1. NAME OF PROPERTY

Historic Name: ***BALTIMORE*, HARBOR INSPECTION TUG**

Other Name/Site Number: *Baltimore*, official number 203700

2. LOCATION

Street & Number: 1415 Key Highway Not for publication:___

City/Town: Baltimore Vicinity:___

State: MD County: Baltimore City Code: 510 Zip Code: 21230

3. CLASSIFICATION

Ownership of Property		Category of Property	
Private:	X	Building(s):	___
Public-Local:	___	District:	___
Public-State:	___	Site:	___
Public-Federal:	___	Structure:	X
		Object:	___

Number of Resources within Property

Contributing	Noncontributing	
___	___	buildings
___	___	sites
1	___	structures
___	___	objects
1	0	Total

Number of Contributing Resources Previously Listed in the National Register: 0

Name of Related Multiple Property Listing:

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria.

_____ _____
Signature of Certifying Official Date

_____
State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

_____ _____
Signature of Commenting or Other Official Date

_____
State or Federal Agency and Bureau

5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

____ Entered in the National Register _____
____ Determined eligible for the _____
National Register
____ Determined not eligible for the _____
National Register
____ Removed from the National Register _____
____ Other (explain): _____

_____ _____
Signature of Keeper Date of Action

6. FUNCTION OR USE

Historic:	Transportation	Sub:	water-related
Current:	Recreation & Culture	Sub:	Museum

7. DESCRIPTION

ARCHITECTURAL CLASSIFICATION:

MATERIALS:
Foundation: Iron (Hull)
Walls: Wood (Superstructure)
Roof: Wood
Other:

Describe Present and Historic Physical Appearance.

Baltimore, official number 203700, was built in 1906 by the Skinner Shipbuilding Company at the foot of Cross Street in Baltimore, Maryland. The hull is constructed of rivetted iron, and the deckhouse is built of wood. A single "scotch" boiler provides steam for the compound reciprocating engine. The tug is maintained as an operating floating exhibit by the Baltimore Museum of Industry, Inc., near the dock area where she tied up during her working life.[1]

HULL

The hull is constructed of wrought iron plate, fastened by rivets to iron frames. The use of durable wrought iron, rather than wood or steel, has helped to preserve the vessel. The deck beams, tie plates, and other deck structural members are steel. The deck planking is pine. The hull measures 84.5 feet in length, 18.6 feet in beam, and 8.2 feet in depth of hold. The current Coast Guard Certificate of Registry lists *Baltimore* at 81 gross tons, and 55 net tons.

The hull is a typical inland waterways tug form for the period, with an upright stem; full, round bilges; moderate sheerline; and an elliptical stern. It is divided into four compartments by bulkheads: forepeak, forecastle, machinery spaces, and after peak. The low bulwarks are vertical around the stern rather than canted inboard as on more modern tugs. A wooden rail cap tops the bulwarks, with an additional rail cap at the bow forward of the deckhouse, and at the stern aft of the deckhouse. Pipe stanchions support a rope rail around the main deck.

Two wooden rub rails or guards protect the outside of the hull against direct contact with other vessels and docks. One rub rail runs the length of the hull and around the stern at deck level. A second rub rail, the length of the deckhouse, runs below the other at about the water line. The sacrificial wooden portions are deteriorated and scheduled for replacement.

The iron rudder is mounted abaft the rudder post and extends above the waterline with preventer chains attached to its upper corner. The rudder is controlled by a system of chains, rods, and wire rope which runs under the deck on each side of the tug between the pilothouse and the stern. The rudder chain turns the rudder quadrant on the fantail above the deck. A steel plate covers the quadrant today, but is planned for replacement by a wooden grating as was originally fitted.

PROPULSION

Marine steam propulsion required a steam-generating boiler, a steam engine, and a number of subsidiary or auxiliary machines. Auxiliary machinery assisted the boiler and engine and provided additional services for the vessel. Auxiliary machinery on board *Baltimore* includes the condenser, air pump, circulating pump, feed pump, sanitary pump, donkey pump, electrical generators, and steam-powered reversing gear.

