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United States Department of the Interior  
National Park Service

NOV 01 1993

NATIONAL  
REGISTER

National Register of Historic Places  
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Starr Mill

other names/site number Russell Mill

2. Location

street & number -- Middlefield Street at Beverly Heights  not for publication

city or town Middletown  vicinity

state Connecticut code CT county Middlesex code 007 zip code 06457

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this  nomination  request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property  meets  does not meet the National Register criteria. I recommend that this property be considered significant  nationally  statewide  locally. ( See continuation sheet for additional comments.)

[Signature] 10/25/93  
Signature of certifying official/Title Date  
Director, Connecticut Historical Commission

State of Federal agency and bureau

In my opinion, the property  meets  does not meet the National Register criteria. ( See continuation sheet for additional comments.)

\_\_\_\_\_  
Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that the property is:

- entered in the National Register.
  - See continuation sheet.
- determined eligible for the National Register
  - See continuation sheet.
- determined not eligible for the National Register.
- removed from the National Register.
- other, (explain:)

[Signature] Signature of the Keeper Date of Action  
Bella Savage 12-14-93

Starr Mill  
Name of Property

Middlesex, CT  
County and State

**5. Classification**

**Ownership of Property**  
(Check as many boxes as apply)

- private
- public-local
- public-State
- public-Federal

**Category of Property**  
(Check only one box)

- building(s)
- district
- site
- structure
- object

**Number of Resources within Property**  
(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
2	0	buildings
1	0	sites
1	0	structures
		objects
4	0	Total

**Name of related multiple property listing**  
(Enter "N/A" if property is not part of a multiple property listing.)

N/A

**Number of contributing resources previously listed in the National Register**

0

**6. Function or Use**

**Historic Functions**  
(Enter categories from instructions)

INDUSTRY/manufacturing facility  
INDUSTRY/waterworks

**Current Functions**  
(Enter categories from instructions)

INDUSTRY/manufacturing facility

**7. Description**

**Architectural Classification**  
(Enter categories from instructions)

NO STYLE

**Materials**  
(Enter categories from instructions)

foundation Sandstone

walls Brick

roof Asphalt

other \_\_\_\_\_

**Narrative Description**

(Describe the historic and current condition of the property on one or more continuation sheets.)

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# National Register of Historic Places Continuation Sheet

Starr Mill, Middletown, Connecticut

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The Starr Mill is located in the western part of Middletown on the Coginchaug River. The mill complex consists of two brick weaving mills built shortly after the Civil War, and an 18-acre millpond and dam (Photograph #s 1, 2). A 1927 steel bridge that spans the river below the dam and once served as the entrance to the mill from Middlefield Street is not part of the nominated property.<sup>1</sup> Since the bridge has been closed to vehicular and pedestrian traffic, the only access to the millyard is from Beverly Heights. (See Exhibit A for the site plan.)

Although woodland remains along the banks of the river downstream from the mill, the area to the north and west is now primarily residential and includes four nineteenth-century workers' houses. The complex itself, however, has changed very little. The only change to the site has been regrading with new landfill at the rear for flood control, directly west of the mill buildings. There is a barrier wall of huge concrete blocks along the millpond in this location and the site now steps uphill to Beverly Heights with a series of level parking areas separated by retaining walls of the same type of block.

The mills have the same type of construction and display the same details (Photograph #s 3, 4, 5). Both were constructed of load-bearing brick on brownstone foundations and incorporate slow-burn interior framing: plank floors supported by wooden beams and posts. Typically for the period, both buildings have corbelled brick courses under the eaves and up the rakes of the roof which also are elaborated by a dentil course and cornice returns, features found on most mills of this period in Middletown.<sup>2</sup> Many original multi-pane sash remain in the segmental-arched openings, which have wooden sills.

Mill A, the earliest extant building, was constructed about 1865 in an L plan (68' x 82') and is three stories in height. The main section paralleling the river was built on the 1813 brownstone foundation of an earlier mill on this site. There were a round-arched headrace opening, 30-feet wide, in the west end elevation of this foundation and three tailrace openings in the east elevation. They have been filled in with concrete, as has the wheelpit, but the top of the round brownstone arch of the headrace is still visible. A late nineteenth-century feature of the waterpower system is still extant on the south elevation (next to the river). It consists of the remains of a Leffel turbine with bevel gear power takeoff, the latter housed in the remnants of a small wooden shed outside the foundation (Photograph #6). An addition to the building, with a concrete foundation, was added at the inside northwest corner about 1930. It has wide bays flanked by supporting concrete piers, which contain the large industrial windows of that period. A brick boiler room with a free-standing tall stack to its north was added at the southeast corner around 1900. The original stack was razed and the boiler room was slightly enlarged and now has its own smaller stack; the monitor on its roof remains. Earlier internal brick ventilating stacks in the gable ends of the mill itself now terminate in the attic.

