

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

**NATIONAL REGISTER OF HISTORIC PLACES  
INVENTORY -- NOMINATION FORM**

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY

RECEIVED SEP 13 1976

DATE ENTERED DEC 29 1978

SEE INSTRUCTIONS IN HOW TO COMPLETE NATIONAL REGISTER FORMS  
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

**1 NAME**

HISTORIC

H. L. HUNLEY (SUBMARINE)

AND/OR COMMON

**2 LOCATION**

STREET & NUMBER

North Channel entrance - Charleston Harbor  NOT FOR PUBLICATION

CITY, TOWN

Charleston

CONGRESSIONAL DISTRICT

VICINITY OF

STATE

South Carolina

CODE

COUNTY

CODE

**2 CLASSIFICATION**

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM
<input type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input checked="" type="checkbox"/> UNOCCUPIED	<input type="checkbox"/> COMMERCIAL <input type="checkbox"/> PARK
<input type="checkbox"/> STRUCTURE	<input type="checkbox"/> BOTH	<input type="checkbox"/> WORK IN PROGRESS	<input type="checkbox"/> EDUCATIONAL <input type="checkbox"/> PRIVATE RESIDENCE
<input type="checkbox"/> SITE	<b>PUBLIC ACQUISITION</b>	<b>ACCESSIBLE</b>	<input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input checked="" type="checkbox"/> OBJECT (submarine)	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES: RESTRICTED	<input type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES: UNRESTRICTED	<input type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input checked="" type="checkbox"/> MILITARY <input type="checkbox"/> OTHER:

**4 AGENCY**

REGIONAL HEADQUARTERS: (If applicable)

General Services Administration

STREET & NUMBER

18th & F Streets N.W.

CITY, TOWN

Washington,

STATE

VICINITY OF

D.C. 20405

**5 LOCATION OF LEGAL DESCRIPTION**

COURTHOUSE,

REGISTRY OF DEEDS, ETC.

General Services Administration

STREET & NUMBER

18th and F Streets N.W.

CITY, TOWN

Washington,

STATE

D.C. 20405

**6 REPRESENTATION IN EXISTING SURVEYS**

TITLE

DATE

FEDERAL  STATE  COUNTY  LOCAL

DEPOSITORY FOR  
SURVEY RECORDS

CITY, TOWN

STATE

# 7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> _EXCELLENT	<input type="checkbox"/> _DETERIORATED	<input type="checkbox"/> _UNALTERED	<input checked="" type="checkbox"/> _ORIGINAL SITE
<input type="checkbox"/> _GOOD	<input type="checkbox"/> _RUINS	<input type="checkbox"/> _ALTERED	<input type="checkbox"/> _MOVED DATE <u>2/17, 1864</u>
<input type="checkbox"/> _FAIR	<input checked="" type="checkbox"/> _UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The H. L. Hunley, the first submarine to sink a warship in combat was privately built in the Spring of 1862 by Park and Lyons, in Mobile, Alabama under the direction of Confederate Army Engineers Lts. W. A. Alexander and G. E. Dixon, 21st Alabama Volunteer Regiment, from plans furnished by Horace L. Hunley, James R. McClintock, and Baxter Watson.

The interest of these civilians and several other unknown shareholders who raised \$15,000 to build the submarine was not entirely patriotic. The group of part-owners, plus B. A. Whitney of the Confederate Secret Service, had entered into an agreement with the Confederacy for half value of any Union property destroyed by their torpedoes or submarine devices.

Their submarine was to be built expressly for hand-power and designed for a crew of nine, eight to turn the hand cranked propeller and one to steer and direct the boat.

The main section was fashioned from a ready-made cylindrical ship's iron steam boiler 25 feet long and 4'-0" in diameter. It was cut in half, lengthwise; and each part strengthened by bars of boiler iron along the interior and the two halves then rejoined. The "deck" consisted of a 12-inch strip of iron riveted to the boat and tapered water-tight bulkheads placed forward and aft. The spaces between the bulkheads and ends of the boat served as ballast tanks and were equipped with sea cocks and hand pumps. Iron castings were bolted to the underside of the hull and could be dropped off by unscrewing the heads of the bolts from the inside if the submarine needed additional bouyancy to rise in an emergency.

Diving vanes were connected by a 1 1/4-inch rod that passed through the forward part of the boat. The single propeller was connected to a shaft powered by eight men turning cranks as they sat alongside the portside. Around the propeller blade was a "fence" that protected it from fouling.

Two notches were cut through the deck about 14'-0" apart, each topped with heavy glassed coamings, rubber gaskets and hinged covers with bolts for tightening.

The air supply was provided through an iron box on the deck, 1'-0" x 1'-6" x 4" from which a shaft led down to the interior at either end of an air tube. The tube was a four foot long section of 1 1/2" piping screwed into elbows. The upper air tube was fitted with a block turned by a key which prevented water from entering it when the craft was under the surface. When the submarine was submerged, light was provided by a candle whose dying flame would also warn of a dwindling air supply.

