

United States Department of the Interior
National Park Service

383

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 National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form*. If any 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.



1. Name of Property

Historic name: Hillsborough Mills
Other names/site number: N/A
Name of related multiple property listing: N/A

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

2. Location

Street & number: 37 Wilton Road
City or town: Milford State: NH County: Hillsborough
Not For Publication: Vicinity:

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 at the following level(s) of significance:

national statewide local

Applicable National Register Criteria:

A B C D

<u>E J Muzzey</u>	<u>4/30/13</u>
Signature of certifying official/Title:	Date
<u>NH State Historic Preservation Officer</u>	
State or Federal agency/bureau or Tribal Government	

In my opinion, the property <input type="checkbox"/> meets <input type="checkbox"/> does not meet the National Register criteria.	
Signature of commenting official:	Date
Title :	State or Federal agency/bureau or Tribal Government

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4. National Park Service Certification

I hereby certify that this property is:

- entered in the National Register
- determined eligible for the National Register
- determined not eligible for the National Register
- removed from the National Register
- other (explain:)

Jan Edson H. Beall
Signature of the Keeper

6-12-13
Date of Action

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

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Number of Resources within Property

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
<u>4</u>	<u>1</u>	buildings
<u> </u>	<u> </u>	sites
<u>1</u>	<u>0</u>	structures
<u>1</u>	<u>0</u>	objects
<u>6</u>	<u>1</u>	Total

Number of contributing resources previously listed in the National Register 0

6. Function or Use

Historic Functions

(Enter categories from instructions.)

INDUSTRY: manufacturing facility

Current Functions

(Enter categories from instructions.)

COMMERCE: business

INDUSTRY: manufacturing facility

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7. Description

Architectural Classification

(Enter categories from instructions.)

Italianate

Materials: (enter categories from instructions.)

Principal exterior materials of the property: Brick, Stone, Wood

Narrative Description

(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with a **summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)

Summary Paragraph

The former Hillsborough Mills complex is located at 37 Wilton Road (formerly Elm Street) in the western part of Milford, New Hampshire, in a fairly sparsely settled area locally referred to as "Pine Valley". Although technically located within the town of Milford, it is more than three miles west of downtown Milford and is located near the Wilton town line. The property is located adjacent to the Souhegan River and is just north of NH Rt. 101, an important east-west highway. Most of the predominantly brick complex is located in a roughly triangular-shaped 5.5 acre parcel of land on the north side of Wilton Road, just east of North River Road which curves and forms the northern boundary for the property. The resources on this side of the road include the original mill (1866) and two later additions (c.1880, c.1915) as well as various attached accessory extensions including a machine shop, engine room and boiler house. There is also an annex building, a wood-frame blacksmith shop, a gate mechanism and the remnants of a stone-lined tailrace. On the south side of the road there is an additional 7.6 acres of land that includes a late 19th century, wood-frame stable which was also part of the mill complex as well as a late 20th century shed. Despite the loss of a wooden dye house, the filling of the canal and incremental changes to the buildings, the complex retains integrity of location, design, setting, materials, workmanship, feeling and association.

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Narrative Description

Historically, the mill property was linked to a dam upriver to the west (in Wilton) by a canal that was laid out north of the mill building. In 1985 the canal was filled and replaced by underground steel penstock eight feet in diameter that carry water from the Souhegan River at the dam to hydroelectric turbine generators in the basement of the machine shop at Hillsborough Mills. The penstocks run below the north edge of the current parking lot. As part of the new hydroelectric project, a new concrete dam was built in 1989 on the site of the previous 1912 concrete dam. The dam is not included in this nomination as it is not a continuous parcel with the mill property and is not fifty years old.

The following description details the various extant resources which are part of the former Hillsborough Mills complex.

1. Main Mill Building, 1866 with c.1880 and c.1915 additions to the west. Contributing building.

The main mill building is a three-story, flat-roofed, unpainted brick building which is rectangular in plan and faces south. The original portion of the building measuring roughly 180' x 50' was constructed in 1866 and comprises the central, four-story rectangular tower and the eight bays of regularly spaced arched windows on either side. The brick is laid in a common bond alternating nine courses of stretcher brick to a single row of headers. The masonry is reinforced by iron tie rods. The original building is further defined by parapet walls on its east and west ends. There is a continuous corbelled brick cornice on the south elevation of the main block as well as on all sides of the rectangular tower. Two corbels decorate each end of the parapet end walls. The segmentally-arched window openings have brick corbel stop lintels and granite sills. The windows contain modern one-over-one sash installed c.1980. In addition to the window openings, the front tower has three former door openings. The first floor opening has a modern glass and metal door while the two former doors above have been filled with 2 x 2-glass panes over a wooden base. The upper, bell level of the original tower has arched openings – three on the front face and two on the sides – which are filled with wooden louvers. Each set of arches rests on a granite sill and there is a metal hoist projecting from the easternmost, front arch. The three-story narrow addition to the east of the original tower, which is just a single bay wide, was added prior to 1912 to provide office space (Sanborn map).

