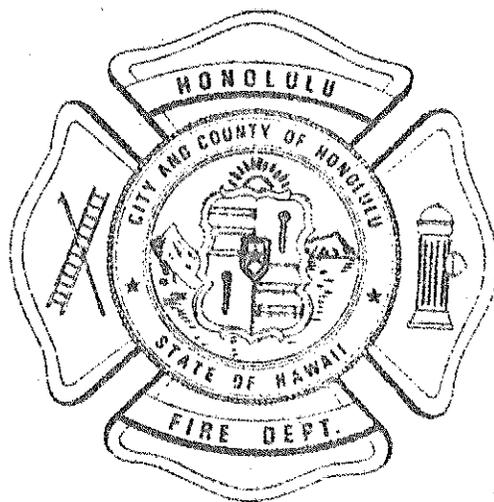


H I S T O R Y
O F T H E
H O N O L L U F I R E D E P A R T M E N T



EST. JAN. 11, 1851

H I S T O R Y

O F T H E

H O N O L U L U F I R E D E P A R T M E N T

By H. A. Smith, Chief

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DEDICATED TO THE MEMORY OF

CAPTAIN JOHN CARREIRA

CAPTAIN THOMAS S. MACY

AND

HOSEMAN HARRY T. L. FANG

KILLED IN ACTION

WHILE FIGHTING FIRE AT

HICKAM FIELD

DECEMBER 7, 1941

THE HONOLULU FIRE DEPARTMENT

"When two raging fires meet together,
They do consume the thing which feeds their fury."

—Shakespeare

FIRE has been called the background and basis of our modern industrial life, and its origin dates back to the beginning of Paleolithic times. Years and years have passed, and civilization is still devising ways and means of holding and controlling this friendly enemy.

Through all these years, water has been and still is the principal fire extinguishing agent. The earliest method of applying water for the extinction of fires was by means of buckets, and these long remained the chief instruments employed for that purpose although Hero of Alexandria, about 150 B. C., described a fire engine with two cylinders and pistons worked by a reciprocating lever, and Pliny refers to the use of fire engines in Rome.

In 1518, we hear of fire squirts or syringes worked by hand, some so large that they required three men to use them. In 1672, an important advance in fire protection was made when J. Heyde and Son made a flexible hose by sewing together two strips of leather.

The first practical steam engine was made in 1829 by John Braithwaite of London. The first self-propelled fire engine, using internal combustion motors, was built around 1903.

For nearly a century Honolulu has been guarding herself against possible ravages by fire. For almost one hundred years, men of all races and creeds have united against this enemy of man and formed bucket brigades, run hand engines, maintained volunteer fire equipment and, in general, paved the way for the present fire department.

Honolulu, the Capital of the Territory of Hawaii, with a population of approximately 267,755, lays claim to having the only fire department in the world which has had kings as active members. Kamehameha III, who reigned during the 1850's, took an immense active interest in the department, and Kalakaua, during the 1880's, also displayed a similar interest, the latter being the first Secretary of No. 4 Engine Company. Both of these monarchs have been seen shedding their coats, rolling up their sleeves, and digging in with the other red-shirted volunteers.

The first piece of firefighting equipment which made its appearance in these islands was brought to Honolulu about 1846 or 1847, and was a hand engine owned by a Chinese firm, Sam Sing and Company. It was a

very diminutive arrangement and constructed on a very rude plan, water being bailed into it with buckets. This machine was used, when necessary, for a slight compensation to the owners. It was taken from the ship Patapsco, enroute from Boston to San Francisco and wrecked at the entrance to the harbor, November 13, 1849.

At a public assembly held on October 24, 1850, the necessity of having adequate fire protection was particularly stressed and, as a result of this meeting, on November 6, 1850 Honolulu's first Volunteer Fire Brigade was formed with W. C. Parke as Chief Engineer.

As fate would have it, these volunteer firemen fought their first fire this same day (November 6, 1850) at Aienui in the vicinity of what is now Nuuanu Avenue, King Street, Smith Street, and Marin Lane. Eleven homes were destroyed.

On December 27, 1850, an ordinance issued by Kamehameha III established the Honolulu Fire Department. This ordinance further ordered every citizen to keep at least two buckets hanging handy for fire use exclusively and, further, ordered that they be brought to every fire. The bucket part was probably the most effective as the only other equipment was the hand engine and 150 yards of home-made canvas hose, "through which by constant relays on the pump handles, water could be thrown about 60 feet."

This order became effective, according to its own terms, upon publication in the "Polynesian," the then official government organ, and was printed on January 11, 1851, thus becoming the birthday of the Honolulu Fire Department. Under the provisions of this ordinance, Alexander J. Cartwright was appointed Chief Engineer of the Honolulu Fire Department by Governor Kekuanāoa on February 3, 1851. This ordinance was enacted into law by the Hawaiian Legislature of 1851 (S.S. 1851, pp. 5-11), becoming effective on May 8, 1851 when signed by William L. Lee, Speaker of the House of Representatives, and the King, Kamehameha.

It seems that soon after the formation of the department with Parke as Chief, the only hose they had burst. So "Mr. J. H. Wood, then in the boot and shoe trade, made one 200 ft. long out of the suggested material (cotton duck). It was then soaked in strong salt brine to shrink it and, absurd as it may seem, this hose did good service for a long time."

August 1851 saw the arrival of the second-hand engine which was purchased through Messrs. Brewer and Company, its cost being defrayed by public subscription. Engine Company No. 1 was formed in anticipation of its arrival.

In February 1853, under a set of by-laws and resolutions, Alexander J. Cartwright was elected chief, and from that time forward the department flourished, the government making biennial appropriations for its benefit and support.

No. 2 Engine Company went into service December 1852, and was

recognized by the department on February 3, 1853.

The Protection Hook and Ladder Company was formed September 10, 1857. The Hawaiian Engine Company, now called No. 4 and composed exclusively of Hawaiians, took shape February 14, 1861. Engine Company No. 3 (then better known as Pacific No. 3), organized January 16, 1861, was changed to a Hose Company December 14, 1863. The China Engine Company No. 5 came into existence January 1878, and was composed of Chinese exclusively.

In the old days each company had its fire house, held regular meetings, became powerful factors in the City's activities, even politically, and held their annual parades in February each year, an imposing procession of red-shirted, helmeted and capped men dragging their quaint firefighting apparatus with hand ropes.

The first great fire in the history of Honolulu broke out on July 7, 1855 at 8:30 P.M., starting in the Varieties Theater which was located in the area now bounded by King, Nuuanu, Merchant and Bethel Streets. It destroyed all buildings in this block including the Police Station.

Henry S. Swinton, Deputy Marshal, offered a reward of \$200 for information leading to the arrest and conviction of the person or persons guilty of starting this fire since he was positive that it was of incendiary origin. This offer was printed in the newspaper in both English and Hawaiian.

One result of this fire was the start of a subscription for the purchase of a new steam fire engine with "ample hose and accompaniments." This fire also led to the opening, the following spring, of the first fire insurance agency here representing the Northern Assurance Company.

Up to 1876, the old Kingdom of Hawaii was fortunate in having few seriously disastrous fires, and it is remarkably singular that the islands have been the scene of so few destructive conflagrations, considering the flammable nature of the buildings usually erected and still existent in many parts of Honolulu.

On December 12, 1877, Honolulu experienced what was known as the Esplanade fire, the greatest conflagration that had occurred up to that time, the loss reaching about \$250,000.

On April 19, 1886, Chinatown was almost wiped out by a fire which burned over 60 acres of buildings and involved a loss exceeding \$1,453,000. This fire is said to have originated in a building near Hotel and Smith Streets occupied by Chinese. A Chinese lottery was supposedly being conducted, and one of the gamblers, claiming that cheating was going on, snatched the raffle tickets and thrust them into the fire. Another pulled them out, and in the scramble that ensued, the wallpaper became ignited, and due to its flimsy construction, the building was soon a mass of flames. Buildings were erected extremely close together, and the fire quickly spread in all directions. King Kalakaua was present at this fire, working with the natives and "inspiring them by his own conduct."