(DESCRIPTION Continued)

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7 DESCRIPTION

On the interior all shafts, bolts, and crevices were tightly caulked. Wrought iron ladders were bolted to the hatches where the pilot stood so that he could sight through glass portholes in the coamings and hold his hand on the diving levers. At the same time he could observe the mercury depth gage and steer with a miniature ship's wheel attached to the rudder. Directional guidance was with the help of an improved compass.

The original armament was a torpedo-on-a-towline in which a floating copper cylinder torpedo with flaring triggers would be towed 200 feet astern. The submarine dived beneath the target ship, surfaced on the other side and continued on course until the torpedo struck the ship and exploded.

After several test runs this technique was abandoned in favor of a spar torpedo which was a copper cylinder holding 90 pounds of powder and equipped with a barbed spike. The submarine would drive the torpedo into the wooden hull of the target ship by ramming, back away, and with a line attached to the trigger, explode the charge from a safe distance.

The career of the H. L. Hunley (she was so named in honor of Hunley, one of the original designers who lost his life in the second sinking) was fraught with frustrations and accidents.

After several successful trials in Mobile under the direction of Lt. G. E. Dixon, the Hunley was ordered by General Beauregard to Charleston where she arrived on two flat cars on August 7, 1863, to join in the defense of the city. The submarine was based at Battery Marshall, Breach Inlet, Sullivan's Island at the entrance to Charleston Harbor where the smooth water was favorable for operating a man-powered submarine which could make, at best, a speed of four knots.

The crew was composed of Confederate volunteer sailors from the CSS Chicoira under the command of Lt. J. A. Payne, CSN. After several dives on August 29, 1863 the submarine was moved by a line tied to the steamer Etrivan at the Fort Johnson dock. The steamer moved away from the dock unexpectedly, drawing the Hunley on its side and she sank. Five crewmen were lost; Payne and two others escaped. The ninth man is unaccounted for in the records. The submarine was raised and on September 21, 1863 she was turned over to Horace L. Hunley for refitting and training of a new crew which he brought from Mobile to be under the command of Lt. G. E. Dixon, 21st Alabama Volunteers.

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7 DESCRIPTION

By October 15, 1863 the submarine was ready for practice diving. Because Dixon was absent Hunley took it down for several practice dives under the receiving ship Indian Chief. After a dive air bubbles traced its downward course and she failed to surface. No immediate aid was possible in the 54 feet of water and Hunley and the crew were suffocated.

The submarine was again raised and reconditioned under the direction of Lts. Dixon and Alexander and named the H. L. Hunley, but General Beauregard refused to permit further dives. Instead, she was fitted with a Lee spar-torpedo and adjusted to float on the surface, being ballasted so that only her manholes showed above the water.

For more than three months, four nights a week, the H. L. Hunley maintained a watch from Battery Marshall at Breach Inlet, Sullivan's Island for Federal ships blockading Charleston.

Her destiny came on a bright moonlight night February 17, 1864, when the Federal steam sloop-of-war Housatonic was spotted anchored in 27 feet of water approximately two miles from Battery Marshall in the north channel entrance to Charleston Harbor. The H. L. Hunley slipped out to attack and was not sighted by the watch on the Housatonic until she was so close that the sloop's heavy guns could not be depressed sufficiently to fire at the floating submarine. In vain the Housatonic tried to slip its cable and get away. The Hunley's torpedo struck home underwater just aft of the mizzenmast and the Housatonic sank rapidly in the shallow water. Five of her crew were lost. The H. L. Hunley failed to return from the mission on which few knew she had gone, so she wasn't missed for several days. Watching eyes on the shore noticed the open space in the Union blockade where the Housatonic had been stationed but assumed it had been moved.

The exact cause of the disappearance of the H. L. Hunley is not known. She could have gone down under the rapidly sinking Housatonic or might have been swamped backing away. What ever the cause, the mission was historic for it was the first submarine in history to sink a warship in combat.

Recently interest has been generated in locating the submarine and raising it again. The general area has been determined at approximately the line of the original Union blockade of Charleston and efforts will start there. Accurate dimensions are not certain since the two available sources vary significantly in overall length. In the Matthew Maury papers, Volume 46 (Folio 9087-9094) Library of Congress they read:

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7 DESCRIPTION

L 40'-0", b. 3'-6", d ph 4', speed 2 1/2 mph." An article by William Alexander in the Mobile Daily Herald, July 6, 1902, gives the following dimensions "L 30'-0", b. 4', d ph 5', speed 4 mph," (Alexander was one of the two supervisors of construction 40 years before).

