-H Housing Project in 2018 (Dye and Maly 2018:104-105). They were documented in worse condition than they were in 2009 and were assessed as lacking the integrity of condition to be listed on the State Register (Dye and Maly 2018:135).

In 2017, the two structures were documented to be partially collapsed and the City of Maui recommended mitigation for their demolition. A Historic American Buildings Survey (HABS) was completed for each of the structures (Ruzicka 2017 a and b). The HABS surveys were submitted to SHPD on October 12, 2018 (Log No. 2018.02441, Log No. 2018.02442). The buildings have since been demolished.

#### Additional Documented Historic Properties Within the Project Area

The Dye and Maly (2018) study also documented a pineapple harvester recorded as “Machine 1”. The harvester originally used a conveyor belt on a long boom to transport handpicked fruit to a bin situated on a flatbed truck. It was moved from the Miki area of southwestern Lānaʻi in 2010 (Morita 2010). The Dye and Maly (2018) study indicated that the harvester “is now in the possession of the Lānaʻi Culture and Heritage Center, which assessed the condition of ‘Machine 1’ around the time it was moved to its current location. The assessment found the main frame to be sound and the diesel engine repairable, but other components, such as the electrical system, elevator, boom, conveyors, counterweight, crown blower system, walkways, rails, ladders, platforms, operator station, and bin were in various states of disrepair. Several pieces were noted as missing, and rust, which was widespread, threatened the structural integrity of several components” (Dye and Maly 2018:104). The harvester was assessed as eligible for the State Register under significance Criterion a “for its association with the commercial pineapple fields that for seven decades were the primary economic pursuit on the island” and it was recommended that it be moved to a sheltered location away from the project area for future restoration and interpretive display (Dye and Maly 2018:135). The study determined that once the machine had been moved away the project would have “no effect” on historic properties.

The Lee-Greig and Hammatt (2009) study also documented a historic culvert headwall (SIHP #50-40-98-6649) within the current project area. The headwall was constructed of four courses of cut basalt held together by fine sand aggregate mortar, the south wall was covered with a thin white layer of plaster that was peeling off, and the north wall was inscribed with the date “1948” (Lee-Greig and Hammatt 2009:32). The culvert headwall was determined to likely be related to the expansion of Lānaʻi City and the development of the associated drainage system (Lee-Greig and Hammatt 2009:55). The study determined the site was eligible for the State Register under significance Criterion d, due to its potential to yield information important for understanding the history of the region.

#### Current Field Inspection

A field inspection was conducted on November 6<sup>th</sup>, 2019 by Nathan DiVito B.A. of Honua Consulting under the general supervision of Rosanna Thurman, M.A. (principal investigator). The fieldwork required approximately 2 hours to complete and was performed under permit number 19-22 issued to Honua Consulting by the SHPD.

The current field inspection could not locate the structures documented as CSH-2 and CSH-3, as reviewed documents suggest they have been demolished. Only thick overgrowth was observed at their former locations. The pineapple harvester, “Machine 1”, was located in the same location as previously documented by Dye and Maly (2018). It was surrounded by a chain-link fenced area that was heavily overgrown and was in the same general rusty condition as previously described (Dye and Maly 2018). Photos and a GPS location were taken for the harvester (Figure 2). The historic culvert headwall (SIHP # -6649) was observed and found to be in the same condition as previously described (Lee-Greig and Hammatt 2009). Nothing else of archaeological note was observed or collected during the current project.

If you have any questions or recommendations, please feel free to notify either Dodge Watson at (808) 392-1617 or Rosanna Thurman at (808) 927-9920.

Sincerely,

Rosanna Thurman  
Principal Investigator  
Honua Consulting

Table 1. Table Listing Historic Properties Previously Documented Within the Current Project Area

| Site   | Site Type   | Condition  | Recommendation  |
|--|---|--|---|
| Temporary Site Number CSH-2  | Koele Grammar School, two-room schoolhouse built 1927 (also referred to as the Boy Scout Hall)    | Destroyed  | Was recommended significant under Criterion d (Lee-Greig and Hammatt 2009:32), determined to not retain integrity and not be eligible for the State Register (Dye and Maly 2018:135)  |
| Temporary Site Number CSH-3; Structure A of SIHP # -1004 (Kō'ele District) | Kō'ele single-room schoolhouse built 1910 (also referred to as Palawai School & Richardson House) | Destroyed  | Was recommended significant under Criterion d (Lee-Greig and Hammatt 2009:32), determined to not retain integrity and not be eligible for the State Register (Dye and Maly 2018:135)  |
| Pineapple Harvester "Machine 1"  | Pineapple Harvester   | Exposed within an open field, surrounded by a chain-link fence | Structural integrity found to be threatened but found eligible to State Register for significance Criteria a; recommends being moved to a sheltered location, restoration, and interpretive display (Dye and Maly 2018:135) |
| SIHP #50-40-98-6649  | Historic culvert headwall   | Good   | Determined eligible for the State Register under significance Criterion d; sufficiently documented, no further work (Lee-Greig and Hammatt 2009:57-58)  |

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2017b Historic American Buildings Survey Conducted for Palawai School (Koele School) (John and Hannah Richardson House). Historic American Buildings Survey, U.S. Department of the Interior, National Park Service, Seattle, Washington.