The following day, April 20, 1886, the Board of Fire Underwriters was formed and the uniform grading of fire risks inaugurated.

May 29, 1886, King Kalakaua signed Honolulu's first building laws. On Friday, March 23, 1888, the first public electric light was turned on.

The daily paper of August 14, 1886 carried an editorial promulgating the use of horses to draw fire apparatus and recommending the purchase of a chemical engine. While records of the fire department show that horses were used in the department as early as April 1886, no provisions were made in the stations for horses but they were held in readiness in a nearby livery stable.

On August 15, 1891 welcomed the arrival of a new steam engine for No. 1 Company. The members of this company had been presented with a pair of horses, purchased by merchants of the town, and had trained these horses for immediate connection to the engine in event of alarm. They had also fitted up their house with electrical appliances for the automatic turning on of the lights and the release of the horses from their stalls. This station, which was located on King Street between Richards and Alakea Streets on the approximate site of the present Hawaiian Electric Company building, boasts of the first horses to be quartered in any fire station in Honolulu.

September 7, 1891, witnessed the arrival of a Champion Chemical Engine consisting of two 80-gallon tanks and costing \$2,993.60. This apparatus was put into service in the Bell Tower, then situated on Union Street.

Up to this time, the volunteer firemen had been paid according to their rank and the number of fires attended. Honolulu's first regular paid Fire Department was created by an Act of the Legislature of the Provisional Government, March 1, 1893, with Frank Hustace as Chief Engineer.

On May 1, 1893, the Honolulu Fire Department purchased its first pair of horses which went to No. 1 Engine. The following July 18 saw the purchase of the second pair of horses which were put to drawing No. 2 Engine. From that time on, horses were purchased until all equipment was horse-drawn, new apparatus being secured, and new stations erected as the city expanded.

Honolulu's first Ladder Truck was contracted for on January 1, 1903 from D. D. Hayes of Elmhurst, California, and cost \$2,750. A life net to be carried on this truck was ordered April 3, 1903.

In December 1902, water heaters were installed by which water in the boilers of the engines was kept at almost a boiling point, lessening the time necessary to raise steam, thus marking another step forward in efficiency. When the engine left the house, these heaters were automatically cut off. It might be a point of great interest to the younger generation to know that a fire was always laid in these engines with oil-soaked shavings, kindling, and coal being in the fire box ready for instant ignition. Immediately upon leaving the station, the engineer broke the fire pot, thus

igniting the already laid fire. This fire pot contained "fire powder" composed of chlorate of potash and sugar which, coming into contact with sulphuric acid, bursts into flames. The pot was swung directly under the fire box and handle pulled, breaking the small bottle which allowed the sulphuric acid therein contained to come in contact with the fire powder. This was much more effective than the ordinary torch in that it ignited practically all the kindling instantaneously, it being extremely hard to light a torch in inclement weather.

The first motor apparatus for Honolulu was put into service April 27, 1912, and consisted of two Seagrave Combination Chemical Engines and Hosewagons of the air-cooled type, one of which was assigned to No. 1 Company, and the other to No. 3 at Makiki Station. These were followed in November of the same year by two additional similar hosewagons, Nos. 4 and 5, and a tractor used to draw the steam engine at Makiki Station.

On January 15, 1916, three of the old steam engines 1, 3 and 4, two horse-drawn and one by tractor, were replaced by three 1,000-gallon motor-combination engines and hosewagons. The tractor was then converted into a chemical engine on which were mounted the two 80-gallon soda and acid chemical tanks taken from the horse-drawn apparatus. May 1920 saw the last of the horses (No. 2), the remaining steam engine being supplanted by a motor-propelled pump.

These steam engines were purchased by the Honolulu Junk Company on August 13, 1920 for \$81.50. On May 28, 1920, the horses Jack and Jill (Gray and Black) were purchased by U. Taira, 1083 River Street, for \$660. These horses were first at Palama Station and later transferred to No. 2 Engine at Central Station. Bill and Jerry, the team used on the chemical engine, had been kept as reserve but on this same day were sold to T. Nosaka, 1457 Auld Lane, for \$640.

The present-day fire department (1950) is composed of twenty-two Engine Companies and two Ladder Truck Companies housed in fifteen permanent and six temporary stations.

In the following, purchase prices of certain fire station sites are not mentioned, the land being owned by the Territory of Hawaii and set aside by Executive Orders.

The corner of Fort and Beretania Streets, the site of Central Fire Station and headquarters of the Honolulu Fire Department, was obtained in three portions, the last transaction being made on January 26, 1898. The first station erected thereon was occupied on December 1, 1897 at 5:00 P. M. by No. 2 Engine Company which, up to this time, had been quartered in the Bell Tower on Union Street above Hotel Street. This building was constructed by the late Fred Harrison and cost \$34,742.50. It was built of "native" or Punahou Stone taken from what was known as the "Swanzy Quarry" in the vicinity of what is now Judd Hillside.

Built for horse-drawn apparatus, this station became obsolete

with the department wholly motorized, and on June 4, 1934 the men and equipment housed therein moved into temporary quarters on Pier 15 at the foot of Maunakea Street at Queen Street. Demolition began immediately and was completed about August 6, 1934 at a cost of \$6,302.34.

Construction of the new station began on August 7 by E. E. Black, Ltd., and was formally occupied by No. 1 and No. 2 Engine Companies on May 2, 1935 at 11:12 a.m. The total cost of construction amounted to \$79,830.12, of which the City and County of Honolulu paid \$43,094.55, the balance being absorbed by the Public Works Administration. It is a two-story reinforced concrete structure and is up to date in every way. The front doors and panel were built by the California Artistic Metal and Wire Company of San Francisco and cost \$9,960. The material used is an aluminum alloy known to the trade as 43S or 95% aluminum and 5% silicon.

Additional office space was provided by the erection of a one-story hollow-tile building in the rear of this station which became the clerk's office on June 13, 1949--cost of construction, \$3,841.

Makiki Station, No. 3 Company, on the corner of Piikoi Street and Wilder Avenue, was first occupied on August 1, 1899. This was a two-story wooden building, razed in 1929, and replaced by a two-story reinforced concrete building into which the company moved on September 28, 1929--cost of construction, \$33,833.50. During the construction of this station, No. 3 Company occupied temporary quarters in a rented dwelling at Artesian and Bingham Streets, moving there March 13, 1929.

No. 4 Company opened Palama Station at King Street and Austin Lane on July 1, 1902. This is a two-story brick and wood building constructed after the idea of Spanish architecture--cost of construction, \$18,945.

Kaimuki Station, Pahoa and Koko Head Avenues, a two-story wooden frame structure, was first opened as Hose Company 5 on July 1, 1913. This building was torn down and replaced by a two-story reinforced concrete building, and Hose Company 5 was changed to an Engine Company on October 1, 1924--cost of construction, \$27,000. During construction the men were quartered in a portion of the frame building housing the kitchen and in the temporary building erected on the sidewalk area for the hosewagon.

These same plans were used for the construction of Kalihi Station on King Street near Harvey Lane. No. 6 Company moved into this building on December 1, 1924--cost of construction, \$27,000; cost of site, \$6,500.

A one-story bungalow building was erected at Kapahulu Road and Leahi Avenue to accommodate No. 7 Company which moved into the station on August 2, 1927--cost of construction, \$28,656. Hose tower completed April 13, 1938--cost, \$3,048.

An explanation of hose towers for drying the hose after use might not be amiss. Previous to the erection of Waikiki Station, all stations had full towers; that is, towers high enough to permit the hanging of a 50-foot

length of hose by the coupling. This meant a tower some 60 feet high which loomed over the surrounding buildings, particularly in the residential districts. Therefore, to conform to neighborhood architecture, the first half tower was built at Waikiki when the hose rack proved unsatisfactory. These half towers are exactly what the name implies, the hose being hung at the center on saddles. With the exception of Kakaako Station, all fire stations erected subsequently were built with half towers.