Boiler

The boiler of *Baltimore* is built on the standard scotch pattern with the addition of a steam dryer around the exhaust uptake. The present boiler replaced the original boiler in 1922. It follows the original pattern in many particulars. The 9 foot, 6 inch by 10 foot, 3 inch cylindrical boiler shell plating holds two corrugated Morrison furnaces which pass from the furnace doors to a point near the back of the boiler where they connect to a single vertical combustion chamber. Fire tubes pass from the top of the combustion chamber back to the front of the boiler over the

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[1] The best single article on *Baltimore* is by Stephen Heaver, Jr., "The Restoration of the Tug *Baltimore*, 1906," *Seaways: Journal of Maritime History and Research,* January/February, 1990, vol. 1, no.1. The author of this nomination is indebted to Mr. Heaver for permission to use that article and for Mr. Heaver's narration during a tour of the tug on March 12, 1993.

furnace doors. The angular steal smokebox carries the exhaust gasses from the boiler through an eccentrically-placed annular steam dryer or superheater up out the smokestack.[2]

Water fills the inside of the boiler to a point above the furnaces, combustion chamber and return fire tubes. The water protects the steel of the boiler from burning through and causing the boiler to explode. As the water is heated it turns to steam and passes from the top of the boiler through the steam dryer and on to power the engine.

The boiler was built to burn coal, formerly cheap and plentiful in Baltimore. The coal is shoveled into the furnaces where it burns atop grates stretching back to the front of the combustion chamber. Air for combustion enters the boiler through the furnace doors from the stokehold. Ashes and clinkers fall through the grates into the ashpit on the bottom of the furnace. Heat and exhaust gases pass into the combustion chamber and out through the tubes.

Baltimore was converted to burn oil as an economy measure in 1957. The change required that the furnace be slightly modified to allow forced draft, oil burners be installed, an oil tank be built into the hull, and the old coal bunkers be partially removed. The museum has returned the tug to burning coal, reversing the changes to match the original design and appearance.

Bunkers

Baltimore was built with coal bunkers along each side of the boiler in the machinery space. These were filled from the deck outside through six circular coal scuttles in the deck. The after ends of the bunkers were open for access by the boiler stokers. When the tug was oil-fired these bunkers were closed up and a new 1,200 gallon oil tank fitted forward of the boiler in the rear of the forecastle. This oil tank has been removed to return the tug to its early appearance. The present coal bunkers are being restored to their appearance and dimensions when the tug was coal fired.

Engine

Dry steam from the boiler passes aft to the compound double-acting steam engine. In this form of engine steam is expanded or used twice, first in the high-pressure cylinder and then again in the low pressure cylinder. The high pressure cylinder is 12 inches in diameter using steam at pressures up to 150 pounds per square inch. The low pressure cylinder is 25 inches in diameter using steam at about 17 pounds per square inch. The current rating for the boiler only allows pressure at 115 pounds.

The mechanical arrangement of the engine is that of a two-cylinder compound, direct-acting, vertical-inverted marine engine. This was a common type of engine for use in tugs and a variety of similarly-sized vessels. The cylinders transmit the up and down linear motion of the engine to the propeller shaft through the use of a crankshaft. The length of stroke for both cylinders is 22 inches. The cranks are at about ninety degrees to one another to make it difficult for the engine to become stuck on center.

Should the engine be stopped with the high pressure cylinder crank either straight up or down the engine can be rotated off center by diverting steam through a bypass to the other cylinder or by using the jacking gear. This is a flywheel with slots cut into its outer surface for a crowbar to jack or rotate the propeller shaft so that the engine can work. The four-bladed propeller is made of wrought iron. It is 6 feet 9 inches in diameter and has a pitch of 8 feet 8 inches.

