

PRATT & WHITNEY PLANT
North Wing Laboratory
(Pratt & Whitney Plant, Building No. 86)
1500-2000 East Bannister Road
Kansas City
Jackson County
Missouri

HAER No. MO-118-AE

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
Midwest Regional Office
National Park Service
601 Riverfront Drive
Omaha, Nebraska 68102

HISTORIC AMERICAN ENGINEERING RECORD

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Location: 1500 – 2000 East Bannister Road, Kansas City, Jackson County, Missouri

Present Owner: U. S. Department of Energy National Nuclear Security Administration

Present Use: This structure serves as a storage facility and a laboratory.

Significance: The enormous Main Manufacturing Plant is an excellent example of the famous “Warspeed” construction system developed by Albert Kahn Associated Architects and Engineers, Detroit, during World War II. Furthermore, for the first time, it was with the Pratt & Whitney Plant that Kahn incorporated the firm’s newly conceived concrete arch, born out of necessity, as a design adaptation of his original Warspeed concept. Kahn developed this multiple arch roof system as a response to the War Production Board’s limitations on the use of structural steel during the war. The Main Manufacturing Plant, the largest building within the complex, was constructed using load-bearing arches, each forty-foot wide, with movable forms. This nearly 3 million square foot building is representative of some of the largest integrated projects in the war construction program, being virtually under one roof. It remains a landmark of American industrial design. The plant was responsible for manufacturing and testing the novel 3,400 horsepower, R-2800-C engines. The North Wing Laboratory was originally constructed as part of the Main Manufacturing Plant.

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PART I. HISTORICAL INFORMATION

A. Physical History

1. Date of Construction: 1943
2. Architect/Engineer: Albert Kahn Associated Architects and Engineers, Detroit, Michigan
3. Builder/Contractor/Supplier: Long-Turner Construction Company, Kansas City
4. Original Plans: Yes
5. Alterations and Additions: Unknown

B. Historical Context

The North Wing Laboratory was constructed as part of the Main Manufacturing Plant and is historically and physically linked to the Pratt & Whitney era. The function of the laboratory is classified information.

PART II. ARCHITECTURAL INFORMATION

A. General Statement

The North Wing Laboratory is located on the northeast end of the Main Manufacturing Plant. This two-story facility occupies 28,624 square feet and has an approximate dimension of 120' x 120'.

1. Architectural Character: Warspeed Construction
2. Condition of Fabric: Excellent

B. Description of Exterior

1. Foundation: Concrete
2. Walls: Brick and concrete
3. Structural System: Concrete Moment Frame

4. Openings:

a. Doorways: Multiple steel swing doors at the north and west façades

b. Windows: N/A

5. Roof: Flat

C. Description of Interior

Due to restricted access, it was impossible to examine the interior.

D. Site

Originally designed and constructed as part of the Main Manufacturing Plant, the North Wing Laboratory is located west of the Test Cells.

PART III. BIBLIOGRAPHY

Primary Sources:

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