

HAWAIIAN PINEAPPLE COMPANY (HAPCO) LTD. HOUSE NO. 26

-4

(LC-BCT-005)

605 Lanai Avenue

Lanai City

Maui County

Hawaii

HABS HI-559

*HABS HI-559*

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

FIELD RECORDS

HISTORIC AMERICAN BUILDINGS SURVEY

National Park Service

U.S. Department of the Interior

1849 C Street NW

Washington, DC 20240-0001

## HISTORIC AMERICAN BUILDINGS SURVEY

### HAPCO (HAWAIIAN PINEAPPLE CO, LTD) HOUSE NO. 26-4 (LC-BCT-005)

HABS No. HI-559

**Location:** 605 Lanai Avenue  
Lanai City  
Maui County  
Hawaii  
  
U.S.G.S. Lanai South, Hawaii quadrangle, 1992  
7.5 Minute Series (Topographic) (Scale – 1:24,000) NAD83 datum.  
  
Universal Transverse Mercator Coordinates:  
04.716515.2304420  
  
Latitude and Longitude Coordinates:  
20°49'38"N 156°55'10"W

**Date of Constr:** 1923

**Designers:** David E. Root<sup>1</sup>

**Builder:** Kikuichi Honda, Contractor

**Owner:** Lanai Resorts LLC

**Present Use:** Vacant

**Significance:** Hawaiian Pineapple Co., Ltd., or HAPCo House No. 26-4 at 605 Lanai Avenue is a double house type plantation housing building located within the proposed Lanai City Business Country Town (Lanai City BCT) historic district. HAPCo House No. 26-4 is significant as a plantation period residence that was constructed exclusively by Japanese contractors under the leadership of Kikuichi Honda. Its double house configuration is an important vernacular house type in Maui County and in the State of Hawaii. Lanai City BCT was the first planned community in the Territory of Hawaii. Today it is the last intact plantation town in Maui County, and the last intact example of Garden City planning and Hawaii Sugar Planters Association Village planning standards in Maui County, and one of the last in the State of Hawaii.<sup>2</sup>

**Date of Report:** December 2013

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<sup>1</sup> James T. Munro, "History of Water Resources on Lanai, n.p. 1958.

<sup>2</sup> Stanley Solamillo, "Draft National Register of Historic Placed Registration Form, Lanai City Business City Town." Proposed historic district. March 2012. P. 7, 45.

## DESCRIPTION:

The historic name for this building, HAPCo House No. 26-4, is taken from the historic resources inventory sheet for 605 Lanai Avenue that is found on page 111 of the continuation sheets of the draft National Register Form for the proposed Lanai City BCT Historic District.<sup>3</sup> The alternate name for this resource, LC-BCT-005, is the site number assigned by Hawaii State Historic Preservation Division, also found on the draft National Register Form continuation sheet.

HAPCo House No. 26-4 is a single story residence that has a side gable roof with shed roof sections. It has a foundation of wood posts on footings of either single basalt stones or solid concrete blocks. It has overall footprint dimensions of 24'-0" x 52'-0". The shed roof portion at the rear of the house was constructed ca. 1938 under the direction of HAPCo plantation superintendent Dexter Fraser to provide toilet facilities and additional space for the residents.<sup>4</sup>

The foundation of the house is 4" x 4" wood posts that raise the building about 2'-6" above grade. These posts are on a typical spacing of about 6' across the front (24'-0" side) of the house and about 5' across the sides (52'-0" side). Some posts have angled bracing of 2" x 4" that ties them to 4" x 4" longitudinal beams that support the 2" x 4" transverse floor joists that are set on 2'-0" spacing. The wood foundation posts are typically set on large stones, with some posts on solid concrete blocks about 10" square and 6" high. A wood grid lattice of 1½" wide strips screens the foundation. The washroom, at the rear of the house, has a concrete wall foundation that supports its concrete slab floor about 2'-0" above grade. This concrete wall foundation has horizontal impressions from the boards used for forming. The foundation wall rises to about 4' above grade in the area that encloses the shower stall. The rear door, at the washroom, is accessed by three wooden steps up from grade. This rear washroom was added to the original building ca. 1938. Before its addition, residents used a communal wash house that was supplied with hot and cold running water.<sup>5</sup>

The exterior walls of HAPCo House No. 26-4 are constructed with 2x4 studs on both sides of each opening and by 4x4 posts at corners which support a 2x4 top plate. The house is clad with 12" side boards and 3" wide battens on the exterior and 1¾" wide battens on the interior. The exterior walls typically have a batten as trim at the eaves and no trim or water table at their bottom. The exterior board and batten walls are visible on the interior. Interior walls are true single wall construction with 1¾" battens each side of 1x12 boards. The exteriors were originally stained but all surfaces are painted.

The approximately 20'-deep portion of this house covered by the side gable roof consists of the living room and two front bedrooms. A short section of shed roof projects about 7' from the northeast lower eave, covering the front lanai, and a longer section of shed roof projects about 27' from the southwest eave, covering the kitchen, rear bedroom and wash room. All sections of the roof are sheathed with corrugated metal. All eaves of the house (gable ends and shed roof eaves) have an overhang of between 1'-0" and 1'-3". The gable ridge height is about 17'-4" above grade. The roof framing of the gable section is 2" x 4" purlins on about 5' spacing with a nominal 1x4 fascia board at the gable ends. Purlins measuring 2" x 4" at the shed roof sections are spaced at about 4'. The rafters are visible at the lower eaves of the front and rear shed sections. These are nominal 2x4s on 4'-0" spacing at the front, and 4'-0" and 5'-0" spacing at the rear.

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<sup>3</sup> Ibid. P. 111.

<sup>4</sup> Ibid. P. 37.

<sup>5</sup> Ibid. P. 23.

