The City of Seattle

Landmarks Preservation Board

400 Yesler Building Seattle, Washington 98104 · (206) 625-4501

LPB308/86

REPORT ON DESIGNATION

Name and Address of Property: Fireboat Duwamish
Hiram Chittenden Locks

Legal Description: Hiram Chittenden Locks

At the public hearing held on October 8, 1986, the City of Seattle's Landmark Preservation Board voted to approve designation of the Fireboat Duwamish as a Seattle Landmark based upon satisfaction of the following criteria of Ordinance 106348:

Section 3.01(1): It is the location of, or is associated in a significant way with, an historic event with a significant effect upon the community, city, state or nation;

Section 3.01(3): It is associated in a significant way with a significant aspect of the cultural, political, or economic heritage of the community, city, state or nation;

Section 3.01(4): It embodies the distinctive visible characteristics of an architectural style, or period, or of a method of construction;

Section 3.01(6): Because of its prominence of spatial location, contrasts of siting, age, or scale, it is an easily identifiable visual feature of its neighborhood or the city and contributes to the distinctive quality or identity of such neighborhood or the city;

DESCRIPTION: Present and original (if known) physical appearance and characteristics

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The all riveted steel hulled fireboat "Duwamish" was built in 1909. Designed for Seattle's own particular waterfront characteristics during this time, she had no external keel, due to the fact that Seattle had large mud flats on its waterfronts. It was judged that she would not be prone to stick in the mud at low tides. Her steel hull also had another feature quite common on naval vessels of the day, a reversed stem commonly called a "ram bow". Because of the large number of wooden ships in Seattle's harbor in those days, a "ram bow" was designed to ram and sink burning wooden ships in shallow water that could not be extinguished by conventional firefighting methods.

She was originally equipped as a steam powered, twin screw, external combustion type. Her twin 45-foot high smoke stacks were located side by side instead of traditionally one behind the other, allowing more deck space for the water streams. She was the latest thing in fireboat construction.

She had 4 Mosher, Water Tube boilers with 9,000 square feet of heating surface, and 2 double vertical 14 inch by 16 inch propelling engines with a top speed of 10-1/2 knots per hour maximum. Her original water pumps were 3 steam piston American La France Duplex each with a rated pumping capacity of 3,000 gallons per minute for a total 9,000 gallons per minute. Other specifications were a length of 120 feet, breadth, 28 feet, draft, 9 feet 6 inches, and gross tonnage, 322.

In 1949, because of the mounting cost of operating her and the slower response time to fires, in comparison to the newer faster gas powered fireboat "Alki" (1927), it was apparent that steam power for a fireboat was a thing of the past. The fireboat "Duwamish" was rebuilt at Commercial Ship Repair, Winslow, Washington. Diesel, electric power was installed to replace the original steam power. Presently, her propulsion is by two General Electric, 765 horsepower, 500 volt d.c., electric motors driving through 2 reduction gears, 6.74 to 1; all driven by 3 General Electric 610 KW 500 volt generators that are drive by 3 Cooper Bessmer 900 horsepower 4 cycle supercharged diesels. Her top speed is now 14 knots. She now sports a single squat exhaust stack in place of the original two tall stacks. Alterations to her hull to replace the "ram bow" design, not needed because most ships by this time were steel, increased her length to 122 feet 8 inches. The portals along the side of her hull are still original.

Her water pumps are now 2 De Laval certrifugal type driven by General Electric, 765 horsepower, 500 volt d.c., electric motors with a pumping capacity of 11,400 gallons per minute, each at 150 pounds per square inch. This is a total pumping capacity of 22,800 gallons per minute, making her the World's most powerful fireboat!

Her pilot house and its interior are still original. Most of the brass and oak detailing like gauges, brackets, the wheel, and other small equipment in the pilot house and below deck, as well as her dual telegraphs, are of 1909 vintage. The most noticeable features on her deck are the eight large monitors (nozzles). The pilot house monitor has a 6-inch barrel with a 4-1/2 inch tip. The after platform monitor has a 5-inch barrel with a 3-1/2 inch tip. The six trunk deck monitors, three to a side, vary from 2-inch to 3-inch tips. These changes that have taken place in the course of time are evidence of the history of development of the fireboat "Duwamish". These changes have acquired significance in their own right, and this significance shall be recognized and respected.

