

Some Construction and Housing Firsts in Hawaii

Robert C. Schmitt

In the two centuries since Captain Cook's arrival in the Islands, vast changes have occurred in Hawaiian construction and housing. Grass huts gave way successively to wood frame dwellings, homes built of masonry, and high-rise apartment structures. Elevators, running water, sewers, and air conditioning—all of which were unknown in Kamehameha's time—were introduced. So were public housing and condominium apartments. Unfortunately, the initial appearance of many of these innovations has gone unrecorded, or has become the subject of scholarly dispute. The following pages are an effort to document some of these construction and housing "firsts" in Hawaii.¹

Building permits. Building permits were first required in 1886. The law covered all construction between Kalihi Stream and Manoa or Kalia Streams, for a distance of three miles inland, and also churches, schools, hotels, and other public buildings elsewhere in the Kingdom, but it excluded buildings costing less than \$1,000.²

Brick building. "As early as January 28, 1809," wrote Walter F. Judd, "Archibald Campbell reported that he saw a brick building there which served as Kamehameha's house while in residence in Lahaina. This first Lahaina palace had been built by 'foreigners,' possibly as early as 1800, and was thus the first Hawaiian palace built of permanent materials." It was probably constructed of adobe bricks.³

Fireproof building ; office building. On April 1, 1854, *The Polynesian* reported, "A fine new Fire-Proof Store, three stories high, erecting at the corner of Kaahumanu and Queen streets, by Capt. Makee, built of brick, with a *granite* front, is something new in Honolulu. . . ." This structure, the Makee & Anthon Building, had been designed and sent out from Boston. It was later described as "Honolulu's first fireproof,

Robert C. Schmitt is State Statistician with the Hawaii State Department of Planning and Economic Development. This is the fourth in his series of articles on Hawaiian "firsts."

pressed-brick structure, its first office building and the only one with a modern look for its time.”⁴

Concrete building. The first building constructed partly of concrete was the sugar house on the Waihee Plantation, Maui, built in 1863–1864. Although basically made of stone, it had window corners and lintels of concrete.⁵

The first Honolulu structure built largely of concrete was the Kamehameha V Post Office at Merchant and Bethel Streets. It was officially opened March 1871.⁶

High-rise buildings and towers. High-rise construction was unknown in Hawaii before 1900. Except for church spires, buildings were limited to two or three stories. Perhaps the highest of the early 19th Century structures was Kawaiahao Church, built in Honolulu in 1837–1842. Unfortunately, no record is available of its height before removal of its steeple (1885); its present height is approximately eighty feet. Central Union Church, built at Beretania and Richards Streets in 1892, had a “corner tower reaching 75 feet, finishing off with a graceful spire at a total height of nearly 160 feet to top of finial.”⁷

“The first three-story building [in Honolulu],” according to Wilcox, “was the 1848 Custom House, a simple barnlike structure used for various purposes.”⁸

The first four-story building was the Judd Block (now the First Federal Building), opened in March 1899. This structure—which acquired a fifth story before 1927—“brought together for the first time in Hawaii an elevator, iron framing and the heretofore missing element—height.”⁹

“Honolulu’s first ‘skyscraper’ ” (in the words of the Historic Buildings Task Force) was the Stangenwald Building, 119 Merchant Street. This six-story office building was completed in April 1901.¹⁰ It was eventually surpassed by the Aloha Tower (10 stories, 184 feet, completed in 1926), Tripler Army Hospital (14 stories, 189 feet, completed in 1948), and many more recent buildings.¹¹

The first high-rise apartment building was the 12-story Rosalei, 445 Kaiolu Street at the Ala Wai Blvd., opened in 1955.¹²

The first high-rise hotels were the six-story Alexander Young (95 feet, 1903, Fig. 1) and Royal Hawaiian (150 feet, 1927), the seven-story Edgewater (1950), and the eleven-story Waikiki Biltmore (96 feet, February 1955) and Princess Kaiulani (131 feet, June 1955).¹³

Chimneys, water towers and radio masts sometimes were higher than the tallest buildings. The H.C. & S. sugar mill at Puunene, built in 1900, was a 107-foot structure topped by a smokestack reaching 174 feet above

the ground. In 1927 the Hawaiian Pineapple Company built a 199-foot water tower shaped like a gigantic pineapple above its Iwilei cannery.¹⁴ Two wireless towers erected in 1912 at Heeiea were 440 feet high, and similar towers built at Kahuku two years later reached 608 feet above the ground.¹⁵ The three radio masts put into service at Fort Kamehameha in 1917 likewise went up 600 feet.¹⁶ The VLF Antenna of the Radio Transmitting Facility at Lualualei includes two towers, each 1,503 feet high, completed in August 1972.¹⁷