On the rear elevation, a modern brick stair tower was constructed at the northwest corner of the original mill c.1980. Although the color of the brick differs from that used on the historic front tower, the newer tower is also flat-roofed with corbel details. Soldier brick forms the lintel for the large second story arched window and a brick band wraps around the tower at the base of the

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arch. Centered below the window is a modern double-doored entry, fronted by a concrete ramp with brick sidewalls that is suspended over the dry moat. All of the windows on the back (north) wall of the original mill have modern 1/1 sash with brick corbelled lintels and granite sills. There is one remaining historic wooden door on the second floor. It has a single panel over two smaller panels and is fitted with the same lintel. At the east end of the rear elevation, a railed handicapped ramp was added in 2007.

Attached to the west wall of the original mill building is a two-story addition which was constructed in two phases in c.1880 and c.1915. The initial section, sixteen bays wide, was constructed just west of the original building c.1880. The westernmost section was added c.1915 and is twelve bays wide. Although the detailing on the two sections is nearly identical, differences in the brick used clearly differentiate the two sections as does the concrete foundation supporting the c.1915 section. The additions are capped by a low pitch gable roof with bold brackets supporting the overhanging eaves. At one time, monitors were centered on the roof but these were removed prior to the 1980s. Like the main mill, the additions have segmental window openings with header brick lintels and rough granite sills. All of the previous windows were replaced c.1980 by modern 1/1 sash. Several modern entries have been inserted on the south elevation. There is an overhead loading door adjacent to the original mill, reconfigured from an earlier historic doorway. An upper level arched doorway on the c.1880 addition was converted to a window and two modern double-doored entrances are located on the first floor. At the west end of the façade a modern door with stairs was added at an unknown time. On the west end of the building, there were originally four bays of windows on two levels. Today the end is fronted by a retaining wall and there are two loading docks and two windows.

On the rear (north) elevation of the additions, the lower level is rendered below grade by the sloping site. The uniform repetition of windows is broken only by a small projection midway on the elevation which originally contained a water closet.

Inside, the structural elements of the mill construction remain clearly visible despite the addition of some modern partitions for offices and other tenants. On the first floor level of the original mill, there are three rows of turned chestnut columns, twelve feet tall, with cast iron connectors and bases resting on iron plates. The other two floors feature a single row of columns running the length of the floor, set on iron plates. These columns are topped by small rectangular wooden caps. The two additions to the west have a single central row of chamfered wooden posts with longer wooden caps that are rounded. Wooden beams remain intact and exposed on all stories. Floors include concrete as well as linoleum and carpeting over wooden floors of pine and maple boards.

Remnants of the mill's original mechanical shafting are found on the third floor of the original mill. The historic staircase in the main tower was replaced as part of the c.1980 renovations by a modern metal staircase. The top level of the main stair tower retains a metal water tank as well as the historic bell and rope pull. Additional modern staircases are located at the northeast corner of the main mill and in the c.1980 rear staitower. There are no remaining historic interior doors.

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Ancillary structures and additions added onto the main mill building over time are described below:

1A. Machine/Carpenter Shop, 1866.

Attached to the east end of the original Mill (#1) and north of the Engine Room (#1C), is a two-story section measuring 32' x 48' which was originally constructed as a machine shop. It is constructed of brick above a granite foundation and is capped by a shallow gable roof with a ridge that runs east-west. The building is punctuated by regular segmental window openings with header brick lintels and rough granite sills. All of the openings have been covered with boards. There are six bays on the rear (north elevation) facing the former head race.

This part of the building is shown on the 1875 insurance map as a machine shop. The insurance survey noted that the first floor consisted of a machine shop, 12 feet high with open beams and open stairs to the room above. The second floor was used as a reel room with 8 foot ceilings and open rafters. The 1919 insurance map indicates that the second floor was being used as a carpenter shop and the first floor was the machine shop. In the basement there was a No. 5 Holly Rotary pump, capable of pumping 650 gallons per minute in the race below.

1B. Machine Shop Addition, c.1920.

This single-story addition to the east of the machine shop (#1A) was built about 1920. It is constructed of brick above a poured concrete foundation lower level. The flat roof has overhanging eaves supported by bold brackets that define the window bays below. There are seven bays of windows on the north elevation and two on the east elevation. All retain 5 x 4-light metal windows with a 3 x 2-light pivot sash. The windows have poured concrete sills and lintels. The lower level on the east side has a set of wooden double doors and a modern vent. To the east of the building is a pit lined by concrete walls, constructed in 1986.

The addition to the machine shop is penciled in on the Insurance survey prepared by the Factory Insurance Association (surveyed October 1919, Revised Feb. 1921). The first floor of the building houses an open workshop. In the lower level two hydropower turbine generators and control units were installed in 1986. The dam structure and power generating equipment was originally constructed upriver on the Souhegan River in Wilton in 1912. The hydroelectric project was reconstructed and renovated in 1986 and is capable of generating more than 2 million kilowatt hours of electric energy annually.

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1C. Engine Room, c.1900.