Mill B is four stories in height with a rubble brownstone foundation, originally built in rectangular plan (40' x 84). Probably constructed about 1870, it has a stair tower on

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Starr Mill, Middletown, Connecticut

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the east face, with doors opening to each level of the building, and a hoist beam in the gable peak of the tower. Windows on its south side have been bricked in but remain in place on the north. A rear addition, which modified and enlarged what appears to have been an early twentieth-century addition (similar to that of Mill A), now has aluminum siding and a shed roof.

Changes to the fenestration of both buildings include the installation of a few replacement windows and the use of garage-type doors at grade in several locations. Some door and window openings have been bricked in or reduced in size, which is most apparent on the elevations on either side of the passageway between the buildings (Photograph #s 3, 5). There, catwalks which provided access between the buildings at each level have been removed, with the result that door openings in these elevations now contain windows.

1. A separate nomination has been prepared for the bridge, a property owned by the City of Middletown.

2. The Russell Manufacturing Company had six mill complexes, five of which were located in Middletown. Three are still standing: the Starr Mill and two others already listed on the National Register: Russell Upper Mill and Sanseer Mill. These Middletown sites all contained brick mills utilized for narrow loom weaving with the same original configuration and construction details as are found here. The company's mills at Rockfall and the major mill complex downstream from the Upper Mill on Sumner Brook were demolished, the latter in 1990 to make way for a shopping mall. The sixth, primarily a thread mill with two wooden buildings, located in Higganum, a village in Haddam, Connecticut, to the south of Middletown, was destroyed by fire.

**8. Statement of Significance**

**Applicable National Register Criteria**

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

**Criteria Considerations**

(Mark "x" in all the boxes that apply.)

Property is:

- A** owned by a religious institution or used for religious purposes.
- B** removed from its original location.
- C** a birthplace or grave.
- D** a cemetery.
- E** a reconstructed building, object, or structure.
- F** a commemorative property.
- G** less than 50 years of age or achieved significance within the past 50 years.

**Areas of Significance**

(Enter categories from instructions)

ARCHITECTURE

**Period of Significance**

c. 1865 - c. 1940

**Significant Dates**

c. 1865; c. 1870

**Significant Person**

(Complete if Criterion B is marked above)

**Cultural Affiliation**

N/A

**Architect/Builder**

Unknown

**Narrative Statement of Significance**

(Explain the significance of the property on one or more continuation sheets.)

**9. Major Bibliographical References**

**Bibliography**

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

**Previous documentation on file (NPS):**

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # \_\_\_\_\_
- recorded by Historic American Engineering Record # not recorded on form

**Primary location of additional data:**

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository:

\_\_\_\_\_

Starr Mill  
Name of Property

Middlesex, CT  
County and State

### 10. Geographical Data

Acreage of Property 22

#### UTM References

(Place additional UTM references on a continuation sheet.)

1 

1	8
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6	9	2	7	4	0
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4	6	0	2	2	6	0
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Zone Easting Northing

3 

1	8
---	---

6	9	2	5	9	0
---	---	---	---	---	---

4	6	0	1	8	1	0
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Zone Easting Northing

See continuation sheet

#### Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

#### Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

### 11. Form Prepared By Reviewed by John Herzan, National Register Coordinator

name/title Jan Cunningham, National Register Consultant

organization Cunningham Associates Ltd. date 5/10/93

street & number 37 Orange Road telephone (203) 347 4072

city or town Middletown state CT zip code 06457

#### Additional Documentation

Submit the following items with the completed form:

#### Continuation Sheets

#### Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

#### Photographs

Representative **black and white photographs** of the property.

#### Additional items

(Check with the SHPO or FPO for any additional items)

#### Property Owner

(Complete this item at the request of SHPO or FPO.)

name Newfield Realty Corp., Attention: J. J. Vinci, Jr.

street & number 1000 Newfield Street telephone (203) 800 - 458 - 5181

city or town Middletown state CT zip code 06457

**Paperwork Reduction Act Statement:** This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 *et seq.*).

**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 18.1 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Projects (1024-0018), Washington, DC 20503.