Dumb waiters. The Hawaiian Hotel, erected on Hotel Street in 1871–1872, had a dumb waiter connecting the kitchen in the basement with the dining room above—possibly the earliest recorded example of this kind of facility.¹⁸

Elevators. The first elevators in Honolulu appear to have been installed in the early 1880s, sometime between the issuance of the 1879 and 1885 fire insurance atlases. None is indicated on the 1879 map.¹⁹ Two elevators appear on the 1885 map, however, one in the Beaver Block at Fort and Queen Streets and the other in a general merchandise store at 16 Nuuanu Avenue.²⁰ Subsequent fire maps attest to the growing popularity of elevators in Honolulu: six are shown in an 1886 supplement, while 48 can be found on the 1899 map.²¹

The Beaver Block was a two-story structure completed early in 1882. Its occupants at first included G.W. Macfarlane & Co. (shipping, commission, and general wholesale merchants) and H.J. Nolte's Beaver Saloon.²² The elevator indicated on the 1885 map was near the ewamauka corner of the building. In 1976, Herman Von Holt (who went to work for the owners of the property in 1922) recalled the elevator as a simple hydraulic lift used for hauling freight from the first to the second floors. It was replaced by an electric elevator long before the building was demolished in 1966.²³

The second of the two elevators shown on the 1885 fire map was located near the front of a two- (or three-) story brick building occupied by Wing Wo Chan (or Chang) & Co., on the waikiki side of Nuuanu between King and Merchant Streets. Neither the building nor its occupant appear in the 1879 atlas and 1880 directory. The building was destroyed in the Chinatown fire of April 18, 1886, but its owner subsequently rebuilt on the same site.²⁴

The first newspaper reference to an elevator in Hawaii appeared on July 1, 1882: "The handsomest building that has lately been erected here is undoubtedly Mesrs. [sic] Wilder & Co.'s store and office. . . . The elevator, a powerful machine, is opposite the freight door." The Wilder building, a two-story brick structure with a height of 44 feet to

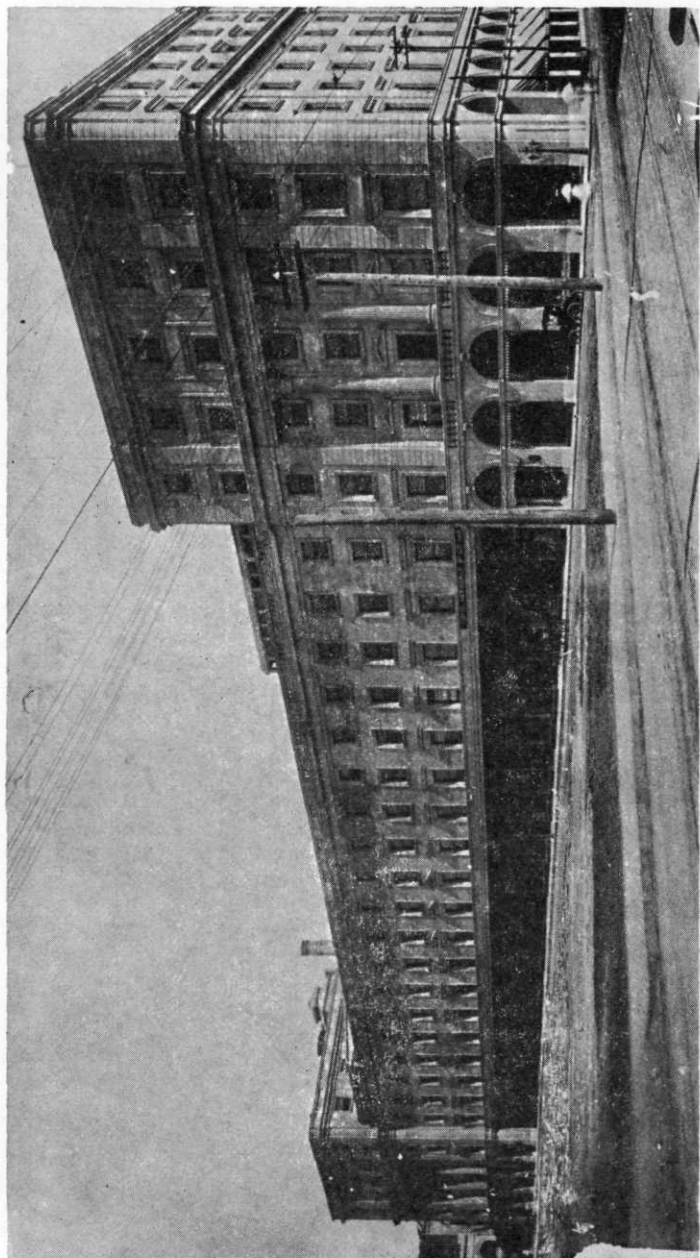


FIG. 1. Alexander Young Hotel, 1906 (State Archives of Hawaii).

the top of its parapet wall, was located on the mauka-waikiki corner of Fort and Queen Streets, directly across Fort from the Beaver Block. The same 1882 article described the new Beaver Block, but failed to mention its elevator.²⁵ The Wilder elevator was not shown on the 1885 fire map.