Following the plans of the new Makiki Station, Kakaako Station was erected on the corner of South Street and Quinn Lane to accommodate No. 9 Engine Company and was officially occupied on October 1, 1929--cost of construction, \$37,224. The Ladder Truck Station, built on the same lot, was put into service on March 1, 1930--cost of construction, \$4,652.

This, then, was the Honolulu Fire Department on December 6, 1941. Eight 2-piece engine companies and the ladder truck in the city, and 2 single-piece engine companies in Rural Oahu, the personnel consisting of 1 Chief, 2 Assistant Chiefs, 12 Captains, 12 Lieutenants, 1 Master Mechanic, 1 Assistant Mechanic, 20 Engineers, and 112 Hosemen, making a total of 161 officers and men--a fine peace-time fire department.

Then came Pearl Harbor Day, Sunday, December 7, 1941! Honolulu was placed under Military Law and Lieutenant General Walter C. Short became Military Governor.

On this never-to-be-forgotten day, two Fire Department Captains, John Carreira and Thomas S. Macy, and Hoseman Harry T. L. Pang were killed, and six other firemen were wounded while fighting fires caused by enemy action at Hickam Field.

The six firemen who were wounded--Lieutenant (now Captain) Frederick Kealoha, and Hosemen Moses Kalilikane, John A. Gilman, Solomon H. Naauao, Jr., Patrick J. McCabe and George Correa--were awarded the Order of the Purple Heart by Lieutenant General Robert C. Richardson, Jr. in his office on June 13, 1944 with very impressive ceremonies. The department received a fine letter of commendation "for their gallant action during the attack on Oahu, December 7, 1941," from Lieutenant General Delos C. Emmons who had succeeded General Short as Military Governor.

Three engine companies were detailed to Hickam Field, Numbers 1, 4, and 6. No. 1 Hosewagon had too many bullet holes to be counted accurately, one piece of shrapnel piercing the chemical tank. No. 1 Engine was riddled with machine gunfire, shrapnel and bomb fragments, all six tires being punctured. No. 4 Engine had shrapnel marks and scars from bullets as did No. 6 Hosewagon, which was set on fire, while No. 6 Engine had six bullet holes. A detailed record of departmental activities on Pearl Harbor Day was incorporated in the department's Annual Report for 1941.

The Military Governor realized the immediate need of increasing the fire protection for the island, and with pumpers loaned by the U. S. Army and salary appropriations and maintenance and upkeep provided by funds

from the Office of Civilian Defense, the following engine compaines were established in temporary quarters. Civil Service requirements were waived, and with the shortage of manpower, firemen were recruited from all possible sources. As rapidly as they could be given preliminary training, they were assigned to companies, regular firemen being promoted as necessary to provide experienced officers and engineers for these temporary companies.

AUXILIARY ENGINE COMPANIES

<u>NO.</u>	<u>LOCATION</u>	<u>PUT IN SERVICE</u>	<u>CHANGED TO 2 MEN</u>	<u>UNDER CITY & COUNTY</u>	<u>OUT OF SERVICE</u>
8	850 Iwilei Road	1/22/42	--	12/31/42	--
10	Funchal & Meli	2/13/42	7/31/43	--	12/31/43
11	Pier 6	2/ 5/42	--	--	12/31/43
13	1300 Punchbowl	2/13/42	8/21/43	--	9/28/44
14	Waialua	2/11/42	--	7/31/43	--
15	976 Smith St.	2/18/42	--	--	12/31/44
17	Kaneohe	2/11/42	7/31/43	12/31/43	--
			(6 men)		
18	Kailua	2/11/42	7/31/43	1/31/44	--
			(4 men)		
19	Lanikai	2/11/42	--	--	7/31/43
20	Pearl City	2/11/42	7/31/43	9/30/44	--
21	2535 So. King St.	2/17/42	12/31/43	--	9/29/44
22	2801 E. Manoa Rd.	2/18/42	7/31/43	9/30/44	--
23	4240 Waialae Ave.	2/21/42	7/31/43	9/30/44	--
24	3117 Waialae Ave.	3/23/42	7/31/43	--	9/28/44
25	419 Wyllie St.	3/23/42	7/22/43	12/31/43	--
26	4600 Sierra Dr.	4/ 2/42	--	--	12/31/43
27	15 Country Club Rd.	4/16/42	7/31/43	--	12/31/43
28	1175 River St.	4/16/42	7/31/43	--	3/10/44
29	1808 Kalakaua Ave.	4/25/42	--	12/31/43	--
30	501 No. King St.	5/31/42	7/31/43	--	9/29/44
31	1599 Hart St.	6/ 3/42	--	12/31/43	--
32	2339 Kalihi St.	6/ 3/42	7/31/43	9/30/44	--
33	1935 Makanani Dr.	7/ 2/42	7/31/43	--	9/28/44
34	4418 Kahala Ave.	8/16/42	7/31/43	--	9/28/44
35	345 No. Kuakini St.	3/16/43	7/31/43	--	9/28/44
	Fireboat	1/21/42	--	--	12/31/43

No. 8 Company moved to temporary quarters at 945 Awa Street on November 16, 1945.

No. 10 Company originally went into service at 2160 Pauoa Road, moving to Funchal and Meli Lanes on February 24, 1942.

No. 11 Company was quartered on Pier 12 from July 29, 1942 to September 24, 1942 while repairs were being made to Pier 6.

No. 13 Company's first location was on the grounds of the Emergency Hospital at Vineyard and Miller Streets, moving to the Punchbowl Street location on March 5, 1942.

- No. 14 Company was brought from Waialua to the new Wahiawa Fire Station on December 8, 1941, and became No. 16 Company. This station was practically complete, but occupancy thereof awaited the creation of the necessary positions and formal acceptance of the building.
- No. 15 Company moved to 945 Awa Street on April 13, 1943.
- No. 17 Company moved to Kealahala Road on November 5, 1945.
- No. 25 Company moved to Funchal and Meli Lane on December 11, 1945.

The Fireboat originally put into service was the Leleiona-220577, and on March 24, 1943 was replaced by the Coast Guard Boat 60006-F.

On March 24, 1943 the crews of Engine Companies 13 and 27 were assigned to the Office of Civilian Defense for the repairing of gas masks, and the Engineer on each watch in both stations was left in charge. These two companies were not again put into service. The so-called two-men companies were manned by volunteers living nearby, although some of them slept in the station.

Fire protection to the City and Island was greatly increased by the installation of numerous engine companies under the control of the Army, the Navy and the Coast Guard. From January 1, 1944 to December 31, 1945, Coast Guard fire apparatus located at Kewalo Basin, Piers 6, 11, 16 and 31-A were dispatched by this department to all fires on the waterfront in conjunction with our regularly detailed equipment.

At the beginning of 1943, the Honolulu Fire Department had reached the height of its wartime strength with 35 Engine Companies, one Ladder Truck, and a Fireboat manned by 503 officers and men. Following is a list of officers of the several companies as of May 31, 1943 before the release of 156 men necessitated by a reduction in the OCD appropriation.