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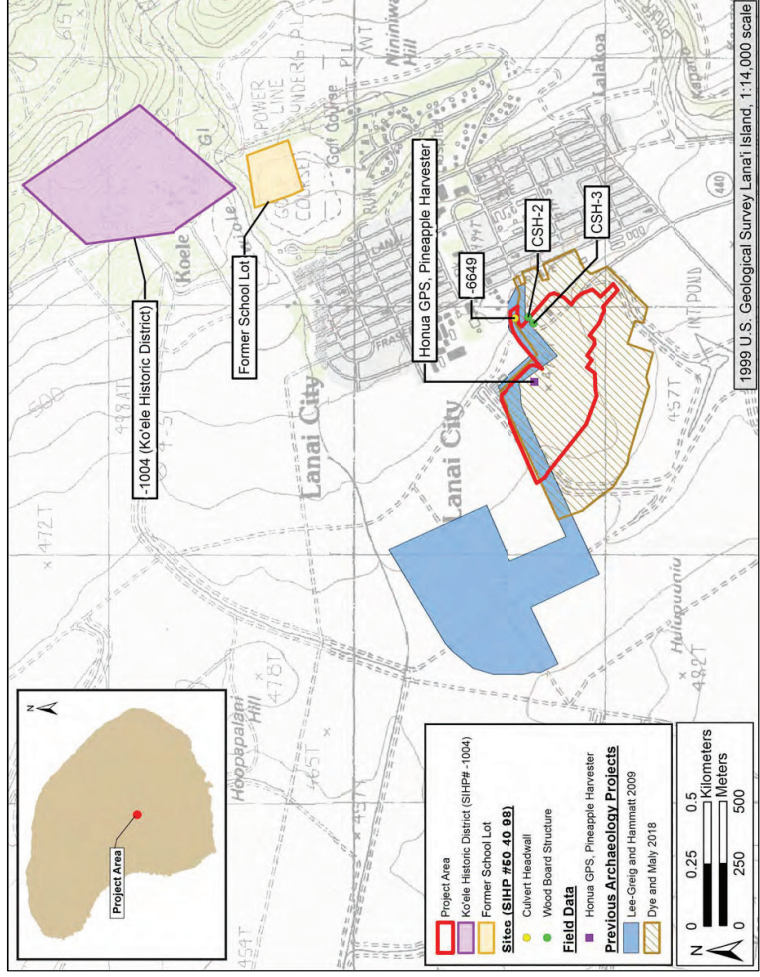


Figure 1. Portion of a 1999 Lanai USGS showing the proposed project area (outlined in red), previous archaeological studies within the project area, locations of previously documented sites within the project area, the location of the Kōe'le District, and the location of a former school lot as shown on LCAP 862



Figure 2. Overview photo of the pineapple harvester recorded as "Machine 1"

**KOELE GRAMMAR SCHOOL  
(Lanai City School)  
Southwest of Fraser Avenue and 9<sup>th</sup> Street junction  
Lanai City  
Maui County  
Hawaii**

**HABS No. HI-###**

**PHOTOGRAPHS**

**WRITTEN HISTORICAL AND DESCRIPTIVE DATA**

**HISTORIC AMERICAN BUILDINGS SURVEY  
U.S. Department of the Interior  
National Park Service  
909 First Avenue, 5<sup>th</sup> Floor  
Seattle, WA 98104**

**HISTORIC AMERICAN BUILDINGS SURVEY**

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**KOELE GRAMMAR SCHOOL  
(Lanai City School)  
Southwest of Fraser Avenue and 9<sup>th</sup> Street junction  
Lanai City  
Maui County  
Hawaii**

**HABS No. HI-###**

David Franzen, Photographer

September 2013

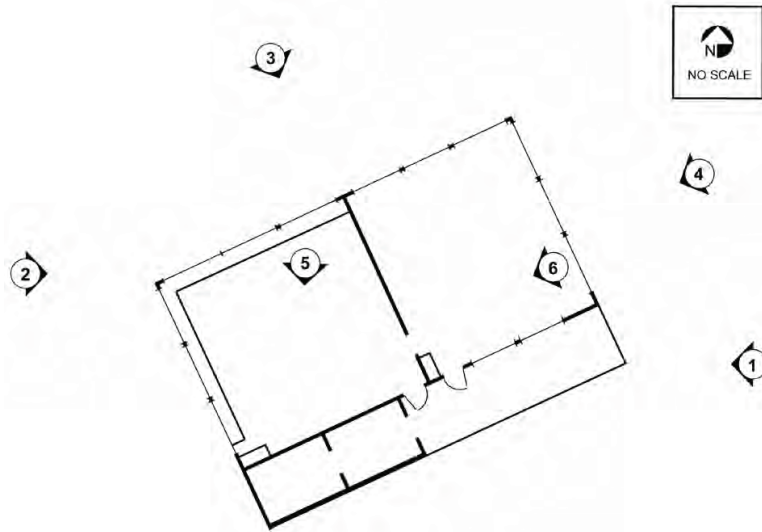
Note that these photographs were taken three years before this report was compiled.  
A 2017 image of the building is included in the field notes accompanying this report.