Windows in this house are a combination of six-over-six-light double-hung sash with sash pins, six-light sliding sash, six-light awning, and six-light fixed sash, all with interior frames. The awning and fixed sash appear to have been converted from sliding windows. All windows have a typical exterior casing and apron of 1x4 boards with a window stool that projects 1¾" from the wall. Double-hung window openings are 2'-2" wide and 4'-0" high and are found in single, paired and triple gang. Paired and triple double-hung windows are in the living room. Single double-hung windows are in the three bedrooms. Awning window and fixed sash openings are 2'-2" wide and 2'-0" high. They are found in the lanai and rear bedroom. Sliding window openings are 2'-0" high; the double sash sliding at the rear bedroom is 4'-6" wide and the triple sash sliding at the kitchen is 6'-7" wide. The rear washroom has typical openings for an awning window that is fitted with a screen only, and a double sliding window that has been replaced with single light sash.

Doorways in the house have nominal 1x4 casings, and are typically 2'-6" wide and 6'-8" high. The front wood entry doors have five panels. Hardware includes steel knobs and escutcheon plates and ball tip hinges. The north entry has a wood screen door with a large screen opening over three lower panels. The wood entry door to the small room off the north end of the lanai has three panels.

The lanai is accessed by wood steps from grade level with nominal 2x4 handrails. The lanai floor is painted 5¼" wide tongue-and-groove boards. The front railing is built of nominal 2x4s with an added solid plywood panel on the exterior. An added lattice of diagonal wood strips covers the open space above the front railing. A grid lattice of painted wood strips covers the front wall of the small room at the north end of the lanai.

The interior of HAPCo House No. 26-4 has three bedrooms along the southeast side and the living room and kitchen along the northwest side. The washroom is set off the main portion of the building at the west rear corner. The interior has painted board-and-batten walls with 12" boards and 1¾" battens. Ceilings have the same board-and-batten configuration. The flooring is painted 5¼" wide tongue-and-groove boards with vinyl floor covering in some rooms. Interior doors are typically five panel wood with steel knobs and escutcheon plates and ball tip hinges. Some interior doors have rim locks and white enamel knobs. Ceiling light fixtures are sockets only. Light fixture controls are surface wired from the ceiling.

The floor level of the kitchen and rear bedroom is about 9" below the floor level of the living room and is accessed by a step down. This drop in floor level corresponds to the rear roof transition from side gable to shed roof. The kitchen has painted wood upper cabinets and natural finished wood lower cabinets with a galvanized metal counter surrounding the sink. The washroom floor level is about another 1' lower than the kitchen and accessed by two wooden steps. The washroom has a concrete floor with a floor drain and board-and-batten interior walls. The washroom has no finished ceiling; the roof framing and the underside of the corrugated metal roofing are exposed. Within the washroom, the wood door to the toilet has three panels and a steel knob and escutcheon plate. The wood door to the shower has five panels and a rim lock.

At the rear (to the southwest) of HAPCo House No. 26-4 is a small garage with space for about three vehicles. It is constructed of corrugated metal on a wood frame and has overall footprint dimensions of 34'-6" x 20'-0". The garage has a low slope shed roof of corrugated metal that has a varying height above grade due to the sloping terrain. The shed roof slopes from about 9' to 7' above grade at the northwest end and from about 7' to 6' at the southeast end. The southwest side of the garage (facing Koele Pl.) is open, with no doors, to allow vehicle entry.

The garage frame is 4 x 4 posts that rest on solid concrete foundation blocks. Horizontal framing members at the top, bottom, and near the midpoint of the posts provide attachment points for the vertically oriented corrugated metal siding. Each of the garages' three bays has a different form of roof framing. The northwest bay (approximately 13' wide) has 2 x 6 rafters on 4'-0" spacing that support 2 x 4 purlins spaced about 2'-9". A wall of vertically oriented corrugated metal panels separates this bay from the middle bay (approximately 10' wide). The 2 x 6 rafters of the northwest bay extend about 1' into the middle bay, where they are attached to the 4 x 4 rafters of the middle bay. These middle bay rafters extend about 1' into the southeast bay (approximately 11'-6" wide), which has 2 x 4 rafters that are sagging and broken. No partition divides the middle and southeast bays. This rafter configuration appears to be the result of incremental construction of the garage by bays, beginning at the northwest. The garage floor is dirt, and a 2'-4" wide doorway opening is located on the northeast side to provide access to the middle and southeast bays from the house. Adjacent to this doorway is an approximate 8'-6" long section of vertical wood slats about 3'-8" high in the upper portion of the wall. Based on aerial photographs and residents' observations, the garage was constructed after 1971.<sup>6</sup>

## **HISTORIC CONTEXT:**

### Early Lanai History

The Island of Lanai was first recorded by Europeans in 1779 by Captain Charles Clerke of HMS Resolution after he took command of the vessel following the death of Captain James Cook. Hawaiian oral tradition maintains that the island was first inhabited ca. 1400 after its malovent spirits had been driven out by an exiled youth from Lahaina. During the pre-contact time between these dates, the island became populated by several thousand Hawaiians who developed extensive dry land cultivation, fishponds, and a variety of cultural features. Hawaiian civil wars during the 1790s sharply reduced Lanai's population before the 1796 unification of the Hawaiian Islands by Kamehameha the Great allowed survivors to gradually replenish their population. At the time of the first census by Christian missionaries in 1832, there were 1,600 Hawaiians on the island. Through the ensuing decades, Lanai's Hawaiian population shrank, down to 616 in 1846, and to 214 in 1878. In 1891, the number of Hawaiians living on Lanai was only 105.<sup>7</sup>

The first American colonization of Lanai was a group of forty-six Mormon missionaries who organized the "City of Joseph" in Palawai Valley in 1854. Land for this venture was provided free of rent by the Hawaiian chief who controlled it. In 1857, the Mormon Church leadership in Utah ordered the missionaries to return to the America. Hawaiian Mormon elders kept the outpost going until 1861, when Walter Murray Gibson arrived to try to convince the Lanai congregation to emigrate to the South Pacific under his leadership. Gibson failed in this and by 1864 the City of Joseph was disbanded; Gibson was excommunicated from the church for using its funds to buy himself land. Gibson stayed on Lanai, acquired more land, and began the Lanai Ranch as a goat and sheep operation with 28,000 head of livestock.<sup>8</sup>

The animals grazed voraciously and by 1875 had severely degraded Lanai's dry land forest and natural pili grass ground cover. Gibson continued to add land to his Lanai holdings and by that year he had consolidated about 90% of the island into Lanai Ranch, either as fee simple

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<sup>6</sup> Lanai historian, Kepa Maly of Kumu Pono Associates.

