

PROPERTY REPORT

Property ID: **480898480**

Property Name: Wright Aeronautical Co.
Address: 110-124 Beckwith AVE

Ownership: Private
Apartment #: **ZIP:** 07503

PROPERTY LOCATION(S):

County:	Municipality:	Local Place Name:	USGS Quad:	Block:	Lot:
PASSAIC	Paterson		Paterson	6508	3
PASSAIC	Paterson		Paterson	6508	1
PASSAIC	Paterson		Paterson	6508	2
PASSAIC	Paterson		Paterson	6508	9
PASSAIC	Paterson		Paterson	6508	4
PASSAIC	Paterson		Paterson	6508	20
PASSAIC	Paterson		Paterson	6508	19
PASSAIC	Paterson		Paterson	6508	6
PASSAIC	Paterson		Paterson	6508	21
PASSAIC	Paterson		Paterson	6508	7
PASSAIC	Paterson		Paterson	6508	5
PASSAIC	Paterson		Paterson	6508	8

Property Photo:



Old HSI Number: PAS1608-501

NRIS Number:

HABS/HAER Number:

Survey Name: Intensive-Level Survey of Paterson Industrial Mills

Principal Investigator: Patrick Harshbarger

Organization: Hunter Research, Inc.

☒ (Primary Contact)

Property ID:

480898480

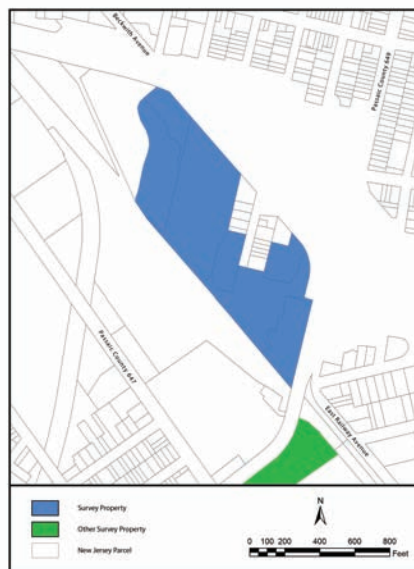
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Description:

The Wright Aeronautical Corporation complex is an expansive industrial site situated on 6.7 acres containing a ca. 1916, 4-story daylight factory designed by architect Fred W. Wentworth; it has multiple additions dating to the 1920s. Also included within the complex is a World War II era building housing test cells for aircraft engines. The complex is now used for various light industrial operations, including storage facilities.

Setting:

The Wright Aeronautical Corporation complex fronts Beckwith Avenue and occupies 12 irregularly shaped contiguous lots bound by Interstate 80 to the west, Beckwith Avenue to the north, Madison Avenue to the east, and the historic Erie Railroad corridor to the south. The setting is an industrial neighborhood, divided from the rest of Paterson by the railway and the highway. The site, along with the Cooke Locomotive & Machine Company, its neighbor to the southwest, comprises the Cooke Locomotive & Machine Company/ American Locomotive Company /Wright Aeronautical Company Historic District.

**Registration
and Status
Dates:****National Historic Landmark?:** ☐**National Register:****New Jersey Register:****Determination of Eligibility:****Certification of Eligibility:****SHPO Opinion:** 8/18/1998**Local Designation:****Other Designation:****Other Designation Date:**☒ **Eligibility Worksheet included in present survey?**☐ **Is this Property an identifiable farm or former farm?****Location Map:****Site Map:****BIBLIOGRAPHY:**

Author:	Title:	Year:	HPO Accession #: (if applicable)
Guzzo, Dorothy P	Cooke Locomotive & Machine Co./American Locomotive Co./ Wright Aeronautical Co. Historic District SHPO Opinion	1998	H98-89
The RBA Group	Rceonnaissance-/Intensive Level Historic Architectural Survey, Madison Avenue/Conrail Bridge Replacement Project, City of Paterson, Passaic County, New Jersey	1998	
The Paterson Press Guardian	Paterson in Pictures	1923	