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Starr Mill, Middletown, Connecticut

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The Starr Mill is historically significant as one of six successful cotton textile mills owned and operated by the Russell Manufacturing Company, recognized innovators in the production of elastic and cotton webbing. The only textile firm in Middletown to survive from the nineteenth century, the company was founded in 1834 by prominent members of the Russell and Hubbard families. Under the direction and control of their descendants for more than a century, the company became the major industry in Middletown and the city's largest employer. It is distinguished by its generally well-preserved typical examples of late nineteenth-century industrial architecture, a significance enhanced by the integrity of the site.

### Historical Significance

The Starr Mill, one of the oldest industrial sites in the city, was first developed by Nathan Starr (d. 1812). He had purchased land here in 1799 and dammed the West River (now the Coginchaug) to manufacture scythes. From 1808 until about 1845, the Starr Mill was an arms factory. Under a series of government contracts, the company produced swords, pistols, and rifles, and was particularly noted for commemorative swords, which were presented to national heroes. After Starr died, the firm was carried on by his son Nathan Starr, Jr., who constructed a brick mill on the site in 1813, the foundation of which is still extant under Mill A. In 1864 the site was purchased by the Russell Manufacturing Company as part of its postwar expansion.

The Russell Manufacturing Company was established in 1834 by Samuel T. Russell and Samuel D. Hubbard and incorporated for \$200,000, a considerable sum for that period. Their partnership was the start of an industrial family dynasty which remained associated with the company until it was absorbed by an international conglomerate, Fenner America, in the 1970s. The last Russells in the firm, Thomas Russell, Sr. and Jr., were descendants of the original partners through the marriage of Samuel Russell's grandson to the daughter of Henry G. Hubbard. Henry was the nephew of Samuel Hubbard and was brought in to manage the company at age 21.

Although the principals relied heavily on a traditional eighteenth-century family management and investment style, with the almost unlimited Russell capital and the contributions of Henry G. Hubbard as manager and president, the Russell Company prospered in the highly competitive antebellum period. Despite being handicapped by lack of rail access to markets prior to 1871, the firm dominated the narrow-gauge webbing market in New England for much of the nineteenth century. By 1900 it employed almost 900 workers, two out of every five in the city, and was worth more than \$2.5 million.

Samuel T. Russell (1789-1882) was a descendant of William Russell, a proprietor of the New Haven Colony, and Nodidiah Russell, one of 12 ministers who founded Yale College and the second pastor of the Congregational Church in Middletown after 1678. Samuel Russell, trained for the mercantile trade, established a trading station in Canton in 1819, one of the first in China. Russell amassed a fortune in the profitable but illegal opium trade (importing opium into China from India and Turkey and exporting tea and silk to Europe).

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Starr Mill, Middletown, Connecticut

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In addition to providing industrial capital, his profits from this trade were used to build his distinguished Greek Revival-style mansion in Middletown (National Register of Historic Places, 1980) and fund major philanthropy in the city.

Russell's partner, Samuel D. Hubbard (1799-1855), another scion of a seventeenth-century Middletown family, had control of several waterpower sites in the city, inherited from his father, Elijah Hubbard, the leading merchant in the city's West Indies trade. Anticipating the decline of trade in the early nineteenth century, Elijah had invested heavily in local woolen mills and thus acquired some of the best waterpower sites when that industry failed.

Most of the company's success can be attributed to the genius of Henry G. Hubbard, a rare combination of inventor and skillful marketing manager. By 1840 the firm had already capitalized on the vulcanization of rubber, a process invented by Samuel Goodyear in 1834, and had been the first company to perfect the handloom process for elastic webbing. Within a year, Hubbard had mechanized the process and the first gross of suspenders was manufactured, utilizing the Hubbard power loom and heated calendar rolls (to set the rubber after weaving, formerly a hand operation with flat irons). Suspender production accounted for half of the company's production in 1877 and remained a staple of the product line into the twentieth century. Hubbard also patented the first multi-ply weaving loom to produce tubular webbing, used primarily for firehose. With his machinery, the firm was one of the first to produce the continuous transmission belting for industry which generally supplanted leather belting after 1850. The company filled orders for belting with a unique interwoven wire reinforcement up to 24 inches wide and 500 feet long.