<sup>7</sup> Solamillo, "Draft N R Form, Lanai City BCT." P. 7-8.

<sup>8</sup> Ibid. P. 8-9. And Gavan Daws, *Shoal of Time, A History of the Hawaiian Islands*, (Toronto: The MacMillan Company), 1968. P 222-223.

purchases or long-term leases. In 1878 Gibson left Lanai for Honolulu, when he was elected to the Hawaiian Government assembly. Lanai Ranch management was left to his daughter and son-in-law, Talula and Frederick Hayselden. In 1882, Gibson mortgaged his property on Lanai to W.G. Irwin of Honolulu, who refinanced it to Claus Spreckles in 1887, the year that Gibson died in San Francisco. In 1899, Hayselden established Maunalei Sugar Co. and began to grow sugar cane on some of the former Lanai Ranch holdings for transport to Pioneer Mill in Lahaina for processing. Maunalei Sugar failed in 1901 because of a lack of operating capital. The company was unable to pay its bills and employees, and by June 1900 it had let go 453 of its 485 employees. It began harvesting cane, but when it was found that the sugar content was insufficient because of a lack of water during the growing season, the rest of the crop was left to die in the field because the plantation did not have enough money to hire laborers to complete the harvest. The company's assets were seized by the deputy sheriff in January 1901, and a number of lawsuits were filed against Maunalei by its creditors. The company ceased operations in March 1901 and the Gibson Estate land on Lanai went into foreclosure.

An option on the Gibson estate land on Lanai was quickly purchased by Charles Gay, whose family had obtained the Island of Niihau decades earlier and were partners in the firm of Gay & Robinson, which had extensive interests on Kauai. Gay began a cattle operation on Lanai and started fencing the island and eradicating numerous goats that had become feral in the years after Lanai Ranch. Over the next several years, Gay was able to acquire most of the 89,600 acres of Lanai. One major transaction was the land exchange for 49,270 acres of Hawaiian Government land on Lanai for 324 acres of land on Oahu. This transaction, supported by Territorial Board of Forestry Commissioner W.M. Giffard, was challenged in court by Territorial Legislator Lincoln L. McCandless. The transaction was successful after McCandless was found to have no standing in his lawsuit. Although Gay was able to gain control over most of Lanai, by 1909 he was forced to liquidate those holdings and he wound up keeping only about 600 acres at Keomoku and Lalakoa, where his family experimented with growing pineapples in 1920.<sup>9</sup>

The bulk of Lanai acreage divested by Gay in 1909 was acquired by the Lanai Company, Ltd., a group of investors piloted by Cecil Brown of First National Bank, Honolulu. Lanai Co. hired former Gay & Robinson employee George Munro to run its operation on Lanai. Forestry Commissioner Giffard had a deed restriction attached to the 1909 sale to Lanai Co. which stipulated that they eliminate the feral goat population from the island. This led to the 1909-1916 eradication of about 8,300 goats, which ended their ecological threat to the island. The system of goat eradication was simple and efficient. Ten to fifteen men would line up as for a cattle drive at a ridge top. All men were armed with caliber 30-30 Winchester lever action rifles. Working downhill, into the gulch, the men drove the goats before them, shooting as they went. The Lanai Company saved the skins and paid a bounty for each goat. The sheep population (about 20,500 in 1911) on Lanai during this time produced valuable wool, but produced it best at altitudes where they were susceptible to disease. As a result, Lanai Co. had phased sheep out of its Lanai operations by 1916, concentrating on cattle. Over the years it was in business, Lanai Co. was not able to operate in the black and the company sold its Lanai real estate in 1917 to Frank F. Baldwin for \$588,000.<sup>10</sup>

Frank Baldwin and his older brother Henry were managers of Hawaiian Commercial & Sugar Co. and Maui Agricultural Co. on Maui. They continued the Lanai Company cattle operation, bringing it into profitability. Although the Baldwins fenced off the remaining dry land forest, livestock was allowed to graze freely in fenced pastures and was seasonally rotated from upper

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<sup>9</sup> Solamillo, "Draft N R Form, Lanai City BCT." P. 10.

<sup>10</sup> Ibid. P. 11-12.

elevation pastures to lower. At roundup time, the cattle were driven to Hulopoe Beach and floated out to waiting steamers by tying them to small boats. While working for the Baldwins on Lanai, Munro tried to recover some of the goat-devastated terrain by introducing plants and grasses to regrow the barren areas. During the Baldwins' tenure of ownership of Lanai, the environmental degradation was reversed and cattle production increased in number and quality. The Baldwins improved the agricultural water system, and new grass was sown on formerly overgrazed areas.<sup>11</sup>

After only five years of ownership of Lanai, the Baldwins placed their holdings there up for sale. An opportunity for them to buy ranch land on Maui came up and they were keen to acquire it, so virtually the entire island plus livestock was put up for sale in the spring of 1922.

In December 1922 virtually the entire island of Lanai was purchased by James D. Dole and the Hawaiian Pineapple Company, Ltd. (HAPCo) for \$1,100,000. The successful 1920 pineapple crop by the Gay family at Lalakoa on Lanai had shown that cultivation of the fruit on Lanai was viable. James Dole's HAPCo was outgrowing its Oahu holdings. The Lanai land purchase, along with an ambitious plan there for fields, a small town (Lanai City) for workers, infrastructure and harbor improvements would provide the means for a large boost in pineapple production for HAPCo.

#### Hawaiian Pineapple Co., Ltd (HAPCo) and the Early Development of Lanai City

HAPCo House No. 26-4 was one of the first residences built in Lanai City when construction of the community began in 1923. Lanai City was built to serve as the home for plantation workers of the Hawaiian Pineapple Company, Ltd. (HAPCo), which purchased most of the Island of Lanai in December 1922 for use as a pineapple plantation. See also HABS No. HI-561 for documentation of HAPCo House No. 26-2 (623 Lanai Ave.) and HABS No. HI-560 for documentation of HAPCo House No. 26-3 (615 Lanai Ave.)

