1. NAME OF PROPERTY

Historic Name: **HARMONY MILLS**

Other Name/Site Number: HARMONY MILLS HISTORIC DISTRICT

2. LOCATION

Street & Number: 2-15 North Mohawk St., 100 North Mohawk St., 2-4 Front St., 1-35 Cataract St., 3-5 School St., Erie Canal land, Niagara Mohawk Headrace, Dam & Gatehouse Not for publication:N/A

City/Town: Cohoes Vicinity: ___

State: New York County: Albany Code: 001 Zip Code: 12047-2897

3. CLASSIFICATION

Ownership of Property		Category of Property	
Private:	X	Building(s):	___
Public-Local:	X	District:	X
Public-State:	___	Site:	___
Public-Federal:	___	Structure:	___
		Object:	___

Number of Resources within Property

Contributing	Noncontributing
49	2 buildings
1	____ sites
3	____ structures
____	____ objects
53	2 Total

Number of Contributing Resources Previously Listed in the National Register: 51

Name of Related Multiple Property Listing: Harmony Mill Historic District

4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, 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.

Signature of Certifying Official Date

State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

Signature of Commenting or Other Official Date

State or Federal Agency and Bureau

5. 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): _____

Signature of Keeper Date of Action

6. FUNCTION OR USE

Historic: Industry / manufacturing facility
Domestic / single & multiple dwellings
Social / meeting hall
Transportation / water-related canal

Current: Industry / manufacturing facility
Commerce / warehouse & specialty store
Domestic / single & multiple family dwellings

7. DESCRIPTION

ARCHITECTURAL CLASSIFICATION: LATE VICTORIAN: Second Empire, Italianate,
MID-NINETEENTH CENTURY: Greek Revival

MATERIALS:
Foundation: granite ashlar
Walls: red brick
Roof: slate, composition
Other: sandstone lintels, quoins, window heads and sills; cast iron lintels, hood moldings & quoins; sheet metal cornices and eaves; iron roof cresting

Describe Present and Historic Physical Appearance.

Harmony Mills is a complete industrial complex that exemplifies the height of cotton mill technology for the period between the late 1860s and the 1880s, and encompasses the full range of building types. The district contains an intact architectural record of water-powered cotton mill manufacturing and associated nineteenth century housing for factory operatives. The unusually elaborate industrial and domestic structures were mostly constructed from 1836 to 1875 and are unified by their consistency of scale and materials. Most of the buildings are constructed of brick in Italianate and Second Empire styles with gray slate roofs. The mill district, Harmony Hill, is a complete neighborhood in itself, almost a quarter of the total city's land area, spread over a hilltop at the northern edge of town. The resulting environment gives this part of the city of Cohoes a visibly distinctive character. The multiple human relationships within the factory are architecturally expressed in the various buildings, creating a remarkably intact example of what one historian has called "an organic, structured piece of industrial social engineering."[1]

The Harmony Mills district is located in Cohoes, an industrial city of approximately 16,800 people[2] situated on the southwest bank of the Mohawk River, ten miles northeast of Albany and two miles west of Troy. The eastward-flowing Mohawk River drops more than seventy feet over the Cohoes Falls before joining the south-flowing Hudson River just east of the city. The proposed Harmony Mills National Historic Landmark extends along the side of a hill overlooking the Mohawk River just south of the waterfalls. It is bordered on the north and east by the Mohawk River, on the west by the remains of the 1837 enlarged Erie Canal and on the south by the commercial center of the city of Cohoes. The district contains three large textile mill buildings and attached buildings, three associated buildings (the company office building, the boiler house, and a connected picker house/ storehouse/ pump house) and the site of a fourth mill; forty-three tenement houses, and the dam, headrace and gatehouse for the Cohoes Company power canal system. The proposed NHL is part of the Harmony Mill Historic District, entered in the National Register of Historic Places on January 12, 1978. The proposed NHL District includes Harmony Mill No. 3 ("The Mastodon Mill"), entered individually in the National Register of Historic Places on February 18, 1971.

