

**U.S. NAVAL BASE, PEARL HARBOR, AIRCRAFT CARRIER
SUPPORT FACILITIES
Northwest side of Ford Island
Pearl Harbor
Honolulu County
Hawaii**

HABS No. HI-394

HABS

HI-394

WRITTEN HISTORICAL DATA

**HISTORIC AMERICAN BUILDINGS SURVEY
National Park Service
U.S. Department of the Interior
Oakland, California**

HISTORIC AMERICAN BUILDINGS SURVEY

U.S. NAVAL BASE, PEARL HARBOR, AIRCRAFT CARRIER SUPPORT FACILITIES

HABS No. HI-394

Location: Northwest side of Ford Island
Roughly bounded by Northwest side wharfs, San Jacinto Street,
and paved area east of hangars on Wasp Boulevard
Pearl Harbor Naval Base
City and County of Honolulu, Hawaii

See HABS reports listed below for UTM coordinates of the facilities

Present Owner: U.S. Navy

Present Use: Mostly storage

Significance: This complex of buildings and berths on the northwest side of Ford Island contained the main aircraft carrier support facilities in Hawaii during World War II. The buildings were mostly constructed about 1941, after the Army aviation functions had been moved from Luke Field (northwest side of Ford Island) to either Hickam or Wheeler Army Air Fields. These Navy-built facilities supplemented the four Luke Field hangars (Fac. 174, 130, 133, and 134 [the last listed now gone]) and a few other structures that the Army had left on Ford Island. This carrier support area included the hangars and shop buildings where planes and other equipment of the carriers were repaired, as well as the storage facilities for small ordnance and other materials. These buildings were needed for training and to provide repairs and supplies for the deployment of the aircraft carriers in the Pacific. The moorings on the northwest side on Ford Island were the preferred berthing spaces for the aircraft carriers when they came to Pearl Harbor on the way to or between battles. These moorings were converted to carrier wharfs (Facilities S382, S383, and S384) during the last years of WWII. This support complex helped prepare the aircraft carriers and allowed rotation of their planes; this enabled maintenance of top readiness for the critical air battles in the Pacific that contributed greatly to the final victory.

Additional information on the specific facilities in this group is available in the following HABS reports (listed by year of construction):

Report Number	Fac. No.	Date	Report Name (all preceded by: U.S. Naval Base, Pearl Harbor)
HABS No. HI-362	S145	1917	Battery Boyd
HABS No. HI-399	174	c. 1920	United States All-Steel Hangar
HABS No. HI-366	130	1934	Army Hangar
HABS No. HI-417	166	1941	First Aid and Decontamination Building

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HABS No. HI-372	167	1941	Fleet Squadron Storehouse
HABS No. HI-364	S168 & S169	1941	Small Arms Magazine Type
HABS No. HI-398	170 & 171	1941	Inert Storehouses
HABS No. HI-363	S172	1941	Pyrotechnic Magazine
HABS No. HI-308	173	1940	Smokedrum Storehouse
HABS No. HI-400	175 & 176	1941	Landplane Hangar Type
HABS No. HI-361	S214	1942	Practice Bomb Storehouse
HABS No. HI-418	184	1942	Naval Air Station Temporary Storehouse

HISTORICAL INFORMATION

Early Carrier Aviation

Seaplanes, lighter-than-air craft (dirigibles and blimps), and carrier planes were the three means of taking naval air power to sea in the first half of the twentieth century (Department of the Navy 1970: 23). The seaplanes were the first Navy aircraft to be based in Hawaii. Although there were plans for lighter-than-air craft at Ewa, no Navy airship ever made it to Hawaii. Seaplanes based at the Pearl Harbor Naval Station on Ford Island generally performed patrol and other important functions around Hawaii. There were also small seaplanes that could be launched from battleships and cruisers to direct ships' gunfire. The patrol planes were considered combat planes because they protected ports and coastal shipping against submarine attacks (Office of the Chief of Naval Operations 1947: 5). The main combat aircraft were the carrier planes, but none were based in Hawaii in the early decades of the century.

Naval aviation began in 1911, when the first naval officer reported for flight training, the first aircraft was bought, and the first aviation camp site selected (Department of the Navy 1970: 1). The Navy's first aircraft carrier was not authorized until 1919; the USS *Jupiter*, a collier, was converted and commissioned as the USS *Langley* in 1922. Congress approved a 1,000-plane level for the Navy in 1926. Several fleet exercises were held in the 1920s, including one in 1928 that conducted a surprise attack on Pearl Harbor. The first of the fast, heavy carriers, the USS *Lexington* and USS *Saratoga*, were built in this decade. The dive bomber was developed and experiments with this aerial weapon were initiated in the 1920s (Wildenberg 1998: xv).

