JOHN RODGERS AIRPORT, HANGAR NO. 2
(Honolulu International Airport, Hangar No. 2)
Elliott Street and Aokea Place
Honolulu
Honolulu County
Hawaii

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA
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

JOHN RODGERS AIRPORT, HANGAR NO. 2

(Honolulu, International Airport, Hangar No. 2)

HABS No. HI-575

Location: Elliott Street and Aokea Place
City and County of Honolulu, Hawaii
Honolulu, Hawaii

The building is located at latitude: 21.333799, longitude: -157.927500. This point was obtained on June 17, 2016 using Google Earth (FJO4Q). There is no restriction on its release to the public.

Present Owner: State of Hawaii, Department of Transportation

Present Occupants: Department of Land and Natural Storage

Present Use: Storage

Significance: Hangar No. 2 is historically significant for its associations with the development of commercial aviation in Hawaii and the construction of John Rodgers Airport. Constructed in 1929, Hangar No. 2 is associated with the oldest commercial airline company in Hawaii and it represents distinctive characteristics of a type, period, and construction methods important to Hawaii’s aviation history, and it has retained integrity throughout periods of major expansion. Though originally located at the John Rodgers Airport, its c. 1961 re-location to its current site at Honolulu International Airport does not significantly affect its historic integrity, nor detract from its distinctive architecture and continued use within an airport facility setting.

Description: Hangar No. 2 is square-shaped in plan, with a smooth gambrel style, peaked lateral-running roofline running east-to-west over the main body of the building. The gambrel roof, made of corrugated metal, exhibits a minimal 3” eave overhang and curves smoothly at its shoulders and peak, culminating in a ridge ventilator. The rectangular wood-frame ridge ventilator that runs almost the entire length of the roof dates back to 1982, due to damage at the original metal-framed, semi-cylindrical ridge ventilator from Hurricane Iwa. The arches of the gambrel roof begin 15'-0" from grade on each side of the building, and ultimately reach a total height of 45'-0" at the peak. The industrial style utilitarian building, which
measures approximately 100'-0" x 100'-0" in plan, is located in a secure area (closed to the general public) at the west side of the Honolulu International Airport complex. The building sits upon a concrete slab foundation. The main entry faces east, towards the main airport building.

Surrounding industrial buildings within the secured Airport Operations Area include a long east-to-west lateral-running storage building immediately to the north of Hangar No. 2, portable storage containers to the east, and a paint shop and ground support equipment building to the south. Beyond the airport boundaries, the Federal Prison Bureau is located to the west at the rear of Hangar No. 2. A barbed wire fence marks the boundary between the airport and prison properties. Paved areas surround the perimeter of Hangar No. 2.

The simple symmetrical two-story facade, with a two-bay wide entryway, lacks ornamentation. Clad in painted modern ribbed metal to match the first floor wall paneling with 5" on-center ribs, the central first floor entry doors hang from a metal sliding track. Each of the two door panels measures 7'-8" wide, across a total 15'-0"-wide opening; however, the above-door track is four bays wide, allowing for flexible entry configuration. A grooved metal track is embedded within the 8.5"-deep concrete threshold. At the second floor facade, original corrugated metal surrounds three central multi-lite clerestory windows. The centered window openings each consist of centered 8-pane awning windows set within an 18-lite panel window with original metal frames. Directly below the second floor windows, a portion running 68'-0" across and 2'-0" high appears to have supported earlier installed signage per historic photos and is confirmed in a historic evaluation report prepared by Mason Architects, Inc.1 Above the dividing line between first and second stories, four non-original industrial metal floodlight fixtures are centered on the facade.

The main body of the building features the roof outline, supported by steel arched ribs that are exposed within the interior main gallery. Two shed-roofed extensions are located at the south and west elevations; of these, only the shed-roofed extension that dominates the west, rear side of the building is original to the hangar.

The one-story west extension, which measures 25'-0" deep by 75'-0" wide with a 11'-10" high corrugated metal roof, is comprised of modern ribbed metal paneling, which replaced the original corrugated metal panel walls. At the south half elevation of the extension, a painted galvanized metal, hollow core dutch door with metal frame is labeled “Cabin Interior.” Air conditioning units penetrate the ribbed metal wall in four separate locations. Beyond the south end of the enclosed extension, a free-standing plywood and corrugated metal shed is located. A southwest doorway within the main body of Hangar No. 2 leads to a hallway. Beyond the north

end of the west extension, a corrugated metal shed roof measuring 10'-2"
high is attached to the west and north exterior walls of Hangar No. 2,
supported by a corner metal post. The roof provides a 25'-0"
wide by 10'-6"
depth shaded, open-sided patio area for lockers and a loading zone at
the northwest hallway entry, marked by a modern flush metal panel door
with wire glass light. A 6'-8" ribbed metal shelf attached by three struts to
the north-facing wall of the rear extension, provides covered storage for
several oxygen tanks. Inside, secure storage, former classrooms, offices,
a raft shop, and functioning restrooms, along with freestanding employee
lockers, line the main hallway with its 8'-0" high dropped ceiling. The
second story of the west elevation features original corrugated metal wall
treatment and three central 18-lite metal-framed window panes similar
to those on the east facade. A 12-rung metal ladder leads to the roof.