HAPCo was incorporated in 1901 by James D. Dole and began its pineapple operations at Wahiawa on the Island of Oahu. Over the next two decades, the company grew in scale and prospered. Production increased from 1,893 cases of canned pineapple in 1903 to over 1,700,000 cases in 1920. During this time, the company, under Dole's leadership, developed numerous patents on pineapple processing and cultivating equipment including the Ginaca processing machine in 1911. The company's land holdings increased to over 12,000 acres on Oahu by 1920, both leased land and outright ownership. The purchase of Lanai for \$1,100,000 was expected to add an additional 20,000 acres of land for pineapple cultivation.<sup>12</sup>

The HAPCo purchase of Lanai had a huge effect on the island, which only had about 125 residents. HAPCo contracted Hawaiian Dredging Co. of Honolulu to build a harbor with breakwater and wharf at Kaunalapau and a road from there to the site of Lanai City. Hawaiian Dredging was also to "establish a small town...with suitable water supply, electric lights, sewerage, etc." that would become Lanai City.<sup>13</sup> It would ultimately house about 3,000 HAPCo employees.<sup>14</sup>

With Hawaiian Dredging Co. contracted to build much of the infrastructure, it fell to HAPCo engineers to formulate the design of the new city's layout and its buildings. For this task they

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<sup>11</sup> Ibid. P. 12.

<sup>12</sup> Ibid. P. 13.

<sup>13</sup> Ibid. P. 14.

<sup>14</sup> Kepa Maly, "Lanai City Historic Context Summary," Lanai City: Kumu Pono Associates. 2013.

turned to HAPCo plantation engineer David E. Root and his assistant James T. Munro. Root was plantation engineer for HAPCo on Lanai from 1923 to 1926. HAPCo hired Munro in 1923 to assist Root by taking charge of the "development and operation of the water system and other responsibilities."<sup>15</sup> In 1926 Munro took over as plantation engineer, a position he held until 1939 when he was transferred to the Honolulu office.<sup>16</sup>

Building construction in Lanai City began in 1923 using Japanese work crews under the direction of Kikuichi Honda, who was a contractor on Maui before coming to Lanai City to work for HAPCo. Honda and his crew worked on buildings (including the three 1923 houses at 605, 615, and 623 Lanai Avenue – HAPCo House No. 26-4, 26-3, and 26-2) through 1924. Construction supervision then passed from Honda to another Maui contractor, Masaru Takaki, who directed building from 1924-1929.<sup>17</sup>

Kikuichi Honda was born in Japan on September 4, 1876 and immigrated to Hawaii in January 1900. His working career in Hawaii began on the island of Hawaii, where he worked for an unidentified sugar plantation before being hired by the Wailuku Sugar Co., Ltd. on Maui. He worked for them building plantation housing before starting his own contracting business on Maui ca. 1909. When Honda was hired by HAPCo to begin building construction at Lanai City, he brought his own crew of Japanese workers with him from Maui.<sup>18</sup> Honda and his crew began work on Lanai in August 1923 and by the end of March 1924, they had built at least 21 houses in Lanai City of the same type as HAPCo House No. 26-4.<sup>19</sup>

Honda left Lanai in mid-1924 for reasons unknown and did not return to do any more construction work. In his stead, he appointed a member of his 1923-24 construction crew, Masaru Takaki as the crew leader for building on Lanai. Takaki was born in Japan in 1902. He arrived in Hawaii at an unknown date and at a sugar plantation on Maui he worked his way up from a water boy to an overseer and eventually as a carpenter before being hired by Honda. Both Takaki and Honda resumed careers as contractors on Maui after their work on Lanai City. After 1924 Honda built commercial buildings in Lahaina, upscale residences in Wailuku, the (pre-1939) Valley Isle Motors Building, a Japanese language school, the Harris residence in Wailuku, and an addition to the Church of the Good Shepherd in Wailuku. Takaki specialized in residential construction in East Maui after finishing at Lanai City in 1929.<sup>20</sup>

Lanai City was the first development in Hawaii to be planned and built with the recognition that "contentment with the housing and surroundings certainly has an effect on a [worker's] producing power, and that good health influenced by sanitary and healthful surroundings plays an important part in keeping up the production by an increased turn-out and a decreased labor turn-over."<sup>21</sup> It was laid out and built using the contemporary principles of the Garden City planning concept developed in the 1890s and adopted in the 1920s by the Hawaiian Sugar Planters Association.<sup>22</sup> This was a rejection of the model of worker housing as an industrial slum. It embraced the idea that a well planned and laid out city in the midst of a greenbelt with open spaces and tree-lined streets was more conducive to worker productivity.

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<sup>15</sup> James T. Munro, "History of Water Resources on Lanai. Manuscript in the collection of the Lanai Cultural and Heritage Center. Feb 18, 1958.

<sup>16</sup> "Man Who Built Lanai City Retires, James T. Munro," Hawaii Industry, January 1958. P. 52.

<sup>17</sup> Lorraine Minatoishi-Palumbo, "HABS HI-547, Hawaiian Pineapple Company (HAPCo) House," 2011. P. 2-3.

<sup>18</sup> Ibid. P. 2-3.

<sup>19</sup> 11<sup>th</sup> Photo Section, U.S. Army Air Corps, aerial photograph "Lanai City from South" March 28, 1924.

<sup>20</sup> Minatoishi-Palumbo, "HABS HI-547," 2011. P. 2-3.

<sup>21</sup> Solamillo, "Draft N R Form, Lanai City BCT." Proposed historic district. March 2012. P. 16-17.

<sup>22</sup> Ibid. P. 15-16.

In part of a 1971 essay, former University of Hawaii Professor of American Studies J. Meredith Neil noted some of Lanai City's remarkable characteristics and its significance in Hawaii's history. The portion of the essay covering Lanai City is worth quoting in full.