Attached to the south wall of the machine shop (#1A) and west of the boiler house (#1D), the former engine room is a single-story brick building measuring approximately 36' x 42'. It is capped by a flat roof from which rises an historic glass skylight. As seen today there are four modern double-hung 1/1 windows with brick sills and no lintels on the south façade. (Originally this wall was largely obscured by a long, two-story building which extended to the south and which was removed in the 1980s.) Markings in the brick indicate that at one time there were four small openings near the top of the south facade but these were filled with brick long ago. In 2003 a modern set of glass and metal double doors was added to the west wall, fronted by a wooden deck.

Historic maps indicate that this structure originally housed a 350 horsepower engine. In 2003 the former steam turbine room was renovated for use as a photo studio. Today the building is vacant. Inside, brick piers support steel roof beams and concrete sills and lintels are visible. Among the notable interior features is the chain hoist suspended from steel beams and manufactured by the Chisholm & Moore Company of Cleveland, Ohio. A staircase in the northwest corner of the room, leading to the basement, has also been blocked off.

1D. Boiler House, 1898, with c.1945 addition.

The boiler house is located at the east end of the main complex, just east of the engine room (#1C). The tall, single-story building is constructed of brick and is capped by a shallow gable roof with overhanging eaves supported by bold brackets. As originally constructed, the building was limited to the 41' x 47' section to the west and had a 98 foot brick chimney rising from its rear (north) wall and a ventilator on the roof. It is not known when these were removed. A modern metal chimney now rises from the roof. Sometime after 1941 the building was extended eastward by a more narrow addition of equal height. Other than differences in the brick and the use of concrete for window sills and foundation, the addition echoes the detailing of the original structure. A dust collector was originally located on the west end of the façade. There is a single segmental window opening on the façade of the older section, filled with a modern 1/1 sash and capped by a header formed by two courses of header brick. The upper level square openings located just under the eaves all retain original metal sash. The windows in the original section have a 4 x 3-light configuration with brick sills while the addition has 3 x 4-light windows with concrete sills. There is a large set of double doors on the south façade of the addition, capped by an I-beam lintel. A pedestrian door has been inserted into one of the four-panel doors. A modern overhead garage door is located on the east wall.

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The older portion of the boiler house appears to have been constructed in 1898, replacing an earlier structure. An industry publication reported that the new boiler house had three new boilers, purchased from the Saxton & Wholey Co. of Lowell, Massachusetts (*America's Textile Reporter*, vol. 12, 1898). The addition to the east was constructed sometime after 1941 (Sanborn map). None of the historic boilers remain today. The current boiler was installed in 1973 and was manufactured by Cleaver Brooks. The former boiler house is now utilized by a blacksmithing shop.

**2. Blacksmith Shop, late 19th or early 20th century with post 1921 addition to north.
Contributing building.**

This single-story, detached frame building is located to the east of the boiler house (#1D) and to the south of the tailrace (#4). The building is clad in vertical boards with a brick chimney emerging from the south slope of the asphalt-shingled roof. The roof has projecting eaves with exposed rafters. There is a set of plywood doors on the gablefront facing the boiler house. The windows on the main portion of the building have been covered with boards. The north side of the building is spanned by a later shed addition, constructed after 1921. It is also clad in vertical boards and has a rolled asphalt roof. There is another door on the west wall and several four-light and 2 x 2-light windows on the north wall.

Inside the building has a poured concrete floor. The 1919-1921 insurance map indicates that it then had an earthen floor and the north addition had not yet been added. On the south wall there is a brick side draft forge that was fueled by bituminous coal. The pegs running the length of the wooden posts in the north part of the building were designed to hold metal stock. In addition to containing the forge, the 1919-1921 insurance map indicates that the building was also used for acetylene welding. Line shafts and jack shafts critical to the mill operation were undoubtedly manufactured and repaired here.

3. Annex, c.1945. Contributing building.

Located to the south of the main mill tower, this single-story structure appears to have been constructed in the 1940s as an office and was originally connected to the west wall of the frame dry house building which was removed in the early 1980s. The annex is set on a concrete foundation and is capped by a flat roof. Patching of the brick suggests that the window and door openings have been reworked on various occasions. As seen today, there are a mixture of original steel multi-light windows and later pairs of modern double-hung 6/6 sash, both with concrete sills and lintels. Modern glass and metal doors are centered on the east and west elevations, marking the ends of the corridor which runs the width of the building. Today, the building houses several small businesses. This office building apparently replaced an earlier, wood-frame structure which appears on historic maps, adjacent to the road.

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4. Tailrace/Stone wall, 1866 with later modifications. Contributing structure.

Extending to the east of the mill are the remains of the stone-lined tail race. A large concrete pipe set above a stone retaining wall marks where the end of the penstock meets the tail race leading into the Souhegan River. Also entering at this point is a boxed culvert constructed about 1986 when the canal that was located north of the mill was filled. The stone retaining wall wraps around and continues southward along the river bank to the stone bridge carrying Wilton Road over the Souhegan River.

5. Gate, late 19th century. Contributing object.

This gate mechanism set on a poured concrete base appears to survive from a former gatehouse which once controlled the overflow from the power canal.