# 8 SIGNIFICANCE

## PERIOD AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW

<input type="checkbox"/> PREHISTORIC	<input type="checkbox"/> ARCHEOLOGY-PREHISTORIC	<input type="checkbox"/> COMMUNITY PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> RELIGION
<input type="checkbox"/> 1400-1499	<input checked="" type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input type="checkbox"/> SCIENCE
<input type="checkbox"/> 1500-1599	<input type="checkbox"/> AGRICULTURE	<input type="checkbox"/> ECONOMICS	<input type="checkbox"/> LITERATURE	<input type="checkbox"/> SCULPTURE
<input type="checkbox"/> 1600-1699	<input type="checkbox"/> ARCHITECTURE	<input type="checkbox"/> EDUCATION	<input checked="" type="checkbox"/> MILITARY	<input type="checkbox"/> SOCIAL/HUMANITARIAN
<input type="checkbox"/> 1700-1799	<input type="checkbox"/> ART	<input type="checkbox"/> ENGINEERING	<input type="checkbox"/> MUSIC	<input type="checkbox"/> THEATER
<input checked="" type="checkbox"/> 1800-1899	<input type="checkbox"/> COMMERCE	<input type="checkbox"/> EXPLORATION/SETTLEMENT	<input type="checkbox"/> PHILOSOPHY	<input type="checkbox"/> TRANSPORTATION
<input type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input checked="" type="checkbox"/> INVENTION		

SPECIFIC DATES 1862 - 1864 Park & Lyons, Mobile, ALA., Builders  
BUILDER/ARCHITECT  
Hunley, McClintock and Watson, Designers

### STATEMENT OF SIGNIFICANCE

The greatest claim the H. L. Hunley can make on history is that she was the first submersible ship to sink a warship in combat. Of lesser importance, but worth noting, is its development as a man-powered ship, operated without any mechanical devices. As a specimen of the evolution of submersible ships the H. L. Hunley will be a rare find. Unfortunately, her condition is unknown since the only search explorations have been limited to private interests to determine her location.

The location has been narrowed down to an area one nautical mile SSW of the intersection of the coordinates 79°-46' longitude west and latitude 32°-44' north, at a depth of 27 feet. The location was established in 1974, through explorations by the Sea Research Society, Sullivan's Island, South Carolina. It has not been verified but consideration is being given to granting the Society permission to explore the area further using sophisticated bottom profiling and magnetometer equipment within a radius of 600 yards. The archeological excavation area lies in the western half of a rectangular area extending approximately 1½ nautical miles in a westerly direction and approximately one-half nautical mile north and one-half nautical mile south of the archeological site center. The rectangular area is within the original Union blockade line and is considered a danger area because of danger from residual Civil War mines. Should an exact location be determined and the ship found to be reasonably intact a study may be undertaken to determine the feasibility for raising the H. L. Hunley, under the direction of professional naval archeologists and technicians.

**9 MAJOR BIBLIOGRAPHICAL REFERENCES** (REFERENCE ON CONTINUATION SHEET)

American Naval Fighting Ships - Vol. II 1963  
 U.S. Government Printing Office  
 Infernal Machines - The Story of Confederate Submarines and  
 Mine Warfare

**10 GEOGRAPHICAL DATA**

ACREAGE OF NOMINATED PROPERTY \_\_\_\_\_

UTM REFERENCES

A	ZONE	EASTING	NORTHING
C	ZONE	EASTING	NORTHING

B	ZONE	EASTING	NORTHING
D	ZONE	EASTING	NORTHING

VERBAL BOUNDARY DESCRIPTION

Believed to be 1 nautical mile SSW of the intersection of coordinates 79° 46' longitude west and latitude 32° -44' north, depth 27 feet. Expected area of exploration approximately a 600 yard radius about this point.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

**11 FORM PREPARED BY**

NAME / TITLE Counsellor to the Commissioner for  
Karel Yasko, Fine Arts and Historic Preservation

ORGANIZATION General Services Administration

DATE February, 1976

STREET & NUMBER 18th and F Streets, N.W.

TELEPHONE 202/343-8667

CITY OR TOWN Washington, D.C. 20405

STATE \_\_\_\_\_

**12 CERTIFICATION OF NOMINATION**

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES \_\_\_\_\_ NO  NONE

STATE HISTORIC PRESERVATION OFFICER SIGNATURE [Signature]

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Historic Preservation Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The evaluated level of significance is \_\_\_\_\_ National \_\_\_\_\_ State \_\_\_\_\_ Local.

FEDERAL REPRESENTATIVE SIGNATURE [Signature]

TITLE HISTORIC PRESERVATION OFFICER

DATE 2.2.76

FOR NPS USE ONLY	
I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER	
DIRECTOR OF THE NATIONAL REGISTER ATTEST: <u>William Brown</u> KEEPER OF THE NATIONAL REGISTER	DATE <u>12/22/78</u> MEMBER OF THE NATIONAL REGISTER DATE <u>12/22/78</u>