The earliest electric elevators in Hawaii were in the Emmeluth Building, on King Street at Bishop, and the Mott-Smith Building (later The Hub), at Fort and Hotel. Both were three-story brick structures completed in 1897. The Emmeluth elevator was put into operation on August 16; the Mott-Smith elevator, on September 23. The latter was of "oxidized metal in a beautiful grill design interior, fitted with bevel-plate glass mirrors."²⁶

Much misinformation has been published regarding early elevators. One newspaper account, for example, stated that "the first elevator came to Hawaii in 1902" and "was installed in the old Amfac building on Bishop Street, called then the H. Hackfeld and Co. Bldg."²⁷ The Hackfeld elevators (there were three) actually came long after those described above; moreover, the building was on Fort Street, not Bishop. Another newspaper article asserted that the Judd Building, opened in 1899, "had the first electric elevator."²⁸

Escalators. The first escalator in the Islands was one installed in the House of Mitsukoshi, a department store at King and Bethel Streets, and dedicated December 21, 1940. This escalator was limited to upbound traffic between the first and second floors. The House of Mitsukoshi building was converted into a USO service center in December 1942; the escalator, dismantled, was shipped to Japan after the war. The building is now known as the International Savings Building.²⁹

The first two-way escalators were placed in operation on June 16, 1947, when Sears Roebuck and Company opened the second floor of their Beretania Street department store. The building was originally a one-story structure opened on May 8, 1941.³⁰ Another department store, Liberty House on Fort Street, got escalators in August 1951.³¹

External fire escapes. The Boston Block, also on Fort Street, had Honolulu's first external fire escapes. The Boston Block was completed in 1900.³²

"Electric eye" door. The first door to open automatically when approached was one equipped with an "electric eye" mechanism at the entrance to the Cooke Trust Co. on Fort Street, on May 22, 1939.³³

Public housing. The first public housing in Hawaii (other than military projects) was Kamehameha Homes, built by the Hawaii Housing

Authority at 1629 Haka Drive, Kalihi, and first occupied on July 19, 1940.³⁴

Fee simple land ownership. Until the 1840s, all land in Hawaii belonged to the king. This system was drastically altered by legislation establishing a board of commissioners to quiet land titles (enacted December 10, 1845), permitting fee simple ownership for Hawaiian subjects (April 27, 1846), and extending similar rights to aliens (June 1847 and July 10, 1850). The first *Mahele*, dividing the land between the king and chiefs, was signed January 27, 1848.³⁵

Early in 1846, however, the government decided to make an experimental beginning on fee simple ownership, without waiting for the new law to go into operation. Nearly 100 parcels of land were sold in Makawao district on Maui, amounting to 900 acres purchased for \$1 per acre. In Manoa Valley, Oahu, "about thirty parcels were sold, most of them being from one to ten acres in extent, and fee simple titles were given to the buyers." The Makawao and Manoa lands were thus the first ever sold in fee simple in Hawaii.³⁶

Residential subdivision. The earliest residential subdivisions in the Islands appear to have been laid out on the level areas between Thomas Square and Pawaa, initially under governmental auspices, during the 1880s. In his review of the events of 1880, Thrum reported: "Building lots on the plains sold at auction by the Government the past summer averaged over \$500, the lots ranging about 100 feet frontage by 150 feet in depth."³⁷ Two years later he wrote: "The plains to the east of Honolulu proper are being rapidly built up with residences so that the blocks and streets are now well defined as far out as Punahou street."³⁸

Residential development soon extended mauka, ewa, and waikiki. In 1883, "a number of suburban lots adjoining Kapiolani Park [were] placed upon the market" and "realized good figures."³⁹ In his retrospect for 1890, Thrum noted that "the government has held two or three sales of lots for building purposes adjacent to the city. Those on the slope of Punchbowl found ready applicants and lively competition. . . ." During the same year, the Oahu Railway and Land Company sold 110 lots at Pearl City, hard by their new railroad line, for \$44,000, then another 58 a week later for \$22,795.⁴⁰ New subdivisions "between Punchbowl slope and Punahou," in Kaimuki, and on Pacific Heights appeared in the late 1890s.⁴¹