6. Stable, c.1870. Contributing building.

Located across the street from the main mill complex, this late 19th century wood-frame stable building is set near the bank of the Souhegan River. The two-story clapboarded building rests on a rubble foundation and is oriented with its gable end to the street. The roof is sheathed in asphalt shingles and has overhanging eaves that are without returns. The gable to the street has two 3 x 2-light windows on the first floor and two 6/6 on the second floor with an additional 6/6 in the attic. There is a wide loading door with ramp centered on the west wall with a 6/6 window above and two small stall openings to the south. The east elevation has a pedestrian door of vertical boards with a 6/6 above and two stall windows. The south gable end is sheathed in vertical boards and is without any openings. A 30' x 95' storage barn was previously attached to this elevation but was removed in 1983 due to its deteriorated condition. The concrete foundation remains.

7. Shed, c.1980. Noncontributing building.

To the west of the stable building is a small wooden shed used as a farmstand in recent years. The building is constructed of vertical boards and is capped by an asphalt roof.

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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.)

- 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 old or achieving significance within the past 50 years

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Areas of Significance

(Enter categories from instructions.)

INDUSTRY: manufacturing facility

Period of Significance

1866-1963

Significant Dates

Significant Person

(Complete only if Criterion B is marked above.)

N/A

Cultural Affiliation

N/A

Architect/Builder

unknown

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Statement of Significance Summary Paragraph (Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)

The Hillsborough Mills is locally significant under Criterion A, Industry, for its associations with manufacturing in Milford, New Hampshire. From the mid 19th to the mid 20th century, the industries housed in this complex served as important local employers for workers in both Milford and nearby Wilton. Constructed in 1866, just after the end of the Civil War, the mill was initially organized by local investors for the manufacture of woolen carpets. When the carpet mill failed, the property was reorganized and purchased in 1874 by new investors from the manufacturing centers of Nashua and Lowell and produced carpet yarns, bed blankets and horse blankets. Although the mill was expanded and flourished for a number of years, it closed in 1901, unable to compete with larger companies. The Hillsborough Mills were sold that year to a group of out-of-town woolen manufacturers including William G. Abbott of Philadelphia. The Hillsborough Mills flourished under the management of Abbott and his two sons, William Jr. and Edward James Abbott, accomplished scientists and inventors. The company became known for its worsted weaving yarns and the success of the Hillsborough Mills led to the development of two other industries - Abbott Worsted Mill and Abbott Mill in nearby Wilton. At its peak 300 workers were employed at the Hillsborough Mills with another 200+ at the other two factories. Although the Hillsborough Mills closed about 1970, Abbott family members retained ownership until 1979 and continued to feature prominently in local affairs into the late 20th century. Despite the loss of a wooden dye house, the filling of the canal and incremental changes to the buildings, the complex retains integrity of location, design, setting, materials, workmanship, feeling and association. The mill's period of significance is 1866-1963. The first date corresponds to the mill's original date of construction; the latter reflects the 50 year cut off of the National Register.

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

In 1866 the New Hampshire Legislature granted a charter to the Pine Valley Company for the manufacture of woolen carpets. Hiram A. Daniels, who had served as agent and treasurer of the Wilton Manufacturing Company and president of the Souhegan National Bank, served as agent of the Pine Valley Company. The company erected a large and substantial brick mill in the western section of Milford known as Pine Valley, in close proximity to the Wilton town line. A dam and canal were also constructed to harness the power of the Souhegan River although the dam and canal were destroyed in a storm and flood in October 1869 and had to be rebuilt. The loss to the Company from the flood was estimated at \$5,000 (*Farmers' Cabinet*, 7 Oct. 1869). The Pine Valley Company advertised in the *New Hampshire Register and Farmers' Almanac* in 1869, 1871 and 1872 but did not flourish (Hurd 1885: 563).

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cash capital of \$200,000, in shares of \$100 each (*Farmers Cabinet*, 16 October 1872). In February 1874 the investors sold the property including land, buildings and equipment to Hillsborough Mills of Milford for \$100,000 (Book 416, Page 413). The new company had been incorporated June 27, 1873 (NH Secretary of State, 1915).

An insurance survey conducted of the property in July 1875 shows a three-story brick structure measuring 180' x 50' with a central tower. The property also included a two-story brick machine shop, two-story frame dye and dry house, a single-story brick boiler house, a two-story frame picker house, office, stable and shed. At the time 180 persons were employed. Inside the mill there were seven sets of cards, eleven combers and twenty-eight looms (Barlow 1875). An updated description of the Hillsborough Mills facility was included in an article in *Granite Monthly* in 1889:

The main mill is substantially built, of brick, is 180 feet long, 80 feet wide, and three stories high; near it is a brick picker-house 110 x 50 feet. The mills obtain their power from a canal from the Souhegan river, and a 200 horse-power engine, which has three magnificent boilers. The waterwheel is of the horizontal pattern and one of the best in the state. The company manufactures about one million pounds of carpet-yarn annually, employs one hundred and fifty operatives, and pays weekly, its payroll averaging about \$900. General George Stark, W.W. Bailey, and J.A. Spalding, of Nashua, are on the board of directors.