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Mingos, Howard	The Aircraft Year Book for 1938	1938
Passaic County Historical Society	Curtis-Wright Collection	
Department of Community Development	City of Paterson Survey	1987
Archimede, Gianfranco	Paterson Historic Mills Group Municipal Historic Site Designations Staff Opinion of Eligibility	2012
Hyde, E B	Atlas of Passaic County, New Jersey	1877
Robison, E	Atlas of the City of Paterson, New Jersey	1884
Robinson, E	Atlas of the City of Paterson and Haledon New Jersey	1899
Mueller, A H	Atlas of the City of Paterson, New Jersey	1915
Sanborn Map Company	Insurance Maps of Paterson, New Jersey	1915
Sanborn Map Company	Insurance Maps of Paterson, New Jersey	1931
Sanborn Map Company	Insurance Maps of Paterson, New Jersey	1950

Additional Information:

HPO Inventory ID#: 3931 HD; Lots 1, 2, & 3 also? (w/in HD bounds)

More Research Needed? ☒ (checked=Yes)

INTENSIVE-LEVEL USE ONLY:

Attachments Included:

0 Building	0 Bridge
0 Structure	0 Landscape
0 Object	2 Industry

Historic District ? ☒

District Name: Cooke Locomotive/American Locomotive/Wright Aeronautical Historic Di

Status: Key Contributing

Associated Archeological Site/Deposits? ☒

(known or potential sites. If Yes, please describe briefly)

Potential for industrial archaeology (parking lot and interior)

Conversion Problem? ☐ ConversionNote: 2

Date form completed: 9/7/2012

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INDUSTRIAL BUILDING ATTACHMENT

Common Name: 238 Lindbergh Place

Historic Name: Daylight Factory at the Wright Aeronautical Corporation

Present Use: Industrial, light industrial

Historic Industry: Machine Manufacture (All types)

Construction Date: 1916 **Source:** Historic Maps

**Construction
Start Date:**

**Construction
End Date:**

Building ID: 1-4, 7, 13

Style: International ☐ Vernacular?

Exterior Finish Materials: Brick, Running Bond

Physical Condition: Good

Foundation Materials:

Remaining Historic Fabric: Medium

Roof Finish Materials:

Length: 625 **Stories:** 4

Structural System: Reinforced Concrete

Width: 500 **Bays:** 21

Roof System:

Equipment/Machinery:

Transportation Links: ☐ airstrip ☒ loading dock ☐ slip
(checked if applicable) ☐ dock ☐ rail siding ☐ other

Exterior Description:

The daylight factory was designed by Fred W. Wentworth and constructed beginning ca. 1916 by the Paterson Industrial Development Company. The earliest part of the building is its northernmost 4-story, 12-bay portion (No. 1), bearing the current address of 238 Lindbergh Place. This initial building was designed by Wentworth in the International style, utilizing reinforced concrete frame construction with brick curtain walls and large steel frame windows spanning the wide bays. The once expansive windows categorized this building as a daylight factory. Today, most window openings are infilled with concrete block. The corners of the 1916 section of the building have parapet walls with geometrical cast concrete details. By 1931, a 4-story, 18-bay addition (No. 2) had been added perpendicularly to the east elevation of the original building. Projecting from the south elevation of No. 2 is a 1-bay tower, housing a freight elevator with a concrete loading dock at ground level. Extending from the south elevation of No. 2 are two wings, labeled on maps as the 4-story, 15-bay, "East Wing" (No. 3) and the 4-story, 10-bay "Central Wing" (No. 4). Each of these additions (Nos. 2, 3, and 4) have 5th story, brick-enclosed observation decks at their central bays. No. 4 has a bay of loading doors at each level, above which is a hoisting mechanism. The wings utilize the proximity of the railroad tracks with a 2-story, stuccoed receiving building (No. 7) with a concrete platform attached to their south ends and oriented parallel to the tracks. A freestanding experimental test building located in the courtyard and a boiler house once attached to the south end of the 1916 portion have been demolished. Mid- and late-20th century additions to the north side of building No. 3 have expanded this building to 7 obvious sections, although the building labels are numbered through 13. The original factory and its extensions have flat roofs. All of the additions mimic No. 1 in form and construction, with reinforced concrete frames and brick curtain walls. Like on N. 1, most window bays on the additions have been infilled with concrete block and smaller, 6-part, metal frame windows.

Interior Description:

The interior was not accessible at the time of this survey.

Alteration Dates:

Alteration(s):	Circa Date:	Date Range:	Source:
Physical alteration	1928	to	Historic Photographs at Passaic County Historical Society (building additions)
Physical alteration		to	Window infill

Survey Name: Intensive-Level Survey of Paterson Industrial Mills

Property ID:

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Principal Investigator: Patrick Harshbarger

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Organization: Hunter Research, Inc.