Although the Russell Company rapidly responded to changing markets and tastes, it wisely concentrated on items that could be produced on narrow-gauge looms. Eventually the firm had more than 1000 looms of this type in operation. While the Russell Upper Mill remained the site of most of the research and development, production of more than 10,000 items was parcelled out to the various mill sites in the city. In addition to a variety of webbings, strappings, and carpet binders for civilian use, the company supplied the military in five wars with items such as cartridge belts and even boot straps. Its contribution to the transportation industry ranged from webbing for early bicycle tire rims to brake linings for automobiles in the twentieth century, when it was a major supplier for Henry Ford. No new taste in fashion escaped its notice; for example, the Rockfall mill was used exclusively for webbing to support hoop skirts and the company was a leading supplier of tapes for venetian blinds and zippers.

Despite this impressive production record, the firm went into receivership in 1931. Major contributing factors were an over-extended physical plant and a too-generous dividend structure, with most of the stockholders still members of the Russell and Hubbard families. Thomas Russell, Jr., was retained as vice-president but new managers were brought in to restructure and consolidate. During a year of retrenchment, obsolete buildings were razed or sold; useful mills were modernized, including the Starr Mill, which continued to operate until the 1940s. After a period of vacancy, it was purchased

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Starr Mill, Middletown, Connecticut

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by the present owners in 1967 and now is rented by a number of light industrial tenants.

### Architectural Significance

The Starr Mill contains good representative examples of function-specific industrial buildings. Together with the site and associated resources, it illustrates the historical development of the narrow-gauge weaving industry. Unlike the more common low weaving sheds with monitors associated with broadloom production, these buildings were constructed specifically for narrow-gauge weaving and have retained their essential characteristic form and features. Modernization in recent years has had only minor impact on the integrity of the structures.

They are tall narrow buildings, with multiple open floors for weaving and spinning. The machinery was located along the outside walls, leaving a wide center aisle. Because of this arrangement, adequate light and ventilation were provided by multiple double-hung sash windows and monitors were not required. In fact, the firm never built the more common late nineteenth-century brick pier mill with larger windows. As demonstrated here in the addition to Mill A, the firm's load-bearing pier mills were constructed of concrete and then only in the twentieth century.

Typically a stair tower was constructed to serve several purposes, as is found in Mill B. Not only did it provide outside access to all the mill floors, but it also commonly combined toilet facilities at each level. The latter were not simply for the comfort of the workers; less time was lost when outside privies were replaced by modern conveniences. For greater production efficiency, the industrial process carried out in a building with a stair tower began at the top floor. Raw material was hoisted to the upper floor, with each finishing stage carried out on successive lower floors until the final product was ready for shipment at grade level. Another important function of the stair tower was fire safety. Heavy internal doors onto the mill floors could be shut to prevent the spread of fire and workers could escape even if fire started lower in the building.

Tangible evidence of the historical development of the power system also remains in place. Here, as at most of the Russell mills, water was the principal power source even into the twentieth century. The dam and the associated millpond appear as they did in the late nineteenth century, since the company raised the dam to its present height soon after it took over the site. Prior to the Russell Company acquisition, water was diverted under the building, as evidenced by the race openings, to turn the waterwheel and power train at the earlier arms factory at the site. It is unlikely that such a system would have had enough output to power two mills. Mill B was built very soon after Mill A and is positioned to take off from the same power source, indicating that a water turbine system was in place at least by 1870. The existing Leffel turbine was a refinement of that system. Steampower was only introduced for use on a seasonal basis and for heating. The original stack has been removed but the boiler room for producing steam with coal remains in place.

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Continuation Sheet**

Starr Mill, Middletown, Connecticut

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Bibliography

Donlan, H. F. Middletown Tribune: Souvenir Edition. Middletown, 1896.

History of Middlesex County, Connecticut, with Biographical Sketches of Its Prominent Men. New York: J. B. Beers & Co., 1884.

Hubbard, Harlan Page. One Thousand Years of Hubbard History, 866-1895. New York, 1895.

Middletown Business Directory, 1880.

North Andover, Massachusetts. Museum of American Textile History. Russell Manufacturing Company 1836-1941, MSS (200 volumes; 3 folders).

Washington, D. C. Library of Congress National Archives. Russell and Company, MSS.