Nash Simonds served as superintendent of the mill and was responsible for day-to-day operations from 1873 until 1908. Sometime before 1894 an addition measuring approximately 145' x 56' was constructed to house weaving functions (see illustration *Granite Monthly* June 1894). In 1898 a new boiler house was constructed with three new boilers from the Saxton & Wholey Co. of Lowell, Massachusetts (*America's Textile Reporter*, vol. 12, 1898).

At the turn-of-the-century the mill was producing \$400,000 worth of carpet yarns, bed blankets, horse blankets and cassimeres annually. An average of two hundred employees found work here, picked up from Milford and surrounding communities by horse-drawn wagons and transported to their work at the mill (Ramsdell 1901: 289; Wright 1978: 234). The town history praises the operation of the company: "This enterprising and well managed corporation has had a high rank among dividend paying companies of the state" (Ramsdell 1901: 289).

However, the outlook for the company was not as rosy as the history suggests. In June 1901 the mills ceased operations, beginning nearly six months of closure. An industry publication reported that "These mills once did a prosperous and paying business, but of late it is said they have lost money, and it was finally decided to close the plant" (*Fibre and Fabric*, Vol. XXXIV, no. 879, 1901). At a meeting of the stockholders at Stark and Whitney's office in Nashua in June 1901, it was decided to close the mill, sell the property and liquidate assets. According to local newspaper reports, the company was unable to compete with larger companies. The impact of adverse trade conditions in the manufacture of worsted fabrics was the final determining factor leading to the closure and sale.

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The Hillsborough Mills were subsequently sold in November 1901 for \$44,000 (\$20/share down from \$100/share) to a new group which included C.H. Moore, a large manufacturer of woolen goods from West Chelmsford, Massachusetts and W. G. Abbott of Philadelphia (*Cabinet*, 21 November 1901). Immediately, thirteen of the mill's spinning frames were put back into production with others to be brought on line as soon as help could be secured. The mill was set up to make fine worsted yarns for carpets. At the time the mill used wool from South America. After cleaning, it was spun into yarn and then packed into 500 lb. bales and shipped to Philadelphia (*Ibid*). In 1901 an electric light plant was installed, including a dynamo with a capacity of 1,000 lights, replacing the oil lamps which had formerly lighted the factory.

William George Abbott (1854-1926) was a yarn broker and a veteran of the Civil War and the Franco-Prussian War. Although he served as president of Hillsborough Mills, he remained in Philadelphia until at least 1911. William's son, Edward J. (Ned) Abbott (1884-1949), was sent to Milford to represent his father in 1907. In 1908, Nash Simonds, who had served as superintendent of Hillsborough Mills for thirty five years, departed and was succeeded by William G. Abbott, Jr. At the time the Hillsborough Mills manufactured a variety of products including worsted and carpet yarns and woolen yarns made largely from the noils and waste from the worsted process. From this woolen yarn a line of horse blankets was produced. However this wide diversification of products was not profitable and under Edward's guidance the mill was gradually changed over entirely to the manufacture of worsted weaving yarns. Initially production was limited to white yarn. In 1917, during World War I, Edward Abbott developed a new system of dyeing to produce khaki material for army uniforms and fancy worsted cloth for officers' uniforms (*Cabinet*, 7 April 1949).

In addition to dyeing equipment, Edward Abbott also developed other machines including a revolutionary winding machine (traveling spindle winder) and the automatic quiller in cooperation with his brother, William G. Abbott, Jr. (1882-1972). The latter graduated from the Massachusetts Institute of Technology in 1906. In 1908 W. G. Abbott, Jr. succeeded Nash Simonds as superintendent of the mill. W. G. Abbott, Jr. held various patents including several developed during his work for General Electric on the development of the mercury arc lamp and the use of tungsten filament for incandescent lights. He later worked at a government research laboratory in Washington D.C. before returning to the family business after World War I. Sometime between 1912 and 1919 (Sanborn map 1912; Factory Insurance Association 1919), a second two-story addition, this one approximately one hundred feet long, was constructed at the west end of the main mill. Monitors were installed in the roof for additional light and ventilation. The small wooden office which was located adjacent to Main Street was removed after 1941 and a single-story brick annex was constructed west of the former dye house by 1947.

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As early as 1926 the Abbotts had carried on the manufacture of textile machinery in a section of the Hillsborough Mills complex. Later, in 1931, the Abbott Machine Shop was incorporated to manufacture and distribute the designs. It operated out of the former Howard furniture factory in Wilton. In 1932 the Abbott family took over the former Colony-Amidon weaving mill in Wilton to allow the concern to market its own yarn in the form of finished cloth. This became known as the Abbott Worsted Company. The following year, James D. Abbott, Edward's son, became a partner in the company. He graduated from the Massachusetts Institute of Technology that year with a bachelors and masters degree in Chemical Engineering; his thesis was a study of the isoelectric point of wool. Another of Edward's sons, William M. Abbott (1914-2002) was also a graduate of M.I.T. and held various positions in the family textile and machinery businesses as well as serving on the Wilton Board of Selectmen and Wilton School Board.