Subdividing soon became a full-time occupation. In January 1898, Theodore F. Lansing and A. V. Gear formed the firm of Gear, Lansing & Co. and before the end of the year had subdivided a 10-acre tract in Makiki and had begun work on a 260-acre subdivision (with an option

for another 260) in Kaimuki.⁴² A year later, Charles S. Desky, aided by the surveyor W. A. Wall, laid out the Pacific Heights tract and began to promote it with considerable vigor and imagination.⁴³ (One historian has called Desky "Hawaii's first subdivider," and noted that "Desky pulled several shady land transactions."⁴⁴)

Cooperative and condominium ownership. Owner-occupied apartment housing, first in the form of cooperative units and later as condominiums, first came on the market in the 1950s. In a condominium project, the individual owner has title to his actual apartment; in a cooperative, he only owns stock in the corporation holding title to the structure, and does not have title to a specific apartment.

Although at least four large cooperative projects were announced in 1953-1955, none of these advanced beyond the planning stage, and the first cooperative actually completed was the Diamond Head Ambassador Apartments, 2957 Kalakaua Avenue, in the summer of 1956. Originally intended as a conventional apartment hotel, the Ambassador was still under construction on March 8, 1956 when its conversion to cooperative tenancy was announced. The development included three five-story structures with 79 units. Sales prices for the one-bedroom units started at \$12,750, with prices for the studios and two-bedroom units in proportion.⁴⁵

The Horizontal Property Regimes Act, passed by the 1961 Legislature, was the first condominium law enacted by any State (although following similar action in Puerto Rico by three years). The Hawaii law went into effect on July 10, 1961, and thereafter most buyers turned to condominiums rather than cooperatives.⁴⁶

The first condominium project to receive State approval was a 12-story apartment structure at 3019 Kalakaua Avenue, near the base of Diamond Head. This building was already three-fourths complete when the developers decided to convert it into a condominium. Authorization was granted by the State Department of Regulatory Agencies in November 1961.⁴⁷

The first condominium mortgage to be negotiated in the Islands was for a unit in a rambling split-level development at 481 Kawaihae Street, Hawaii Kai, in November 1962.⁴⁸

The first commercial condominium in Hawaii, and one of the first two in the United States, was the 100 Wells-Kona, a single-story, 5,000-square foot office building in Wailuku, Maui. This structure was erected late in 1961 and granted condominium status on March 14, 1963, about the same time that work began on the first Mainland commercial condominium. The \$22 million Financial Plaza of the Pacific, completed

in 1968 in downtown Honolulu, has been described as “the first commercial condominium project to be put together under the American flag,” but such acclaim is obviously unwarranted.⁴⁹

Public water supply and sewers. Water supply and sanitation were relatively primitive in the early days of Honolulu. The residents commonly relied on the water from springs and streams, sometimes carrying calabashes of water great distances over rugged terrain. Sewers did not exist.

Wm. R. Warren reportedly made the earliest attempt to dig a well in Honolulu, around 1820, but failed to find water. The first successful well was dug two years later by Joseph Navarro in his yard near the Bethel.⁵⁰ Visiting Honolulu about the same time, in 1822, Tyerman and Bennet recorded that “good fresh water is obtained from wells sunk eight or ten feet through the coral reef.”⁵¹

The first unit of a public water system was completed by March 31, 1848, using lead pipe acquired from Ladd & Co. the previous September. According to the Minister of the Interior, “a water tank, for the convenience of shipping, was placed in the basement of the new Harbor Master and Pilots’ Office, near the wharf (foot of Nuuanu street), and it was supplied through a leaden pipe from a reservoir at ‘Pelekane’ . . .”⁵² After the completion of the Bates Street reservoir in 1851, nearby businesses and homes were connected with the main. The system was further expanded in 1860–1861, eventually covering most of the city.⁵³

The first artesian well in the Islands was drilled in the summer of 1879 near James Campbell’s ranch house in Ewa and on September 22, a good flow of water was obtained. On April 28, 1880, an artesian well was successfully completed on the land of A. Marques near Punahou.⁵⁴

Construction of a sewer system for Honolulu began soon after annexation. The first contract was signed January 13, 1899, work was commenced early in August 1899, and by mid-1901 almost 34 miles of sewers had been completed. The 1901 report of the Governor stated: “Connections are rapidly being made, and in a few months the entire business section of the city will be using the system, together with a greater portion of the residence district.”⁵⁵

