

LAWRENCE MACHINE SHOP, BUILDING 16  
70 General Street  
Lawrence  
Essex County  
Massachusetts

HABS No. MA-988-M

HABS  
MASS  
5-LAWR,  
1M-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN BUILDINGS SURVEY  
Northeast Area Office  
National Park Service  
U.S. Custom House  
200 Chestnut Street  
Philadelphia, Pennsylvania 19106

HISTORIC AMERICAN BUILDINGS SURVEY

HABS  
MASS  
5-LAWR,  
IM-

LAWRENCE MACHINE SHOP, BUILDING 16 HABS No. MA-988-M

- Location: 70 General Street (bounded by General and Canal Streets), Lawrence,  
Essex County, Massachusetts  
USGS Lawrence, Massachusetts - New Hampshire Quadrangle,  
UTM Coordinates 19.323783.4730371
- Present Owner: GenCorp Inc.  
175 Ghent Road  
Fairlawn, Ohio 44333-3300
- Present Use: Vacant.
- Significance: Building 16 is one of approximately 100 buildings in the 60-acre, mile-long complex of textile mills and related buildings in the North Canal Historic District. Part of Building 16 dates from 1905 when a boiler house was built on the site of an old foundry with a brick stack next to it, but it was not completed until approximately 1948. This structure is part of the more modern improvements to the Lawrence Machine Shop yard. The North Canal is part of the original town plan and is the focus of the central city's major streets. The 1905 portion of the building existed during Lawrence's famous Bread & Roses Labor Strike of 1912, which took place in this area.

## PART I - HISTORY OF THE LAWRENCE MACHINE SHOP, BUILDING 16

Building 16 was built partly in 1905 and completed in 1948. Located in the North Canal Historic District, it is one of approximately 100 buildings within a 60-acre area of nineteenth and early twentieth century hydraulic structures, textile mills and other related buildings. The development of this district resulted in one of American's leading planned textile centers.

In 1845 the Essex Company established Lawrence and made the North Canal its industrial focus. The city plans were laid out by the Essex Company's engineer, Charles S. Storow. Most major improvements to the city were made between 1845 and 1855.

A section of Building 16 dates back to 1905, when a boiler house was built on the site of an old foundry by the Everett Mills Corp. The boiler was fueled by coal to generate heat and steam which was distributed through a piping system. The steam generated energy for industrial processes throughout only part of the complex. Which part is unknown. The former boiler house is now the southern part of Building 16. The rest of Building 16 was built by Bolta Company in 1948, during one of the latest developments of the surrounding area, well after the country's industrial boom and during the plastics and vinyl industries' height of progress. Bolta Company sold this building to General Tire & Rubber Co. in 1954, which changed its name to GenCorp Inc. in 1984. The 1905 section of the building was part of the location for the Bread & Roses Labor Strike of 1912. The strike was highly instrumental in changing women and child labor practices forever.

## PART II - DESCRIPTION OF THE LAWRENCE MACHINE SHOP, BUILDING 16

Building 16 ranges from two to four stories high and is approximately 53,000 square feet. It is made of granite, brick and steel walls, concrete floors and a steel, gypsum and wood roof. It sits at the northeast end of the former Lawrence Machine Shop yard, near the Spicket River and General Street. It is also in the northeast section of the North Canal Historic District.

The 1905 portion of the building, about two stories tall, consists of wood planks on timber purlins supported by structural steel trusses. Brick and stone masonry make up the bearing walls of this portion of the structure. The brick stack and its concrete foundation on the east side of Building 16 were built about the same time as the boiler house.

Around 1947 and 1948 the boiler house was significantly modified. A four story addition and elevator were built after removal of the north wall and several of the roof trusses on the north side. The addition's second floor extends into the older portion of the building and is independently supported on columns and spread footings. The high roof of the addition is gypsum concrete planks and its low roof is a concrete slab; the floors are concrete slabs and floor plate. The roofs and floors are supported on steel beams and columns, with the columns founded on spread footings. Interior CMU walls exist on the second and third floors. The ground floor is a concrete slab on grade and has a number of pits. The tank room at the northeast corner is surrounded by a concrete dike and contains concrete cradles which supported the tanks. There are ventilation ducts, utility runs, and abandoned building and machine foundations beneath the ground floor. The addition's exterior walls are brick and concrete.

An old stone retaining wall, running north to south and aligning with the east wall of the old boiler house, was incorporated into the foundation for the addition. Buttresses were added to the wall and the wall was underpinned with new footings to support a rail spur which was extended into the addition and supported on heavy steel framing at about the second floor level. There is a bridge crane over the rail track (craneway). A concrete retaining wall, running east-west, was also added on the east side of Building 16.