- HI-###-1 OBLIQUE VIEW OF THE FRONT FAÇADE. VIEW FACING WEST.
- HI-###-2 OBLIQUE VIEW OF THE REAR SIDE. VIEW FACING EAST.
- HI-###-3 ELEVATION VIEW OF THE REAR SIDE. VIEW FACING SOUTHEAST.
- HI-###-4 ELEVATION VIEW OF THE GABLE END. VIEW FACING SOUTHWEST.
- HI-###-5 INTERIOR VIEW OF THE LEFT SIDE CLASSROOM SHOWING THE BUILT IN CLOSET AND COUNTER WITH CABINETS. VIEW FACING SOUTH.
- HI-###-6 INTERIOR VIEW OF THE RIGHT SIDE CLASSROOM SHOWING THE BUILT IN CLOSET AND THE DOOR TO THE OTHER CLASSROOM. VIEW FACING SOUTHWEST.



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PHOTO KEY



HISTORIC AMERICAN BUILDINGS SURVEY

KOELE GRAMMAR SCHOOL  
(Lanai City School)

HABS No. HI-###

**Location:** Southwest of Fraser Avenue and 9<sup>th</sup> Street junction  
Lanai City  
Maui County, Hawaii

Located at latitude: 20.822800, longitude: -156.922120.  
This point was obtained in December 2016, using Google Earth (WGS84). There is no restriction on its release to the public.

**Date of Construction:** 1927

**Builder:** Unknown

**Original Owner/Use:** County of Maui/ Schoolhouse

**Present Owner/Use:** Lanai Resorts LLC/ Vacant

**Significance:** Koele Grammar School is significant for its association with the development of the education system on the Island of Lanai. This building served as the main schoolhouse on Lanai about ten years.

**Project Information:** This Level III Historic American Buildings Survey (HABS) report was produced to fulfill the County of Maui's recommendations for mitigation for the demolition of the Koele Grammar School. This HABS report was produced in March, 2017. Field work was conducted on March 13, 2017 by Dee Ruzicka of Mason Architects Inc., Honolulu, HI. Report written by Dee Ruzicka. Archival Photography was produced by David Franzen of Franzen Photography, Inc., Kailua, HI in 2013.

**Historian:** Dee Ruzicka  
Mason Architects, Inc.  
119 Merchant Street, Suite 501  
Honolulu, HI 96813

**Date of Report:** March 2017

**Description:**

The Koele Grammar School has been moved twice.

This single-story, gable roof, wood building has an overall footprint of 48' x 34'-6" which includes an 8' wide lanai along the front long side of the building that provides entry to the two classrooms. The building is set up on wood blocks and is beginning to collapse. A portion of the roof, lanai floor, and a section of the exterior wall at the lanai are collapsed, sagging, and broken. Areas of the interior floor that are unsupported are sagging.

The building is single wall construction of 5" wide tongue and groove boards with v-joint chamfered edges and a center v-shaped groove running the length of the interior faces of the boards. On the exterior, the boards have vertical battens of 1" wide, rounded bead molding on

5" spacing covering the joints. Exterior walls have a water table of a 12" high board. The gable ends of the building, along the shorter sides, each have a two-panel fixed wood louver vent with an opening about 6' wide x 1'-6" high.

The visible roof sheathing at the eaves and lanai is the same 5" wide, v-groove boards as the building walls. The open rafters are 2 x 4 on 2' spacing, the eave overhang is about 2'-6", and the roof covering is wood shingles. At the gable ends the end rafters are 2 x 8 and there are knee braces with pyramid cut ends at the ridge and the side walls.

The building has wood sash, double sliding windows with openings measuring 3'-6" high x 6'-6" wide. All glazing has been removed from the windows. The windows form a band along three sides of the building, with three windows along the shorter sides and six windows along the longer (rear) side. Facing the lanai (front) side of the building, the classroom on the right has two added window openings, each about 6' wide with no sash. The two entry doors to the classrooms are missing, having been broken off. Ball top hinges remain in these doorways. The collapsed lanai is about 28' long. It was supported by 5½ square wood posts with chamfered edges, only two of which are still in place. Facing the building, the left side of the lanai has a small collapsed room, about 20' long and 8' wide (the width of the lanai). This room is divided into two 10' long sections by a partition wall with a doorway. The room was originally entered by a doorway from the lanai.

The interior of the main portion of the Koele Grammar School is divided into two 24' x 26' classrooms by a partition wall with a doorway (no door). Typical interior finishes in both rooms are: 3½" wide tongue and groove wood flooring with degraded linoleum floor covering in some places, 5" wide v-grooved tongue and groove boards at walls, approximately 8' x 4' painted plywood-panel ceiling with half round molding covering panel joints, and suspended fluorescent light fixtures. Each room has a small built-in wood closet with shelving. Each closet is 4' wide, 6' high, and 1'-6" deep with no door. The classroom that is on the left when facing the front (lanai) of the building has a built in wood counter, 1'-4" wide and 3'-3" high, that extends along the two exterior walls, under the windows. Cabinet space with shelving is beneath the countertop. All cabinet doors have been removed.