Five new aircraft carriers were built in the 1930s, four large fast carriers, the USS *Yorktown*, *Enterprise*, *Wasp*, and *Hornet*, as well as the smaller USS *Ranger*. Many design developments in carriers and carrier planes occurred in the 1930s. "Hydraulic arresting gear and catapults were installed aboard aircraft carriers" (Department of the Navy 1970: 75). The Bureau of Aeronautics changed carrier aircraft from the standard biplanes with fabric-covered wings to single-wing, all-metal planes. This material change was made despite the faster landing speeds the latter required, which put more stress on the planes' undercarriage. Thus, the skin material change also involved more reinforcing and weight, which adversely affected aircraft performance (Wildenberg 1998: 133). Some of the other design features developed in the 1930s were better radios and the wing-folding system, which cut in half the amount of deck space required for parking. The first order for the all-metal monoplanes was placed in 1936. Homing devices for aircraft carriers were also being developed in the late 1930s. These would allow the scouting aircraft to fly longer and further, not having to allow for fuel reserves to scout for their carrier.

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Fleet exercises with aircraft carriers and other ships were again held in Hawaiian waters several times in the late 1930s. In the 1938 "problem," the "purpose was to test the tactics employed in both occupying an advanced base and defending the Hawaiian area" (Wildenberg 1998: 158). Some of the new carrier torpedo planes were tested during these exercises.

In the 1930s providing shore facilities for fleet aircraft was one of the Navy's chief concerns. The Navy needed all of Ford Island, which was still being shared with the Army. "Since carriers can launch their planes only at sea, an operating base for carriers must include an air base for their planes" (Snowbarger 1950: 233).

Termination of Joint Army-Navy Aviation on Ford Island and Other Naval Air Stations

Aircraft carriers and their planes were not based at Pearl Harbor before 1939, although they had visited during earlier fleet exercises. There was not enough room for basing carrier planes on Ford Island until the Army moved its aviation operations from there to Hickam and Wheeler Fields in the late 1930s. The Navy gained complete control of Ford Island on November 1, 1939 (Naval Air Station 1945: 13).

In the early 1940s several other Naval Air Stations (NAS) were established in the Hawaiian islands – at Kaneohe Bay and Barbers Point on Oahu, Puunene and Kahului on Maui, and Hilo on the island of Hawaii. Most of these NAS included Carrier Aircraft Service Units (CASU) for the repair and maintenance of carrier planes. Some of these NAS, including Barbers Point and Puunene, were used for training carrier group personnel, pilots and other crew. The Maui and Hilo NAS were not needed by the Navy after WWII and two became Territorial (civilian) airports in the late 1940s. NAS Kaneohe Bay became a Marine Corps air station in 1952. The Navy retained NAS Barbers Point until the late 1990s.

The number of planes authorized for the Navy increased steadily over the 1930s and then sharply in 1940. The limit in 1934 was 2,050 planes, increased in 1938 to 3,000. On June 11, 1940, the ceiling was raised to 4,500, and a few days later, the Vinson Act raised "the number of aircraft authorized still further to 10,000;" and it was raised again in July to the level of 15,000 (Wildenberg 1998: 162).

Although the buildings on the northwest side of Ford Island were intended to support the carrier planes, the maps of the period and the building drawings do not specify this use. The Army had left a few buildings, and the Navy could use most of them immediately without much conversion work or change in function. One Army hangar was relocated and changed to a storehouse for practice bombs (Fac. 174) and Battery Boyd (Fac. S145) was used for ammunition storage, its guns having been removed years earlier. Except for those Army buildings, the facilities in this area were built by Contractors Pacific Naval Air Bases (CPNAB), the consortium of construction firms that had been building many facilities for the Navy at Pearl Harbor and other Pacific locations.

Some of the buildings, including Facilities 175 and 176, were designed by Albert Kahn Associates of Detroit, Michigan. This firm designed many of the buildings at naval bases in Hawaii and the Pacific (Contractors Pacific Naval Air Bases n.d.: A-338). Albert Kahn was "one of the country's foremost industrial designers, and had been chosen to prepare plans for the barracks, messhalls, and hangars that could be standardized for the various bases" (Woodbury 1946: 76). German-born, but raised in the United States, Kahn specialized in factory design and had several commissions from the Ford Motor Co. (Richards 1977: 163). His buildings

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were noted for their simplicity, efficiency, and use of natural light. The firm also became famous for the speed of its design process when a huge aircraft factory in Baltimore was completed, from design to construction, in 81 days (Bucci 1993: 105). This simplicity of design and construction was much needed and appreciated when Kahn's firm was awarded the contracts to design the new Navy bases in the Pacific and Atlantic.

Other buildings in the carrier support complex appear to be based on standard Bureau of Yards & Docks designs, including all of the ammunition storage buildings (Fac. S 168 to S 172). Facility 184 was built after 1941; it is the only remaining wood-frame building in the area. Most buildings in the carrier support complex on the northwest side of Ford Island were designed and built before the December 7, 1941 attack.

Carriers and December 7, 1941 attack

Luckily, the three Pacific-based aircraft carriers were not in Pearl Harbor on December 7, 1941. The USS *Enterprise* and the USS *Yorktown* were transporting reinforcements to Wake and Midway, and the USS *Saratoga* was being overhauled and collecting her air group on the west coast (Lundstrom 1984: 4). If the U.S. carriers, as well as the battleships, had been damaged or sunk, the outcome of WWII could have been quite different. In any case the war certainly would have been longer.