<u>CO.</u>	<u>CAPTAIN</u>	<u>LIEUTENANT</u>	<u>CO.</u>	<u>CAPTAIN</u>	<u>LIEUTENANT</u>
1	G.K. Cash	J. Naone (Capt.)	19	H.M. Hewett	J.W. Parker
2	L.R. Kanoa	H.K. Kaakua	20	G.W. Blackburn	H.J. Hollinger
3	J.J. Phillip	J.K. Nakoa	21	H.C. Pate	F.E. Cook
4	R.T. McCabe	G.A.T. Spencer	22	V.K. Mokulehua	William Kapahu
5	H.P. Kipi	O. Cummings	23	S.S. Guerreiro	William Kamai
6	J.T. Franco	A.A. Smith	24	E.R. Dunbar	G.P. Victor
7	J. Pacheco	J.D. Barboza	25	L.R. Kay	P. Kamalii, Jr.
8	C.W. Blaisdell	T.T. Kaleo	26	F.A. Phillip	D. Kalawe
9	S.H. Saffery	L.R. Kamalii	27	O.A. Green	A.P. Wright
10	J.L. Malterre	A. Guerreiro	28	H.M. Kanoa	C.K. Hoopai
11	J.R. Sylva	A.T. Torres	29	L.M. Watson	G.F. Walser
12	P.H. Naone, Jr.	Peter Akimo	30	E.K. Meek	B.P. Nakoa
13	H.C.D. Aiwohi	J.K. Kaluna	31	D. Kaopuiki	A.J. Lopez
14	J.K. Kalili	M. Machado	32	C.L. Joseph	A.S. Cavaco
15	Fred Kealoha	David Harris	33	A.K. Beck	A.M. Meyer
16	H.K. Nuuhiwa	E.W. Kaaa	34	Olaf Evenson	O.S. Stone
17	W. Kalakau, Jr.	Frank Kanae, Jr.	35	H.K. Bell	W.A. Jones
18	C.P. Ellis	A.J.K. Perkins	Truck	J.K. Wise	Manuel Barrett
		Fireboat		E.P. Kealoha	D.O. Ezera

Fire Alarm Bureau personnel consisted of Captain H. F. Booth; Lieutenants R. E. Hollinger, C. H. Kalaiwaa and W. H. S. Liu; operators Choy Zane, P. J. McCabe, Lawrence N. Thiim, A. E. Kufferath, Frank Brisette, Donald D. W. Joe, George N. C. Leong, Boniface K. Aiu and Owen T. Young.

From July 31, 1943, and as the possibility of enemy attack on the island lessened, the OCD appropriations decreased, and on September 30, 1944, ceased entirely except for one man, Captain M. G. Mahner, who was retained as instructor for Fire Wardens. Captain Mahner returned to his regular duties on November 1, 1945.

Therefore, it may be assumed that on September 30, 1944 the Fire Department returned to a more or less peace-time basis except for the additional engine companies noted previously, personnel consisting of 273 officers and men. Civil Service rules, suspended during the war period except for those firemen employed as of December 7, 1941, were put back into effect February 1, 1946.

On January 1, 1946, the department still had seven pumpers on loan from the Army. In May the same year it was requested that they be returned because they were needed to furnish protection to certain mandated Pacific Islands as well as in Japan and Korea. Direct appeals to the War Department for permission to retain these pumpers were ineffective and the last of these pumpers were returned to the Army on October 1, 1946.

On June 25, 1946, a "Mutual Aid" system was put into effect between the Army, the Navy and this department whereby each agreed to assist the other in fighting fires anywhere on the island. At this same meeting, the Navy agreed to lend seven pumpers to the department until such time as replacements might be purchased. This enabled the department to keep in operation certain much needed engine compaines which otherwise would, of necessity, have been discontinued. Written agreements of this "Mutual Aid" plan were formally signed on January 31, 1950.

With the return of peace, attention was directed toward getting the newly-created engine companies out of their temporary quarters and into permanent fire stations. It must be assumed that the Wahiawa Fire Station at 630 California Avenue was officially occupied on December 8, 1941 when No. 14 Engine Company moved in and became No. 16 Engine Company because it has been in service continuously since that date. Cost of site--\$5,600; station--\$33,094.

The beautiful and modern one-story reinforced-concrete fire station at 840 Iwilei Road was erected at a cost of \$74,970 and No. 8 Engine Company moved in on June 25, 1948.

At the request of the Hawaii Housing Authority and because some 6,000 live in the vicinity of Aiea, the building (No. 228), formerly used by the Navy as a fire station, was renovated and painted inside and out at the expense of the Housing Authority. No. 10 Engine was created and moved into this building on June 1, 1948. Cost of rental, electricity and water, and

maintenance and upkeep of the station is borne by the Hawaii Housing Authority. In a letter to the Board of Supervisors, dated March 1, 1948, the Authority further agreed to maintain and keep in good condition the then existing water mains and hydrants (installed by the Navy during the war) together with the fire alarm boxes in this area. The Navy installed and connected a tape register in this station, and assigns one company to all calls in this district.

The site of Kaneohe Fire Station was purchased on December 22, 1941 for \$4,386. No. 17 Engine Company officially occupied this station on August 14, 1947. Cost of construction of this one-story reinforced-concrete and hollow-tile station was \$64,255.

Wailupe Fire Station site, 5046 Kalaniana'ole Highway was purchased on July 28, 1948. This one-story reinforced-concrete and hollow-tile building was officially opened by No. 23 Engine Company on August 16, 1949 with appropriate ceremonies which included a talk by Mayor John H. Wilson who turned the station over to the Chief. Cost of land--\$14,500; building--\$71,266.75.

The site of the Nuuanu Fire Station, 115 Wyllie Street, was set aside by Executive Order No. 321 dated April 12, 1928. Lack of finances prohibited the erection of this station for many years, but on February 6, 1947, No. 25 Engine Company moved into their new one-story reinforced-concrete and hollow-tile building erected at a cost of \$64,598.34. This is the only fire station with a basement and is used for storage and recreation.

McCully Fire Station, 2425 Date Street, a two-story reinforced-concrete and hollow-tile building, was officially occupied by No. 29 Engine Company on July 28, 1948. This station also houses the City Service Truck put into service December 6, 1949, and was built for \$93,685.05, the land having been purchased November 28, 1940 for \$6,869.69.

Thus we find, as of today, Engine Companies 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 14, 16, 17, 23, 25 and 29 in modern permanent stations while Engine Companies 10, 18, 20, 22, 31 and 32 are in temporary quarters. It will be noticed that company numbers are not consecutive, their wartime numbers being retained for sentimental and historical reasons. No. 10 Company, as noted herein before, was put into service after the war and is the sole exception to the numbering system.

Engine Companies 1, 2, 3, 4, 5, 6, 7 and 9 are two-piece companies consisting of a double combination hosewagon and a double combination pumping engine. The eight hosewagons, all Seagrave make, carry a minimum of 1,500 feet of 2½-inch hose, 300 feet of 3-inch hose and 200 feet of 1½-inch hose siamesed into two leads. Six of the hosewagons carry two 40-gallon chemical tanks, converted to water tanks equipped with nitrogen bottles to give pressure, and two hosewagons have 100-gallon water tanks with booster pumps, all having 200 feet of one-inch hose. All hosewagons carry a monitor nozzle.

All other engine companies in the city and all in rural Oahu are one-piece companies consisting of a pumping engine only and are fully equipped.

Honolulu had 19 pumping engines classified as follows: 4 Seagrave 1250 gallons per minute; 6 Mack 1250 gallon; 7 Seagrave 1000 gallon; and 2 Seagrave 500 gallon. The seven pumpers on loan from the Navy are: 1 Seagrave 1000 gallon; 3 Seagrave 750 gallon; 2 American La France 1000 gallon; and 1 American La France 750 gallon. All engines carry a minimum of 1500 feet of 2½-inch hose and are otherwise fully equipped. With the exception of Engine Companies 5, 22, 25 and 32, all carry foam powder and generator. All companies in the city carry 1½-inch liquid foam pickup nozzles. No. 32 Company carries nozzles only. Portable deluge sets are carried on Engines 1, 2, 3, 4, 5, 6, 7, 8, 9, 25 and 31. All pumpers except 3, 4 and 6 are equipped with water tanks and 200 feet of 1½-inch hose. All pumpers in the two-piece companies carry four lengths of 1½-inch hose bundled and siamesed into two lines.