#### Historical Context:

The two-room Koele Grammar School was built by March of 1927, and by the 12<sup>th</sup> of that month it was occupied. The building was financed by the County of Maui, for an unknown amount over \$1500.<sup>1</sup> It was built about a half mile from the Koele Ranch Camp, to the south, across Iwole Gulch on the site of what would become the Cavendish Golf Course.<sup>2</sup> Students from Koele Ranch and from Lanai City attended. Eighth grade graduation ceremonies from Koele Grammar School were held at the Lanai Theater in Lanai City.<sup>3</sup> In September 1928, the people of Lanai City petitioned the Maui County board of supervisors to have the school's name changed to Lanai City School.<sup>4</sup>

By the mid-1930s, school children of Hawaiian Pineapple Co. (HAPCo) employees had expanded public school enrollment on Lanai to such a degree that additional classes were held

<sup>1</sup> "Koele School Finished." *Maui News*, March 12, 1927. P. 8.

<sup>2</sup> "Jean Forbes Adams, interviewed by Mina Morita, February 21, 1988." In *Lanai Ranch, The People of Koele and Keomuku*, (Honolulu": University of Hawaii at Manoa Center for Oral History, Social Science Research Institute) July 1989. 4.

<sup>3</sup> "Jean Forbes Adams," in *Lanai Ranch*. 19.

<sup>4</sup> "Lanai Requests Change in Name Leading School." *Maui News*, September 15, 1928. 1.

in the Lanai Japanese School and in the HAPCo plantation gymnasium.<sup>5</sup> By about 1937 the Koele Grammar School complex consisted of at least two buildings, the 1927 two-room building and another four-room building.<sup>6</sup>

In January 1938, the Lanai High and Elementary School was opened at its present location on Fraser Avenue.<sup>7</sup> The buildings of the Koele Grammar School complex were moved, in sections, to this new high school site.<sup>8</sup> During the 1970s the Koele Grammar School, on its second site at the high school campus near 7<sup>th</sup> and Fraser Avenues, was used as a meeting hall for the Lanai City chapter of the Boy Scouts of America. At some time after 1976, the two-room Koele Grammar School building was moved to its present location.<sup>9</sup>

#### Sources:

##### Drawings and Photographs:

No historic drawings of the Koele Grammar School were located during research for this report.

Aerial photographs of Lanai are available in the collection of the Hawaii State Archives:

January 26, 1952, Folder PPA-1, photo # 1-5.

January 20, 1965, Folder PPA 32-2, photo # 1CC-26.

Aerial photographs of Lanai are available in the MAGIS collection of the University of Hawaii at Manoa:

December 25, 1976, Folder GeoserverFiles/ShpFiles/MauiLanaiKahoolawe/035/jpegs.

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<sup>5</sup> "Lanai Starts High School." *Maui News*, November 9, 1938. 5.

<sup>6</sup> "Jean Forbes Adams," in *Lanai Ranch*. 4.

<sup>7</sup> Alberta De Jetley, *Images of America, Lanai*. (Charleston: Arcadia Publishing). 2015. 59. And *Maui News*, July 20, 1938. 1.

<sup>8</sup> *Lanai Ranch, The People of Koele and Keomuku*, (Honolulu": University of Hawaii at Manoa Center for Oral History, Social Science Research Institute) July 1989. A-8.

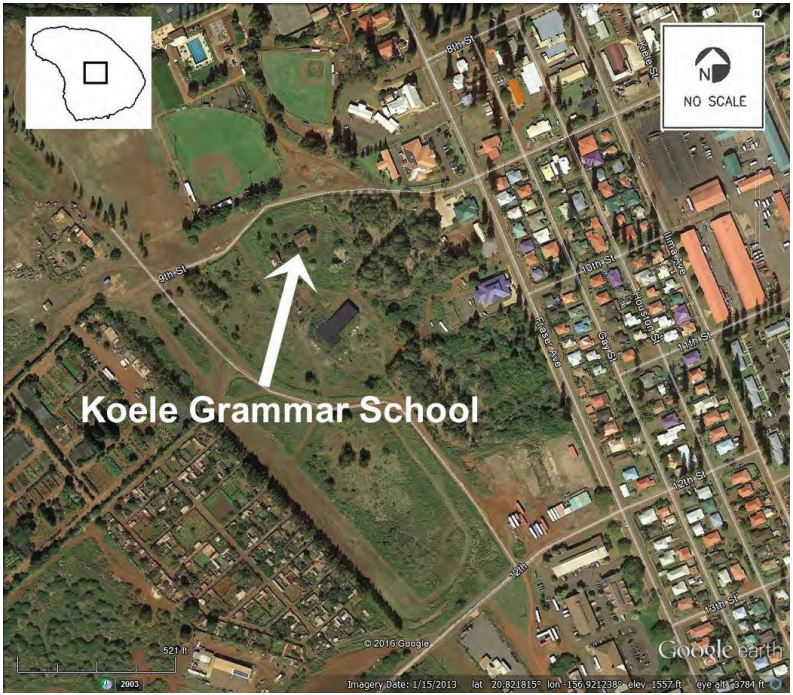
<sup>9</sup> Maps, Aerial Photographs, and GIS (MAGIS) archives at University of Hawaii at Manoa. Image 3461 in folder GeoserverFiles/ShpFiles/MauiLanaiKahoolawe/035/jpegs. December 25, 1976. And Alberta deJetly, telephone interview with Dee Ruzicka, March 22, 2017.