Some aircraft from the USS *Enterprise* did have tragic associations with the date of December 7, 1941. The aircraft carrier was in a group of ships to the west of Oahu, returning from Wake. Luckily, weather had slowed the task force, because they had originally been scheduled to arrive back at Pearl Harbor on December 6, 1941. Eighteen dive bombers from the *Enterprise* were sent out ahead to scout at dawn on December 7, a normal procedure. Since the task force was close to Pearl Harbor, the planes were to land there, instead of returning to the carrier. They arrived about 8 am, in the midst of the first wave of the Japanese attack. Five of the eighteen made crash landings or were shot down, either by Japanese planes or by anti-aircraft fire (Lundstrom 1984: 15).

The remaining planes of that group, plus some from the carrier, searched for the Japanese attack force, but were misdirected that day and found nothing. When the planes from the carrier returned to the *Enterprise* from their combat air patrol after dark, some were allowed to land, because they were low on fuel. The carrier's squadron of six fighter planes, however, was directed to fly to Oahu. Although some ground personnel at Pearl Harbor had been notified that American aircraft were en route, distraught gunners on damaged battleships believed Japanese planes were returning and opened fire. Two of the six planes were immediately shot down, and the other four scattered. One plane landed without power, its engine smashed by an anti-aircraft shell. Pilot Gayle Hermann was unhurt. Another plane tried to land in a canefield, perhaps damaged by the wild anti-aircraft fire; it cartwheeled and broke into flames. Its pilot died the next day. The last two pilots survived, but David Flynn had to parachute from his plane when the engine stopped, perhaps due to lack of fuel. James Daniels was the only one of the group to land with his plane. He had landed through tracer bullets and even was shot at by a Marine guard as he "taxied back up to our hangar on the north side of the field" (Daniels 1986: 85). That night, in the house on the east side of Ford Island where he was bunked, Daniels also survived some shrapnel that came through the wall from the still-exploding USS *Arizona*.

Carrier and Seaplane Naval Aviation on Ford Island During WWII

Soon after the attack on Oahu's military installations, two other carriers, the USS *Lexington* and the USS *Hornet*, were moved to Hawaii from the Atlantic, and another carrier, the *Wasp*, arrived about mid 1942. Because the Pearl Harbor attack had damaged or sunk all the battleships in Hawaii, the Naval war in the Pacific became a fast carrier war (Reynolds 1992: 22). Through the first part of the war, a single-carrier task force was typical because of the limited number of carriers. After the Battles of the Coral Sea and Midway, Admiral Ernest J. King, Commander in Chief of the U.S. Fleet and Chief of Naval Operations, issued a policy forbidding two carriers to operate together (Reynolds 1992: 30). There were experiments with two-carrier task formations, and a British carrier, the *Victorious*, was loaned to the Pacific command for training in Pearl Harbor from March to May 1943 (Reynolds 1992: 35). By the spring of 1943, the U.S. scientific and industrial community, the "sleeping giant" that the Japanese military had feared, had constructed the *Essex*-class fast heavy carriers, the *Independence*-class fast light carriers, and the first escort carrier, the *Long Island*. "By the end of 1943 the Navy air arm had added 48 new carriers and a year later the number had doubled with the majority assigned to Pacific waters" (Sunderman 1981: 73).

Besides new carriers, many new carrier planes were being developed in the U.S. to improve the odds against the Japanese Zero, which was the superior plane at the beginning of the war. During the war, there was a transition to assign more fighter planes to carriers and to develop a combined dive bomber and torpedo bomber. Besides designing better aircraft, the U.S. ramped up production to quickly surpass Japan's planes in numbers. "Japanese air power was geared for a quick offensive war, not a long drawn-out defensive war of attrition" (Sunderman 1981: 73). Between July 1940 and August 1945 the U.S. aircraft companies produced 174,000 combat planes for the Army, Navy, and Marines.

Captain James G. Daniels (1999), who served for four years on the USS *Enterprise* starting in September 1939, stated that usually only one carrier was in port at Pearl Harbor at any one time during the war years. One of the reasons for this, at least in the early part of the war, was to minimize the number of these critical vessels that could be attacked in port. Second, with so few carriers, each could only be spared the minimum time for necessary repairs, rotation of planes, and upgrades to the planes and ship. Third, one carrier brought in a large number of planes, which filled the repair hangars in the carrier support complex to capacity.

Facilities 175 and 176, as Captain Daniels (1999) recalled, were the main carrier hangars. He noted that there were four identical sets of shops (on the hangar floors) and two offices (in the mezzanines) in each of the two main hangars. He said each hangar could handle two 18-plane squadrons, and typically there were four squadrons per aircraft carrier. Repairs as well as plane and equipment upgrades were done in the hangars. Replacement parts that could not be made on Ford Island were provided by the large industrial shops in the Shipyard (Daniels 1999).

There were at least 12 fast carriers in the Pacific by the middle of WWII, and all of them made stops at Pearl Harbor for repairs, upgrades, and/or supplies, on the way to and from battles. Before the summer of 1944, carriers always returned to Pearl Harbor to pick up their new air group and train for ten days. After that date, "all new air groups trained aboard available carriers at San Diego or Hawaii, and after qualification were ferried to their ships at the advanced anchorages just prior to going into combat" (Reynolds 1992: 230).