For many years, practically all of the department repair work was done in the one-story wooden frame building with a corrugated iron roof situated in the rear of Central Fire Station. This building was erected about 1901 during the time of the plague to serve as a kitchen and dining room for the firemen were working day and night, destroying by fire, plague-infested buildings and it was necessary not only to have all the firemen available at all times but also to segregate them, more or less, as it was considered most unwise and unsafe to let them go home due to the possibility of spreading the disease. In 1905 this structure was enlarged to permit the storing of the old Hook and Ladder Truck which, due to limited space, had been kept in an old building on the waterfront under the control of the Department of Public Works. This, then, was the building used as a shop--small, inadequate and very poorly lighted.

Accordingly, on May 27, 1931, 4,726 square feet of land directly in the rear of Kakaako Fire Station grounds was purchased for \$3,835 as a shop site. September 30, 1931 was a red-letter day for the Master Mechanic for it was on this date that the new one-story concrete-tile building erected on the above site was first occupied. This shop, large, airy and well lighted, was equipped to handle almost any kind of repair work. Cost of erection--\$8,500.

But with the war came much additional firefighting equipment and this shop became too small almost overnight. At a cost of approximately \$3,000 from OCD funds, certain additions were made but of frame construction under the necessary variance permit. With the termination of the war and the expiration of the variance permit, these structures were changed by the Building Department to second class to comply with the Building Code at a cost of \$7,998.69. This work was completed during April 1947.

On August 3, 1948, 12,007 square feet immediately adjacent to Kakaako Station site on the upper side was purchased for \$36,649.72 for additional shop space and to provide adequate dormitory space for the Ladder Truck Crew.

In 1905, a five-story wooden drill tower was built on the grounds in the rear of Central Fire Station. This tower saw good service for not only were the firemen drilled there but all applicants for positions in the Fire

Department must show an ability to work at heights before receiving an appointment. This tower was blown down during a storm and gale on January 26, 1916. The erection of a modern and up-to-date drill tower is now under consideration.

Since February 1930, salvage has been one of the regular duties of the department, each company carrying the necessary equipment for this important work.

The history of radio in the Fire Department dates back to May 3, 1932 on which date receivers were installed in the three chiefs' automobiles. These receivers were tuned to the wave length of the police transmitter and alarms were broadcast by the police dispatcher. With the opening of the Fire Alarm Bureau on May 8, 1933, this department began transmitting fire calls by remote control on the police transmitter. On February 6, 1934, radio receivers were installed on Numbers 2 and 6 Hosewagons, this equipment being most frequently dispatched to fires in Rural Oahu.

However, with the gathering of war clouds in 1941, the necessity of additional and more efficient means of communication became apparent. Therefore, an application was made to the Federal Communications Commission in Washington for permission to erect and operate a 100-watt transmitter and 20 mobile sets. This application was returned without action. Up to this time the FCC had assigned no channels for the fire service except for fire boats. Then came the war and an enormous increase in the use of the police transmitter which was so set up that our transmissions could be cut out should the police desire to transmit.

In August 1942, under a directive from the General commanding the Hawaiian Department, the U. S. Signal Corps authorized the Fire Department to set up its own radio network. On September 5, 1942 telegraphic authorization from the Federal Communications Commission for the operation of a 250-watt transmitter (KFJC changed to KUA 201 on May 1, 1949), 50 mobile units and six portable 50-watt transmitters, KFJD, KFJJ, KFJO, KFJP, KFJR and KFJY was received.

First car-to-car transmission, September 21, 1942. First transmission from KFJC--October 9, 1942, by the author. First fire call from KFJC, October 9, 1942 at 9:18 P.M., Puuhale and Kananui Streets. This transmitter was installed in the basement of the City Hall and the antenna atop the City Hall Tower. On April 22, 1943 this transmitter was relocated in the City Hall Tower. Once again this transmitter was moved on June 25, 1948 to Makiki Round Top (elevation about 1,000 feet) into the one-story hollow-tile building erected for this purpose by the Building Department at a cost of \$2,482.81.

The first assigned wave length of 37,000 kilocycles was changed to 37,740 kilocycles on March 13, 1947 and on June 30, 1940 was again changed to 46,100 kilocycles on which all transmitters are presently operating.

On November 9, 1943 the installation of the 50 mobile units was completed. It must be borne in mind that the above-mentioned installations were made during the war as rapidly as possible and with no chance for

experimenting. Much was learned from subsequent tests, and transmitters moved as a result to increase range and efficiency.

KFJD put into operation at Central Fire Station on April 10, 1943. Call letters changed September 4, 1946 to KFJA Portable 1 and on November 7, 1949 to KUA 228, remote controlled from Chief's office.

KFJJ installed at Kakaako Fire Station April 15, 1943--call letters changed on September 4, 1946 to KFJA Portable 2. Transmitter moved to Kailua Fire Station on February 16, 1949. Present call letters (KUA 229) assigned November 7, 1949.

KFJO put into operation at Kaimuki Fire Station on August 4, 1943, moved to Fire Alarm Bureau June 27, 1948 to serve as standby transmitter. Assigned call letters (KUA 231) on November 7, 1949.

KFJP put into operation at Kalihi Fire Station on May 21, 1943. Call letters changed on September 4, 1946 to KFJA Portable 3. Moved to Wahiawa Fire Station on September 8, 1948. Present call letters (KUA 230) assigned November 7, 1949.

KFJR installed at Wahiawa Station on August 7, 1943, moved to Waialua Fire Station on September 8, 1948 and remote controlled from Fire Alarm Bureau. Present call letters (KUA 232) assigned November 7, 1949.

KFJY installed at Kaneohe Fire Station on August 4, 1943, remote controlled from Fire Alarm Bureau April 30, 1945. Present call letters (KUA 233) assigned November 7, 1949.

KUA 246 installed at 224 Pokohana Street on October 13, 1950.

KUA 247 installed at Pearl City Fire Station on October 26, 1950.

KUA 248 installed at Waipahu Fire Station on October 19, 1950.

This department maintains two-way radio communication with the Police Department and the Pearl Harbor Fire Alarm Bureau by means of exchanged receivers. All fixed and portable transmitters have emergency power units which operate automatically with the failure of normal power.

This department has authorization from the FCC to operate 12 hand-carried transceivers, commonly referred to as "Handie-Talkie" or "Walkie-Talkie," of which six are presently in operation (assigned to Deputy Chief, Assistant Chiefs, Tank Wagon and Rescue Wagon).

All in all, the Fire Department has an original investment of over \$50,000 in its radio equipment.

On January 22, 1930, the telephone switchboard (PBX) was installed in the Captain's Office at Central Fire Station with locals to each fire station in the City, and as new stations were opened they also were tied into

the PBX. Previous to this PBX installation, each fire station had its own telephone and much valuable time was lost in notifying each of the other companies of a fire.

When the Fire Alarm Bureau was put into operation on May 8, 1933, the PBX was installed there.

On March 11, 1947, another step forward to increase the efficiency of the department was made by the inauguration of "Familiarization Tours." Twice each month each shift of each company with the men and apparatus tour their districts, familiarizing themselves with the buildings therein, both exterior and interior, means of entrance, exposures and other vital information, noting unsafe conditions and fire hazards which are followed up immediately by the Fire Inspectors.

On January 19, 1949, an Inspector was detailed with each company on tour to instruct the officer in charge relative to violations and infractions of the fire laws and ordinances in order that they, too, might make immediate corrections and issue orders when necessary. By the first part of April, all officers were qualified as Inspectors.

On September 13, 1934, two firemen were detached from their engine companies and assigned as Inspectors. This was the first attempt at systematic inspections, although the records show spasmodic efforts in 1949 and subsequently. On Pearl Harbor Day, inspections ceased until November 1, 1944 when the Board of Supervisors created the present Fire Prevention Bureau consisting of one Captain and three Inspectors.