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[2] Stephen G. Heaver, Jr., "Documentation of the 1922 Scotch Marine Boiler for S.T. *Baltimore*," August, 1985, typescript in administrative files for tug, Baltimore Museum of Industry, Baltimore, Maryland; general information on scotch boilers is from C.W. Dyson, *Practical Marine Engineering for Marine Engineers and Students*, (New York: Marine Engineering, 1917) pp. 63-66.

The steam is admitted to the cylinders by valves controlled by eccentric rods attached to the crank shaft fore and aft of the cranks. The high pressure cylinder steam valve is an outside admission spool type. The low pressure valve is a "d" type double ported slide valve. The Stephenson valve gear could reverse the engine by changing the position of the eccentric rods. Adjusting the eccentrics is accomplished with the aid of an auxiliary steam reversing engine or ram.

Auxiliaries

Baltimore has a surface condenser built into the columnar supports for one side of the engine cylinders. The condenser reduces steam from the engines to water by passing the steam through a multitude of small tubes in a cool water bath. Two pumps aid the process of returning the condensed water to the boiler. The air pump moves the water from the condenser to a set of filters called the hot well for cleaning to remove grease and other impurities. The feed pump moves the water from the hot well to the feedwater heater and hence to the boiler. At some time in the later history of *Baltimore* an additional stage of water cleaning, a grease extractor, was added. The grease extractor might be retrofitted with filter cartridges.

Pumps

A rotative duplex donkey pump, duplex feed pump, duplex sanitary pump, and centrifugal circulating pump handle the movement of water for various purposes within the tug. The water pumping system was designed to assist in damage control and to give *Baltimore* a moderate fire fighting capability. Piping runs to each compartment to allow water to be pumped out by the air pump in case of a leak. Two fire hose standpipes supplied water to hoses on deck and to a monitor atop the pilothouse which could deliver water to fires near the harbor front.

Electrical System

Baltimore was specially fitted with electric generators and lights, an unusual feature in 1906. The city council added the electrical system to the order for the tug when Skinner bid substantially below the city's cost estimate. Power is generated by the original 5.5 kilowatt Westinghouse dynamo generator driven by an American Blower high-speed (500rpm) rotative steam engine. A Pyle National five kilowatt reserve turbine generator was installed in 1947 when the electrical system was upgraded. Most of the electrical system dates from that time, although components have been replaced.

SUPERSTRUCTURE

The deckhouse extends most of the length of the hull, a common feature of older inland waterway tugboats. The pilothouse is above the deckhouse, set back several feet from the front of the deckhouse below. Both the deckhouse and pilothouse are built of Georgia pine. The windows are hung with counterweights to lower into a galvanized steel pocket in the pilothouse and deckhouse bulkheads. These pockets were previously lined with lead sheet. Each pocket is fitted with a drain to the weather deck. The pilothouse and saloon windows were spring loaded.

The pilothouse was built with drop moulded paneling below the windows. These were replaced ca. 1927 because the construction method allowed water to collect inside the walls and promoted rot. Horizontal tongue-in-groove planking follows the deck sheerline on the sides of the house and runs vertically around the curved front of the house.

A comfortable saloon is fitted in the forward portion of the deckhouse below the pilothouse. Oak match board covers the interior surfaces. The saloon has a door on each side and an escape hatch from the forecastle below in the center of the deck. Windows line the front of the saloon, and a wooden bulkhead separates it from spaces aft. Aft of the saloon to port a companionway ladder

leads to the pilothouse. The middle half of the deckhouse extends over the boiler (forward) and engineroom (aft) spaces.

Aft of the engine room the galley extends across the width of the house. It is fitted with a Shipmate coal burning stove. Racks for cooking utensils and crockery are mounted on the forward bulkhead, and a folding work table is mounted on the after bulkhead. These have been reconstructed based on conjecture. Water closets are located at the after end of the deckhouse, for officers to port and crew to starboard.

PILOTHOUSE

The pilothouse has an elliptical forward face, a flat rear face and windows all around. The door is located on the port side, and a pipe ladder to the pilothouse roof is located to starboard. The interior is warmed by a steam pipe radiator that curves across the front below the windows.

