

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 Lilly Biological Laboratories

AND/OR COMMON

Eli Lilly and Company, Greenfield Laboratories

2 LOCATION

STREET & NUMBER

U.S. Highway 40 West of Greenfield, Indiana

NOT FOR PUBLICATION

CITY, TOWN

Greenfield

VICINITY OF

CONGRESSIONAL DISTRICT

10th Indiana

STATE

Indiana

CODE

018

COUNTY

Hancock

CODE

059

3 CLASSIFICATION

CATEGORY

- DISTRICT
- BUILDING(S)
- STRUCTURE
- SITE
- OBJECT

OWNERSHIP

- PUBLIC
- PRIVATE
- BOTH

PUBLIC ACQUISITION

- IN PROCESS
- BEING CONSIDERED

STATUS

- OCCUPIED
- UNOCCUPIED
- WORK IN PROGRESS
- ACCESSIBLE
- YES: RESTRICTED
- YES: UNRESTRICTED
- NO

PRESENT USE

- AGRICULTURE
- COMMERCIAL
- EDUCATIONAL
- ENTERTAINMENT
- GOVERNMENT
- INDUSTRIAL
- MILITARY
- MUSEUM
- PARK
- PRIVATE RESIDENCE
- RELIGIOUS
- SCIENTIFIC
- TRANSPORTATION
- OTHER:

4 OWNER OF PROPERTY

NAME

Eli Lilly and Company

STREET & NUMBER

307 E. McCarty Street

CITY, TOWN

Indianapolis

VICINITY OF

STATE

Indiana

46206

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE,
REGISTRY OF DEEDS, ETC.

Hancock County Courthouse

STREET & NUMBER

Public Square

CITY, TOWN

Greenfield

STATE

Indiana

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

None

DATE

FEDERAL STATE COUNTY LOCAL

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
<input type="checkbox"/> EXCELLENT	<input type="checkbox"/> DETERIORATED	<input checked="" type="checkbox"/> UNALTERED	<input checked="" type="checkbox"/> ORIGINAL SITE
<input checked="" type="checkbox"/> GOOD	<input type="checkbox"/> RUINS	<input type="checkbox"/> ALTERED	<input type="checkbox"/> MOVED DATE _____
<input type="checkbox"/> FAIR	<input type="checkbox"/> UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Lilly Biological Laboratories, built in 1914, are excellent examples of Spanish Colonial architecture constructed in a midwestern U. S. setting. The laboratories consist of three buildings; a prominent center tower building about 80 feet high and two adjacent buildings, with almost identical external features, located on each side of the tower. Pergolas connect the tower with each building. The pergolas were once covered with fragrant vines in true Spanish tradition. The laboratory buildings are situated on a 2.5 acre tract and contain approximately 54,000 square feet of floor space.

The Tower Building is the prominent feature as one approaches the laboratories which are situated about 1,000 feet south of U.S. Highway 40 on the west boundary of Greenfield, Indiana. The tower consists of five levels. The first three floors were used as administrative offices and a library. The fourth level was a storage area having no windows. The top level is an open vista from which one can view the surrounding countryside. The tower is capped by a pyramidal red-tiled roof. The open vista on the top level of the tower features four wrought iron railings which give the effect of balconies so typical of Spanish Colonial structures.

As one approaches the site, the building to the left of the tower was commonly referred to as the antitoxin building. To the right of the tower was the virus vaccine laboratory. The front facade of each building is almost identical. Each building features two Spanish Colonial gables with gently curved profiles and rounded peaks. The walls are plastered with a slight textured finish. The buildings are generally without sculptural ornamentation which is more characteristic of the Mission Style that preceded the Spanish Colonial revival. The arched windows and doors, also characteristic of the Mission Style, are prominent features throughout the buildings.

The virus and antitoxin buildings are of two-story construction with two parallel wings extending at right angles in back of each building. The roofs are red tile with dormers protruding from the roofs in three directions to provide lighting for the second floors. The prime visible difference in the vaccine and antitoxin buildings is the number of dormers on each; the vaccine building having eleven and the antitoxin (east) building having seventeen.

The second floor window in the center of each gable on the front facade is arched and can be opened for access to a balcony enclosed with

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wrought iron railings. A small gently curved diamond-shaped window adds a decorative touch to each side of the balconies and arched windows.

The light fixtures on each side of the front doors are interesting because of their design which blends with and accentuates the overall Spanish motif.

Facilities are available to illuminate the buildings at night. This was discontinued recently as a measure to conserve energy. But the Lilly Biological Laboratories were among the first buildings in the country to have their exterior illuminated at night by floodlighting.

The Spanish Colonial architecture provides a little of the charm of the old Spanish Missions to the level pasture lands of Central Indiana. Not only are the buildings uniquely beautiful in their suburban setting, but also have provided clean and efficient facilities for the manufacture of biologicals for over 60 years.

The buildings are now surrounded by a complex of laboratories, offices, barns, sheds, and test plots which constitute the Agricultural Research Center for Eli Lilly and Company.

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 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 checked="" 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 checked="" type="checkbox"/> INDUSTRY	<input type="checkbox"/> POLITICS/GOVERNMENT	<input type="checkbox"/> OTHER (SPECIFY)
		<input type="checkbox"/> INVENTION		

SPECIFIC DATES	Land purchased - 1912	BUILDER/ARCHITECT	Robert Frost Daggett
	Construction started-1913		Indianapolis, Indiana
	Construction completed-1914		

STATEMENT OF SIGNIFICANCE

The Greenfield Biological Laboratories of Eli Lilly and Company are significant for their architectural and historical interests.