More modern modifications include a penthouse, mezzanine and extension of the east side. The penthouse has been added over the high roof level. It consists of metal roof deck on steel joists and beams which are supported on steel columns. The walls are corrugated insulated metal panels supported on steel girts that span to the columns. The penthouse is stabilized by cross braced bays. The old roof planks in this area have been removed and replaced with steel floor grating and beams supported off of the old steel framing. A mezzanine between the first and second floor has been added adjacent to the craneway. The concrete mezzanine slab rests on steel beams and girders which are supported by steel columns. The roof of the extension is metal deck on steel beams and the exterior walls are CMU. The floor here is a concrete slab on grade.

### PART III - SOURCES OF INFORMATION

#### Interviews

Devaney, Robert J. Jr., Gauvin, Mark R. and Kfoury, Kasper J. *November 1995 - March 1996 GenCorp Inc. - Lawrence*. GenCorp Inc. - Lawrence Location employees and retired employee.

#### Bibliography

Gwardyak, Chester T. and Keating, John W. *Main Buildings Demolition Structural Report*. Cambridge: Camp Dresser & McKee Inc., 1995.

Grasso, Darren R., Kfoury, Robert T. and Stupich, Martin. *Graphic Sketch Plans*. Lawrence and Boston, 1996.

Poirier, Clarisse A. *Massachusetts Historical Commission - Form No. 809 (Form B - Building)*. Lawrence: Planning & Community Development Department, 1981.

Zellie, Carole. *National Register of Historic Places Inventory - Nomination Form*. Cambridge: Landscape Research, 1983.

#### Repositories Searched

1. City of Lawrence Planning & Community Development Dept. and Historical Commission  
225 Essex Street  
Lawrence, MA 01840  
Tel: (508) 794-5891
2. Essex Company  
200 Bulfinch Drive  
Andover, MA 01810  
Tel: (508) 681-1900
3. GenCorp Inc. - Lawrence Location  
70 General Street  
Lawrence, MA 01840  
Tel: (508) 683-7123

4. Immigrant City Archives  
6 Essex Street  
Lawrence, MA 01840  
Tel: (508) 686-9230
5. Museum of American Textile History  
800 Massachusetts Avenue  
North Andover, MA 01845  
Tel: (508) 686-0191
6. Society For Preservation Of New England Antiquities (SPNEA)  
141 Cambridge Street  
Boston, MA  
Tel: (617) 227-3956

The above repositories were thoroughly searched and are all appropriate sources of information for this project. Very few historic photographs (two or three) of this site exist, and those that do are copyrighted. They can be viewed at the Immigrant City Archives and The Society For Preservation Of New England Antiquities which are both open to the public. These photographs do not show any of GenCorp's buildings separately, and the two or three group photos show a large area of buildings partially consisting of GenCorp buildings. The best historic photo, which is owned by GenCorp Inc., has previously been submitted to the National Park Service and is now in the Library of Congress and Massachusetts State Archives (Reference: HABS No. MA-988-18 photograph). The Museum of American Textile History has historic site plans of the general area, but all are copyrighted, though they can be seen at the museum which is open to the public. There were no original drawings of the site available.