Flush toilet. The original plans for the new Court House on Queen Street, drawn in 1850, showed a small room marked “water closet,” but these plans were later discarded and after the facility was completed, late in 1852, it was described as simply a “privy.”⁵⁶

The first flush toilets of which a definite record exists appear to have been those installed in King Kamehameha IV’s new house on the Iolani Palace grounds in 1856.⁵⁷

Flush toilets eventually appeared in other buildings—the new main building of The Queen’s Hospital in 1860, the Hawaiian Hotel in 1872, the Opera House in 1880, and the new Iolani Palace in 1881, among others.⁵⁸

The first plumber in Hawaii was G. Segelken, who arrived in 1850 and opened a shop on Nuuanu Avenue near the waterfront.⁵⁹ Another plumber, Robert Rycroft, on June 30, 1866 ran the first newspaper advertisement to mention water closets.⁶⁰

No record can be found of the earliest private dwellings with flush toilets, but known examples included Washington Place (“probably installed in the latter half of the nineteenth century”) and Woodlawn, the home occupied by Frank Dillingham and his family in 1879. By 1886 the Board of Health was deploring “the construction of water-closets, sinks, and baths in the interior of houses,” particularly among “the better-off classes of society.” Such indoor facilities were deemed gassy, noisome, and a “danger to the public health.”⁶¹

Air conditioning. “The earliest recorded experiment in air conditioning in Hawaii,” according to a report published by the Honolulu Department of Housing and Community Development, “appears to have occurred at the Hawaiian Opera House, King and Mililani Streets, in 1912 or 1913. Large tubs were filled with cakes of ice, with electric fans placed behind the tubs to blow cool air toward the audience.

“Other rudimentary efforts were soon made. In 1939, George Mellen wrote: ‘Metropolitan Market, 50 South King St., has cooled itself since 1917 by using the excess cold from its refrigerated show cases; theatres were cooled by refrigerating machinery, but these are not considered complete air-conditioning jobs.’

“The first fully air-conditioned offices in the Islands were those of W.A. Ramsay, Ltd., agents for the Carrier Corp., in the Pier 11 Building at Fort and Queen Streets. This pioneering installation was announced in a half-page newspaper advertisement in September 1935.

“Later in 1935, Ramsay air-conditioned the Hawaii Theater, and, in 1936, the Cooke Trust Company offices, the new Waikiki Theater, and The Queen’s Hospital asthma ward.” The first fully air-conditioned home was built in 1938.⁶²

Pre-fabricated housing. Pre-fabricated wood-frame dwellings were relatively common in Honolulu during the first half of the 19th Century. What may have been the earliest to reach the Islands was brought by the Russian frigate *Neva* from Sitka, Alaska, in January 1809. Acquired by Kamehameha, it was set up the following year by carpenters from the royal navy yard. A later pre-fab, the Marshall and Wilder two-story

frame house built on the Honolulu waterfront in 1819, had the first wallpaper to reach Hawaii.⁶³

Other innovations. In recent years, Hawaii has been among the first areas to see major innovations in structural design. Among the most notable are the Kaiser aluminum dome, La Ronde revolving restaurant, and Aloha Stadium's movable stands.

In January 1957, Henry J. Kaiser erected one of the world's first aluminum geodesic domes, as an auditorium for his Hawaiian Village Hotel in Waikiki. Inexpensive and quickly assembled, the dome had a planned capacity of 1,800.⁶⁴

La Ronde is a revolving restaurant on the twenty-third floor of the Ala Moana Building, 1441 Kapiolani Boulevard. Opened to the public on November 21, 1961, it was described variously as "one of the first of its kind in the United States" and even as "the first revolving restaurant in the United States."⁶⁵

Aloha Stadium, a 50,000-seat, \$32 million facility opened in Halawa, Oahu, on September 13, 1975, boasted stands that could be moved to different configurations (depending on the sport) on a film of air. Although a few other stadiums in the United States offered movable bleachers, none at that time used this unique air bearing system.⁶⁶

Builders and architects. Finally, reference should be made to Hawaii's earliest builders and architects of the post-contact period. Architectural historian Charles E. Peterson has noted that "the two English sailors, John Young and Isaac Davis, marooned on the Island of Hawaii in 1790, . . . built the first foreign-style masonry buildings and may be considered, in a sense, the first architects of the civilized era." Peterson has identified the first *professional* architect in Honolulu as the German Theodore C. Heuck, who arrived in 1850 and eventually designed The Queen's Hospital, the Royal Mausoleum, and Iolani Barracks.⁶⁷

NOTES

¹ An earlier draft of this article appeared in a limited-circulation publication of the Honolulu Department of Housing and Community Development, *Housing and Community Development Research*, No. 39, July 1979, pp. 7-13.