"The 1920s may have been as crucial in Hawaiian regional planning as they had been for architecture. The Dole Company purchase of the whole island of Lanai in 1922 and the development during the next few years of the island as one huge pineapple plantation with the workers housed in the newly created Lanai City may have marked a major turning point in the history of Hawaiian town-planning. The crowded jumble of thatched huts that, throughout the islands from the 1880s on, quartered the workers first imported from Japan and then from the Philippines, had gradually but noticeably improved into reasonably attractive and comfortable villages. Early photographs of Lanai City do not show it to be appreciably superior to other, contemporaneous plantation towns. However, the wide streets and commodious-looking structures eventually enhanced by thousands of Norfolk pine trees make Lanai City now one of the handsomest small towns in Hawaii. Researchers looking for rewarding topics could hardly do better than to tell the story of twentieth century Lanai within the context of the history of plantations in Hawaii.

"Dole's use of the pine trees from Norfolk Island in the South Pacific – the first major appearance of this tree in Hawaii – highlights two frequently neglected aspects of Hawaiian landscaping. Like many individuals and organizations before it, Dole was supplementing the scanty range of indigenous flora by importing varieties from elsewhere. Dole's use of the Norfolk pine also points up a trend, evident in the 1920s and 1930s, away from Mainland styles of decoration and towards a greater use of those from Asia and the Pacific area.<sup>23</sup>

Although it doesn't change Neil's basic message, subsequent testing has shown that only one of the pines on the island was from Norfolk Island; the rest are similar, but are Cook Island pines. James Dole had originally proposed that his main town on Lanai be named Pine City. He preferred this name for the town as a shortened version of Pineapple City. When the U.S. Postal service began to set up postal operations there, it informed HAPCo that it would not allow the use of the name Pine City (apparently that name was already over-used on the US mainland). The main town was instead named Lanai City.<sup>24</sup>

#### Lanai City and the Garden City Planning Concept

The Garden City planning concept originated in the 1890s when Briton Ebenezer Howard proposed a town design as an alternative to the then-typical British city, which was largely a product of industrialization. At the time most architecture and planning professionals, as well as the city inhabitants themselves, viewed the typical industrialized, urban environment as inherently unhealthy for those who lived there. Pollution and overcrowding made urban, industrialized areas frightful places. Dirty, dark, cramped slums that had evolved as industrialization increased were the rule. Howard's ideas, published in 1898 with the title of *Garden Cities of To-Morrow*, proposed that new cities be built to replace the slums. He envisioned these new cities to be built in the midst of unspoiled countryside. They would be

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<sup>23</sup> J. Meredith Neil, "Paradise Improved: Environmental Design in Hawaii," in William B. O'Neal, ed., *The American Association of Architectural Bibliographers, Papers, Vol. VIII, 1971*. (Charlottesville: University Press of Virginia), 1971. P. 56-57.

<sup>24</sup> Solamillo, "Draft N R Form, Lanai City BCT." P. 14.

limited in size and would stay surrounded by a permanent greenbelt. These features were promoted to be more healthful for the cities worker-inhabitants, and would result in greater productivity and efficiency for their industrial employers. Howard's concept, in theory, was quickly adopted by progressives in Great Britain and in the United States.<sup>25</sup>

Little more than a decade after it was introduced, Howard's Garden City concept was widely known and accepted by American planners. Howard provided details on the optimum number of housing units per acre, designs for city block layouts, open spaces, a central park, and tree lined streets to combat the creeping industrialized sprawl of most larger cities. Although his ideas were put into practice by some American city planners and designers of the early 1900s, very few planners worked with municipalities that had sufficient funds or territory to start over with a new city.

James Dole had this luxury on Lanai, and during the 1920s plantation managers such as he understood that Garden City planning concepts would produce more pleasant living conditions for workers. More importantly, plantation managements felt that contented workers under these conditions would be more productive.<sup>26</sup> Plans for plantation worker's housing that were produced in the 1920s by the Hawaiian Sugar planters Association (HSPA) included design features that were similar in concept to the Garden City planning. During the 1920s it was common for the sugar and pineapple industries to share information that concerned workers and housing, so it would be expected that Dole was aware of HSPA design concepts (likely derived from Garden City planning) when he envisioned Lanai City.

The HSPA produced a plot plan ca. 1920 for a workers' camp that had 100' x 300' blocks containing six workers houses. Centered within a cluster of these blocks were three larger blocks containing a park, baseball grounds, and a playground with a church and an amusement hall. The layout of Lanai City appears similar to this plot plan with the three centered park/playground blocks consolidated into one.<sup>27</sup> This central park was named Dole Park sometime after the death of James Dole which occurred on May 14, 1958.<sup>28</sup>

### Plantation Housing Construction.

By the time James D. Dole and Hawaiian Pineapple Co., Ltd (HAPCo) purchased most of Lanai in 1922, the plantations of Hawaii were implementing a paternalist system of benevolent control over their employees. Years of neglecting the welfare of workers resulted in work strikes and labor unrest. This led to the plantations' realization that they needed to make "at least minimal efforts" to create better living conditions and a sense of community for the workers "in order to cope with the labor force problems."<sup>29</sup> The Hawaiian Sugar Planters Association (HSPA) began a program in 1919 to "reduce the manifest discontent found in the industry" through improvements in employee housing."<sup>30</sup> The close association of sugar and pineapple industries in Hawaii provided a good opportunity for these ideas to migrate between plantations.

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<sup>25</sup> Ibid. P. 15.

<sup>26</sup> Ibid. P. 16-17.

<sup>27</sup> Ibid. P. 17.

<sup>28</sup> Ibid. P. 33.

<sup>29</sup> Edward D. Beechert, *Working in Hawaii, A Labor History*, (Honolulu: University of Hawaii Press), 1985. P. 192.

<sup>30</sup> Ibid. P. 193.