At the south side of Hangar No. 2, a one-story open area that runs west
from the facade to the middle of the south elevation measures 40'-0"
wide by 15'-0" deep and is covered by an 11'-6"-high corrugated metal shed roof
with a 1:6 pitch; the area is used for palette storage. Immediately west, a
9'-0"-wide by 15'-0" deep section, also covered by the same roof, is used
for locker and equipment storage; at the face, this section is protected by
open hexagonal fencing. From the middle of the south elevation to the
west end, an enclosed shed-roofed extension of approximately the same
depth as its adjacent open counterpart encompasses the remainder of
the first floor elevation for additional locked drum storage. This enclosed
section dates to the early 1960s, according to airline Captain and historian
Rick Rogers.2 The enclosed drum storage shed roof measures 8'-3"
high with a 1:3 pitch. Two metal-framed window bays measuring 5'-0"
high by 9'-0" wide, with a 2'-8" high apron, flank the metal-framed non-historic
2'-6"-wide hinged doorway at the center of the enclosed extension. An
additional multi-lite window at the east side of the enclosed extension
measuring 5'-0" high by 4'-6" wide is not readily accessible due to the
shed-roofed storage addition immediately to the east. Exposed T-shaped
metal rafters extend 1'-6" beyond the modern ribbed panel walls.

The north elevation exhibits a single 3'-8" wide doorway, and three
rough-patched sections where previous openings were located but
are no longer functional. Four non-original 4-lite metal-framed window
openings are located at the north wall of the rear west extension.
The curved roof with protective applied roofing material reflects the shape
of the exposed, arched structural ribs. Within the main gallery of Hangar No.
2, ten equally-spaced metal ribs are visible across the open length of the
building. Each metal rib is comprised of two 15'-0" tall vertical leg members,
each 15" wide, supporting an arch-like polygon of increasingly narrow, tapered
channels. Seventeen total segments, welded together in alignment, form

2 Captain Rick Rogers, “Hawaiian Airlines’ #2 Hangar on Elliott Street: History” (unpublished
Interest and theories about aviation in Hawaii initially began with Emil L. Melville’s attempts to fly a hot-air balloon from the slopes of Punchbowl in 1889. However, it was not until 1927 that Army Air Force Lieutenants Lester Maitland and Albert Francis Hegenberger, led by Commander John Rodgers, completed the first successful non-stop trans-Pacific flight from Oakland, California to Honolulu, Hawaii by landing at Wheeler Field on June 29, 1927 in a Fokker C-23 airplane with three Wright 220
Tri-Motor engines. The plane was nicknamed “The Bird of Paradise.”⁴ Two years earlier, through Act 176, Session Laws of Hawaii 1925, the City of Honolulu appropriated an amount of “$45,000 for the acquisition and improvement of an airport and/or landing field on the island of Oahu… within a reasonable distance of Honolulu.”⁵ The Chamber of Commerce raised money, as well. Act 257, Session Laws of Hawaii 1927 provided $75,000 in additional funding, all of which allowed for land purchase, planning, and development of the new John Rodgers Airport, named after the Commanding Officer of the Naval Air Station at Pearl Harbor who led the Oakland-Honolulu flight to its successful completion.⁶ Several historic flights between Hawaii and the West Coast, including Amelia Earhart’s plane in 1935, were soon to follow.⁷ Between 1925 and 1929, additional funds identified through Act 257 Session Laws of Hawaii 1927 were being allocated for airport construction on neighboring islands, including the Big Island (Hilo), Maui (Maalaea), Molokai (Hoolehua), and Kauai (Port Allen).⁸

On March 21, 1927, the John Rodgers Airport was formally dedicated, and work began on the 119.3-acre site near Kehei Lagoon. Under the jurisdiction of the Territorial Aeronautical Commission, several improvements were deemed of immediate necessity, including “clearing, grading, filling, roadways, runways, landing strips, aprons, water service, hangars, administration building, telephone, electric light and power service, and fencing.”⁹

The first commercial inter-island air service was provided by Inter-Island Airways, Inc., which was incorporated in 1929 under the Inter-Island Steam Navigation Company and which later officially became known as Hawaiian Airlines in 1941. During its first year of service, Inter-Island Airways, Inc. carried 10,355 passengers over a total of 275,574 miles.¹⁰ Following the Great Depression, Inter-Island Airways, Inc. expanded service across the other islands, carrying both passengers and airmail during the 1930s. Additional facilities were built for the expanded air fleet and support services of this airline and others. Part of Hangar No. 2 was sub-leased to the Andrew Flying Service during the 1930s.¹¹ Flying service classrooms and offices located off the main hallway within the west shed-

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⁵ Ibid., 6.
⁶ Ibid., 7.
¹⁰ Hawaii Aeronautics Commission, Annual Report, 10.
roof portion of Hangar No. 2 are most recently used as secure storage.