Architect/Designer:

Type:	Name:	Person/Firm Description:
Architect	Fred W Wentworth	

Date form completed: 10/1/2012

Survey Name: Intensive-Level Survey of Paterson Industrial Mills

Principal Investigator: Patrick Harshbarger

Organization: Hunter Research, Inc.

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INDUSTRIAL BUILDING ATTACHMENT

Common Name: 40-80 Beckwith Avenue

Historic Name: Machine Shop & Test Cell Building at Wright Aeronautical Corporation

Present Use: Industrial, light industrial

Historic Industry:

Construction Date: 1940

Source: Historic Maps

**Construction
Start Date:**

**Construction
End Date:**

Building ID:

Style:

☐ Vernacular?

Exterior Finish Materials: Brick, Common Bond

Physical Condition: Good

Foundation Materials:

Remaining Historic Fabric: Medium

Roof Finish Materials:

Length: 650

Stories: 2

Structural System:

Width: 750

Bays: 20

Roof System:

Equipment/Machinery:

Transportation Links: ☐ airstrip
(checked if applicable) ☐ dock

☐ loading dock
☐ rail siding

☐ slip
☐ other

Exterior Description:

The machine shop and test cells building is a ca. 1940 building constructed to manufacture and test aircraft engines. This 2-story, brick building has a V-formation, with 20 bays oriented roughly north-south and 13 bays oriented roughly east-west. The 20-bay, eastern portion of the V pre-dates the 13-bay western portion. Most of the building is blind, emphasizing its functionality. Each of the test cell compartments rises independently from the roofline, with nearly 70 individual cells visible on aerial photographs of the building. This exorbitant number of cells emphasizes the building's existence as a war-time facility, where a great number of engines were built and tested for the war effort, with possibly as many engines as test cells being tested at one time. Attached to the north elevation of the western section of the building are several one-story, flat roof office additions and one, 1-story side-gabled addition.

Interior Description:

The interior of this building was not accessible at the time of this survey.

Alteration Dates:

Alteration(s):

Circa Date:

Date Range:

Source:

Physical alteration

to

front office additions

Architect/Designer:

Date form completed:

10/1/2012

Survey Name: Intensive-Level Survey of Paterson Industrial Mills

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**Principal
Investigator:** Patrick Harshbarger

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Organization: Hunter Research, Inc.

ELIGIBILITY WORKSHEET - Properties

Property ID **480898480**

History:

As the name suggests, Wright Aeronautical was a direct descendant of the company formed by the Wright Brothers prior to World War I to build engines for their airplanes. The Wright four-cylinder motors were produced in Dayton, but in 1916 Wright merged with the Glenn L. Martin Company to form a short-lived firm known as Wright-Martin, which produced a revolutionary new rotary engine under license to a Spanish firm with a Swiss founder, known as Hispano-Suiza. Wright-Martin chose Paterson as its manufacturing center, largely because of its skilled workforce, consisting of many machinists with experience in the locomotive and textile industries, which were then experiencing layoffs. About 1916, Wright-Martin built a factory on Beckwith Avenue, and would continue to expand it through the early 1940s (Figures 2.6 and Photograph 2.9). In 1919, Wright-Martin reorganized with the Paterson factory becoming part of the Wright Aeronautical Company, a firm that eventually operated plants located all over the country to produce various airplane components. Under the leadership of F.B. Rentschler, a former U.S. Army Air Force officer concerned with engine production, Wright continued improving the Hispano engines, developing ever more powerful and efficient models marketed under names like Tempest, Tornado and Whirlwind. A major innovation was the development of an air-cooled radial engine that met the specifications of the U.S. Navy in the mid-1920s, prompting a major expansion of the Beckwith Avenue plant. This original Wright plant built about 1916 was a multi-story, reinforced-concrete "daylight" factory, which was expanded in the late 1920s to accommodate the additional military orders.

The Wright Aeronautical Company engine division did modestly well, but at the time it was usually considered to be "second fiddle" to Pratt and Whitney, its major competitor located in Hartford, Connecticut. In 1929, Wright merged with Curtiss, a company that was struggling to stay in the market with its V-8 and V-12 engine designs. The new Curtiss-Wright Corporation merged its engine-design department in Paterson, coming up with the Whirlwind or G-series engine, a highly regarded air-cooled radial engine that was considered among the most highly refined of the pre-jet engine era.