By 1920 the HSPA had a number of standardized plans for employee homes that were recommended for new construction along with improved worker's camp sanitation and recreational facilities. Up until about 1920, the pineapple industry's reliance on independent farmers and the seasonal nature of the pineapple harvest resulted in little attention paid to the plantations existing labor camps, which were generally much more run down than typically found on sugar plantations.<sup>31</sup> With Dole's expansion onto Lanai, he seized the opportunity to change this situation by instructing his engineer, James T. Munro, to design and build employee housing "with modern conveniences and other provisions for pleasant living."<sup>32</sup> Lanai City was to be a "model village" of about 650 buildings with a water system, roads, and employee recreational facilities. Lanai City's initial construction in 1923-24 corresponds to the period of the 1920s that saw substantial improvements in Hawaii plantation housing and sanitation.<sup>33</sup> During that time, pineapple plantation villages were also established on Molokai at Mauna Loa (Libby, McNeil & Libby) and Kualapuu (California Packing Co.). Dole's existing HAPCo pineapple operation at Wahiawa on Oahu continued to utilize a series of scattered labor camps for its employees until they were consolidated in the early 1950s at Whitmore Village.<sup>34</sup>

The construction of the 1923 Lanai City double houses (at 605, 615, and 623 Lanai Avenue) is typical of plantation housing of the time and was also commonly used for other residential construction in Hawaii. These houses are typically either the board-and-batten construction, as found on the Lanai City double houses, or the more common configuration of tongue-and-groove (T&G) boards. As T&G boards became readily available as a building material, they tended to be utilized more frequently over board-and-batten construction. For plantation housing, "the recommended standard was a single-family house with not less than two bedrooms, on a lot of five thousand square feet,"<sup>35</sup> with a wash house, bath house and other sanitary provisions. "The size of houses increased, kitchens were generally within or attached to the houses and sanitary facilities improved."<sup>36</sup> "The houses built for plantation laborers were significant for more than just their small size: the structures built were a study in economy of material and labor."<sup>37</sup>

The term "single wall construction" is commonly used to refer to these simple buildings. While they all share the characteristic of having exterior structural walls only one board thick, there are many different ways these homes are built. Early single wall homes were all constructed on post and beam foundations with beams and joists forming the floor structure. True single wall homes then relied on the vertical wall boards to carry all of the roof loads, with only a 2 x 4 member at the top of the walls to which the boards were nailed, and to act as a top plate for the roof to rest on. In this construction type, the vertical loads are almost entirely transmitted from roof to the floor framing system by shear forces through the nails fastening the boards to the horizontal members.

The buildings in Lanai City have corner posts and studs at every window or door opening that rest on top of the floor framing and flooring and support the wall plate above. Although some of

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<sup>31</sup> Ibid. P. 182.

<sup>32</sup> "Man Who Built Lanai's Model Village to Call it a Day," Honolulu Star Bulletin, January 1, 1958. P. 16. And Jack L Larsen, *Hawaiian Pineapple Entrepreneurs*, (Sheriden OR: Jack L. Larsen), 2010. P. 358.

<sup>33</sup> Beechert, *Working in Hawaii*. 1985. P. 193.

<sup>34</sup> Larsen, *Pineapple Entrepreneurs*, 2010. P. 292.

<sup>35</sup> Barbara Shideler, "Hawaii's Plantation Village: History, Interpretation and Design of an Outdoor History Museum," (Submitted to the Faculty of the Department of American Studies In Partial Fulfillment of The Requirements For The Graduate Certificate in Historic Preservation) 1993. P. 25.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

the vertical loads are likely carried by the exterior board and batten sheathing, the primary vertical structural support is the corner post and window and door stud framing. This type of construction was very common. Thinner vertical sheathing could be used with this construction method than with true single-wall construction.

These variants of single-wall construction system were common building techniques on Hawaiian plantations through the 1960s. By eliminating most structural framing in wood buildings, highly economical use of wood materials, all of which were imported into Hawaii, was accomplished. Other forms of single-wall construction were common on the United States mainland in the nineteenth century, in places where milled lumber was expensive, builders had limited financial resources, and construction was transitory. Single-wall construction is simple and economic, which gave it a wide appeal "among rural, pioneer and working class builders."<sup>38</sup>

### Lanai City

The commercial buildings of Lanai City were also erected by Honda's (1923-24) and Takaki's crews (1924-29), and by other unidentified contractors from 1930-1956. These include stores, office, hospital, bank, church, theater, and clubhouse. These were all single story, primarily single wall construction, and mostly duplicated the character of the surrounding residential buildings. Some were even built with entry porches. Most were clustered around the central park and followed rules of Garden City planning with generous set back from the street and planted lawns.<sup>39</sup>

In 1926, Hawaii governor Wallace R. Farrington and a group of 138 visitors toured Lanai City and the surrounding plantation lands. Arriving by steamer from Honolulu, the entourage was carried around the island in a motorcade of thirty vehicles. The visit received widespread press coverage with Lanai City very favorably impressing the reporters present. Although the visitors saw a harmonious plantation village, some residents of Lanai City during the 1930s recall that the city was both racially segregated into camps and economically segregated along the slope of the hill that the city is sited upon. "Up camp" towards the top of the hill was the neighborhood of the plantation foremen and the superintendent H. Bloomfield Brown (Supt. 1923-1936). For adults, driving into this neighborhood was prohibited and children were cautioned to not wander into it to play. "Down camp" near the central park and business area was segregated into racial camps. These were not prohibited as was "up camp" but the racial division of the houses in the area was well defined. This segregation of housing neighborhoods ended in 1946 when Lanai City residents were allowed to move into areas that had previously been restricted by ethnicity.<sup>40</sup>

By 1930 the HAPCo labor force on Lanai was 2,356 persons, including 965 Japanese, 867 Filipinos, and 173 Hawaiians. In 1924 HAPCo had brought in about 200 Filipino workers to offset the approximately 150 Japanese on Lanai which formed a racial majority of the workforce. During the 1930s, Filipino immigration to Lanai from other locales in Hawaii continued, with a large influx of about 1,000 in 1938. Many of these workers had left employment with sugar companies because of labor disputes to relocate to Lanai.<sup>41</sup>

In 1932, HAPCo had a deficit of over \$12 million that was accrued during the preceding years and James Dole was replaced as General Manager. He remained on the board of directors

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<sup>38</sup> Peter Schultz and Andrea Sue Morrison, "Architecture as Material Culture: A Survey of Residential and Commercial Structures in a Western Ghost Town," *California Archaeology*: California Dept. of Parks and Recreation. 1995. P. 105 & 106.

<sup>39</sup> Solamillo, "Draft N R Form, Lanai City BCT." P. 24-25.

<sup>40</sup> Ibid. P. 39.