During the war an aircraft pool was created on Ford Island "to form a reserve supply from which carriers, air groups and squadrons could draw upon to supplement their aircraft complement"

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(Naval Air Station 1945: 18) This pool was considered one of the most important functions of the Naval Air Station (NAS) Pearl Harbor. The limited land area of Ford Island meant that the supply function of supporting all Naval aviation in the Pacific could not be contained here. Scattered warehouses and storage areas in Honolulu were leased or otherwise obtained, while a new Naval Aviation Supply Depot (NASD) was constructed on parcels in Waiawa Gulch, at the tip of Pearl City Peninsula, and at Pearl City Junction. Four docks (Fac. V1 through V4) were built at the tip of the Pearl City Peninsula, but the first two were not completed until the summer of 1944, and the other two were not operational before spring of 1945 (Fourteenth Naval District [1945]: Vol. 1, 55 & 60). These docks were used by aircraft carriers and aviation supply ships when loading up with supplies from the NASD storehouses at Pearl City Peninsula, Pearl City Junction, and Waiawa Gulch. The NASD did not become fully functional until the spring of 1945 (Fourteenth Naval District [1945]: Vol. V, 6). Except for those last few months of the war, the Supply Department of NAS Pearl Harbor on Ford Island functioned as the main supply conduit for the ten other Naval Air Stations in the Hawaii area, as well as for the aircraft carriers that came through Pearl Harbor. Contributing to the supply difficulties were the variety of plane types. "Almost all plane types used by the Navy were operated at one or another of these [Hawaii] stations, so it has been necessary to stock spares for almost every Navy plane to assure that there would be no interruption of essential training and operating schedules" (Fourteenth Naval District [1945]: Vol. V, 5).

Patrol planes, mostly seaplanes, continued to occupy the southeast corner of Ford Island. Because they were based here, their repairs and upgrades could be scheduled more evenly and with less time pressures than the carrier plane work. Some facilities, such as the engine test building at the south corner of the island, served both the patrol and carrier planes. Aircraft engines required rebuilding or replacement after a certain amount of operational time was reached.

Physical Evolution of the Carrier Support Complex on Ford Island

The northwest side of Ford Island held the main carrier support complex. [Additional carrier-related facilities were also built across the channel on Pearl City Peninsula (see HABS No. HI-393).] The Ford Island support facilities included the 1930s ship moorings on the northwest side of the island, which were converted to carrier wharfs (Fac. S 382, S 383, and S 384) between 1943 and 1945. The Navy database lists 1941 as the date of the first two wharfs, but historic photos prove those later dates.

The cluster of buildings near the center of the northwest side of Ford Island was the core of the carrier support facilities. This grouping was the third known "generation" of buildings on this part of the island – the Navy facilities constructed on the site of Army buildings, which had displaced sugar plantation facilities. By the time the Navy gained tenure of this side of Ford Island the only remaining plantation facility was an artesian well, which was temporarily used after the December 7, 1941 attack to supply water to fire lines (Dodge 1998).

The first military structure erected on the northwest side of Ford Island was Battery Boyd (Fac. S 145). Although the guns were removed by the Army in the 1920s, it has remained in use for ammunition storage. The Navy continued to use a few other Army structures after that service vacated the island. The c. 1922 Army finger piers (Fac. S291, see HAER No HI-22) continued in use for small boat berthing (this facility recently has been entirely rebuilt). Historic photos show that the Army had built a boathouse over these finger piers before WWII, and that the Navy continued to use this structure during the war. The boathouse was taken down by 1953,

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although the piers remained. Maps indicate that the Navy also used the Army swimming pool built near this pier until at least 1953, but removed it by 1963 (U.S. Navy 1963). Another leftover from the Army development of this area is the arched alignment of the street called Ranger Loop, which echoed the original shoreline. WWII fill on Ford Island has obscured the relationship of street to shore. The Navy imposed a new grid pattern of roads and buildings within Ranger Loop, and covered over the triangular-shaped street that the Army had built inside of the road that became Ranger Loop.

The only buildings that the Army did not remove when it moved from Ford Island were the officers' housing and a row of hangars, aligned along the main street on the northwest side of the island. The Navy reused most of the Army's houses and their four hangars, Facilities 130, 133, 134 [now gone], and 174. Before 1941, the Navy relocated the last hangar, which was the smallest and oldest of the four, and placed it within Ranger Loop, across the street from the other three hangars, which were closer to the runway. This small hangar (Fac. 174) was converted to storage for practice bombs. A few of the Army houses were demolished to make room for two new large Navy hangars (Fac. 175 and 176) in 1941.