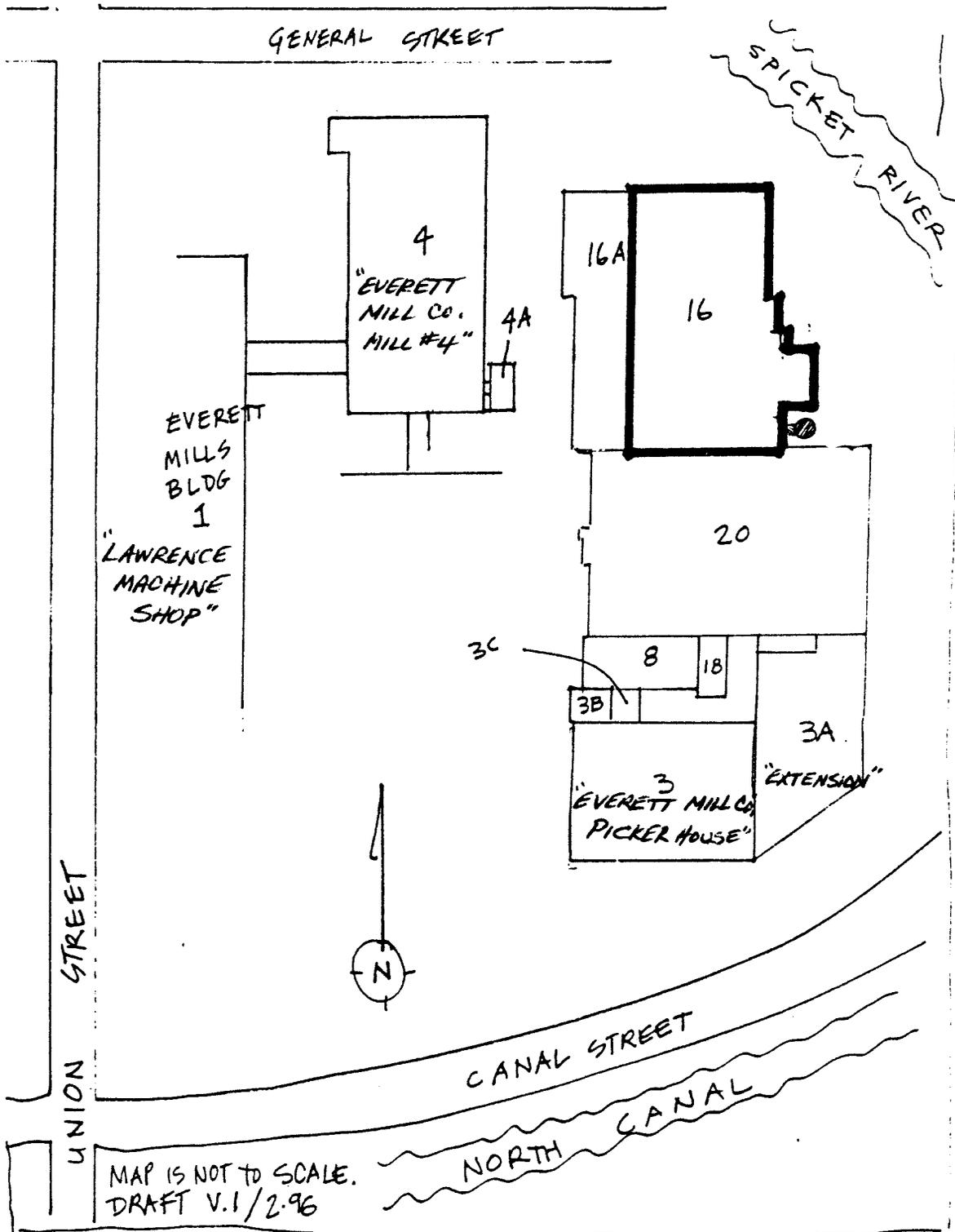
The historical and descriptive information was all found in the records of GenCorp Inc. - Lawrence Location and the City of Lawrence Planning & Community Development Department and Historical Commission (Please see Bibliography). Lawrence Community Development and Historical Commission information included information that could also be found in the state archives with the Massachusetts Historical Commission.

#### PART IV - PROJECT INFORMATION

This project is a continuation of an ongoing remediation project with this particular segment known as the GenCorp Inc. Phase II Demolition/Main Buildings Project (Phase II). It is part of a phased comprehensive remediation project addressing environmental, health and safety concerns with the objective to return the property to productive use in the City of Lawrence. Phase II demolition, scheduled to begin in June 1996, is primarily needed to remove contaminated buildings, to provide access to subsurface areas for investigation and potential remediation, and to continue the remediation process in order to achieve compliance with government environmental, health and safety standards. This program is being conducted under the Massachusetts Contingency Plan with the Massachusetts Department of Environmental Protection as the lead agency. Since there are many environmental statutes applicable to this project, the Environmental Protection Agency - Region I, New England (EPA) is the lead federal agency involved. Both agencies concur with GenCorp on the project. Also, EPA, the Advisory Council on Historic Preservation, Massachusetts Historical Commission and GenCorp have all agreed to and signed a Memorandum of Agreement regarding this project. This record was prepared February 23, 1996.

Prepared by: Robert T. Kfoury, Esq.  
Title: Consultant  
Affiliation: GenCorp Inc.  
Date: May 14, 1996