Previous to and during part of 1934, all calls for assistance other than actual fires were complied with by dispatching equipment nearest the scene. In the early part of January 1934, this department secured from the Hawaii National Guard a 1923 Model "T" Ford truck which they had discarded, it having been previously discarded by the Post Office Department. In the Fire Department Shop, it was completely dismantled and the body scrapped. The engine was overhauled thoroughly, the body from an old hosewagon purchased in 1912 and condemned installed on the chassis, the entire outfit given several coats of red paint standard with the department, and christened "Rescue Wagon." Much of the equipment on this wagon was made or purchased by the firemen at Kakaako Fire Station. A skiff and a dory, long since worn out, were also secured from private funds.

This wagon responded to its first call on April 16, 1934 at McCully Street and Ala Wai Boulevard where an automobile had crashed through the bridge guard rail and plunged into the canal.

The present Rescue Wagon, the body specially designed and built in the department shop, is mounted on a five-ton Chevrolet chassis, and is fully equipped with the most modern and up-to-date appliances to handle practically any type of emergency call from removing cats from trees to raising heavy tractors which may have capsized and pinned workmen. This Rescue Wagon made its first run on December 27, 1942 to Kualoa Range to search for two missing

soldiers. This wagon has no crew and must take its crew from No. 2 Ladder Truck and No. 29 Engine Company.

On August 11, 1943, the Light Wagon was completed. This wagon was built in the department shop on a three-ton Chevrolet chassis. Its equipment consists of a 5000-watt, 110-volt AC Kohler electric generator; four stationary and four portable flood lights 17 inches in diameter, each with 750-watt globes; five reels of 207 feet, 250 feet, 256 feet, 500 feet and 513 feet extension cords; and one rectifier capable of charging ten 6-volt batteries simultaneously.

The Service Truck, built on a 2½-ton Dodge Chassis and completed August 16, 1943, is equipped with a 350-gallon gasoline tank and pump; three 52-gallon tanks of lubricating grease, transmission oil, and lubricating oil, each of the foregoing with 30 feet of hose on reels; a Curtis air compressor, 200 lbs. capacity with 30 feet of hose; 5 gallons of distilled water for batteries; one 7-ton hydraulic jack; and assorted tools for minor repairs. This truck is used to service pumpers working at fires and visits each station monthly to service apparatus therein.

The Tank Wagon, a two-ton Reo truck used extensively to fight brush and grass fires in suburban Honolulu and Rural Oahu, was also built in the department shop and first put into service on December 7, 1941 at Kalihi Fire Station with an emergency crew to stand by for No. 6 Company which was at Hickam Field. Equipment consists of a 315-gallon water tank with 200 feet of 1-inch hose on a reel and 100 feet in doughnuts; 400 feet of 2½-inch hose; twelve 5-gallon pump cans, 12 brush beaters; 12 brush knives; 12 shovels; 4 cane knives; 4 fire axes; 1 foam and 1 soda and acid extinguisher; two 10-foot lengths 2½-inch hard suction; 50 feet of garden hose and 10 gallons of "Penetrate" (water wetter). The pump on this wagon is a Seagrave booster with a capacity of 125 gallons per minute at 120 lbs., 100 gallons at 200 lbs., and 75 gallons at 250 lbs.

A 2½-ton Chevrolet truck called the Foam Truck is located at Kakaako Fire Station loaded with one foam generator, two 1½-inch and four 2½-inch foam pickup nozzles, 24 cans of foam powder and 36 cans of mechanical foam ready to leave immediately as required.

The personnel, totaling 324 officers and men, and the salary of each are as follows:

1 Chief	\$9,280	1 Radio Mechanic	\$3,840
1 Deputy Chief	7,200	51 Engineers	3,840
2 Assistant Chiefs	5,940	202 Hosemen	\$2,940 - 3,540
28 Captains	4,440	1 Clerk	2,940 - 3,540
32 Lieutenants	4,140	1 Jr. Accountant	3,715 - 4,485
1 Master Mechanic	4,540	1 P & S Clerk	2,850 - 3,390
1 Assistant Mechanic	4,290	1 Clerk-Steno	2,650 - 3,095

A very determined effort was made to trace back the firemen's days off duty. No company records or logs were kept previous to April 15,

1905, and the memories of the few firemen living then and previously are very hazy on this subject. However, in a book recording Fire Department events from April 1, 1894 to June 16, 1895, names of various firemen are mentioned as being "on liberty" about once in every ten or eleven days. From the minutes of the meeting of the Board of Fire Commissioners on March 28, 1896, comes this: "The Chairman (Andrew Brown) stated that the demand for increased liberty of the men of the department should be granted if possible. Following discussion on the subject, it was moved by Commissioner Brown and seconded by Commissioner Crozier and carried that liberty to twenty-four hours each once in fourteen days. Same was ordered to go into effect April 1, 1896." Whether this was an increase in the number of hours off duty or whether days off became more frequent cannot be determined.

However, it is known that in 1901, a fireman was off duty one day in every twelve. The exact date of change from one day in fourteen to the above is indefinite. On January 15, 1915 came the change to one day in eight, followed on January 16, 1918 by one day in six, and on March 6, 1925 to one in every four. Since June 1, 1925, the Honolulu firemen have worked under the two-platoon system, 24 hours on followed by 24 off.

The minutes of the Fire Commissioners meetings show that in 1896, a fireman's 24 hours off began and ended at 9:00 A.M., for in this same minutes book is recorded, on July 17, 1900, the fact that the Chief (Hunt) was authorized to change from this time to 12 M. Again on August 21, 1901, at the request of the Chief (Thurston), the hour was changed from 12 M. to 6:00 P.M. This hour remained, except as noted in the next paragraph, until August 16, 1945 when the present 8:00 A.M. change began.

Within two hours after the Japanese attack on December 7, 1941, all but a few of the off-duty firemen had reported for and remained on duty until the morning of December 9, when each man was allowed four hours off. On December 11, the two watches alternated eight hours' liberty until December 15, when the regular 24-hour shifts were resumed, changing at 5:00 P.M. because of the blackout laws and the subsequent lack of transportation. On December 17, 1941, the time was set ahead half an hour to 4:30 P.M. and remained that hour until June 12, 1944 when it reverted to the pre-war time of 6:00 P.M.

In reviewing many and various Fire Department records, only two references were found relative to uniforms, both in the minutes of the Fire Commissioners meetings--one on February 26, 1893 which stated the uniform should be dark caps, dark pants and red shirts; and the other on March 14, 1895 when double-breasted blue shirts were permitted. About 1906, coats, single breasted, six buttons in front and three on the sleeves for ranks below Lieutenant were introduced with double-breasted four buttons front and sleeves for all officers and chiefs. All firemen, except chief officers, wore black shirts with and without the coat. All caps were black.

On August 16, 1930, the present uniforms were adopted. Officers' and men's coats are double breasted, three buttons. Men below rank of Lieutenant--one mohair braid stripe on sleeves. Lieutenant--one silver stripe; Captains--two silver stripes; Assistant Chiefs--two gold stripes; Deputy

Chief--three gold stripes; Chief--four gold stripes. All officers wear lapel insignia indicative of their ranks and white shirts all the time. Men below rank of Lieutenant--black shirt and black bow tie without coat; white shirt, black four-in-hand tie with coat. Black caps for all men except officers. Captains and Lieutenants--white top, black band and visor; Chief Officers--white top, black band, white visor. Service stars--silver, except for Chief Officers who wear gold, awarded for each five years of service. In deference to Aloha Week, firemen on duty are permitted black aloha shirts and all officers white aloha shirts tucked inside the trousers, effective August 7, 1974.

The Honolulu Firemen's Relief Association, incorporated October 25, 1935, was organized for the express purpose of assisting its members in defraying doctor, hospital and medical bills incurred by them from illness or injury not in line of duty. Membership is limited to active and pensioned firemen. Originally, this association was able to operate on monthly dues of \$2.00, but at present monthly dues are \$4.00, this increase being necessitated by an overall increase in bills for service rendered. There is no limit as to the amount of a bill a member may incur during any given period. Since organization, \$77,990 have been received in dues and bills amounting to \$70,645.55 have been paid. This association has \$6,000 invested in 2½% U. S. Government Bonds.