The pilothouse is dominated by the massive wheel which controls the rudder with wire rope, chains, and iron rods. The single piece rudder rope is passed about a dozen times around the axle of the wheel and down through each side of the deckhouse into the hull by the use of carefully placed pulleys. Below decks the helm ropes are tied to chains and rods that pass aft to turn the rudder quadrant. This arrangement is extremely rare on surviving boats because it depends on human strength alone to turn the wheel.

Another unusual feature today is the use of gong and jingle bell signals to the engine room to control the speed and direction of travel. Several bells and a voice pipe allow commands to be passed from the pilothouse to the engine room where the engineers actually control the engine. A second voice pipe runs to the saloon below. The tug's bell hangs from a bracket on the front face of the pilothouse. The pilothouse roof supports a small foremast, a fire monitor, a searchlight, and a replica of the city seal.

RIG

The rig is standard for a tug of the turn of the century. A tall wooden jack staff is mounted behind the stem, a small foremast is atop the pilothouse, and the mainmast is mounted to the rear of the deckhouse.

The smokestack is made of a seamless steel pipe interior liner which extends from the steam dryer through a rivetted iron funnel 18 feet high. The stack had been shortened twelve feet at some time, but has been restored by the museum to eighteen feet, the height necessary for good draft in the boiler. Steel wire rope stays support the stack, attaching to a reinforcing band about two thirds of the way up the stack.

The smokestack supports several other fittings. Racks for 12 round-bottom steel fire buckets surround the lower portion of the stack. The steam escape pipe for the boiler is mounted on the aft side of the smokestack. The steam pipe for the whistles runs up the stack on the forward side.

A single, 20-foot Kahnweiller metallic lifeboat certified to carry 11 people is carried on chocks atop the portside engine room skylight. The boat is lifted into the water by curved pipe davits mounted at the edge of the deckhouse roof (boat deck). *Baltimore* has only one ships boat; a second boat, shown on the builder's plans, does not appear in photos and may never have been fitted.

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties: Nationally: X Statewide:___ Locally:___

Applicable National Register Criteria:	A X B___ C X D___
Criteria Considerations (Exceptions):	A___ B___ C___ D___ E___ F___ G___
NHL Criteria:	1, 4
NHL Theme(s):	XII Business L. Shipping and Transportation XIV Transportation B. Ships, Boats, Lighthouses XVI Architecture (Naval)
Areas of Significance:	Architecture (Naval); Maritime History Transportation
Period(s) of Significance:	1906-1922
Significant Dates:	1906
Significant Person(s):	
Cultural Affiliation:	N/A
Architect/Builder:	Skinner Shipbuilding of Baltimore, Maryland

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

Baltimore is the oldest operating steam tugboat in the United States. Built by Skinner Shipbuilding of Baltimore, Maryland, in 1906, the tug spent its entire career in and around Baltimore, Maryland, moving barges and workboats, breaking ice and carrying city and harbor commissioners and other VIPs for harbor inspection tours.

The preceding statement of significance is based on the more detailed statements which follow.

DEVELOPMENT OF THE TUGBOAT

The first steam-powered tugboat was *Charlotte Dundas*, which demonstrated the usefulness of mechanical propulsion in 1802 on Britain's Forth and Clyde Canal. A steam engine turned sidewheels that moved her through the water. The idea of steam power spread rapidly, particularly in the United States where by the 1830s steam tugboats had freed sailing ships from their dependence on winds and tides when entering and leaving port.[1]

Improvements in tugboat design included screw propulsion, introduced in the mid-1840s, compound and triple expansion steam engines in the 1860s, and quadruple expansion steam engines, and from 1860 to 1900, iron and steel hulls. All of these advances made tugs stronger and cheaper to operate. Better hull design, improved propellers, and better steering arrangements have made them more maneuverable.