The Abbott industries in Pine Valley and Wilton were of vital importance to the local economy. The three plants gave employment to hundreds in the adjacent communities and sent Abbott textiles and machinery all over the world (*Cabinet*, 7 April 1949). In 1939 total annual payroll of the Hillsborough Mills, Abbott Worsted Mill and Abbott Machine Shop was an estimated \$500,000. At that time, 300 workers were employed at the Hillsborough Mills. One hundred and fifty were employed at the Abbott Worsted Mill in Wilton village where fine fancy men's worsted wear was made and another 125 found work in the Abbott Machine Shop (Putnam 1939: 84). Of the various cotton and woolen mills established in Milford and Wilton, the Hillsborough Mills were the largest.

The Hillsborough Mills continued to manufacture yarn and thread until after World War II and was the main industry in Milford during this period. Operations moved south after the war. The company finally closed about 1970 although the Abbott family continued to own the Hillsborough Mills complex until 1979. (Of the two other Abbott family-owned mills, the Abbott Worsted Mill later became Label Art and the former Abbott Machine shop is now Riverview Mills).

In 1979 the Hillsborough Mills complex was sold by the remaining members of the Abbott family to the Milford Elm Street Trust (Book 2725, Page 400). One of the partners in the trust was David Blackmer (1927-2002), a prominent American audio electronics engineer. Blackmer was best known as the inventor of the DBX noise reduction system. He was a member of the first graduating class of the High Mowing School in Wilton in 1945 and later studied at Harvard and MIT. In the 1980s, the former Hillsborough Mills was renovated for new uses and tenants. In 1980 the two-story, wood-frame dye house extending from the south side of the main mill building was removed. Over the years, it had been damaged by several fires. In 1985 the canal was filled and replaced by underground steel penstock eight feet in diameter that carry water from the Souhegan River at the dam upstream to the newly-installed hydroelectric turbine generators in the basement of the machine shop at Hillsborough Mills.

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There were also changes made to the remaining mill structures. Also in the 1980s, a staintower was constructed on the rear elevation (southwest corner) of the original mill. All of the existing windows in the mill were replaced by modern 1/1 sash. Across the street, the storage building attached to the south end of the stable was removed due to advanced deterioration.

Among the early occupants of the former mill was Earthworks, which Blackmer founded in the late 1980s to produce studio microphones. Blackmer also operated the Café Pierrot here in the early 1990s. Other past tenants have included Citronics, Datasec Corp., BCE Inc., Amherst Equipment Corporation, IRobot Corp., Sanders Design International, American Crystal Lamps, a fitness and health center, and STI. Today, the tenants include Earthworks, a blacksmith, a woodworking shop, hair salon, and dog groomer.

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Name of Property

Hillsborough Co., NH
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9. Major Bibliographical References

Bibliography (Cite the books, articles, and other sources used in preparing this form.)

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U.S. Census, 1900-1940. Information on the Abbott family.

“Wilton Past and Present”, *Granite Monthly*, vol. 12, 1889.

Wright, Winifred A. *The Granite Town: Milford, New Hampshire, 1901-1978*. Canaan, NH: Phoenix Publishing, 1978.

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 # _____
- recorded by Historic American Landscape Survey # _____

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other
- Name of repository: _____

Historic Resources Survey Number (if assigned): _____

10. Geographical Data

Acreage of Property 13.1 acres

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Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates

Datum if other than WGS84: _____

(enter coordinates to 6 decimal places)

- | | |
|--------------|------------|
| 1. Latitude: | Longitude: |
| 2. Latitude: | Longitude: |
| 3. Latitude: | Longitude: |
| 4. Latitude: | Longitude: |

Or

UTM References

Datum (indicated on USGS map):

NAD 1927 or NAD 1983

- | | | |
|-------------|-----------------|-------------------|
| 1. Zone: 19 | Easting: 277620 | Northing: 4746720 |
| 2. Zone: 19 | Easting: 277640 | Northing: 4746640 |
| 3. Zone: 19 | Easting: 277590 | Northing: 4746400 |
| 4. Zone: 19 | Easting: 277300 | Northing: 4746380 |
| 5. Zone: 19 | Easting: 277310 | Northing: 4746440 |
| 6. Zone: 19 | Easting: 277430 | Northing: 4746480 |
| 7. Zone: 19 | Easting: 277530 | Northing: 4746670 |

Verbal Boundary Description (Describe the boundaries of the property.)

The boundaries of the nominated property include Tax Map 6, Lots 13 & 14 in the Town of Milford Assessor's records.

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Boundary Justification (Explain why the boundaries were selected.)

The two current tax map/lot numbers correspond to the property which remains from the former mill. It does not include the dam upriver to the west in Wilton which once provided power to the mill as the dam is not a continuous parcel with the mill property and was rebuilt in 1989 and thus is not fifty years old.

11. Form Prepared By

name/title: Lisa Mausolf, Preservation Consultant
organization: _____
street & number: 6 Field Pond Drive
city or town: Reading state: MA zip code: 01867
e-mail lmausolf@att.net
telephone: 781-944-5958
date: April 2013

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.
- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.
- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.)