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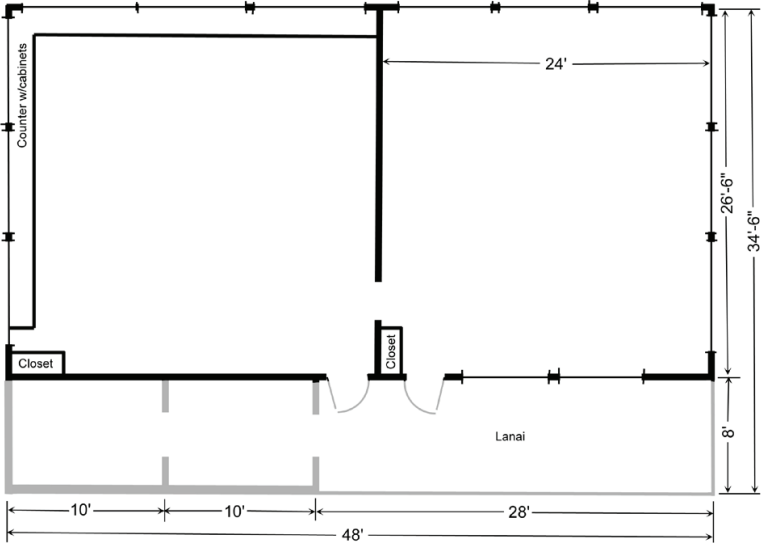
UDGS. "Topographic Map of the Island of Lanai, scale 1:62500." (Washington DC: Department of the Interior, U.S. Geological Survey). 1940.

Location Map (Source: Google Earth).



Field sketch (Prepared by Mason Architects, Inc.)

The gray area indicates; collapsed, broken, sagging areas of the building. No scale.



Koele Grammar School  
HABS No. HI-###  
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Field Notes:  
This photograph showing the condition of the building was taken on March 13, 2017. View facing north.



Koele Grammar School  
HABS No. HI-###  
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Field Notes:  
This photograph showing the condition of the building was taken on March 13, 2017. View facing northeast.





Koele Grammar School  
HABS No. HI-###  
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Field Notes:  
This photograph showing the condition of the building was taken on March 13, 2017. View facing northeast.



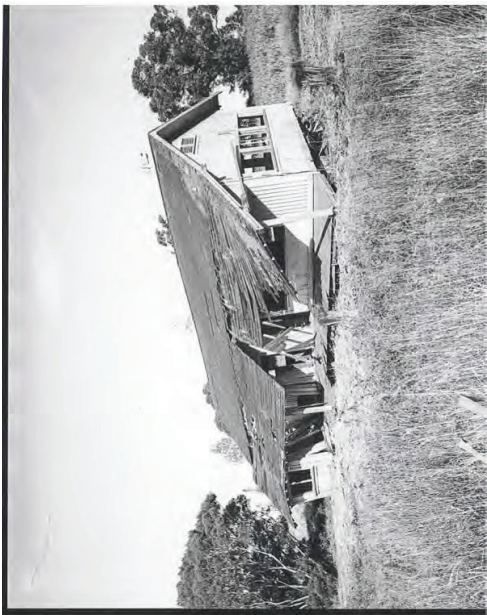
Koele Grammar School  
HABS No. HI-###  
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Field Notes:  
This photograph showing the condition of the building was taken on March 13, 2017. View facing southeast.