² Session Laws of Hawaii (hereafter SLH) 1886, ch. XVI, approved 28 August 1886; amended by SLH 1890, ch. LXXII, approved 14 November 1890, and SLH 1903, Act 8. The first statistics on building permits were published in *Biennial Report of the Minister of the Interior . . . 1890*, p. 270.

³ Walter F. Judd, *Palaces and Forts of the Hawaiian Kingdom* (Palo Alto: Pacific Books, 1975), p. 61.

- ⁴ Gaylord Wilcox, "Business and Buildings: Downtown Honolulu's Old Fashioned Block," HJH 6 (1972), 3-27, espec. p. 13; "Something New in Honolulu," P, 1 April 1854, p. 186. For pictures of the Makee and Anthon Building, see Joseph Feher, Edward Joesting, and O. A. Bushnell, *Hawaii: A Pictorial History* (Honolulu: Bishop Museum Press, 1969), pp. 235 and 259.
- ⁵ "Kamehameha V Post Office," *Historic Hawaii News*, June 1977, pp. 1 and 8.
- ⁶ *Ibid.*; Historic Buildings Task Force, *Old Honolulu* (Honolulu, 1969), building 57.
- ⁷ Historic Buildings Task Force, *Old Honolulu*, building 28; "The New Edifice of the Central Union Church," HAA 1893, pp. 121-124; Honolulu Redevelopment Agency, "High-Rise Construction in Hawaii, 1842-1967," *Redevelopment and Housing Research*, Supplemental Research Notes, April 1967, pp. 1-4.
- ⁸ Wilcox, "Business and Buildings," p. 13.
- ⁹ *Ibid.*, pp. 3, 6, 7, 8, 13, and 25; "It Is Now Ready," PCA, 16 March 1899, p. 5.
- ¹⁰ Wilcox, "Business and Buildings," p. 10; Historic Buildings Task Force, *Old Honolulu*, building 44.
- ¹¹ Honolulu Redevelopment Agency, "High-Rise Construction," p. 2; HAA 1926, p. 120; HAA 1927, p. 124. The Historic Buildings Task Force (*Old Honolulu*, building 51) has incorrectly dated the construction of the Aloha Tower as 1921.
- ¹² "Ancient and Modern Hawaii at Ground Breaking Rite," HSB, 28 April 1954, p. C-25; "Gala Events Mark Opening of Rosalei Apartments," HSB, 8 March 1955, p. 12.
- ¹³ Wilcox, "Business and Buildings," p. 14; Honolulu Redevelopment Agency, "High-Rise Construction," p. 2; "Kaiulani Hotel Is Tallest in Waikiki, Matson Claims," HSB, 28 January 1955, p. A-11; "Waikiki Biltmore Hotel Captures Island Charm," HA, 19 February 1955, pp. B-3 and B-6; HA, 11 June 1955, Kaiulani Sect., p. 15.
- ¹⁴ Honolulu Redevelopment Agency, "High-Rise Construction," p. 2.
- ¹⁵ H. P. Veeder, "The New Wireless System," PP, December 1912, pp. 29-31; PCA, 15 September 1914, p. 7; "Reminders of the Past," HSB, 29 April 1969.
- ¹⁶ HAA 1917, p. 167; HAA 1918, p. 176.
- ¹⁷ Honolulu Department of Housing and Community Development, "High-Rise and Elevator Structures in Hawaii," *Housing and Community Development Research*, no. 36, July 1976, pp. 13-17, espec. table 1, p. 15.
- ¹⁸ E. S. Baker, "A Trip to the Sandwich Islands," HAA 1877, pp. 27-40, espec. p. 29.
- ¹⁹ Lion Insurance Co., [*Fire Atlas*,] *Honolulu, H.I.*, [1879].
- ²⁰ Anon., [*Fire Map*,] *Honolulu, Hawaiian Islands* (July 1885), sheet 4.
- ²¹ Untitled insert to 1885 map, dated April 1886, sheet 4; Dakin Publishing Co. of San Francisco, *Fire Map of Honolulu* [1899]. The latter volume covered the area between College Walk and Punchbowl Street, mauka from the harbor to School Street.
- ²² Richard A. Greer, "The Beavers' Pedigree," *Hawaii Historical Review*, 1, no. 7 (April 1964), 136-141, espec. pp. 137-138; PCA, 8 April 1882, pp. 1 and 5; L.M. McKenney & Co., *McKenney's Hawaiian Directory* (San Francisco and Oakland, 1884), pp. 98, 172, and advertisement on front cover.
- ²³ Telephone conversation between Herman Von Holt and Robert Schmitt, 3 September 1976; letter to Schmitt from O. K. Stender, Trustees' Executive Officer, Estate of James Campbell, 17 August 1976.
- ²⁴ Fire maps for 1879, 1885, and 1899, cited earlier; George Bowser & Co., *The Hawaiian Kingdom Statistical and Commercial Directory and Tourists' Guide, 1880-1881* (Honolulu and San Francisco, 1880); L.M. McKenney & Co., *McKenney's Hawaiian Directory* (1884), pp. 105 and 223, and *Hawaiian Directory and Hand Book*