In addition to the relocated Army hangar turned storehouse (Fac. 174), the Navy built nine buildings within Ranger Loop in the 1940-1942 period. A drawing, dated March 1941 (reproduced in this report), shows that this grouping was then called the "Small Storehouse Area." Most of these nine buildings were concrete construction: two small arms storehouses (Fac. S168 and S69); two inert storehouses (Fac. 170 and 171); a pyrotechnic magazine (Fac. S172); a First Aid & Decontamination building (Fac. 166); and the two-story "Fleet Squadron Storehouse" (Fac. 167). In 1942 an L-shaped wood-frame warehouse (Fac. 184) was built adjacent to the last building, instead of the planned extension of that two-story concrete building. Only the name of "Fleet Squadron Storehouse" clearly ties the complex to any aviation use. No official designation of this area as the carrier support complex has been found, but that is how it functioned. The buildings within and near Ranger Loop were painted in a camouflage pattern soon after the December 7, 1941 attack.

Not all the WWII buildings constructed on this side of Ford Island were specifically aircraft carrier support facilities. The 1941 map shows Fac. 173 as "FS Drums" building (along with two "future" ones never built). During attacks the FS drums (fluid smoke canisters) could provide protective smoke coverage for all facilities and planes nearby, including the seaplane area. A 1942 (Naval Air Station) map of Ford Island shows two other structures southwest of Ranger Loop that served the whole area and perhaps the whole island -- an incinerator and a garbage loading facility. A 1943 (Naval Air Station) map shows the latter was replaced by a tennis court and a fire and rescue station. None of these facilities remain. The fire and rescue station here (Fac. 221) was one of five concrete facilities of this type scattered around on the runway. Two other facilities were also built southwest of Ranger Loop during WWII, but demolished sometime before 1978. It is not clear if the guard house (Fac. 135) and an additional land plane hangar (Fac. 177) were part of the aircraft carrier support complex during WWII. For at least a few months before and after the December 7, 1941 attack, Utility Squadron 2 was stationed in Fac. 177, and their duties included using seaplanes for towing targets (Morgan n.d.: 3).

Historic photos show that much of the land to the northeast of Ranger Loop was fill land, created from the extensive dredging done around Ford Island in the late 1930s and early 1940s. On the northeast side of the loop road (un-named on the 1941 map), there was a galley building by March 1941. Historic photos and maps show that by June 1943 there were also 18 one-story wooden barracks and latrine buildings, several splinter-proof shelters, and a fire station and

truck shed building on this fill land. By June 1945, there was a "beer garden" adjacent to the fire station. These temporary buildings were all removed by 1953.

Most of the extant facilities that supported the aircraft carriers were erected before or in 1942 and were classified as permanent construction, including the L-shaped wood-frame warehouse (Fac. 184), and another wood-frame warehouse for practice bomb storage (Fac. S 214), built at the northwest corner of the island in 1942. The former is still in use and the latter was only recently demolished. Almost all the permanent construction erected by the Navy within or near Ranger Loop during World War II remains, except for the small ready magazines (recently demolished) erected at the Wasp Boulevard corners of the four extant hangars. The only post-WWII structure in the Ranger Loop core of the aircraft carrier support complex is a 1948 swimming pool filtration plant (Fac. 293), which was changed to a storage building when the pool was removed, sometime before 1963.

SOURCES

A. DRAWINGS

Drawings of the individual buildings in this complex are noted, and some are reproduced, in the individual HABS reports listed on the first and second pages of this report. Microfiche cards of the drawings or maps made for or by the U.S. Navy, including the original construction and later alterations drawings for buildings, are located at the Plan Files of the Naval Facilities Engineering Command, Pacific at Pearl Harbor, Hawaii. Maps of Ford Island from WWII were found in the Naval Facilities Engineering Command Archives at Port Hueneme, California and at the National Archives II, College Park, Maryland, in addition to a July 1942 map provided by Jeffrey Dodge, of Naval Facilities Engineering Command, Pacific.

B. EARLY VIEWS

There are numerous aerial and facility-specific photographs of Pearl Harbor in the Still Photo section of National Archives II, College Park, Maryland, mostly in RG 71 CA and RG 71 CB. Only a few photos of the aircraft carrier support facilities on the northwest side of Ford Island were found.

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Naval Air Station

- 1942 Ford Island [map], Conditions as of June 1, 1942. Drawing no. 509. Provided by Jeffrey Dodge, Naval Facilities Engineering Command, Pacific.
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National Archives, Pacific Sierra Region, 1000 Commodore Drive, San Bruno, California
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D.C. 20734, ph. (202) 433-4131.