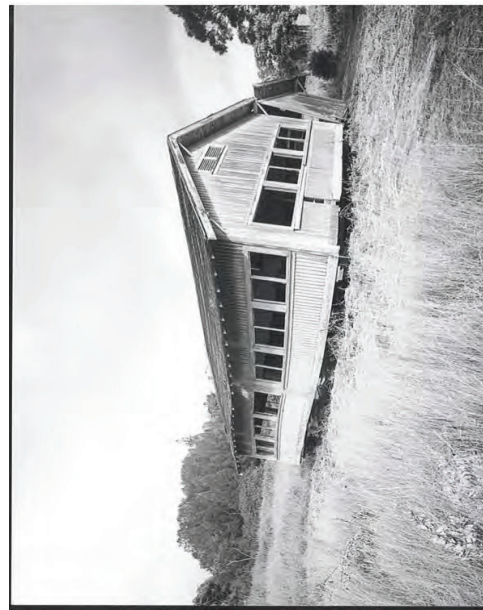
HISTORIC AMERICAN BUILDINGS SURVEY  
SEE INDEX TO PHOTOGRAPHS FOR CAPTIONS

HABS No. HI-###-1



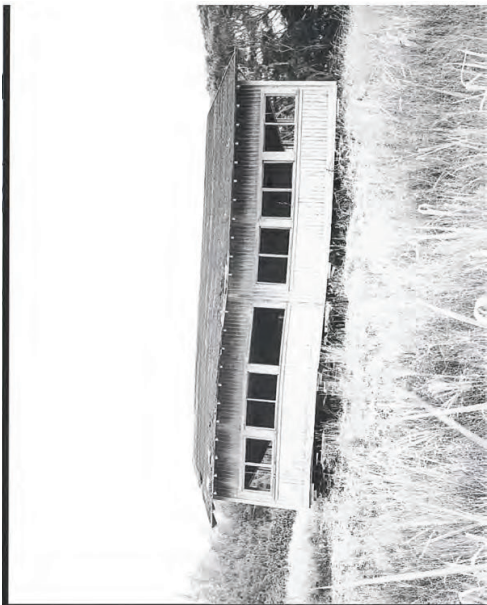
HISTORIC AMERICAN BUILDINGS SURVEY  
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HABS No. HI-###-2



HISTORIC AMERICAN BUILDINGS SURVEY  
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HABS No. HI-###-3



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HABS No. HI-###-4





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HABS No. HI-###-6





**PALAWAI SCHOOL**  
**(Koele School)**  
**(John and Hannah Richardson House)**  
**Southwest of Fraser Avenue and 9<sup>th</sup> Street junction**  
**Lanai City**  
**Maui County**  
**Hawaii**

**HABS No. HI-###**

**PHOTOGRAPHS**

**WRITTEN HISTORICAL AND DESCRIPTIVE DATA**

**HISTORIC AMERICAN BUILDINGS SURVEY**  
**U.S. Department of the Interior**  
**National Park Service**  
**909 First Avenue, 5<sup>th</sup> Floor**  
**Seattle, WA 98104**

**HISTORIC AMERICAN BUILDINGS SURVEY**

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**PALAWAI SCHOOL**  
**(Koele School)**  
**(John and Hannah Richardson House)**  
**Southwest of Fraser Avenue and 9<sup>th</sup> Street junction**  
**Lanai City**  
**Maui County**  
**Hawaii**

**HABS No. HI-###**

David Franzen, Photographer

September 2013

Note that these photographs were taken three years before this report was compiled.

A 2017 image of the building, now a ruin, is included in the field notes accompanying this report.

- HI-###-1 OBLIQUE VIEW OF THE FRONT FAÇADE. VIEW FACING EAST.
- HI-###-2 OBLIQUE VIEW OF THE REAR SIDE. VIEW FACING WEST.
- HI-###-3 ELEVATION VIEW OF THE FRONT FAÇADE WITH SCALE DEVICE IN 1' INCREMENTS. VIEW FACING SOUTHEAST.
- HI-###-4 INTERIOR VIEW. VIEW FACING SOUTHWEST.

Because of inability to orient these 2013 photos with the ruined 2017 building, a sketch photo key was not prepared for this report.

HISTORIC AMERICAN BUILDINGS SURVEY

**PALAWAI SCHOOL**  
(Koele School)  
(John and Hannah Richardson House)

HABS No. HI-###

**Location:** Southwest of Fraser Avenue and 9<sup>th</sup> Street junction  
Lanai City  
Maui County, Hawaii  
Located at latitude: 20.822615, longitude: -156.922375.  
This point was obtained in December 2016, using Google Earth (WGS84). There is no restriction on its release to the public.

**Date of Construction:** Ca. 1910

**Builder:** Charles Gay

**Original Owner/Use:** Charles Gay/ Schoolhouse

**Present Owner/Use:** Lanai Resorts LLC/ Vacant

**Significance:** The Palawai School is significant for its association with the development of the education system on the Island of Lanai and as an example of single family housing at Koele Ranch. This building was one of the earliest schoolhouses on Lanai and it served as a school for about seventeen years. For over fifty years after that it was a single family dwelling at Koele Ranch.

**Project Information:** This Level III Historic American Buildings Survey (HABS) report was produced to fulfill the County of Maui's recommendations for mitigation for the demolition of the Palawai School. This HABS report was produced in March, 2017. Field work was conducted on March 13, 2017 by Dee Ruzicka of Mason Architects Inc., Honolulu, HI. Report written by Dee Ruzicka. Archival Photography was produced by David Franzen of Franzen Photography, Inc., Kailua, HI in 2013.

**Historian:** Dee Ruzicka  
Mason Architects, Inc.  
119 Merchant Street, Suite 501  
Honolulu, HI 96813

**Date of Report:** March 2017

**Description:**  
The Palawai School has been moved three times.

This single story wood building is completely collapsed into an irregular footprint that is indistinct in some areas but has overall dimensions of about 40' x 31'. The building has collapsed onto the steel 55-gallon drums that it was set on after its last move. Remaining

Palawai School  
(Koele School) (John and Hannah Richardson House)  
HABS No. HI-###  
(Page 2)

portions of the building in the collapsed jumble show that it was of board and batten construction, with 12" wide boards and 3" wide battens. The building had a corrugated metal roof with a narrow eave overhang of about 1' and narrow fascia boards.