Statement of Significance

The fireboat "Duwamish" is significant because she is associated with an important aspect of the maritime economic heritage of Seattle. She was designed, built, and operated during a historical period when large, pumping capacity fireboats were needed to protect the large wooden warehouses, wharfs, and docks, loaded with high value cargo, on the sprawling central waterfront. She was built in 1909, at a cost of $125,000, by the Richmond Beach Shipbuilding Company, her machinery by Fulton Machine Works, at Richmond Beach, Washington. The steam powered fireboat "Duwamish" was designed by McAllaster and Bennett, naval architects, consulting engineers, and marine surveyors located at 703 Central Building, Seattle. Eugene L. McAllaster, arriving in Seattle in 1894, was a famous Puget Sound naval architect specializing in power and pumping plants, marine engines and boilers. He designed many area vessels including the passenger steamer "Mainlander" for the Puget Sound Victoria service of Cary Cook's Western Steam Navigation Company, in 1900.

After the "Great Fire" of June 6, 1889, Seattle began its rebuilding and the first steps were taken to create a permanent, paid, professional Fire Department. On October 20,1889 the paid Fire Department was established. The year following the fire, new firehouses, needless to say, were of high priority and the building of a fireboat was ordered. In 1891 the fireboat "Snoqualmie" arrived and was berthed at the foot of Madison Street.

With large wooden warehouses and wharfs atop creosoted pilings along the growing, bustling waterfront, the Seattle Fire Department ordered the building of another, more powerful, fireboat. In 1909, with her first, commanding officer, Captain Arthur G. Bennefiel, and Lieutenant Harmon Leighton as pilot, the new powerful steel hulled fireboat "Duwamish" replaced the old wooden fireboat "Snoqualmie". The latter boat was found to be in unseaworthy condition and put out of service for several months for overhauling following the arrival of the "Duwamish."

On July 30, 1914, the "Duwamish" fought her largest and most infamous fire when the Grand Trunk Pacific Dock burned on Seattle's central downtown waterfront. It was the largest wooden structure of its kind on the Pacific Coast and stood on 5,000 creosoted piles. The 500 foot 105 foot wide warehouse and three story office building contained 2,700,000 feet of lumber from the Port Blakely Mill. When "air turned to fire" the powerful streams from the fireboat "Duwamish" helped to save other nearby piers from destruction, preventing a major conflagration on the waterfront.

The fireboat "Duwamish" slugs the Grand Trunk Dock with her pilot house monitor.

During World War II, the fireboat "Duwamish" was painted in wartime colors of drab gray and operated by the U.S. Coast Guard. It protected the shipyard installations on Harbor Island. In 1946 she was returned to the Seattle Fire Department.

Another spectacular fire, that the "Duwamish" worked at, was the Seattle Cedar Mill in Ballard on May 20, 1958. She pumped 18-1/2 hours without stopping and worked over 25 hours total.

By 1972 Seattle's waterfront economics had shifted to containerization making large wooden warehouses, for the most part, empty and obsolete. The development of better fire prevention technology like automatic sprinkler systems under wharfs and in warehouses, and the use of concrete instead of creosote soaked wood for pilings and docks, made the chance of a major fire happening on the waterfront less likely. Also, fireboats like the "Duwamish" require larger crews (creating higher labor costs) and are not economically feasible to operate. This combination of less actual firefighting activity and increased labor costs, make lighter and faster fireboats more economical to run. They have quicker response time and cover increased distances.

Seattle's new fireboat "Chief Seattle", replaced the "Duwamish" on January 8, 1985, reflecting these economical changes. It's built of aluminum and fiberglass to be lighter and faster (less monitors, more power for speed). It has only four monitors (nozzles) instead of eight like the "Duwamish" and its four water streams look insignificant in comparison to the old "Duwamish". Its monitors are automatic and can be controlled by one member instead of having to be individually operated by additional crew members on the deck.

The powerful pumping capacity of the fireboat "Duwamish" is her most treasured and unique quality. Her beautiful and spectacular water displays embody the distinctive visible characteristics of an historic period. The World's most powerful fireboat "Duwamish" has remained a part of Seattle's marine and waterfront legacy for 77 years. She holds one of the longest continuous original commissions and also has one of the oldest active registered hulls of any vessel on the west coast of the United States, being commissioned and active since 1909.

The features of the Landmark to be preserved, include:

The vessel in its entirety.

Issued: October 10, 1986

Karen Gordon

Karen Gordon
City Historic Preservation Officer

KG:dlv

cc: Holly Miller, DCLU (3)
Susan Boyle, Chair, Landmarks Preservation Board
Richard Columbi, Seattle Fire Department

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