Tugboats vary in detail, but are generally so distinctive that they are easily recognized by young children. Most tugboats have high bows with a plumb stem, a graceful sheer curving back to a counter stern, prominent rubbing rails, and strong tumblehome to their bulwarks. The pilothouse is usually above a single-deck house that extends back to just abaft amidships. A single smokestack normally rises with a saucy rake from behind the pilothouse. This recognizable tug profile developed between 1840 and 1880, and has subsequently changed only in small details of proportion and rig.

Tugboats have been grouped by their trades into three general groups. The hull designs of these types reflected the requirements of the work that they engaged in. The various types were developed early, and most of the old designs are little changed from the early days.

Transfer and harbor tugs were, and are, the most common and the smallest of the three types. Designed to operate in protected waters close to home, they had small deckhouses and were usually propelled by a single screw. The next larger type was generally over 120 feet in length and designed for offshore, long-distance towing. These oceangoing tugs had more freeboard and often were equipped with a topgallant forecastle to turn aside high seas. The final and largest type of tugs were designed to save vessels in distress. These salvage and rescue tugs were generally about 200 feet long and often equipped with twin screws for greater power and maneuverability.

All tugboats are designed to serve as additional motive power for other vessels. They vary in how they apply that assistance. The earliest tugs only towed other vessels on the end of a hawser. This is still the most common type of towing work. Later, tugboat captains learned how to safely nudge large vessels directly to assist them into a berth. Tugs can also lash themselves to the vessel they are towing and serve as a strap-on engine. On America's rivers this was found to be

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[1] P.N. Thomas, *British Steam Tugs* (Albrighton, Wolverhampton, Great Britain: Waine Research Publications, 1983) p. 11; Michael K. Stammers, *Tugs and Towage*, Shire Album No. 239, (Aylesbury, Bucks, Great Britain: Shire Publications, 1989) p. 3.

the best method of dealing with strong, confused currents. The ultimate manifestation of the integrated tug and tow came in the 1960s when offshore tugs were designed to fit their bow into a corresponding aperture in the stern of a special ocean-going barge and become, in effect, one vessel.

BALTIMORE

Baltimore is an inspection tug, a variant form of harbor tugboat, designed to operate in several roles as a municipal tug, an auxiliary fireboat, an icebreaker during the winter months, and a VIP launch for harbor commissioners to view harbor improvement work sites. Inspection steamers were intended to transport harbor officials to work sites and other areas where decisions might be affected by local conditions. Many other large cities, as well as the federal government, formerly operated inspection tugs or launches for similar purposes.[2]

As a municipal tug *Baltimore* helped welcome new arrivals to the port and helped tow city barges and other vessels when required. One notable special visitor welcomed to Baltimore was the German blockade running cargo submarine *Deutschland* in July 1916 before the United States entered the war. This vessel was the first submarine to cross the Atlantic solo, eluding British and French patrols that might have caught a surface ship. *Baltimore*, and the city quarantine tug, *Thomas F. Timmins*, patrolled the area around the submarine to assure that American neutrality would not be broken. After *Deutschland* exchanged cargoes, the two city tugs escorted the sub out of Baltimore waters for the return trip to Germany.[3]

The mayor and other city officials occasionally travelled on board to visit various parts of the waterfront. School groups, societies, and VIP visitors to the city also toured the harbor.[4] *Baltimore* also represented the city at important maritime civic occasions such as vessel launchings. The tug was damaged during the launching of a vessel in 1922, when the ship capsized on top of *Baltimore*, damaging or destroying the pilothouse and smokestack. The city took the opportunity while the tug was undergoing repairs to replace the boiler as well.[5]

The Baltimore Harbor Board was dissolved with the creation of the Maryland Port Authority in 1956, and the tug *Baltimore* was transferred to the state. The tug continued to operate in the same sort of service, but was modified to burn oil in 1957 as an economy measure. In 1963, the Maryland Port Authority sold *Baltimore* to Alexander Luckton, Jr., owner of Baltimore's Poe Bookshop.