The principal building material throughout the district is a local red brick used in all of the mill buildings and tenement houses, with slate roofs. The earliest mill buildings are Greek Revival in style, with later structures using Second Empire and Italianate designs. An extensive corporate remodeling program in the late 1860s added mansard roofs and towers to older mill buildings to create an unusually elaborate and consistent stylistic presence for the complex. The buildings, structures, and site are considered as contributing resources with the single exception of the boiler house which was built after the period of national significance, 1850-1894.

Mill No. 1 (1837, 1853) The Harmony Manufacturing Company erected its first textile mill in 1837, one year after its incorporation. The four-story brick building was 165 feet long and 50

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[1]Daniel J. Walkowitz, unpublished manuscript of *Worker City, Company Town: The Working Class of Two American Cities in a Maturing Industrial Society: 1855-1884*, quoted in John R. Crowl & Kathryn A. Youngs, "A Self-Guided Tour and Brief History of Harmony Mills Historic District." (Troy, New York: Hudson Mohawk Industrial Gateway, 1978), p.8.

[2]The City of Cohoes is currently experiencing economic difficulties. Indicative of the decline is the reduction of the city's population from over 18,000 in 1990 to its present 16,825. At the peak of its industrial development in 1880, Cohoes had a population of 19,416.

feet wide, with a slate roof. It contained a wheelhouse, flumes, water wheels, and a driving pulley. An adjacent two-story brick building (no longer extant) housed the picker room and repair shop.[3] A simple rectangular brick tower on the western facade of the building faced Lock No. 16 of the realigned and enlarged Erie Canal of 1837-42. The original (1820-25) bed of the Erie Canal lies to the east of the building and was taken over by the Cohoes Company in 1837 and used as a hydraulic canal. The gable-roofed Greek Revival structure retains its rectangular stone lintels and sills, 12/12 wooden sash windows, and a wide-banded brick cornice.

In 1853 the new owners of Harmony Mills (Thomas Garner of New York City and Alfred Wild of Kinderhook, New York) added a new mill to the north of the original building, connecting the two with an arched entranceway and massive tower. The new mill addition, with walls of red brick and a slate roof, was 274 feet long, 75 feet wide, and five-stories high. The Greek Revival mill building retains its original cast iron lintels and sills, 15/15 wooden sash, and a slate gable roof with simple brick cornice band. The Italianate brick tower, located at the junction of Mill No.1 and the original 1837 mill building, has graceful arched brick openings and a shallow hipped roof. Gable-roofed wings at the northeastern end of the new building were used for storage and carding. The building is in good condition and is currently being used for light industry and for commercial purposes. It contributes to the NHL. (The 1837-42 Erie Canal bed and Lock No. 16 are intact, but filled in with topsoil to create a linear city park. The tops of the stone locks are visible. They lie immediately to the west of the proposed NHL boundary and are not considered a part of this nomination.) The original Erie Canal bed, used as a power canal, has been paved over for a parking lot.

Picker House / Storehouse / Pump house. (c. 1853) A series of connected brick buildings to the northeast of Mill No. 1 originally contained the Picker House at the southern end where the bales of cotton were opened and cleaned, and storage space for raw cotton. These brick buildings are one to two stories high with flat and gable roofs, simple Greek Revival stone lintels and sills. The northernmost building was built as the pump house and housing for the attendants. It later also contained the Harmony Mills fire pumper behind the large double door and arched fanlight. This building was connected to Mill No. 1 in the early twentieth century with a second story walkway. The building is in good condition and contributes to the NHL.

Site of Mill No. 2 (1857, 1866). South of Vliet Street and Mill No. 1 lies an open lot, formerly the site of Harmony Mill No. 2. The north section of the mill building was completed in 1857; a southern section and a mansard roofed- fourth story over both sections were added in 1866. At either end of the completed mill there was a five-story wing with a mansard roof. The entire Second Empire style building was severely damaged by fire in 1995 and has been demolished.

The site still contains underground tunnels for the power canal system, as well as an open, abandoned, portion of the earthen-walled power canal system. This section of the second level canal retains the stone arched intakes on the southwestern side that originally led to the turbines of Mill No. 2, a stone spillway into the Mohawk River at the southeastern end to prevent overtopping of the berm, and a cast iron gate control at the southern end, where water was let directly into the third level canal. The site contributes to the NHL.

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[3]Edward Joseph Clark, "An Economic History of the Harmony Mills of Cohoes, New York," Thesis, Master of Business Administration, Siena College, Loudonville, New York, 1952, p. 13.