During World War II, Wright Aeronautical was inevitably caught up in the military's demand for aircraft engines. In 1939-41, Wright doubled the size of its plant, building a large single-story factory building to the northwest of its original premises and adding an unusual windowless brick building with an irregular cubicle roof line to house reinforced cells for testing engines. Wright built a second wartime plant in Wood-Ridge, New Jersey. After the war, the company's headquarters and principal base of manufacturing moved from Paterson to Wood-Ridge. By 1950, the plant in Paterson had been sold off.

Statement of Significance:

The Wright Aeronautical Corporation complex is significant in that it perpetuated the existence of Paterson as an industrial force by taking advantage of the pre-existing skilled labor population created by the establishment of mills during the last quarter of the 19th century. The Wright Aeronautical Company was a leader in aircraft technology and manufacturing. It contributed to the war effort during both World Wars. The earliest building on the site is the design of locally prominent architect Fred W. Wentworth. His design, mimicked in later additions, focused on functionality in form. The test cell buildings even further emphasize functionality in form as they were constructed for the very specific purpose of testing newly built aircraft engines. They are unique to the industry and appear infrequently in the American industrial landscape.

Eligibility for New Jersey and National Registers: ☒ Yes ☐ No

National Register Criteria: ☒ A ☐ B ☒ C ☐ D

Level of Significance: ☒ Local ☐ State ☐ National

Justification of Eligibility/Ineligibility:

The Wright Aeronautical Company complex is recommended eligible under Criterion A for its associated with a company that played a leading role in the development of aircraft technology, specifically the rotary air-cooled engines that were designed and constructed here. It is also significant as an example of how Paterson's skilled machinists adapted to 20th-century conditions and products. The Wright Aeronautical Company complex is recommended eligible under Criterion C as a distinguished example of industrial architecture with the earliest portion of the plant designed by Paterson architect Fred W. Wentworth. The test cell building is an unusual type of industrial architecture designed specifically for testing dozens of engines in windowless reinforced rooms.

Total Number of Attachments: 2

List of Element Names: Daylight Factory at the Wright Aeronautical Corporation
Machine Shop & Test Cell Building at Wright Aeronautical Corporation

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Organization: Hunter Research, Inc.

Narrative Boundary Description:

The property boundary is tax block 6508, lots 1-9 and 19-21

Date Form Completed: 9/27/2012

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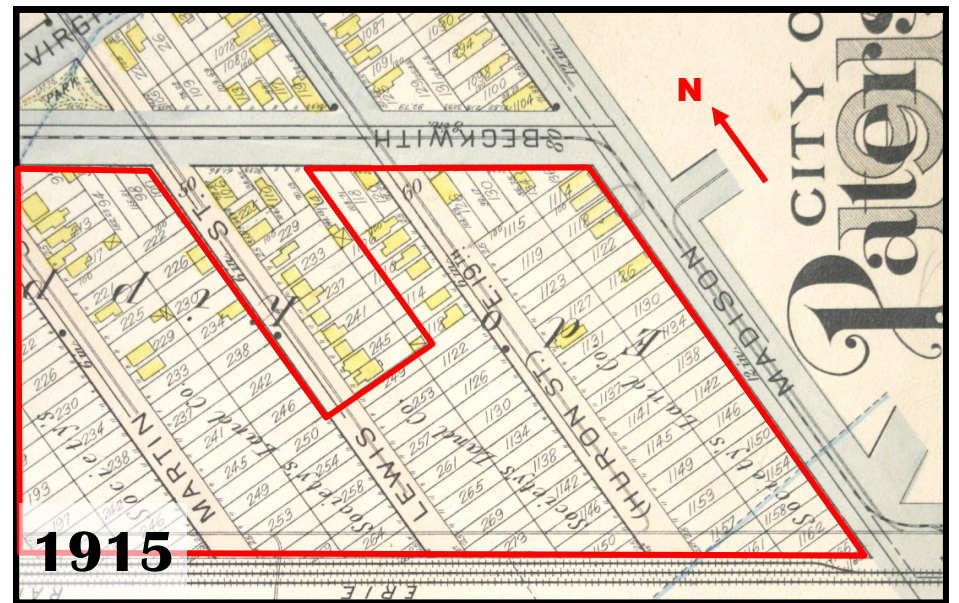
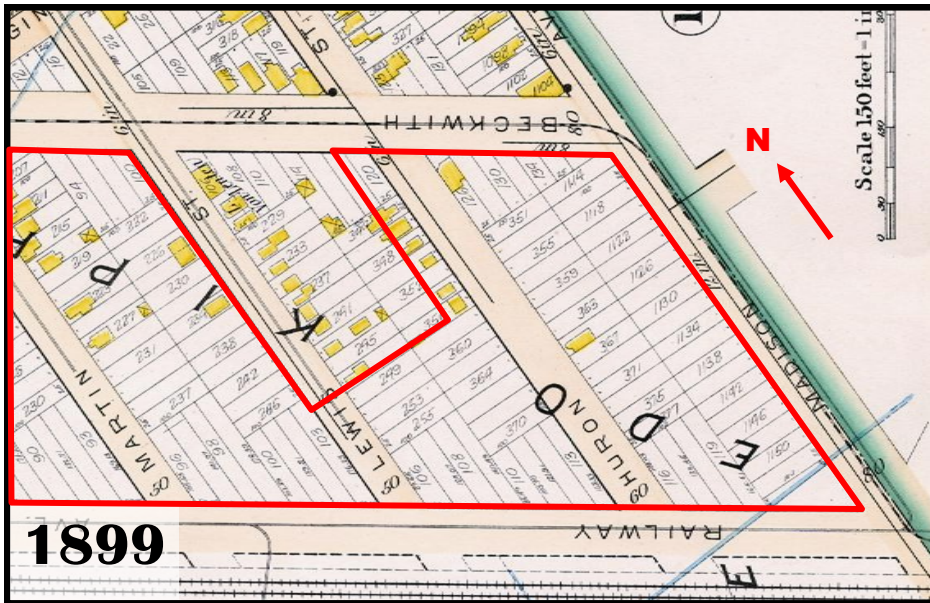
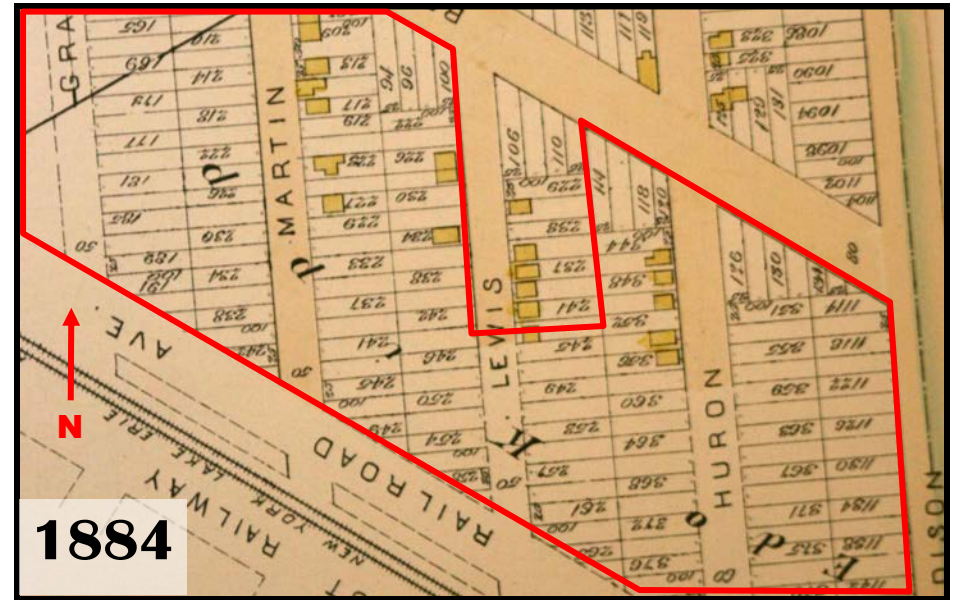
