

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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

FOR NPS USE ONLY

RECEIVED

DATE ENTERED

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

1 NAME

HISTORIC

Elihu Thomson House

AND/OR COMMON

Elihu Thomson Administration Building

2 LOCATION

STREET & NUMBER

33 Elmwood Avenue

__NOT FOR PUBLICATION

CITY, TOWN

Swampscott

CONGRESSIONAL DISTRICT

6th

STATE

Massachusetts

__ VICINITY OF

CODE
25

COUNTY

Essex

CODE

009

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input checked="" type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM
<input checked="" type="checkbox"/> BUILDING(S)	<input type="checkbox"/> PRIVATE	<input 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	PUBLIC ACQUISITION	ACCESSIBLE	<input type="checkbox"/> ENTERTAINMENT <input type="checkbox"/> RELIGIOUS
<input type="checkbox"/> OBJECT	<input type="checkbox"/> IN PROCESS	<input checked="" type="checkbox"/> YES: RESTRICTED	<input checked="" 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 type="checkbox"/> MILITARY <input type="checkbox"/> OTHER:

4 OWNER OF PROPERTY

NAME

City of Swampscott

STREET & NUMBER

33 Elmwood Avneue

CITY, TOWN

Swampscott

__ VICINITY OF

STATE

Massachusetts

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,
REGISTRY OF DEEDS, ETC.

Registry of Deeds

STREET & NUMBER

Essex County Courthouse

CITY, TOWN

Salem

STATE

Massachusetts

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

None

DATE

__ FEDERAL __ STATE __ COUNTY __ LOCAL

DEPOSITORY FOR
SURVEY RECORDS

CITY, TOWN

STATE

50

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input checked="" type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input checked="" 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 _____
<input type="checkbox"/> FAIR <input checked="" type="checkbox"/> XXX -unrestored	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Elihu Thomson House in Swampscott, Massachusetts, was built in 1889. Constructed of brick it is a two-and-one-half story Georgian Revival mansion. The names of the architect and builder are unknown. A railing on the flat hip roof is embellished with urns on the balustrade. Two dormer windows with broken-scrolled pediments are located on each face. A columned portico characterizes the paladian front entrance. Among the many exterior embellishments are corner quoins. The house has three chimneys. A full length columned porch marks a side entrance and there is also a rear entrance. The interior is characterized by a central hall floor plan. Behind the house stands a two and one half story carriage house built in the same Georgian Revival style as the main house. It is connected to the main house by a brick enclosed passageway.

Elihu Thomson, who by the turn of the century had become a wealthy man, built his house in Swampscott in 1889-90. Thomas commissioned an architect to design the building and he took an active interest in its construction. He is said to have personally selected the interior details and furnishings. Although Thomson maintained an office and a laboratory in nearby Lynn, he also worked at home. He built a well equipped laboratory over the carriage house where he often labored late into the night. He also built a small observatory on the grounds which he used for about 35 years to pursue his astronomical observations. When his children were small, Thomson built a miniature railroad on the property for their amusement and as they grew older he installed a laboratory in the attic of the main house for their use. For the last 40 years of Thomson's life, his fine Georgian Revival mansion was the center of his family life and the location of his scientific pursuits.

In 1944, seven years after Thomson's death, his family presented the property to the town of Swampscott as a partial gift to his memory. The Elihu Thomson Administrative Building, as the house is now called, retains its full integrity. With the minor exception of enclosing a walkway from the main house to the carriage house, no alterations have been made to the exterior. The interior floor plan has also remained completely unchanged except for the installation of two vaults, one in a closet and another in the ex-kitchen.

54

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 type="checkbox"/> ARCHEOLOGY-HISTORIC	<input type="checkbox"/> CONSERVATION	<input type="checkbox"/> LAW	<input checked="" 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 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 checked="" type="checkbox"/> 1900-	<input type="checkbox"/> COMMUNICATIONS	<input type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES 1889-1937

BUILDER/ARCHITECT

unknown

STATEMENT OF SIGNIFICANCE

Elihu Thomson was born March 29, 1853, in Manchester, England. His father, who worked as a mill mechanic, was thrown out of work in 1857 and decided to emigrate to the United States. In 1858 the family settled in Philadelphia, where Elihu grew up. His father's work as a mechanic stimulated Thomson's interest in mechanical and chemical processes. From his early teens he read widely, built models, and conducted simple chemical experiments. At Philadelphia's Central High School Thomson was an outstanding student who attracted the interest of his instructors. Upon graduating in 1870 he was offered a teaching position at the school.

Between 1870 and 1880 Thomson taught high school in Philadelphia. At the same time he and a fellow teacher named Edwin J. Houston experimented with electricity and succeeded in building a practical electric arc lighting system. In 1879 a group of New England businessmen took an interest in the Thomson-Houston arc lighting system and offered to finance its fabrication. In 1880 Thomson moved to New Britain, Connecticut, as the company's chief engineer. By 1881 Thomson had designed the best arc lighting system in the country, but sales were slow. In 1882 a group of Lynn, Massachusetts, businessmen purchased the company and changed the name to the Thomson-Houston Electric Company.