BUILDING 16 SITE PLAN

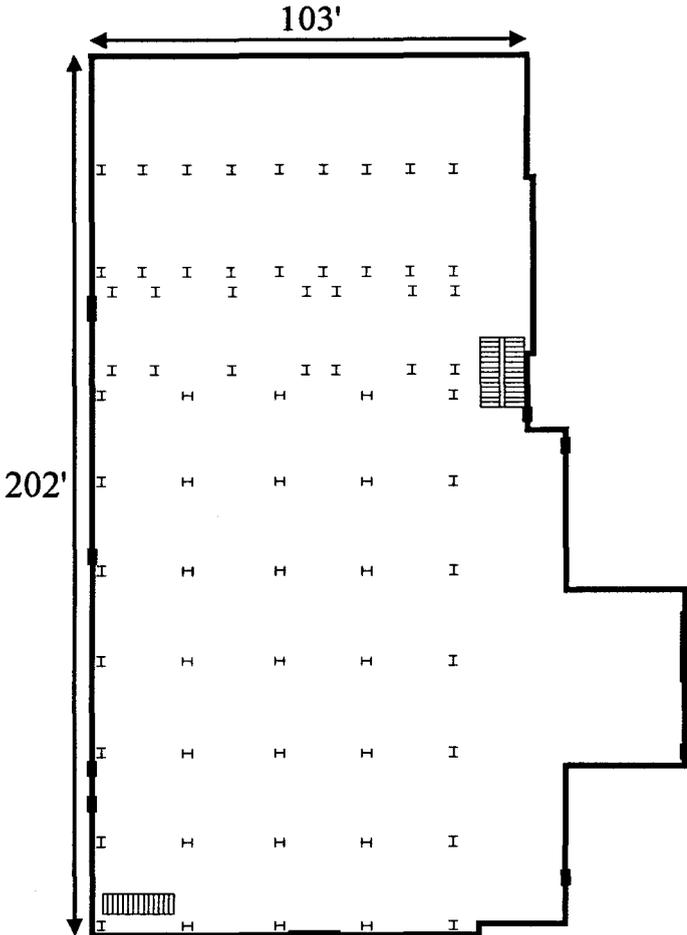


MAP IS NOT TO SCALE.  
DRAFT V.1/2.96

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Building 16  
Floor 1

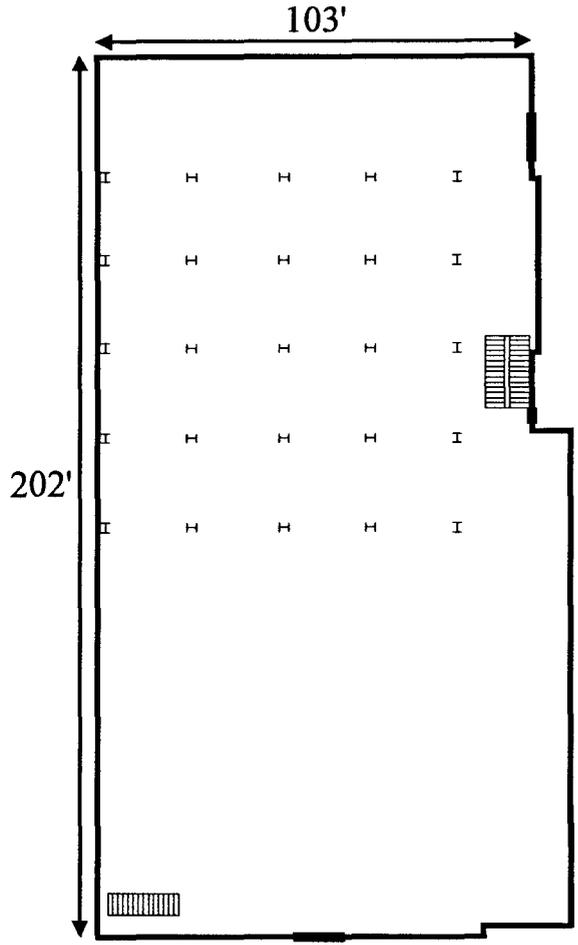


-  = Doorway
-  = Column
-  = Stairway

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Building 16  
Floor 2

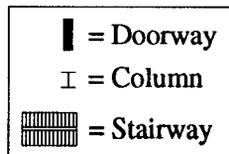
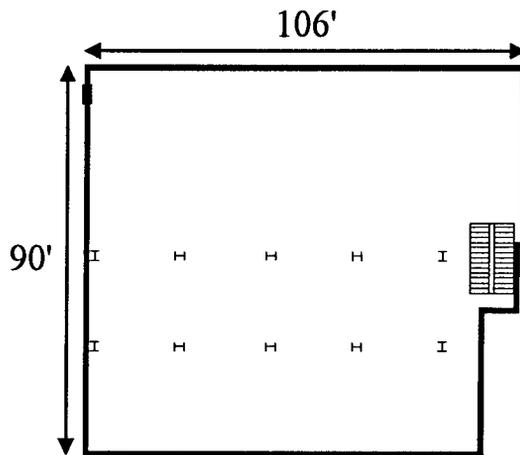


-  = Doorway
-  = Column
-  = Stairway

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Building 16  
Floor 3





Building 16  
Floor 4