Luckton and his wife apparently intended to use the tug to move a barge filled with 100,000 books to educate the people of Puerto Rico. When Mr. Luckton's health failed he had to sell the tug. *Baltimore* was put up for auction at pier three and was knocked down for $5,000.

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[2] See also the National Historic Landmark Nominations for *Becky Thatcher*, ex *Mississippi III;* and *Sergeant Floyd*. Nominations on file in the National Park Service History Division, Washington, D.C.

[3] Manuscript letter from Doug Feldwick to Stephen Heaver, June 20, 1988, in files of Baltimore Museum of Industry, Baltimore, Maryland; Captain Paul König, *Voyage of the Deutschland, The First Cargo Submarine*, (New York: Hearst's International Library Co., 1916, pp. 121-190; Charles I. Wirts, "Floating Equipment," *Baltimore Gas and Electric News*, partial photocopy of 1921 issue in files of Baltimore Museum of Industry, Baltimore, Maryland, pp. 216-217.

[4] Charles Smith, "History of Tug *Baltimore*," typescript on file at the Baltimore Museum of Industry, Baltimore Maryland, pp. 3-4.

[5] Statement of Stephen Heaver, Jr. elaborating upon the fact sheet "1906 Steam Tug Baltimore," available at the Baltimore Museum of Industry, Baltimore, Maryland.

Unfortunately, the buyer claimed he did not have any money and returned to a nearby flophouse. The tug was sold a second time to Harbor Towing Company of Baltimore.[6]

Harbor Towing allowed the Coast Guard certification to lapse in 1963 and sold *Baltimore* several months later. The new owners, Samuel F. duPont and Joanna J. duPont, had the tug serviced at the General Ship Repair Company, and moved to their pier on the Sassafras River under her own power. Further work followed and the tug was recertified as a steam yacht, permitted to carry 20 passengers on a "not for hire" basis. Towing was also not allowed.[7]

DuPont used and maintained *Baltimore* until 1979, when she sank in the spring resulting from freezing. The tug sank in fifteen feet of water at the dock. In 1981 the duPonts offered the tug to the newly formed Baltimore Museum of Industry in return for raising and removing the wreck.[8] Teams of volunteers assisted the museum in several attempts to raise the wreck, which was finally lifted at no cost by two floating cranes of the McLean Contracting Company.[9]

Baltimore is believed to be the only surviving inspection tugboat and is the only preserved municipal tug in the country. Two historic Western Rivers inspection vessels exist, *Becky Thatcher*, the former *Mississippi*, and *Sergeant Floyd*, a National Historic Landmark. The Corps of Engineers survey launch, *Suisun*, exists in a damaged state. No other inspection vessels are known to survive.[10]

Baltimore has been berthed at a pier behind the Museum of Industry since her return from oblivion. After eight years of work, a dedicated group of highly skilled volunteers and helpful companies have restored the tug back to operating condition and continue to improve her condition and appearance. The Maryland Historical Trust financed hull repair expenses and holds a preservation lien upon the tug.[11] *Baltimore* is licensed to carry guests and she steams about Chesapeake Bay three or four times a year.

The management of the conservation and restoration of *Baltimore* has been of the highest caliber. Stephen Heaver, Jr., the project director, has done an excellent job planning and organizing the restoration. Dennis Zembala, the museum's executive director, has supported the project strongly since its inception. The *Baltimore* restoration project is an excellent example of the right way to execute such a project and is a living example of the ideals behind the *Secretary of the Interior's Standards for Historic Vessel Preservation Projects*.

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[6] Bill Eggert, "Steam Tug S.S. *Baltimore,*" *Chesapeake Bay Magazine*, September 1983, vol. 13, no. 5, pp. 32-33, 39.

[7] "Consolidated Certificate of Enrollment and Yacht License, steam screw *Baltimore*, official no. 203700," photocopy of document on file at the Baltimore Museum of Industry, Baltimore, Maryland; Charles Smith, "History of Tug *Baltimore*," typescript in files of Baltimore Museum of Industry, Baltimore, Maryland, pp. 4-6.