1. Architectural Interest

The architecture is Spanish Colonial, closely resembling the old Spanish Missions in Southwestern United States and especially Southern California. This type of architecture is unusual in the American midwest where extreme weather conditions prevail and often work havoc to this type construction. The Greenfield buildings are in good state of preservation considering the adverse weather conditions in Indiana.

The Spanish Colonial architecture was selected in 1912 by Mr. J. K. Lilly, then president of Eli Lilly and Company, following an extended trip through the Southwestern States and Southern California. During this trip, Mr. Lilly became so interested in the old Spanish Missions built by Catholic fathers in the early days of California that he visited every mission along the California coast. It was during some of these visitations when the thought occurred to him that this type of architecture would be ideal for the new biological laboratories which the company planned to build.

The manufacture of biologicals required large quantities of animals, particularly horses, and yet the entire biological process from inoculation of horses to the final purification of biological products required immaculately clean facilities. The Spanish construction proved to be ideal in its adaptability to meet this strict requirement of cleanliness--in the horse stables as well as in the sterile purification laboratories.

The buildings extending to the right and left of the Tower were primarily processing areas including rooms for animal treatment,

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laboratories for maintenance of cultures, and equipment for refinement and concentration of various biological products.

The parallel wings built at right angles to the main laboratories were stables in which the horses and other animals under treatment were kept. Each wing had a capacity of 35 to 40 horse stalls. These stables were built after the most improved sanitary construction. They resembled stables where the very finest racing horses were kept. The Lilly antitoxin horses were kept well groomed and cared-for in the most efficient way. Manure and debris were carried from the stables in mechanized litter carriers. All manure was immediately removed from the stables and carried to a fly-proof shed.

The second floors of the stables were used to store hay, grain and supplies for the care and well-being of the animals.

Although certain changes have taken place in some interior portions of the laboratories, many of the features mentioned above are still intact and can be seen today.

2. Historical Interest

These buildings are also of historical interest. First, they are located on a site just west of Greenfield, Indiana, which is the birthplace and early home of the beloved Hoosier poet, James Whitcomb Riley. It was in these surroundings that Riley was inspired to write of plain Hoosier folks and describe such enjoyable scenes as the "Ole Swimmin' Hole."

Second, these buildings marked the beginning of production of immunizing biologicals by Eli Lilly and Company in the year 1914. Here the company produced antitoxins, serums, toxoids, vaccines, etc., to protect against such dreaded illnesses as diphtheria, smallpox, scarlet fever, rabies, tetanus, gas gangrene, typhus, influenza, and others. Upon completion of construction in 1914, these buildings were called a "Model Biological Laboratory."

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In addition to producing biologicals of the highest quality to meet the demands of the public for over 60 years, the laboratories also produced critical supplies of immunizing biologicals for our armed forces during two world wars. Of particular interest was the major effort to supply gas gangrene antitoxin to our armed forces during World War II.

Gas gangrene antitoxin was important to the armed forces because it served to protect our soldiers against infection that so often occurred as a result of lacerations, puncture wounds, and injuries which were common to men in combat. It became the responsibility of the Lilly Biological Laboratories to supply the greatest amount of gas gangrene antitoxin ever required from a single manufacturer. Gas gangrene and some other antitoxins are derived from blood serum of horses that have been inoculated with a toxin that causes a buildup of antitoxin in the animal's blood.

To supply the millions of doses of this critical antitoxin required over a thousand horses along with huge supplies of hay, grain, and water to care for them.

Although the spacious facilities of the Spanish buildings were quite adequate for peacetime operation, it soon became obvious that these were not large enough to provide the huge demands of our armed forces. Temporary barns and laboratories were built to house supplies and animals. The number of operating personnel increased more than three times, many of whom were employed to procure horses and supplies as well as to care for such a large number of animals.

The Greenfield personnel did their job; the antitoxin requirements were supplied in adequate quantities and on time.

Following World War II, the temporary facilities were razed and activities gradually reverted to peacetime levels with all operations again being carried out in the Spanish buildings. Eli Lilly and Company continued to supply biologicals of highest quality from these laboratories until 1975. The buildings and equipment remain as a monument to a bit of old Spain transplanted to Indiana and as a reminder of the contribution Eli Lilly and Company has made to

9 MAJOR BIBLIOGRAPHICAL REFERENCES

Publications from the Archives of Eli Lilly and Company:

The <u>Lilly Balance</u> , August, 1920	<u>Supervision</u> - November, 1947
<u>Lilly Review</u> - April, 1941	<u>Tile and Till</u> - November, 1916
" " - June, 1941	" " " - August, 1916
" " - July, 1944	" " " - February, 1926
" " - November, 1945	" " " - August, 1928

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 2.5

UTM REFERENCES

A	1,6	6,0,2	9,7,0	4,4	0,3	9,1,0
	ZONE	EASTING	NORTHING			

B						
	ZONE	EASTING	NORTHING			

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

Eugene F. Rodman, Industrial Development Projects

ORGANIZATION

Eli Lilly and Company

STREET & NUMBER

307 E. McCarty Street

CITY OR TOWN

Indianapolis

DATE

April 12, 1976

TELEPHONE

(317) 261-3807

STATE

Indiana

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.

STATE HISTORIC PRESERVATION OFFICER 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

DATE