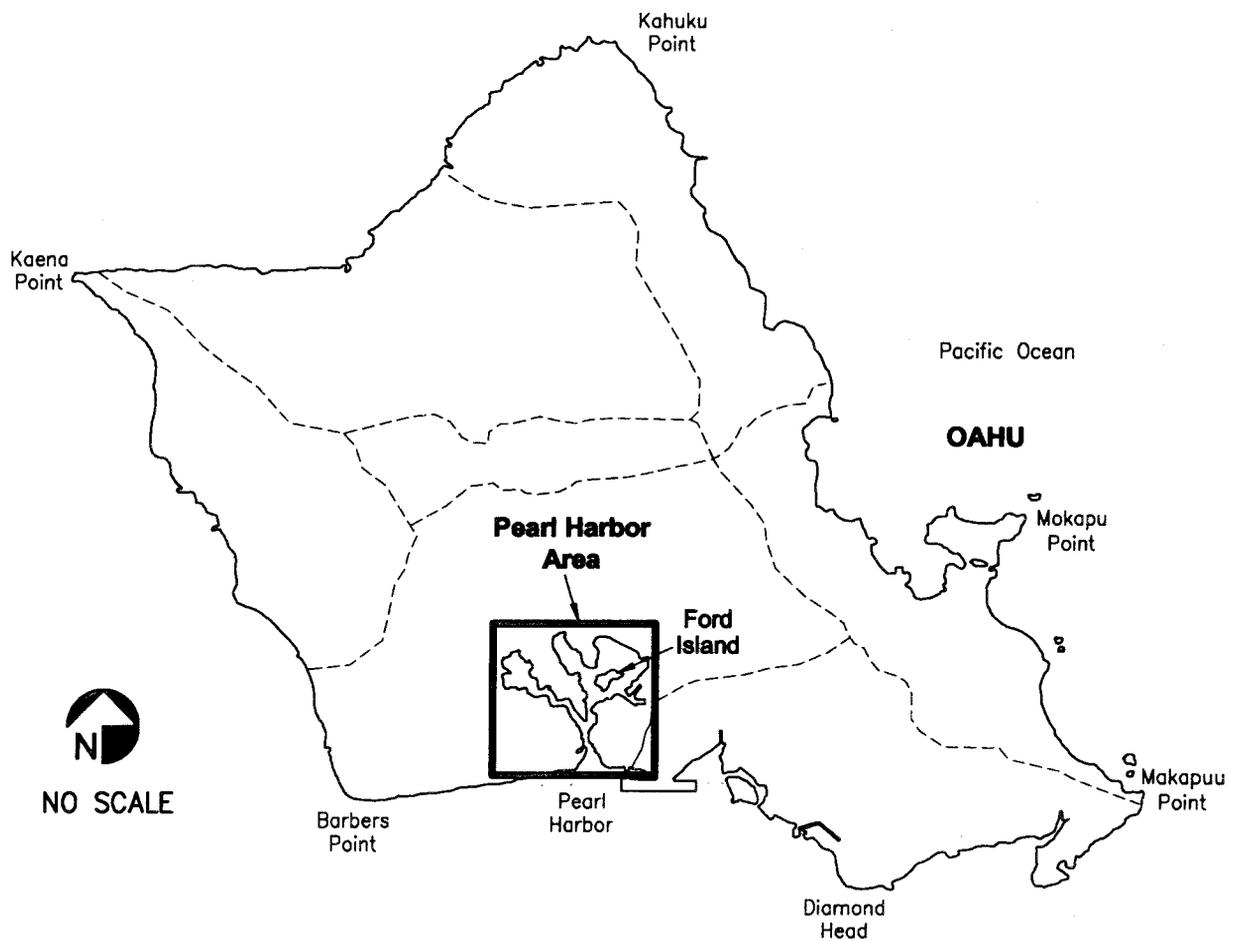
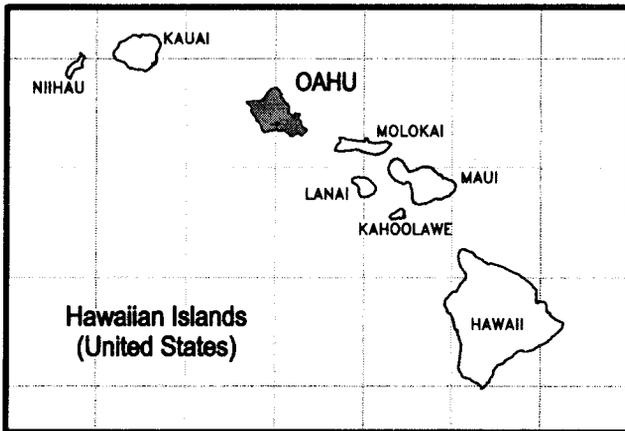
PROJECT INFORMATION