**Historical Context:**

The Palawai School was built ca. 1910 by Charles Gay<sup>1</sup> near the lower end of Keaaku Gulch where it opens into Palawai basin, about two miles south of Koele.<sup>2</sup> The school was built like a house and had one classroom.<sup>3</sup> Palawai was chosen for the location of the school because of its central location; students came from Koele, Malauea, and Waiapaa.<sup>4</sup> At the time it was built, another schoolhouse was located at Keomuku on the northeast coast of Lanai. Sometime about 1920-22,<sup>5</sup> the Palawai School was moved to Koele, and set up at a site near where the 7<sup>th</sup> green of the Cavendish Golf Course is today.<sup>6</sup> In 1922 the school became part of the public school system of the Territory of Hawaii.<sup>7</sup> The Palawai (Koele) School ceased functioning as a classroom in 1927, when the two-room Koele Grammar School was built a short distance away.<sup>8</sup>

Ca. 1927, with the construction of the new Koele Grammar School, the Palawai (Koele) School was moved to the Koele Ranch Camp by Morikazu Kawano, who was a carpenter for the ranch.<sup>9</sup> The building was moved by dismantling and re-assembling, and it became a residence. It was set up within a cluster of residential buildings at the north corner of the Ranch Camp.<sup>10</sup> Kawano was the first of several successive occupants of the building, including ranch saddle maker Simeon Kauakahi and his family.<sup>11</sup> In 1946 the building became the home of John and Hannah Richardson.<sup>12</sup> The building underwent numerous alterations since the time it was a one room school house, including a kitchen addition, bathroom, and the partitioning of the original single class room.<sup>13</sup>

<sup>1</sup> "Violet Gay, interview by Mina Morita, December 5, 1988." In *Lanai Ranch, The People of Koele and Keomuku*, (Honolulu": University of Hawaii at Manoa Center for Oral History, Social Science Research Institute) July 1989. 402, 438, 391, 434. "Hannah Richardson interview by Mina Morita, August 14, 1988." In *Oral Histories*. 662.

<sup>2</sup> "Violet Gay," In *Lanai Ranch*. 442-443.

<sup>3</sup> "Violet Gay," In *Lanai Ranch*. 437, 439.

<sup>4</sup> "Violet Gay," In *Lanai Ranch*. 438.

<sup>5</sup> "Hannah Richardson, interview by Mina Morita, August 14, 1988." In *Lanai Ranch, The People of Koele and Keomuku*, (Honolulu": University of Hawaii at Manoa Center for Oral History, Social Science Research Institute) July 1989. 664.

<sup>6</sup> "Violet Gay," In *Lanai Ranch*. 444.

<sup>7</sup> "Lanai Starts High School," *Maui News*, November 9, 1938. 5.

<sup>8</sup> "Jean Forbes Adams, interviewed by Mina Morita, February 21, 1988." In *Lanai Ranch, The People of Koele and Keomuku*, (Honolulu": University of Hawaii at Manoa Center for Oral History, Social Science Research Institute) July 1989. 4.

<sup>9</sup> "Hannah Richardson," In *Lanai Ranch*. 664-665.

<sup>10</sup> Alberta deJetly, telephone interview with Dee Ruzicka, March 22, 2017.

<sup>11</sup> "Hannah Richardson," In *Lanai Ranch*. 664-665.

<sup>12</sup> "Violet Gay," In *Lanai Ranch*. 445. "Hannah Richardson," In *Lanai Ranch*. 662.

<sup>13</sup> "Hannah Richardson," In *Lanai Ranch*. 663, 666.

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The Richardsons occupied the building until ca. 1986, when the Koele Lodge was being built.<sup>14</sup> At that time, the Palawai School (Richardson House) was moved from Koele to its present site near the Lanai Power Plant.<sup>15</sup>

**Sources:**

Drawings and Photographs:

No historic drawings of the Koele School were located during research for this report.

Historic photographs of the building are found in:

Munro, George C. *The Story of Lanai*. (Honolulu: Richard M. Towill). 2007. Front pieces. Ca. 1924 aerial photograph of Koele Ranch showing the building to the southeast of the ranch compound. Ca. 1921 photograph of the front of the building during a luau.

de Jetley, Alberta. *Images of America, Lanai*. Charleston: Arcadia Publishing. 2015. Page 41. A ca. 1988 photograph of the building when it was the home of John and Hannah Richardson.

Center for Oral History, Social Science Research Institute, University of Hawaii at Manoa. *Lanai Ranch, The People of Koele and Keomuku, Volumes I and II*. (Honolulu: University of Hawaii at Manoa). July 1989. Page ii, Images 72-74. Photos of the building ca. 1921 when it was Koele School, and ca. 1986 when it was the home of John and Hannah Richardson.

Aerial photographs of Lanai are available in the collection of the Hawaii State Archives:

January 26, 1952, Folder PPA-1, photo # 1-5.

January 20, 1965, Folder PPA 32-2, photo # 1CC-26.

Bibliography:

Center for Oral History, Social Science Research Institute, University of Hawaii at Manoa. *Lanai Ranch, The People of Koele and Keomuku, Volumes I and II*. (Honolulu: University of Hawaii at Manoa). July 1989.

de Jetley, Alberta. *Images of America, Lanai*. Charleston: Arcadia Publishing. 2015.

de Jetley, Alberta. Telephone interview with Dee Ruzicka. March 22, 2017.