- (San Francisco, 1888), p. 363; Richard A. Greer, "'Sweet and Clean': The Chinatown Fire of 1886," *HJH*, 10 (1976), 33-51, espec. pp. 37, 39, 40, and 41. The name appears as Chan in the 1884 directory and Greer's article, as Chang in the 1888 directory and 1899 fire map, and does not appear at all on the 1885 map. The building is shown with two stories on the 1885 map and is credited with three in Greer's account.
- ²⁵ "Building Improvements in Honolulu," *PCA* (weekly), 1 July 1882, p. 2. Also mentioned in Charles E. Peterson, "Pioneer Architects and Builders of Honolulu," *72nd Annual Report of the Hawaiian Historical Society for the Year 1963*, pp. 7-28, espec. p. 22. Pictures of both the Wilder building and Beaver Block appear in Edward B. Scott, *The Saga of the Sandwich Islands*, (Crystal Bay, Lake Tahoe, Nev.: Sierra-Tahoe Publishing Co., 1968), I, pp. 170-171.
- ²⁶ "Handsome Structure," *Hawaiian Star*, 14 August 1897, p. 1 and advertisement, p. 5; *PCA*, 24 September 1897, p. 9; Edward B. Scott, *The Saga of the Sandwich Islands*, p. 355; *HAA* 1898, pp. 161-162. Scott erroneously credits the Mott-Smith elevator as being first. Mellen correctly notes that the Emmeluth Building had the "first electric elevator in Hawaii" but assigns the wrong date ("Call a plumber," *The Sales Builder*, 13, no. 11 [November 1940], 11).
- ²⁷ Beverly Creamer, "Ups and Downs of Old Elevators," *HSB*, 14 May 1974, pp. B-1 and B-3. For a contemporary description, see "The Public Will View the New Hackfeld Building Tomorrow," *PCA*, 20 March 1902, p. 1.
- ²⁸ John Christensen, "The Past With a Future," *HSB*, 24 May 1979, pp. D-1 and D-7. For comments on Christensen's article, see R. C. Schmitt's letter in the *HSB*, 9 June 1979, p. A-9.
- ²⁹ "House of Mitsukoshi to Open in October," *HA*, 11 February 1940, p. 10; "Big Mitsukoshi Store Completed," *HA*, 1 November 1940, p. 3; "House of Mitsukoshi Installs Escalator," *HSB*, 20 December 1940, p. 3; "Highway to Better Service Opened," *HA*, 22 December 1940, p. 8; "Remodeling of Mitsukoshi Building Starts," *HSB*, 2 December 1942, p. 11; telephone conversations between Robert Schmitt and Fred Fujioka (architect for the store), 10 June 1976, and Rey Nakamura (of Otis Elevator Co.), 5 October 1976; Honolulu Department of Housing and Community Development, "High-Rise and Elevator Structures," p. 13.
- ³⁰ *HA*, 15 June 1947, advertisement, p. 7.
- ³¹ "Escalators at Liberty House Start Operating on Monday," *HSB*, 11 August 1951, p. 8, and advertisement, p. 5; "Liberty House to Open Electric Stairs Monday," *HA*, 12 August 1951, p. 9.
- ³² Glenn E. Mason, "Oliver G. Traphagen, FAIA, 1897-1907, in Hawaii," *Hawaii Architect*, December 1980, pp. 6-8, 10, 12, 13, 16, 17, 24, and 26, espec. p. 16.
- ³³ "Eye Opener," *HSB*, 22 May 1939, p. 3.
- ³⁴ Information supplied by the Hawaii Housing Authority, 13 February 1978.
- ³⁵ Ralph S. Kuykendall, *The Hawaiian Kingdom*, vol. I, 1778-1854, *Foundation and Transformation* (Honolulu: University of Hawaii, 1938), pp. 269-298.
- ³⁶ *Ibid.*, p. 283.
- ³⁷ *HAA* 1881, p. 63.
- ³⁸ *HAA* 1883, p. 61.
- ³⁹ *HAA* 1884, p. 68.
- ⁴⁰ *HAA* 1891, p. 147.
- ⁴¹ *HAA* 1896, p. 144; *HAA* 1897, p. 127; *HAA* 1899, p. 154; *HAA* 1900, p. 160.
- ⁴² Anon., "Wanna buy a lot?," *The Sales Builder*, January 1936, pp. 3-10, espec. pp. 5-6. This article erroneously refers to these developments as the "first attempt to subdivide city property into house lots" in Hawaii.