The Honolulu Fire Department Federal Credit Union, organized in January 1937, continues to hold its high rank among the Credit Unions in the territory despite its limited number of potential members, membership being limited to active members of the Fire Department, members of their immediate families, any organization of firemen and the employees of the Credit Union. At present, 281 firemen have \$243,828.36 in outstanding shares. Since organization, this Credit Union has made loans totaling \$2,945,460, paid dividends amounting to \$53,361.76 and has sold U. S. Bonds aggregating \$2,476,150.

Employment in the Fire Department is limited to male citizens who are between the ages of 21 and 31 years and who obtain a passing mark of at least 70% in competitive examinations conducted by the Honolulu Civil Service Commission. This commission was created by an act of the Legislature of 1913 for firemen and policemen. Amended in 1932 with the creation of a Police Commission, it took the Police Department out of Civil Service, but the Legislature of 1939 made further amendments which brought all City and County employees under Civil Service except certain department heads and their first deputies. All promotions in the Fire Department are made from within the department and from an eligible list established by competitive examinations.

All firemen who were members of the department on December 31, 1927 may retire after 20 years of service on a pension equal of 40% of their average monthly salary for the 10 years immediately preceding the date of retirement; with 25 or more years of service the retirement allowance is 50%, computed similarly. Originally enacted by the Legislature of 1917 and amended several times, this law also provides for firemen who may be required to retire because of injuries received or illness contracted in performance of their duties. Computed as above, the amount is variable--25% to 75% as the case may warrant--final decision resting entirely with the Pension Board.

Upon enactment this Pension Board consisted of the Mayor, the Auditor, and the Treasurer with the Clerk of the City and County acting as Clerk. As amended, this board is now composed of three members who are appointed by the Mayor and the approval of the Board of Supervisors for a term of four years. The Mayor designates the Chairman. This law also provides for the widow and minor children of a fireman who may meet accidental death in performance of his duties.

Those firemen entering the service on and after January 1, 1928 are provided for under the Employees' Retirement System of the Territory of Hawaii. This system is jointly contributory and membership therein is compulsory immediately upon permanent employment. This system makes provisions for the firemen very similar to the so-called "Old Pension System."

When the Retirement System was expanded to include firemen, there were 126 firemen under the old system. Today there are but 40 and this number is constantly decreasing.

Section 6648 of the Revised Laws provides that a fireman be furnished with such medical, surgical and hospital care as the nature of any injury incurred in line of duty may require and permits four months disability leave with full pay.

A fireman is allowed 30 days of annual vacation which may be accumulated, not to exceed 90 days, and 21 days of sick leave accumulated not to exceed 54 days.

The life of each fireman is insured for \$3,000 against total and permanent disability and death under a group policy, the annual premium of which is met with proceeds from the Annual Firemen's Ball, football games, a circus, and many donations from generous friends. From this Firemen's Fund a burial plot in Nuuanu Cemetery was purchased, orphans of firemen cared for and educated, and various other reliefs made. No money is dispensed from this fund without the majority approval vote of what is actually a Board of Directors composed of the Chief as Chairman, his assistants and the Captain of each company.

On April 1, 1902 Honolulu's first fire alarm system was completed, a Gamewell Automatic, consisting of an 8-circuit switchboard and 6-circuit repeater, together with 65 non-interfering fire alarm boxes. This repeater was later changed to one which would care for 8 circuits.

Oddly enough, no new fire alarm boxes were installed until April 19, 1912 and then only one, at the Queen's Hospital. However, from that year on and as the city expanded, additional boxes were purchased and installed so that on May 1, 1933 there were 351 boxes in the city.

On May 8, 1933, the present Gamewell Manual Fire Alarm System was cut over and firemen stationed in the Fire Alarm Bureau in the basement of the City Hall to operate it. This system consists of 30 box circuits, two primary, two secondary and three tapper circuits. At this same time, 152

additional boxes were put into service. Total boxes today - 555, of which 42 are master boxes operated either by an automatic sprinkler system, auxiliary stations or both.

On December 16, 1947, the Gamewell Fire Alarm receiving and transmitting equipment was moved into the new Fire Alarm Bureau building, together with a specially-built PBX and the remote control unit for the radio transmitter. This building is located on the grounds of the City Hall and is of first-class construction throughout, equipped with cooking facilities, a rest room for the operators and hot and cold showers. Cost of erection-- \$43,701.08.

Between 65% and 75% of all fire alarms are received by telephone. All alarms, telephone, box and still, are transmitted by the fire alarm system, and the assignment of companies is the same on all type of alarms except when it is definitely known that one company will be sufficient.

The first master box to be installed was on the grounds of the Honolulu Lithograph Company, Ltd., 530 South Hotel Street, and was put in service September 11, 1926.

The first company to install an automatic sprinkler system was the Hawaiian Pineapple Company, Ltd. in Iwilei. This system was put into service September 1920. At present there are 60 buildings either wholly or partially equipped with automatic sprinkler systems, exclusive of those under the jurisdiction of the armed forces.

Honolulu's first water line was laid in the summer of 1847 and was the initial effort of the up-to-date system of today's water distribution. The present water supply comes mainly from artesian wells, the first well on this island being dug at Honouliuli in July 1879, and the first in Honolulu brought in water April 28, 1880 on Wilder Avenue near Metcalf Street. Pumping stations in different parts of the city pump from these wells to reservoirs on the higher elevations from whence the water is distributed through the city maintaining a hydrostatic pressure averaging about 65 pounds.

Tappers connected to the Gamewell Fire Alarm system are installed in all these pumping stations which stations are immediately notified in the event of a telephone alarm. Water is then directed toward the fire by closing, or partially closing, valves leading in other directions, stations pumping directly into the mains. Being a seaport, Honolulu has the entire Pacific Ocean to draw from in the event of the failure of the city water.

At present, there are 2,824 government-owned fire hydrants with standard connections in the City of Honolulu and 101 privately-owned similar hydrants. Each naval and military reservation on the island has hydrant installations totaling approximately 2,900.

The island of Oahu constitutes the City and County of Honolulu so that broadly speaking, the Fire Department renders protection to the 604 square miles which comprise the island. Honolulu itself spreads over 82.2 square

miles of densely populated area which is protected by the 15 engine companies in the city. The reasonably closely built-up 9.42 square miles in Rural Oahu are protected by the seven country stations who also have slightly over 55 square miles of sugar cane under their care. Army and Naval reservations occupy approximately 85 square miles while there are about 31 square miles of pineapple fields.

During 1949 the average distance traveled per alarm in the city was 5.3 miles while in Rural Oahu the companies averaged 7.6 miles per alarm. These averages are figured on individual pieces of equipment and include the distance to and from the fire.

Of the 360 miles of dedicated streets in the city, 140 miles are paved with asphalt concrete, 180 miles with asphalt macadam, 32.5 miles with concrete while 7.5 miles are unimproved. These figures do not include an estimated 15 miles of short roads in subdivision areas covered with asphalt concrete or asphalt macadam.

Temperatures are persistently equable to extremes, as recorded by the U. S. Weather Bureau, being 56 and 87 degrees.

The gross fire loss for the previous five years amounted to \$2,621,438.62, the annual loss varying from \$307,058.40 in 1946 to \$960,525.67 in 1949. The average annual number of actual fires, exclusive of false alarms, was 1,089 with the average loss per fire of \$481.08. Based on an average population of 363,622, the average annual number of fires per thousand population was 3.52 and the average per capita loss, \$1.441.

Being on an island, the Honolulu Fire Department cannot call on neighboring cities for help and necessarily must have sufficient equipment itself to take care of any conflagration which may occur. As stated previously, the Army and the Navy will send equipment and men wherever and whenever the department requests, although their own fires must be taken care of first.

