

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 General Electric Research Laboratory

AND/OR COMMON General Electric Research Laboratory

2 LOCATION

STREET & NUMBER

CITY, TOWN Schenectady VICINITY OF 28th
STATE New York CODE 36 COUNTY Schenectady CODE 093

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE
<input type="checkbox"/> DISTRICT	<input type="checkbox"/> PUBLIC	<input checked="" type="checkbox"/> OCCUPIED	<input type="checkbox"/> AGRICULTURE <input type="checkbox"/> MUSEUM
<input checked="" type="checkbox"/> BUILDING(S)	<input checked="" 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 type="checkbox"/> GOVERNMENT <input type="checkbox"/> SCIENTIFIC
	<input type="checkbox"/> BEING CONSIDERED	<input type="checkbox"/> YES UNRESTRICTED	<input checked="" type="checkbox"/> INDUSTRIAL <input type="checkbox"/> TRANSPORTATION
		<input type="checkbox"/> NO	<input type="checkbox"/> MILITARY <input type="checkbox"/> OTHER

4 OWNER OF PROPERTY

NAME General Electric Company

STREET & NUMBER

CITY, TOWN Schenectady VICINITY OF STATE New York

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, Registry of Deeds
REGISTRY OF DEEDS, ETC

STREET & NUMBER

Schenectady County Court House
CITY, TOWN Schenectady STATE New York

6 REPRESENTATION IN EXISTING SURVEYS

TITLE None

DATE

FEDERAL STATE COUNTY LOCAL

DEPOSITORY FOR SURVEY RECORDS

CITY, TOWN STATE

81

7 DESCRIPTION

CONDITION

EXCELLENT

GOOD

FAIR

DETERIORATED

RUINS

UNEXPOSED

CHECK ONE

UNALTERED

ALTERED

CHECK ONE

ORIGINAL SITE

MOVED DATE _____

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

(The General Electric Research Laboratory is located in three buildings in Schenectady, New York. One of these buildings is located on the outskirts of the town while the other two are within General Electric main plant. All possess integrity. The question is, where best to put the plaque. Enclosed are photographs of the three buildings which will be discussed at the consulting committee meeting.)

25

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 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

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The official date for the establishment of the General Electric Research Laboratory is 1900. In that year Willis R. Whitney, a young MIT chemistry instructor, who would later be called the dean of American industrial research, received an offer from E. W. Rice, G.E. president, to come to Schenectady to, as Rice wrote, "...establish a laboratory to be devoted exclusively to original research. It is hoped by this means that many profitable fields may be discovered." Whitney accepted. Years later an historian would write about Whitney and the lab, "It was he who designed, built, and launched it, chartered its course, enlisted an able crew, and steered it for more than thirty years, through fair weather and foul, to a long series of ports of triumphant achievement." Willis R. Whitney justly deserves credit for developing the General Electric Research Laboratory into one America's most important research facilities. But the historical reasons for the laboratory being established, and for its success, preceded Whitney. They are to be found in the developments in education, industry, and science during the second half of the nineteenth century.

By the end of the nineteenth century the basic institutional framework for teaching science in America was in place. Following the pioneering example of schools such as Harvard, Yale, and Johns Hopkins, numerous universities throughout the country had established departments, schools, and institutes for the purpose of producing a cadre of well educated physical and biological scientists. With their cousins the engineers these men and women were ready to assault systematically nature through research.

In industry the growth success of those businesses that had grown up out of the inventions of such men as Alexander G. Bell, Samuel F. B. Morse, Thomas Edison, and Charles Morton Hall (aluminum) attracted the interest of other companies eager to gain the profits that could be derived from employing science to create new products and improve methods and processes.

By 1900 science had changed the nature of invention. Whereas previously a painter named Morse could invent the telegraph with absolutely no knowledge of the principles of electricity or an Edison could cut and paste until finally he produced an incandescent lamp, by 1900 the discovery of new products and processes that could be patented depended on the scientific knowledge of scientists and engineers. The days of invention and improved efficiency by rule of thumb were over and were being replaced by research, engineering, uniform methods, and standards.

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(Continued)

9 MAJOR BIBLIOGRAPHICAL REFERENCES

- Mendall Birr, Pioneering in Industrial Research, The Story of the General Electric Research Laboratory, (Washington, 1957).
 Howard R. Bartlett, "The Development of Industrial Research in the United States," Research, A National Resource, (Washington, 1941).
 Laurence A. Hawkins, The Story of General Electric Research, (New York, 1950).

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY _____

UTM REFERENCES

A

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 ZONE EASTING NORTHING

B

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 ZONE EASTING NORTHING

C

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D

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VERBAL BOUNDARY DESCRIPTION

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

James Sheire, Historian

March 1975

ORGANIZATION

Historic Sites Survey, National Park Service

DATE

STREET & NUMBER

1100 L Street NW.

TELEPHONE

CITY OR TOWN

Washington

STATE

D.C.

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL

STATE

LOCAL

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

FEDERAL REPRESENTATIVE SIGNATURE

TITLE

DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST:

DATE

KEEPER OF THE NATIONAL REGISTER

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Statement of Significance:

General Electric Research
Laboratory

The electrical industry, having been born out of the accomplishments of science, was the first to realize fully the economic potential of a marriage between scientific research and industry. As Laurence A. Hawkins, a long time assistant to Whitney, writes:

There was little fundamental research in American universities or elsewhere in this country, so why should not General Electric itself engage in such research? Just as great steel companies find it advantageous to acquire ore fields of their own, why should not General Electric engineering possess a source of its most essential raw material? This question became explicitly asked, and was promptly answered.

Hawkins indirectly outlines the fundamental reason for the establishment of the General Electric Research Laboratory and industrial research in general. The universities were the source of personnel who could exploit a raw material called scientific knowledge. The industrial research laboratory would be the factory where they would both produce and apply this knowledge to extract from nature the ways and means of improving man's material existence (with all the attendant implications for his social, economic, and intellectual well being. Today it is a banality to state that the union of science and technology and economies of scale has fundamentally affected 20th century reality. In 1900 the marriage was a hope and a promise).

The significance of the General Electric Research Laboratory in the history of science in America is that it was the first truly industrial research facility in the United States. Edison at Menlo Park was predecessor and men like Elihu Thomson, one of General Electric's fathers, had established experimental facilities, but the G.E. lab was the first institution to organize scientific research on a systematic basis. Although an oversimplification, the modern industrial research laboratory pursues two major objectives; pure science research in so far as it is related to the company's concerns and the application or exploitation of the products and processes created by pure science. Although industrial research laboratories such as the General Electric Laboratory are as "pure" in their scientific work as the universities, they are also, unlike the universities, highly utilitarian. General Electric was, if not the first, then one of the first to realize that knowledge is a capital resource and that the ability to produce it (science) and to exploit it (technology) is central to industrial growth and development.

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(Continued)

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The success of the G.E. lab has been considerable. From a small garage with a dozen workers the plant has grown to include three facilities employing thousands of scientists, engineers, and technicians. Great American scientists like the Nobel Prize winning Irving Langmuir and the late William D. Collidge made significant contributions to the physical sciences from the General Electric laboratory. Men like Charles Steinmetz and Edward W. Hewlett, both G.E. employees, rank among the great electrical engineers. For better or for worse, depending on the critical point of view or interpretation, the cliché is true. The life of every American, indeed the nature of his civilization, is touched by the achievements of the General Electric Research Laboratory and others like it.

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