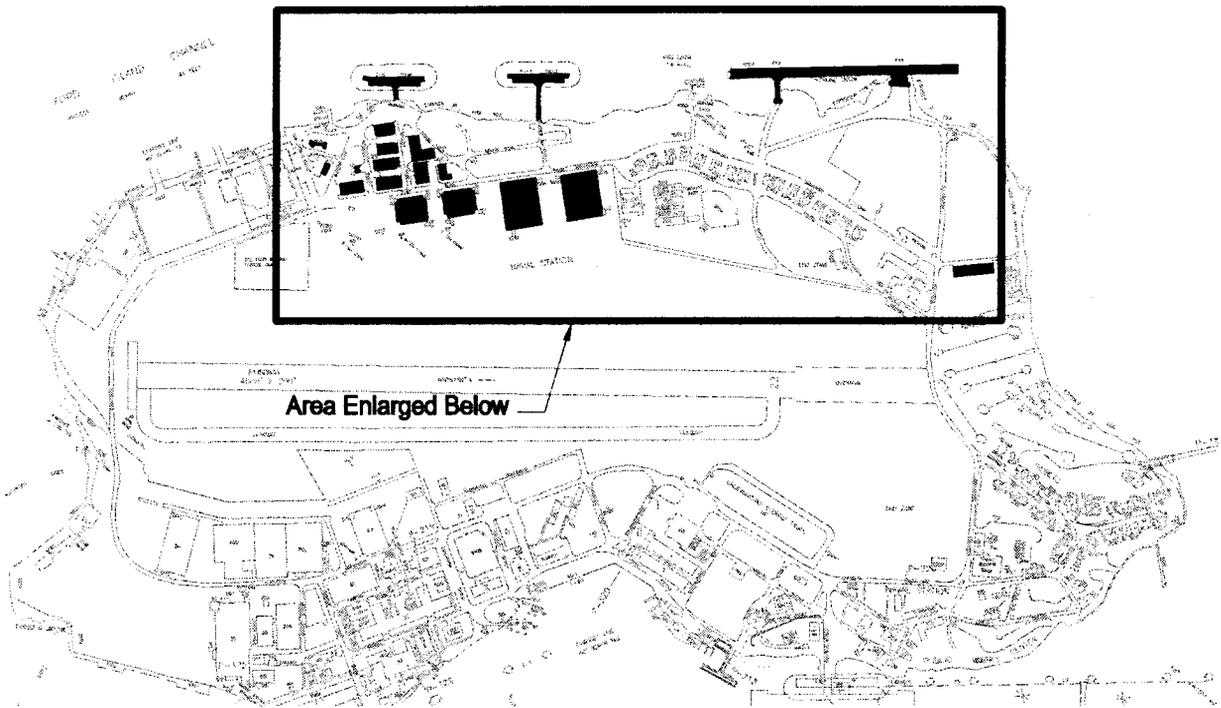
Commander Navy Region (COMNAVREG) Hawaii has embarked on a program of documentation of historic properties within its area of responsibility, with the goal of recording historic information about each building or set of facilities. In order to establish the context of significance for this facility group, this overview report was prepared. This information will assist COMNAVREG Hawaii in the appropriate management of these properties, be it routine repair and maintenance for continuing use, rehabilitation for continuing use / adaptive reuse, or demolition. This report was prepared under a Historic Preservation Services contract (N62742-97-D-3502) awarded to AMEC Earth and Environmental, the prime contractor, by the U.S. Navy, Naval Facilities Engineering Command, Pacific. The contract was funded through the Cultural Resources Program of COMNAVREG Hawaii. Maps were made by Nestor Beltran of NAB Graphics. Ann Yoklavich of Mason Architects did the research and writing for this report.

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Date of Final Report: August 2004

U.S. NAVAL BASE, PEARL HARBOR, AIRCRAFT CARRIER SUPPORT FACILITIES
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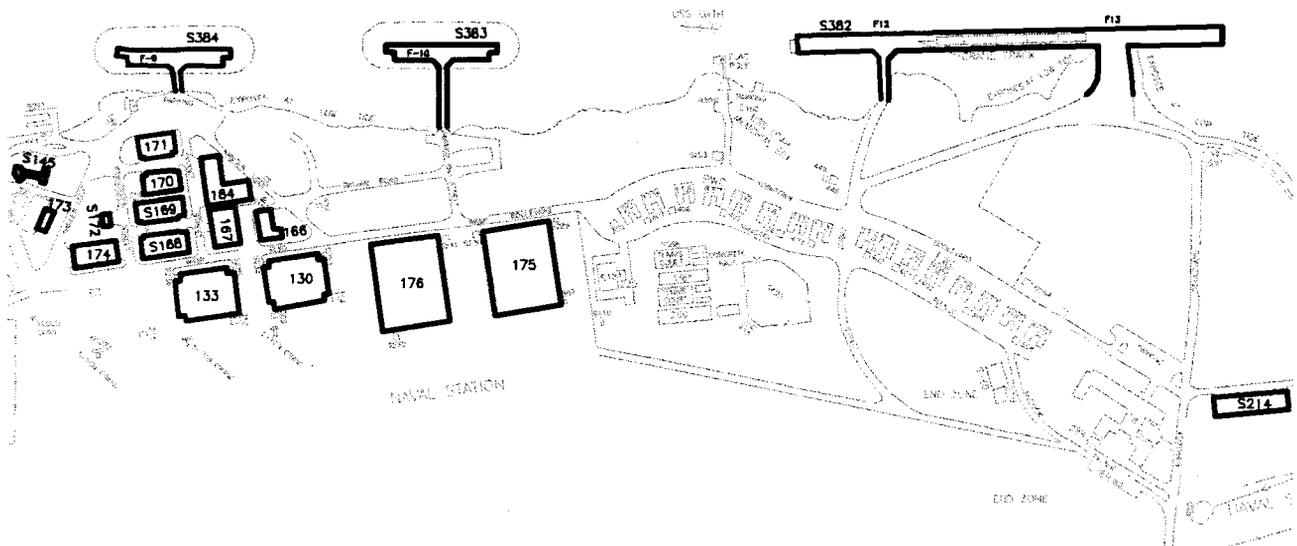