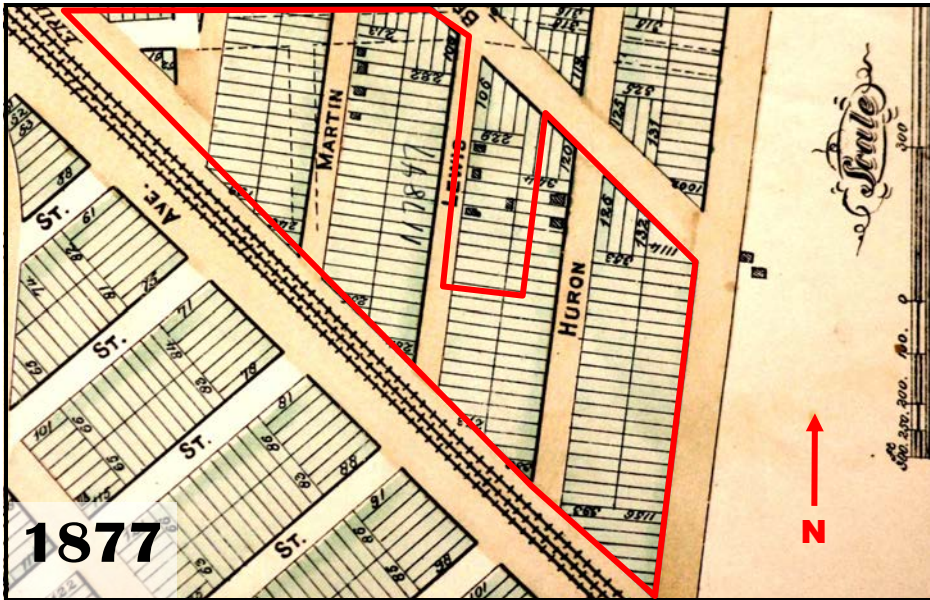
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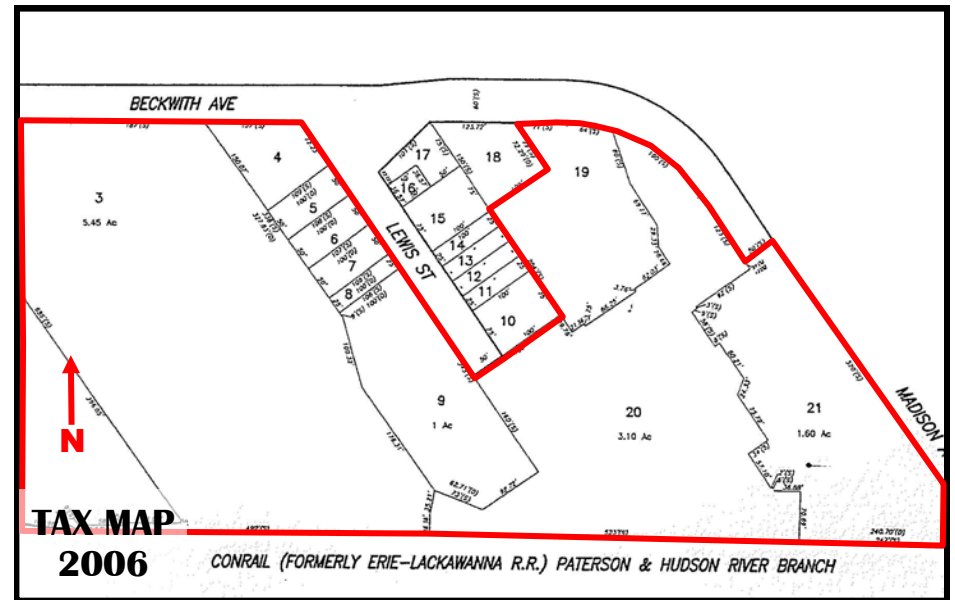
WRIGHT AERONAUTICAL CORP.
 Various addresses on Beckwith, Lindbergh, Madison Aves,
 Paterson, NJ B 6508 L 01-09, 19, 20, 21