<sup>41</sup> Ibid. P. 34.

until 1948. Worker layoffs in 1932 forced some workers and their families to leave Lanai and student workers were brought in from Maui for the summer harvest.<sup>42</sup> The influx of Filipino workers to Lanai in the 1930s may have been prompted by HAPCo recovering from this downturn.

During World War II, four Japanese residents of Lanai were interred. One man was the pastor of the Lanai Nishi Hongwanji Mission, one was a Japanese language instructor there, one was the proprietor of the local store, and one was a HAPCo employee. In addition the Hongwanji congregation was ordered to vacate the mission building and it was turned over to a Christian congregation and became the Lanai Union Church.<sup>43</sup> After the end of the war, Hongwanji members were told they could not get their building back and should build another.<sup>44</sup>

HAPCo began to mechanize its operation in 1949, which resulted in the layoff of about 500 workers over the next two years. In 1950 the population of Lanai was about 3,000 people, and in 1951, a strike against HAPCo was declared, organized by a foreman and the International Longshoremen's & Warehousemen's Union (ILWU), which had been active on the island since shortly after World War II. This was Lanai's first labor strike and lasted 201 days before HAPCo agreed to a \$0.12 per hour wage increase and reinstatement of eighteen workers fired for a suspected slow-down. Further ILWU strikes occurred on Lanai in 1952, 1965, and 1968.<sup>45</sup>

Up until 1954, when HAPCo offered its houses for sale to its employees, it leased housing to them. Monthly rates were initially (1920s) for the amount of electrical utilities and for kerosene. By the 1950s rents were about \$30 per month for a typical dwelling. The house sales initiated in 1954 did not go as well as HAPCo had hoped.<sup>46</sup> Most employees seemed quite content to pay the low monthly rent in lieu of ownership.

In 1961 HAPCo merged with Castle & Cooke and was renamed Dole Corporation. During the early 1960s growers in Hawaii supplied eighty percent of the world's canned pineapple and the HAPCo Lanai plantation was the largest in the world. By the late 1960s Hawaii's share of the canned fruit market began to decline, a result of plantations in other parts of the world opening and increasing production. With this declining market for Lanai pineapple in the 1960s, HAPCo/Dole began the practice of deferring maintenance on many of their Lanai City buildings, causing them to become run down. In 1972, Dole announced its intention to phase out pineapple plantations on Lanai. A twenty one-day, ILWU sanctioned walkout occurred the following year. In the early 1990s as pineapple was closing down on Lanai, tourism was initiated by the completion of two luxury hotels.<sup>47</sup> In 1992 the HAPCo/Dole plantation on Lanai closed, ending commercial pineapple production there.

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<sup>42</sup> Ibid P. 35.

<sup>43</sup> Ibid. P. 38.

<sup>44</sup> Ibid. P. 39.

<sup>45</sup> Ibid. P. 41-42.

<sup>46</sup> Ibid. P. 42.

<sup>47</sup> Ibid. P. 43-44.

## Sources

### A. Architectural Drawings:

No original drawings for Lanai City double houses were located.

### B. Early Views:

Early aerial photos (1924) showing Lanai City, taken by the 11<sup>th</sup> Photo Section are available in the archives of Kumu Pono Associates, P.O. Box 631599, Lanai City HI 96763. This photograph was taken by a U.S. military photographic section and is considered in the public domain.

An aerial photograph taken on October 23, 1929 showing Lanai City is located in the photography archives of the Bishop Museum, Honolulu, folder: Geography, Lanai, Aerial Photos, neg. # CP 50182.

### C. Bibliography:

Ashford, Marguerite K. "Lanai: A Narrative History." Stanford University, thesis for MA. 1974.

Beechert, Edward D. *Working in Hawaii, A Labor History*. Honolulu: University of Hawaii Press. 1985.

"Builder of Lanai City, James Munro, 69, Dies." *Honolulu Advertiser*. July 27, 1962.

Larsen, Jack L. with Thomas A Marks. *Hawaiian Pineapple Entrepreneurs, 1894-2010*. Sheridan OR: Jack L. Larsen. 2010.

"Man Who Built Lanai City Retires, James T. Munro." *Hawaii Industry*. January 1958. P. 52.

"Man Who Built Lanai's Model Village to Call it a Day." *Honolulu Star Bulletin*. January 1, 1958.

Minatoishi-Palumbo, Lorraine. HABS HI-547 Hawaiian Pineapple Company (HAPCo) House. Washington DC: US Department of the Interior, National Park Service. 2011.

Munro, James T. History of Water Resources on Lanai. N.p. 1958. From website [www.lanaichc.org](http://www.lanaichc.org) accessed August 15, 2013.

Neil, J. Meredith. "Paradise Improved: Environmental Design in Hawaii." in William B. O'Neal, ed., *The American Association of Architectural Bibliographers, Papers, Vol. VIII, 1971*. Charlottesville: University Press of Virginia. 1971.

Nishimoto, Warren, Mina Morita, Michi Kodama-Hishimoto, Cynthia A. Oshiro, Geoffry E. Eisen. *Lanai Ranch, The People of Koele and Keomumu*. Honolulu: University of Hawaii at Manoa, Social Science Research Institute, Center for Oral History. 1989.

Okahara & Associates, Inc. "Lanai Structural Inspection Report, for 3 Houses and 1 Garage." Castle & Cooke Resorts, LLC: Lanai City. October 2011.

Reinhardt, James N. "Climate-Bred System of Housebuilding." *AIA Journal*. March 1982.

Riznak, Barnes. "From Barracks to Family Homes: A Social History of Labor Housing Reform on Hawaii's Sugar Plantations." *The Hawaiian Journal of History*. Honolulu: Hawaiian Historical Society. Vol 33. 1999.