From 1882 to 1892 Thomson, who left the management of the company to others, devoted his energies to extending the range of products the company manufactured. From his laboratory and workshop came an incandescent lighting system, alternating current apparatus, electric railway equipment, and other electrical devices. By 1890 the Thomson-Houston Electric Company was one of the country's leading manufacturers of electrical equipment. In 1892 Thomson's Company merged with the Edison General Electric Company to form General Electric. After the merger General Electric officials urged Thomson to move to Schenectady, but he preferred to remain in Lynn and act as a general consultant to the company. Thomson continued to keep abreast of developments in electricity and never stopped experimenting with new electrical devices, but his scientific interests turned to other disciplines and especially to astronomy. Between 1892 and 1937 Thomson broadened the range of his knowledge. Although he

51

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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

FOR NPS USE ONLY

RECEIVED

DATE ENTERED

Elihu Thomson House

CONTINUATION SHEET

ITEM NUMBER 8

PAGE 2

was not formally associated with an institution such as a university, or the General Electric research laboratory, he became a prominent member of the scientific community. During these years he experimented, wrote papers, lectured, and actively participated in numerous professional organizations. Thomson retained his vigor and interests throughout the declining years and remained active until almost the day of his death at the age of 84. He died in Swampscott March 13, 1937.

Like Thomas Edison, Elihu Thomson belonged to a group of late 19th and early 20th century scientists who are difficult to classify. According to the Dictionary of American Biography, Thomson was a scientist, inventor, and engineer. Thomson made contributions to American science and invention in each of these three interdependent roles. As a scientist he did research on the nature of electricity and in later years conducted research in astronomy. As an inventor he held nearly 700 patents to products and processes. As an engineer he designed, built, and tested numerous systems that relied on electricity as the energy source.

Thomson was able to combine in himself the roles of scientist, inventor, and engineer primarily because he grew up and matured in an age when the basic scientific discoveries concerning electricity had been made and awaited application. Thomson helped extend pure science knowledge of the nature of electricity and at the same time he applied this knowledge to systems such as X-ray tubes, electric ship propulsion, refrigeration, arc lighting, electric traction, and arc welding. With men like Edison, Frank Sprague, Charles Bush, and George Westinghouse, Thomson was one of the founders of the American electrical manufacturing industry.

Thomson is also credited with being among the first Americans to recognize the value and importance of industrial research. According to David Woodbury, Thomson's principal biographer, the idea of an industrial laboratory dedicated to pure science research began in Thomson's office at the Thomson-Houston Electric Company in Lynn.¹

It was in Thomson's office that Thomson, Charles Steinmetz, and a patent lawyer named A. G. Davis convinced Wilbur Rice (later General Electric president) that the company's future well being would depend on the

¹David O. Woodbury, Beloved Scientist, (New York, 1944), p. 245.

52

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FOR NPS USE ONLY

RECEIVED

DATE ENTERED

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

Elihu Thomson House

CONTINUATION SHEET

ITEM NUMBER 8 PAGE 3

manufacture of the new products and systems that would result from pure science research. They used Thomson's experience as a scientist, inventor, and engineer as the ideal model. The result was the General Electric research laboratory with Willis R. Whitney as director and Thomson as his leading consultant. According to Karl Compton, the distinguished physicist, "Professor Thomson was one of the first in America to recognize the importance of research, both fundamental and practical, to our industrial progress." Assessing the impact and significance of industrial research in America, Compton felt that this contribution by Thomson, "...may transcend any of his scientific discoveries."²

Thomson received the full range of honors accorded a distinguished scientist and inventor. The academic community through universities such as Harvard, Yale, Wisconsin, and Pennsylvania, recognized his accomplishments in science by awarding him honorary doctorates. He was the recipient of prestigious awards such as the Elliott Cresson, Edison, and Faraday Medals. He belonged to all the prominent scientific societies and participated actively in their affairs. Although he declined many offers to assume an academic position, Thomson, an ex-high school teacher with no advanced degrees, felt especially honored when the Massachusetts Institute of Technology asked him to conduct a series of guest lectures.

By the time of his death in 1937 the age of men like Thomson, Westinghouse, and Edison was over. The great industrial research laboratories and the universities specialized in pure science research and an army of engineers produced a constant flow of highly refined technological innovations. In electricity Thomson was both a beginning and an end. He pioneered the application of the principles of electricity and was one of the last who combined the roles of scientist, inventor, and engineer.

² Karl T. Compton, "Elihu Thomson," National Academy of Science Biographical Memoirs, 21, (Washington, 1941), p. 161.

53