[8] "Deed of Gift of Enrolled or Licensed Yacht, *Baltimore*," U.S. Coast Guard form, copy in files of Baltimore Museum of Industry, Baltimore, Maryland.

[9] "Sunken Tug Raised; Returns to Port," *Port of Baltimore*, March 1982, pp. 2-5.

[10] National Maritime Initiative, National Park Service, "Large Preserved Historic Vessels" computerized database, Maintained by the National Maritime Initiative, History Division, National Park Service, Washington D.C.

[11] "*Notice of Claim of Lien*;" and (preservation lien) "*Agreement*, by and between the Maryland Historical Trust and the Baltimore Museum of Industry," document in vessel administrative file at the Baltimore Museum of Industry, Baltimore, Maryland.

9. MAJOR BIBLIOGRAPHICAL REFERENCES

[Coast Guard], "Consolidated Certificate of Enrollment and Yacht License, steam screw *Baltimore*, official no. 203700," photocopy of document on file at the Baltimore Museum of Industry, Baltimore, Maryland;

Delgado, James and Kevin J. Foster, National Historic Landmark Nomination for *Sergeant Floyd*. Nominations on file in the National Park Service History Division, Washington, D.C.

Dyson, C.W., *Practical Marine Engineering for Marine Engineers and Students*, New York: Marine Engineering, 1917.

Feldwick, Doug, to Stephen Heaver, June 20, 1988, manuscript letter in files of Baltimore Museum of Industry, Baltimore, Maryland.

Foster, Kevin J., National Historic Landmark Nomination for *Becky Thatcher*, ex *Mississippi III*, on file in the National Park Service History Division, Washington, D.C.

Heaver, Stephen G., Jr., "Documentation of the 1922 Scotch Marine Boiler for S.T. *Baltimore*," August, 1985, typescript in administrative files for tug, Baltimore Museum of Industry, Baltimore, Maryland.

_____, "The Restoration of the Tug *Baltimore*, 1906," *Seaways: Journal of Maritime History and Research,* January/February, 1990, vol. 1, no.1.

Thomas, P.N., *British Steam Tugs,* Albrighton, Wolverhampton, Great Britain: Waine Research Publications, 1983.

Stammers, Michael K., *Tugs and Towage*, Shire Album No. 239, Aylesbury, Bucks, Great Britain: Shire Publications, 1989.

König, Captain Paul, *Voyage of the Deutschland, The First Cargo Submarine*, New York: Hearst's International Library Co., 1916.

Smith, Charles, "History of Tug *Baltimore*," N.D., N.P., typescript on file at the Baltimore Museum of Industry, Baltimore Maryland.

Eggert, Bill, "Steam Tug S.S. *Baltimore,*" *Chesapeake Bay Magazine*, September 1983, vol. 13, no. 5, pp. 32-39.

Wirts, Charles I., "Floating Equipment," *Baltimore Gas and Electric News*, partial photocopy of 1921 issue in files of Baltimore Museum of Industry, Baltimore, Maryland, pp. 216-217

Previous documentation on file (NPS):

___ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.
___ Previously Listed in the National Register.
___ Previously Determined Eligible by the National Register.
___ Designated a National Historic Landmark.
___ Recorded by Historic American Buildings Survey: #_____
___ Recorded by Historic American Engineering Record: #_____

Primary Location of Additional Data:

___ State Historic Preservation Office
___ Other State Agency
___ Federal Agency
___ Local Government
___ University
___ Other (Specify Repository):

10. GEOGRAPHICAL DATA

Acreage of Property: Less than 1/4 acre

UTM References: Zone Easting Northing

A 18 361960 4348260

Verbal Boundary Description:

All of the area encompassed with the area defined by the extreme length and breadth of the vessel.

Boundary Justification:

The entire vessel's area is encompassed within the boundary.

11. FORM PREPARED BY

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Date: April 30, 1993

NATIONAL HISTORIC LANDMARK SURVEY