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Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property: Hillsborough Mills

City or Vicinity: Milford

County: Hillsborough

State: NH

Photographer: Lisa Mausolf

Date Photographed: March 16, 2013

Description of Photograph(s) and number, include description of view indicating direction of camera:

Photo 1: View of south façade of original 1866 mill building with Annex visible at extreme right. Camera looking northeast.

Photo 2: View of west and south (façade) elevations of c.1915 and c.1880 additions to west of original mill. Camera looking northeast.

Photo 3: View looking east at north elevation of mill showing Machine Shop addition at left with original Machine Shop at right and rear of boiler house in background.

Photo 4: View looking northeast at west and south elevations of Engine Room and Boiler House sections of main mill.

Photo 5: View looking south at east and north elevations of Boiler House and Machine Shop addition with east end of original Mill visible in distance at right.

Photo 6: View looking N-NE at west and south elevations of Blacksmith Shop

Photo 7: View looking northeast at west and south elevation of Annex

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Photo 8: View looking southwest at remains of stone-lined tail race east of mill complex

Photo 9: View looking east at gate mechanism from former gate house on hillside behind mill.

Photo 10: View looking southeast at north and west elevations of former stable, across the street from mill complex.

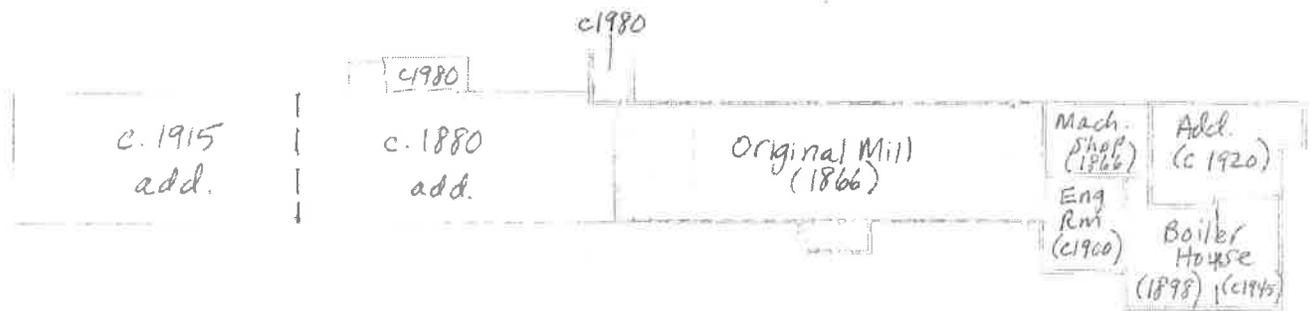
Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 100 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 Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

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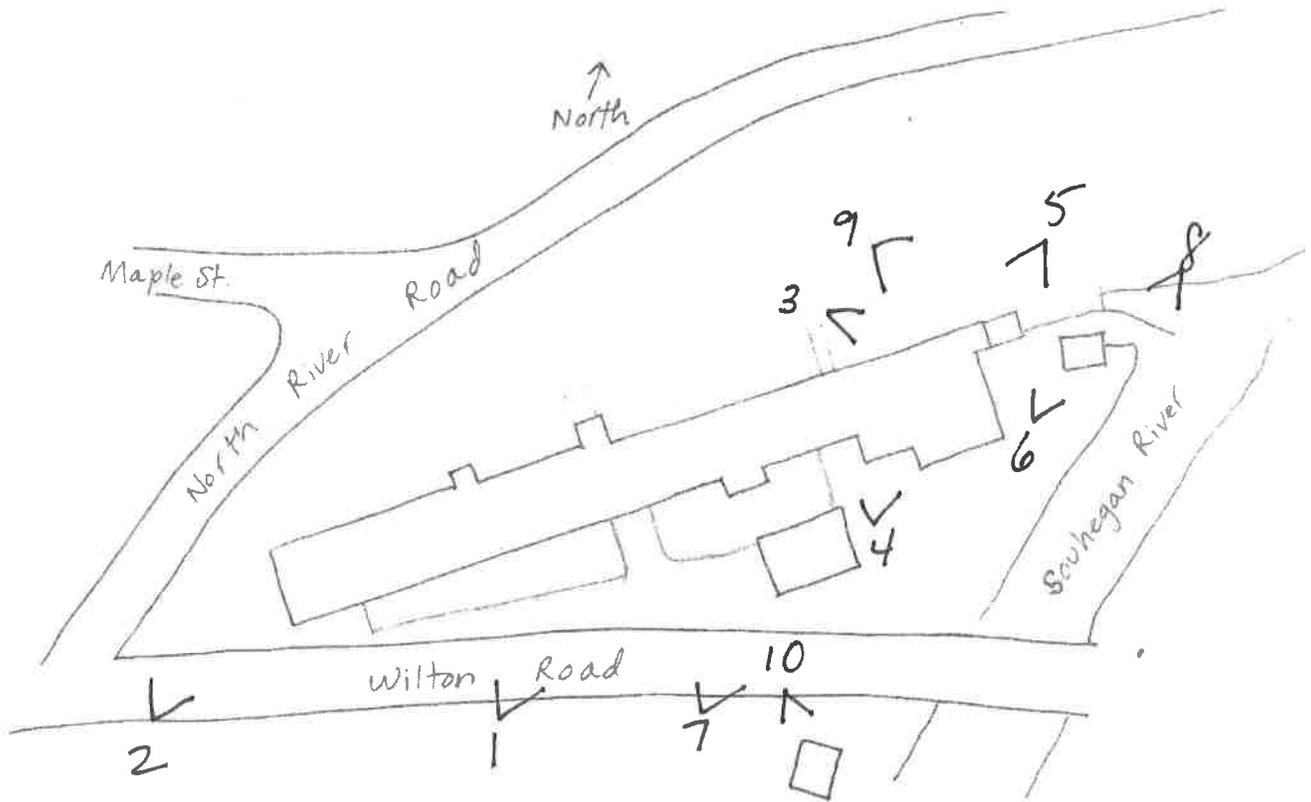
EVOLUTION OF MAIN MILL BUILDING