- Schultz, Peter, and Andrea Sue Morrison. "Architecture as Material Culture: A Survey of Residential and Commercial Structures in a Western Ghost Town." California Archaeology: California Dept of Parks and Recreation. 1995.
- Shideler, Barbara. "Hawaii's Plantation Village: History, Interpretation and Design of an Outdoor History Museum." Honolulu. Submitted to the Faculty of the Department of American Studies In Partial Fulfillment of The Requirements For The Graduate Certificate in Historic Preservation. 1993
- Solamillo, Stanley. "Historic American Building Survey: Masumoto House, Wailuku, Hawai'i." Wailuku: Donna Masumoto Phillips, Maui County Planning Department, 2007.
- \_\_\_\_\_. "Draft National Register of Historic Placed Registration Form, Lanai City Business City Town." Proposed historic district. Form prepared by Sally Kaye and Reynold Gima. . March 2012. Located in the files of Hawaii State Historic Preservation Division.
- Upton, Dell. "Traditional Timber Framing." In *Material Culture of the Wooden Age*, pp. 35-93. Edited by B. Hindle. Tarrytown, New York: Sleepy Hollow Press, 1981

## **PROJECT INFORMATION**

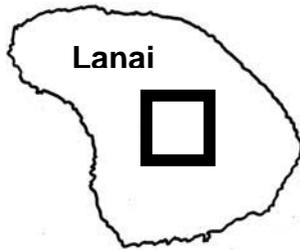
This report is written in advance of the demolition of three houses and a garage at 605, 615, and 623 Lanai Avenue, in Lanai City. These buildings will be replaced in kind by new construction. The houses and garage have been vacant for several years, are in advanced stages of deterioration, and were found to be structurally unsafe in October 2011.<sup>48</sup> Maui County has stipulated that this HABS report be produced as mitigation for the demolition of these buildings.

The historic context for this report was researched and written by Dee Ruzicka of Mason Architects Inc, Honolulu, Hawaii with contributions by Kepa Maly of Kumu Pono Associates, Lanai City, Hawaii. Archival photographs were taken May, 2013 by David Franzen of Franzen Photography, Kailua, Hawaii. Measured Drawings were completed by Katharine Stephens, AIA, of Mason Architects, Inc. This report was compiled by Dee Ruzicka of Mason Architects, Inc, Honolulu, Hawaii.

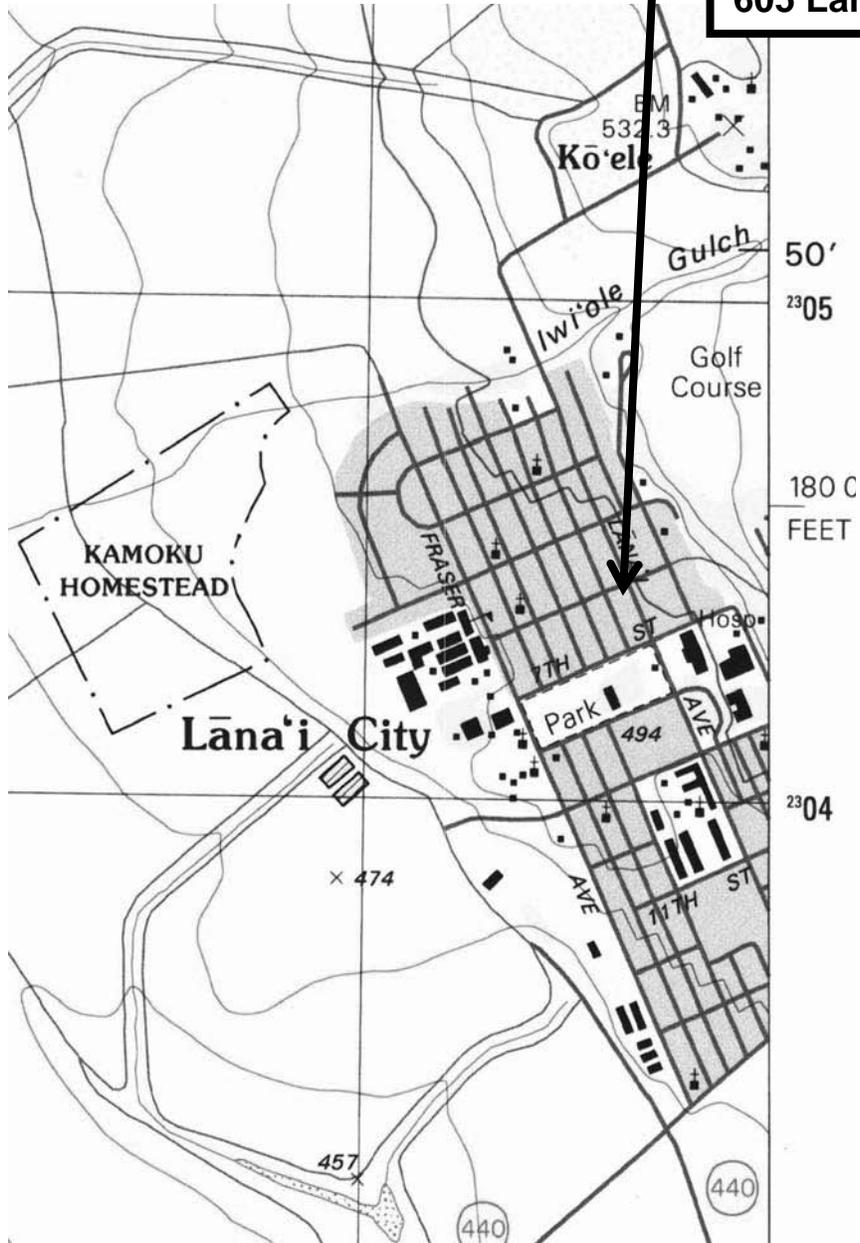
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<sup>48</sup> Okahara & Associates, Inc. "Lanai Structural Inspection Report, for 3 Houses and 1 Garage," October 4, 2011.

Location map.



**HAPCo  
House No. 26-4  
605 Lanai Ave.**



Aerial photograph taken March 28, 1924 showing early construction in Lanai City. The group of four houses containing HAPCo House No. 26-4 is at the upper center with their side gables facing the camera and rear shed roof extending to the left. Note that there are 21 houses appearing in this photo that are the same design as HAPCo House No. 26-4. View facing north. Today's Lanai Avenue is the well-defined street running from the foreground past the group of houses. Photo courtesy of Kumo Pono Assoc. 11<sup>th</sup> Photo Section. *This photo was taken by a U.S. military photographic section and is considered in the public domain.*