Geographical Data

UTMs continued:

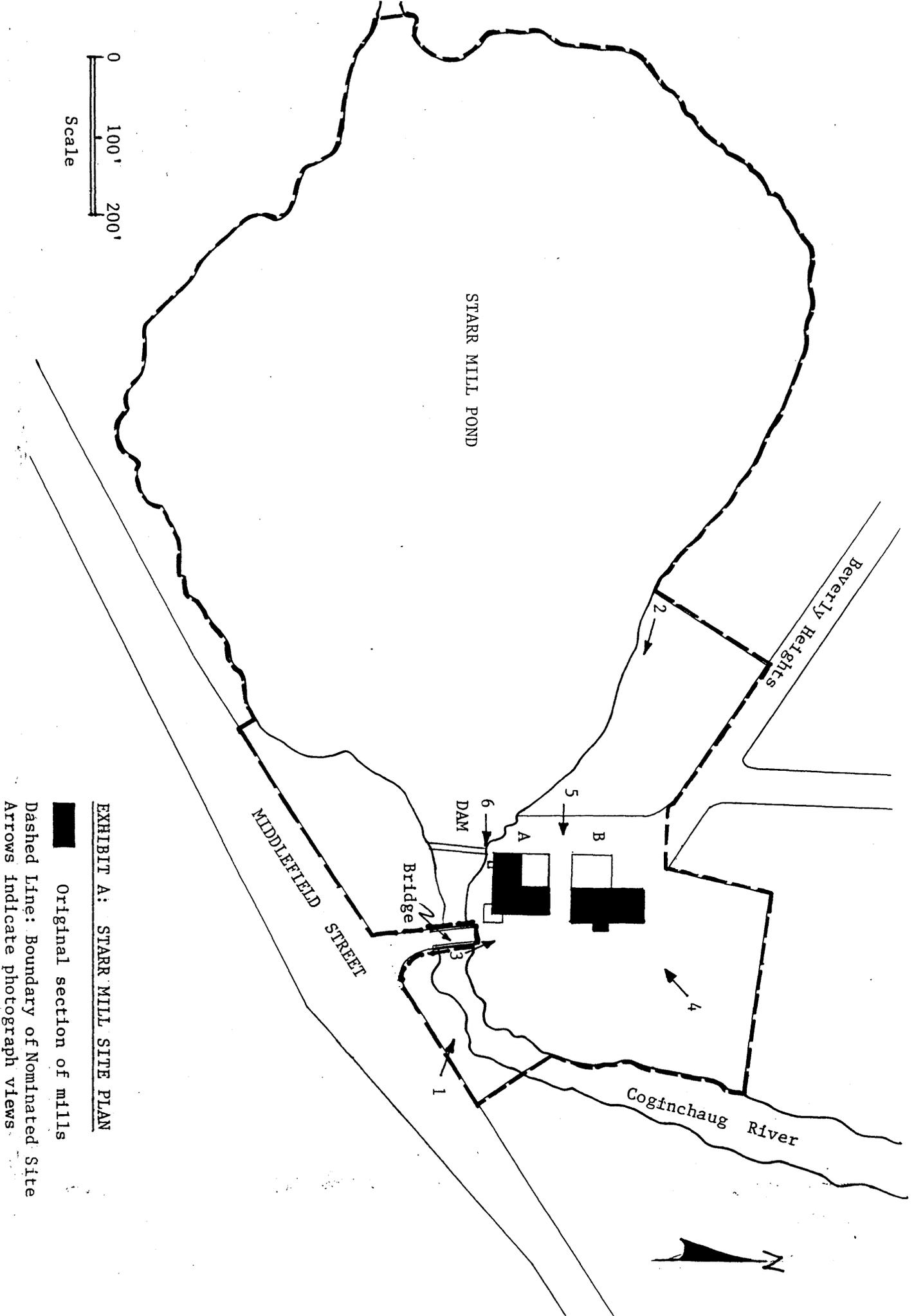
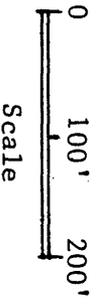
5. 18 692420 4602120            6. 18 692610 4602110

Verbal Boundary Description

The boundaries of the nominated property are delineated on the attached site map drawn to scale from Middletown Tax Assessor's Maps 14 and 15.

Boundary Justification

The boundaries of the nominated property encompass all the land, buildings, and structures associated with the Starr Mill during its period of significance.



**EXHIBIT A: STARR MILL SITE PLAN**

- Original section of mills
- - - Dashed Line: Boundary of Nominated Site
- Arrows Indicate photograph views

Base map: Middletown Assessor's Map #s 14, 15