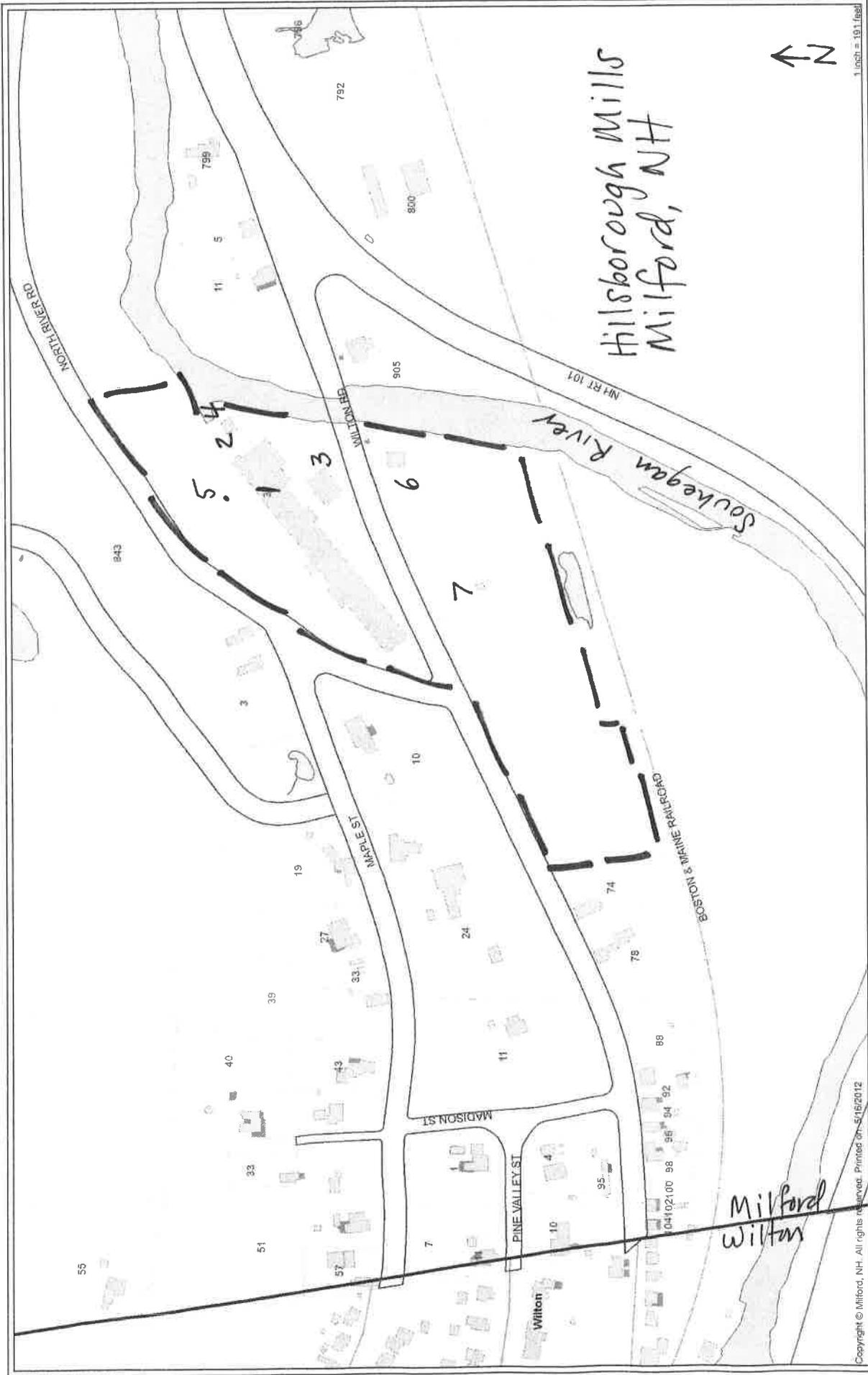


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