The Honolulu Fire Department established a most unique record on the evening of November 28, 1933 when No. 2 Engine and No. 6 Engine were loaded on a barge with hose, foam powder, etc., and towed 52 miles to Kaunakakai on the island of Molokai where a fire in a large gasoline tank owned by a local oil company was extinguished. The crew was composed of off-duty firemen who volunteered for the occasion. Men and equipment were back in Honolulu by 12:30 p.m. the following day.

As far as can be ascertained, this was the first and only time that fire apparatus was ever taken from one island to another for firefighting purposes.

Another first for Honolulu and perhaps for the United States took place on July 26, 1949 when approximately 100 soldiers and equipment were flown from Hickam Field to Bellows Field in three C-46 troop carriers to assist in fighting a grass and brush fire which burned an estimated 1,500 acres before being extinguished.

Another first--the first permit to any municipal fire department to operate its own radio transmitter was cabled by the Federal Communications Commission on September 5, 1942 to the Honolulu Fire Department.

The Honolulu Fire Department enjoys the distinction of being the only fire department in the United States which fought fire under the rain of bombs and machine gun bullets from enemy attack.

The Fire Department is proud to list among its members six men who were awarded the Order of the Purple Heart, a decoration usually given only to members of the Armed Forces wounded in battle. It is believed that these men are the only members of any civilian fire department to be so honored.

The Honolulu Fire Department is the only fire department in the United States, and quite probably in the world, which was established by the order of the King of a Monarchy and carried on by a Provisional Government, a Republic, a Territory, a County and finally, by a City and County Government.

Men of all stations in life, of all religions, and of all nationalities have, at one time or another, been members of this department, and all of them cherish those memories and deemed it an honor to have been carried on its rolls. The loyalty to the Fire Department and its activities is not confined to the firemen themselves but extends to their parents, their children, and even to their grandchildren.

Who amongst you has not at some time desired to be a fireman, to share the perils, the dangers and the thrills of one who is ready at all times to risk his life to protect your property and the lives of those who are near and dear to you.

--- THE END ---

V I S I T

Y O U R N E I G H B O R H O O D

F I R E S T A T I O N

A N D

G E T A C Q U A I N T E D

CHIEFS OF THE HONOLULU FIRE DEPARTMENT
AND THEIR TENURE OF OFFICE

1.	W. C. Parke	November 6, 1850	to February 3, 1851
2.	A. J. Cartwright	February 3, 1851	to June 30, 1859
3.	Richard Gilliland	July 1, 1859	to June 30, 1862
4.	A. J. Cartwright	July 1, 1862	to June 30, 1863
5.	R. B. Neville	July 1, 1863	to June 30, 1865
6.	Richard Gilliland	July 1, 1865	to June 30, 1867
7.	C. E. Williams	July 1, 1867	to June 30, 1870
8.	Charles N. Spencer	July 1, 1870	to June 30, 1872
9.	John A. Hassinger	July 1, 1872	to June 30, 1874
10.	James S. Lemon	July 1, 1874	to June 30, 1878
11.	George Lucas	July 1, 1878	to June 30, 1882
12.	John Nott	July 1, 1882	to June 30, 1886
13.	C. B. Wilson	July 1, 1886	to December 31, 1891
14.	Julius Asch	January 1, 1892	to February 28, 1893
15.	Frank Hustace	* March 1, 1893	to August 31, 1893
16.	J. H. Hunt	September 1, 1893	to June 15, 1901
17.	C. H. Thurston	June 16, 1901	to February 18, 1928
18.	W. W. Blaisdell	February 20, 1928	to December 31, 1945
19.	H. A. Smith	January 1, 1946	to July 31, 1956
20.	H. C. Pate	August 1, 1956	to December 31, 1958
21.	W. K. Blaisdell	January 1, 1959	to January 26, 1966
22.	R. L. Young	February 1, 1966	to January 1, 1969
23.	L. M. Kwaitkowski	January 2, 1969	to June 30, 1972
24.	B. K. Aiu	February 5, 1973	to

* Paid department organized

Updated 2/4/74

LOCATIONS OF FIRE STATIONS
(Updated August 14, 1975)

4/15/77

<u>COMPANY</u>	<u>STATION</u>	<u>ADDRESS</u>	<u>ZIP CODE</u>
1, Snorkel	Central	104 S. Beretania St., Honolulu	96813
2, L2, R1	Pawaa	1610 Makaloa St., Honolulu	96814
3	Makiki	1202 Wilder Ave., Honolulu	96822
4, L4	Kuakini	601 N. Kuakini St., Honolulu	96817
5	Kaimuki	971 Koko Head Ave., Honolulu	96816
6	Kalihi	1742 N. King St., Honolulu	96819
7, L7	Waikiki	381 Kapahulu Ave., Honolulu	96815
8	Iwilei	840 Iwilei Rd., Honolulu	96817
9, L9	Kakaako	555 Queen St., Honolulu	96813
10	Aiea	98-1239 Ulune St., Aiea, HI	96701
11	Sunset Beach	59-719 Kam Hwy, Haleiwa, HI	96712
12, L12	Waipahu	94-121 Leonui St., Waipahu, HI	96797
13	Kahuku	56-674 Kam Hwy, Kahuku, HI	96731
14	Waialua	66-420 Haleiwa Rd., Haleiwa, HI	96712
15, T15	Hauula	54-064 Kam Hwy, Hauula, HI	96717
16	Wahiawa	640 California Ave., Wahiawa, HI	96786
17	Kaneohe	45-910 Kam Hwy, Kaneohe, HI	96744
18, L18	Kailua	211 Kuulei Rd., Kailua, HI	96734
19	Aikahi	45 Kaneohe Bay Drive, Kailua, HI	96734
20	Pearl City	885 First Street, Pearl City, HI	96782
21	Kaaawa	51-518 Kam Hwy, Kaaawa, HI	96730
22	Manoa	2850 East Manoa Rd., Honolulu	96822
23	Wailupe	5046 Kalaniana'ole Hwy, Honolulu	96821
24	Ewa Beach	91-832 Pohakupuna Rd., Ewa, HI	96706
25	Nuuanu	115 Wylle St., Honolulu	96817
26	Waianae <i>85-245</i>	86-230 Farrington Hwy, Waianae, HI	96792
27	Waimanalo	Bellows Field, Waimanalo, HI	96795
28, T28	Nanakuli	89-334 Nanakuli Ave., Nanakuli, HI	96792
29, L29	McCully	2425 Date St., Honolulu	96814
30, L30, T30	Moanalua	2835 Ala Ilima St., Honolulu	96818
31, L31, T31, R2	Kalihi-Kai	1334 Nimitz Hwy, Honolulu	96817
32	Kalihi-Uka	1861 Kam IV Rd., Honolulu	96819
33	Palolo	3345 Kiwila St., Honolulu	96816
34	Hawaii Kai	515 Lunalilo Home Rd., Honolulu	96825
35	Makakilo	92-885 Makakilo Dr., Ewa Beach, HI	96706
36	Mililani-Waipio	95-269 Kipapa Dr., Wahiawa, HI	96789
Fireboat	Waterfront	111 N. Nimitz Hwy, Pier 15, Honolulu	96817
Air-1	Aircraft	Honolulu Airport, 421 Aowena Pl. Hon.	96819
	<i>Kaimuki</i>	<i>47-304 Waimanalo RD Kaimuki</i>	<i>96744</i>

L = Ladder
R = Rescue
T = Tanker

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2. Interviews with various retired firemen.
3. National Board of Fire Underwriters, Committee on Fire Prevention and Engineering Standards, Report No. 355 dated August 1924, November 1930 and April 1950.
4. Life of W. C. Parke.
5. Thrum's Annuals.
6. Files of Pacific Commercial Advertiser.
7. Files of Polynesian.
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9. Files of Library of Hawaii.
10. Encyclopedia Britannica.

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/s/

H. A. SMITH, Chief
Honolulu Fire Department