Site Development Maps 1877, 1884, 1899, 1915



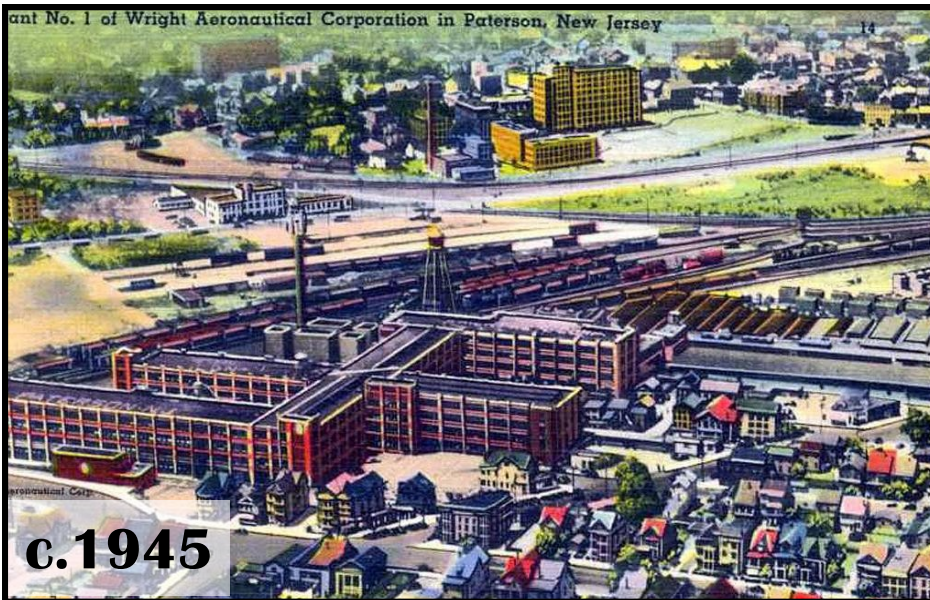
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Site Development Maps, 1931, 2006, 2010



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WRIGHT 1: c.1945 aerial overview looking W. Original 1916 building designed by F.W. Wentworth is in front of the water tower at center.



WRIGHT 3: oblique overview of rear of Bld. 1 looking NE, showing ancillary loading docks that were added to the building.

Photographs, historic / contemporary



WRIGHT 2: detail view of 1916 bld. (Bld. 1), looking SE. Lindbergh Pl. runs along far side, where telephone pole is.



WRIGHT 4: oblique overview of rear of Bld. 1 looking NE, showing south end of building and part of interior courtyard.

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Photographs, historic / contemporary



WRIGHT 5: detail view of S end of Bld. 1, looking N from courtyard parking lot. Lindbergh Pl. enters on the right, passing under Bld 2, which was added during the 1920s



WRIGHT 6: close up view of S end of Bld. 1, looking N, showing geometrical parapet detailing in cast concrete. Such detail sets Bld. 1 apart from the complex additions made after this first bld was designed by F.W. Wentworth in 1915.



WRIGHT 7: oblique overview of rear of Bld. 2 looking NE from interior courtyard. Bld 1 is just off frame on left, Lindbergh Pl. enters courtyard at left.



WRIGHT 8: overview of rear of Bld. 4 and end of Bld 7, looking E from interior courtyard. Bld 2 is perpendicular to Bld 4, and is just off frame left. Railroad tracks are off frame right.

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WRIGHT 9: oblique overview looking N from Madison Ave bridge showing E end and S side of Bld. 7 in foreground, and the long façade of Bld. 4 running parallel to Madison Ave.

Photographs, historic / contemporary



WRIGHT 10: oblique overview looking N from Madison Ave bridge the long façade of Bld. 4 running parallel to Madison Ave.



WRIGHT 11: oblique overview looking SW from Beckwith Ave. of corner of E side of Bld. 4 running on the left and N side of Bld. 2. running on the right.



WRIGHT 12: oblique overview looking SW from Beckwith Ave. of interior corner of Bld. 2 and E side of Bld. 13.

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Photographs, historic / contemporary



WRIGHT 13: view looking W from Beckwith Ave. of E side of Bld. 13, which is an addition made perpendicular to Bld. 2 .



WRIGHT 14: oblique overview looking SW from Beckwith Ave. of corner of E side of Bld. 4 running on the left and N side of Bld. 2. running on the right.



WRIGHT 15: view of N end of Bld. 13 looking S from Beckwith Ave. Bld. 2 runs perpendicular in the background.



WRIGHT 16: Overview looking south from Beckwith Ave. showing engine testing facility constructed to meet the high demand of war time production needs c1943.

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Paterson, NJ B 6508 L 01-09, 19, 20, 21



WRIGHT 17: Oblique view looking southeast from parking entrance, showing east testing wing.



WRIGHT 19: Overview of north testing wing and loading dock, looking S from parking area.

Photographs, historic / contemporary



WRIGHT 18: Overview looking southeast from parking area. Showing corner of east and south testing wings.



WRIGHT 20: view looking southwest from parking area showing concrete warehouse constructed in 1944.