Vicinity Map



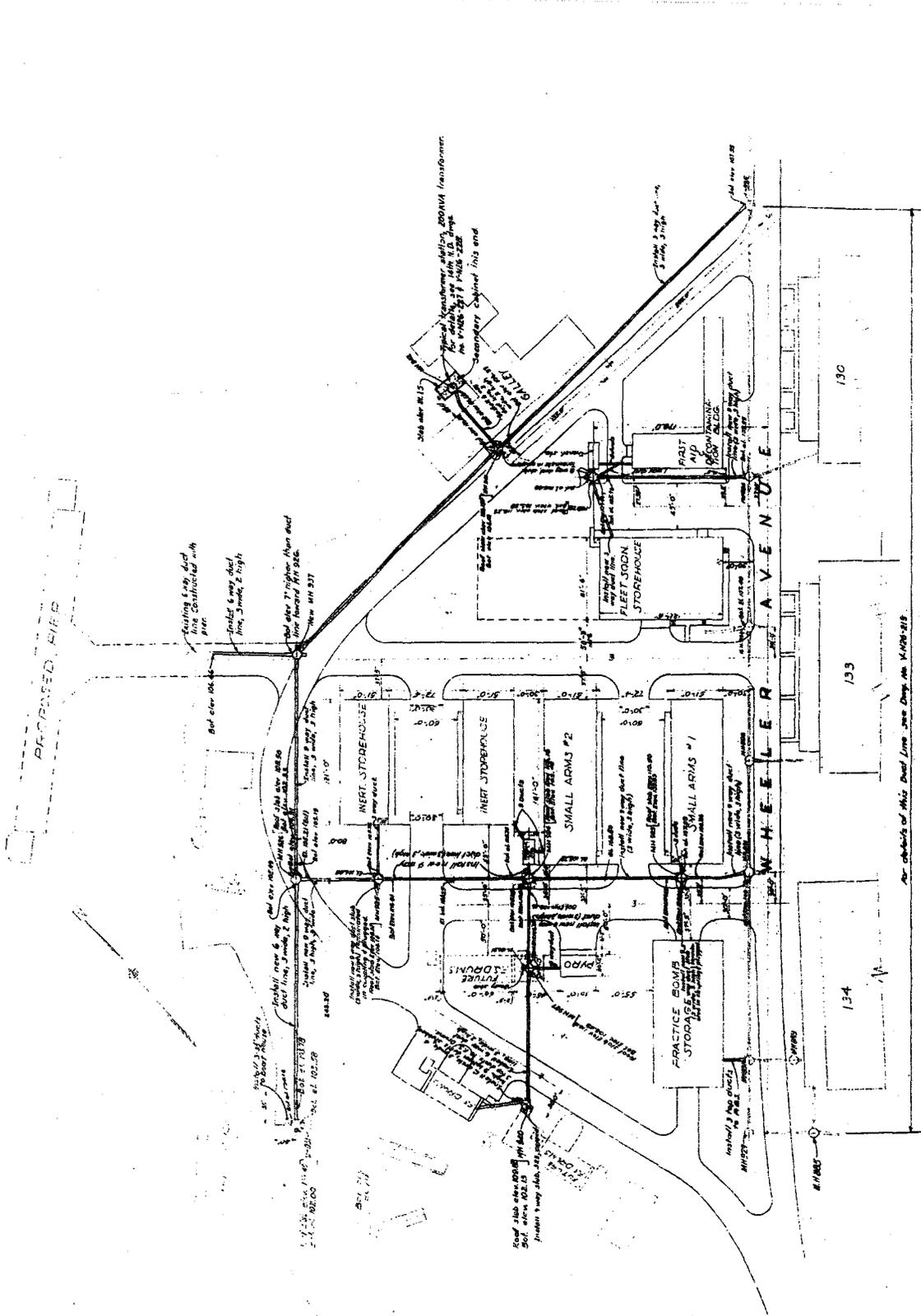
NO SCALE



Site Map

**U.S. NAVAL BASE, PEARL HARBOR, AIRCRAFT CARRIER SUPPORT FACILITIES
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1941 Map of Small Storehouse Area - 14th N.D. Drawing no. V-N26-218 (reduced)



NOTE: For symbols for details, see Dwg. V-N26-133.
 All steel work to be of A36 steel unless otherwise specified.
 All masonry to be of concrete unless otherwise specified.
 All concrete to be of heavy duty specifications as per
 General Contracting Plans to new specifications of 1939.
 For details refer to new drawings V-N26-218 & V-N26-219.

PLAN
 Scale 1"=40'-0"

Approved: [Signature]
Checked: [Signature]
Scale: 1"=40'-0"

V-N26-218

SMALL STOREHOUSE AREA
DUCT LINE LAY OUT

WHEELER AVENUE

130
133
134

**U.S. NAVAL BASE, PEARL HARBOR, AIRCRAFT CARRIER SUPPORT FACILITIES
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**Photocopy of July 1942 Photo of USS Enterprise and part of Aircraft Carrier Support Complex
(National Archives 80-G-451154)**