Munro, George C. *The Story of Lanai*. (Honolulu: Richard M. Towill). 2007.

USGS. "Topographic Map of the Island of Lanai, scale 1:62500." (Washington DC: Department of the Interior, U.S. Geological Survey). Edition of 1925.

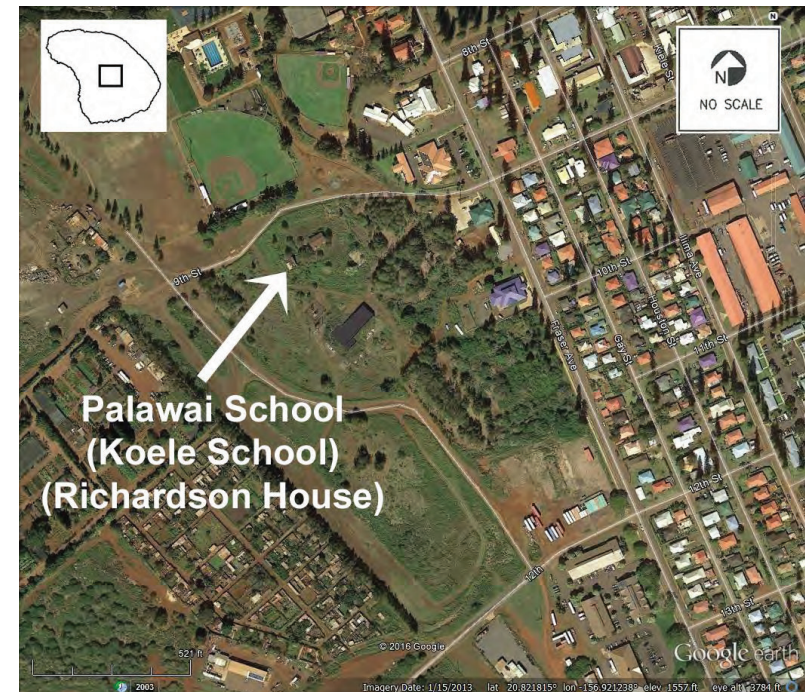
<sup>14</sup> "Hannah Richardson," In *Lanai Ranch*. 630, 662.

<sup>15</sup> Alberta de Jetly, *Lanai, Images of America*. (Charleston: Arcadia Publ.). 2015. 41. And Alberta deJetly, telephone interview with Dee Ruzicka, March 22, 2017.

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USGS. "Topographic Map of the Island of Lanai, scale 1:62500." (Washington DC: Department of the Interior, U.S. Geological Survey). 1940.

**Location Map** (Source: Google Earth).



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Field Notes:

This photograph showing the condition of the building was taken on March 13, 2017. View facing southeast.



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Field Notes:

This photograph showing the condition of the building was taken on March 13, 2017. View facing south.





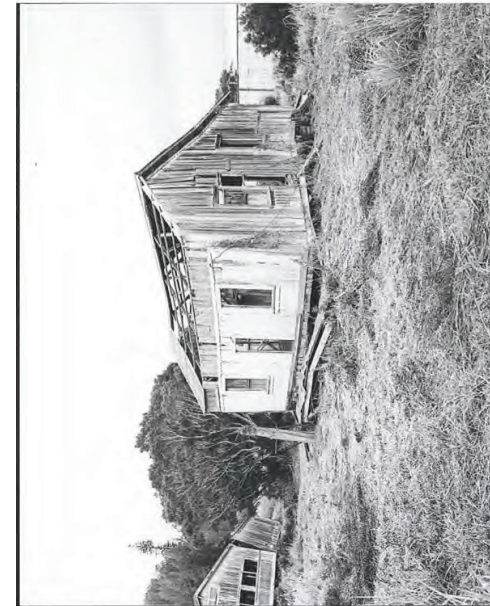
Palawai School  
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Field Notes:  
This photograph showing the condition of the building was taken on March 13, 2017. View facing west.



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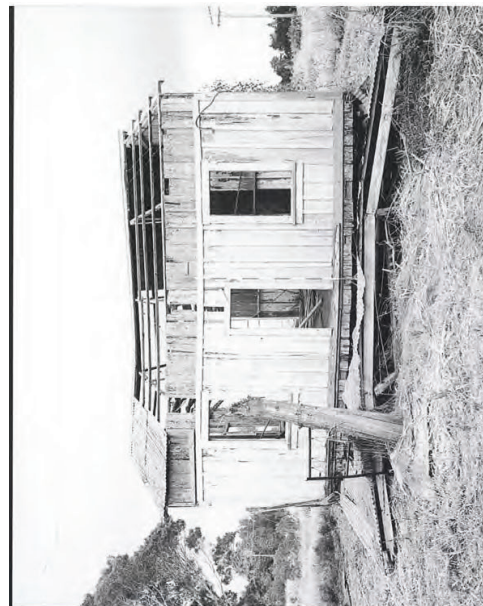
HISTORIC AMERICAN BUILDINGS SURVEY  
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HABS No. HI-###-2



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