- ⁴³ *Ibid.*, pp. 7-8; Manuel G. Jardin, "Honolulu's First Electric Railway," *Hawaii Historical Review, Selected Readings* (Hawaiian Historical Society, 1969), pp. 270-273; "Map showing lots at Pacific Heights, Kewalo, Honolulu, Oahu. W. A. Wall, surveyor, Nov. 1899. Tracing [from Govt. Survey reg. map no. 2,148] by H. E. Newton, Aug. 1902;" filed in Hawaii State Archives.
- ⁴⁴ T. Blake Clark, "Honolulu's Streets," *Papers of the Hawaiian Historical Society*, no. 20 (March 1939), pp. 5-25, espec. p. 14. Clark dates the Pacific Heights development in 1889, an obvious misprint for 1899.
- ⁴⁵ Honolulu Department of Housing and Community Development, "Condominium and Cooperative Apartments in Hawaii, 1953-1977," *Housing and Community Development Research*, no. 37 (July 1977), pp. 1-3.
- ⁴⁶ SLH 1961, Act 180; U.S. Department of Housing and Urban Development, *HUD Condominium/Cooperative Study*, vol. I (July 1975), p. VI-3; information provided by Legislative Reference Bureau, 30 December 1980.
- ⁴⁷ Honolulu Department of Housing and Community Development, "Condominium and Cooperative Apartments," p. 2.
- ⁴⁸ *Ibid.*, p. 3.
- ⁴⁹ "1st Isle Business Condominium OK'd," HSB, 15 March 1963, p. 12; Charles Turner, "Crossroads" (column), HA, 27 March 1963, p. B-4; Emil A. Schneider, "Financial Plaza Work Is Set," SSB&A, 16 January 1966, p. A-22; "Heavy Pace of Office Construction Continues," *Hawaii Business and Industry*, March 1966, pp. 11-18, espec. pp. 11-12; "Financial Plaza Dedicated," HA, 16 July 1968, p. B-1; Robert R. Midkiff, "The renaissance of our downtown," HA, 12 November 1980, p. E-1. The erroneous claim for the Financial Plaza appears in both the Schneider and Midkiff articles.
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- ⁵¹ *Journal of Voyages and Travels by the Rev. Daniel Tyerman and George Bennet, Esq.* (Boston: Crocker and Brewster; New York: Jonathan Leavitt, 1832), vol. II, p. 47.
- ⁵² *Biennial Report of the Minister of the Interior . . . 1886*, Appendix C, "Honolulu Water Supply," p. xxi; anon., "First Water Pipe for Honolulu," HAA 1889, p. 85.
- ⁵³ "History of the Honolulu Water Works," *Report of the Superintendent of Public Works . . . 1913*, pp. 259-295, espec. pp. 266 and 269; W. A. Wall, "Honolulu Water Works," HAA 1923, pp. 47-53; George F. Nellist, "An Early History of Honolulu's Water System," in *Thirteenth Biennial Report of the Board of Water Supply, City and County of Honolulu. . . For the Biennium Ending December 31, 1950*, pp. 127-131.
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- ⁵⁵ *Report of the Governor of Hawaii to the Secretary of the Interior, 1901*, pp. 87-88; HAA 1900, p. 161.
- ⁵⁶ "Report of Committee on a Court House, September 25, 1850," filed in AH; *Interior 1851-1854 Journal D*, unpagged journal in AH, entry for 16 November 1852.
- ⁵⁷ *Chamberlain's Account Book and Agency of the King's Private Lands, Feb. 1, 1850-Dec. 1861* (ledger in AH), pp. 120, 129, 132, 135, and 171. I am grateful to H. James Bartels for bringing these references to my attention.
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- ⁶⁰ HG, 30 June 1866, p. 3.
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- ⁶² Honolulu Department of Housing and Community Development, "Air Conditioning in Hawaii," *Housing and Community Development Research*, no. 37 (July 1977), pp. 29-30 and 34.
- ⁶³ Charles E. Peterson, "Pioneer Prefabs in Honolulu," *HJH*, 5 (1971), 24-38, espec. pp. 25-26.
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