According to original newspaper records, Hangar No. 2 was built by Islands Welding & Supply Co., Ltd. for a company called Hawaiian Airways in 1929. It featured “unobstructed floor space, ample daylight, and full ventilation.” Also recommended as ideal and economical structure for other business facilities, such as “sugar warehouses, industrial buildings, packing plants, canning plants, garages, and power houses,” the basic body of the hangar style construction could be modified, as seen in Hangar No. 2 with its original rear, shed-roof extension, to meet necessary functions of different business operations. The original rear extension exhibited windows and a door, neither of which currently exist.

The east façade of the hangar was designed to be open, presumably to allow for ease of access for the planes; as such, neither walls nor corrugated metal sliding doors were present at the first floor of the east entryway at the time of original construction. In 1930, Inter-Island Airways, Inc. purchased this hangar building from Islands Welding & Supply Company at a cost of $8,750, according to the company’s annual report. Since Inter-Island Airways, Inc. had previously constructed a hangar in the fall of 1929 in preparation for their first flight on October 6 of that year, the new hangar acquisition was referred to as Hangar No. 2 and was intended for the airline’s repair and maintenance operations. A final third structure, Hangar No. 3, was eventually built in the same style in 1935. Hangars No. 1 and 3 no longer exist at the Honolulu International Airport.

The unique gambrel-curved roof and original wall-to-wall open entry design of Hangar No. 2 is easily differentiated from those constructed later in Hawaii, which were also built primarily in metal forms and often for wartime preparations. Many of these World War II era hangars still exist on the islands’ military bases. Quonset huts, originally popularized as “Temporary Aviation Facilities” were utilized for various functions by the United States Navy throughout the nation. These standard arched forms measuring 16'-0" x 36'-0" are one of the most identifiable structures from this period, with their semi-cylindrical corrugated metal walls and roof intended to deflect shell fragments. Unlike Hangars No. 1, 2, and 3, which were all constructed individually as necessary from 1929 to 1935, the erection of Quonset huts often occurred in a markedly different

15 Ibid.
16 Ibid., 7.
manner, with the quick work of assembly crew lines facilitated by the close siting of multiple Quonset structures. Additional airplane hangars located at Hickam Airfield, Pearl Harbor, Ford Island, and Wheeler Air Field exhibit a more standard low-pitched roof, standing four stories high with central three-story sliding entry doors and concrete pillars flanking each end of the façade. These hangars also display varying bands of multi-pane windows on each side of the building, unlike Hangar No. 2 which displays only a select use of front, rear, and side windows for daylighting.

Hangar No. 2’s metal ribs, with their inscriptions of “Carnegie USA,” “Pencoyd USA,” and “Tennessee USA,” appear to have been manufactured in collaboration by three subsidiary companies under U.S. Steel, which was formed in 1901 through the merger of the Carnegie Steel Company, Federal Steel Company, and National Steel Company. In addition to the Carnegie name, structural steel members are identified at Hangar No. 2 bearing the stamps of Pencoyd Iron Works (located in Bala Cynwyd, Pennsylvania), which was acquired by U.S. Steel in 1902, and the Tennessee Coal, Iron and Railroad Company (headquartered in Birmingham, Alabama), which was purchased by U.S. Steel in 1907. United States Steel Corporation was the leading steel manufacturing company in the early 1900s, and it continued to add smaller companies and facilities to the fold as operations grew significantly during the first decade of the twentieth century, setting early precedent for antitrust litigation.

In May 1947, under Act 31, Session Laws of Hawaii 1947, entitled An Act to officially establish the name of Honolulu Airport, what had been known as the John Rodgers Airport and Keehi Lagoon Seaplane Harbor was officially re-named to the Honolulu Airport in order to streamline designations according to geographical location. Master plans from 1955 indicate only Hangar No. 2 within the new airport complex, for which ground was broken in 1959; the airport was completed in 1962. According to historian and airline Captain Rick Rogers, “It has been stated that Hangar No. 2 was set on 34 heavy-duty casters and towed to her present location.” However, the exact date and circumstances of Hangar No. 2’s re-location are unknown.

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Sources:

Bibliography


United States v. United States Steel Corp. 251 U.S. 417 (1920).

Internet Sites


Project Information: The State of Hawaii Department of Transportation proposes to demolish Hangar No. 2 at the Honolulu International Airport. In accordance with Chapter 6E-42, Hawaii Revised Statutes, the State of Hawaii Department of Transportation, Airports Division, has conducted documentation of the building in accordance with HABS standards prior to the undertaking of the proposed project. This photo documentation and recordation fulfills that agreement.

This report was prepared under a Historic Preservation Services contract (Project No. AO1125-18) awarded to Fung Associates, Inc., the architect of record, by the State of Hawaii Department of Transportation. This project is being supervised by Valerie Sasuga, State of Hawaii Department of Transportation, Airports Division. The photographic documentation was undertaken by David Franzen, photographer. Alison Chiu, who is an architectural historian meeting the Secretary of the Interior’s Professional Qualifications Standards, prepared the written documentation.

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Fig. 1: U.S.G.S. Map, U.S.G.S. Pearl Harbor, HI Quadrangle 2013 (7.5 Series) NAD83.