Mill No. 3 (1866-68, 1872). This mill is locally known as the "Mastodon Mill" because of the nearly complete mastodon skeleton unearthed here during excavations for the foundation of the north section.[4] The building is typical of Victorian textile mill construction, in a massive scale with unusually elaborate decorative Second Empire features. The building runs north and south, 70-76 feet wide, 1,185 feet long, and five stories high, including a usable attic floor under the mansard roof, plus a full basement. The northern half of the mill was constructed in 1866. In 1871-72, the southern section was built with a large central pavilion between the two halves. This central tower rises one story above the main roofs of the mill, projecting slightly beyond the front and rear faces of the main blocks, and topped with a high mansard roof. At each corner of the pavilion is a highly detailed square tower capped with a straight mansard roof and crowned with decorative ironwork. A brick niche on the fifth story contains a monumental bronze statue of Thomas Garner, company president, standing with the plans for the mills in his hand. The statue is marked on its base "Garner." Four six-story stair towers project from the western facade at the approximate third-points of both the northern and southern sections. These originally were topped by convex mansard roof caps, which were removed after damage in a 1938 hurricane. A five-story wing projects at right angles to the rear of the northern section of the mill, originally constructed for the cotton picking-and -opening machinery.

The Second Empire styled Mill No.3 retains its original cast iron quoins, segmental arched window headings and sills in the north section. The same original details are carved of sandstone in the later central and south sections. The elaborate architectural details are omitted on the rear or eastern facade of the building. The doorways and dormer windows throughout the building are fully arched openings. The cornice moldings, and ornate tower details on the central section are sheet metal. The slate mansard roof of the mill is in good condition, as are the original 12/12 wooden sash windows throughout. Several modern loading docks and exterior staircases, encased in siding and metal, have been added to the front of the building on the lower level. An early twentieth century covered walkway bridges North Mohawk Street, connecting the third level of the north end of Mill No. 3 with the third level of Mill No. 1.

Mill No. 3 is architecturally intact, in fair to good condition and retaining most of its original character. Although the convex mansard roof caps are now gone on the central pavilion, it retains the original stylistic grandeur of its highly decorative corner towers, iron roof cresting, and the elegantly detailed fifth story centered with the niche containing Thomas Garner's memorial statue. Some interior details such as cast brackets, cast iron columns, horizontal shafting, pulleys, and leather belting remain in place in portions of the mill, with additional gears removed but still on site. Two original 800 horsepower Boyden turbines (c.1872) remain in their original location in the basement of the southern section, along with their 8-foot diameter intake pipes and tailrace. Mill No. 3 is now leased to a number of companies that undertake a variety of light manufacturing operations and warehouse functions. Only a portion of the mill remains unoccupied. It contributes to the NHL.

Mill No. 4 (1862-1864), the Van Benthuysen Mill. Originally a paper mill, the building was converted after its 1872 purchase by the Harmony Company to manufacture jute and seamless cotton bags. The four-story brick building is located on North Mohawk Street, just south of the site of Mill No. 2. Originally a Greek Revival-style structure with handsome brick pilasters and

[4] Diana S. Waite, "Number 3 ('Mastodon') Mill 1868 and 1872," *A Report of the Mohawk-Hudson Area Survey*, Robert Vogel, ed., Smithsonian Studies in History and Technology, Number 26 (Washington DC: Smithsonian Institution Press, 1973) p. 99.

cornice, the mill was renovated in 1872 to match the other Second Empire style buildings in the Harmony Mills complex, adding a new dormered mansard roof to create a fourth story. The six-story Italianate corbeled tower that dominates the structure with its massive angular cornice and mansard roof was apparently added at this same time. The building retains its gabled dormers, rectangular cast iron lintels, 12/12 wooden sash, and sheet metal cornice and brackets. Perched on the edge of the hill overlooking downtown Cohoes, the mill clearly delineates an entrance to the Harmony Mills district. The building is currently in fairly good condition and is unoccupied. It contributes to the NHL district.

Office and Sunday School Building (c. 1853). This solid Italianate two-story brick building is set back from North Mohawk Street at the northwestern corner of the intersection of that street with Vliet Street. The building appears to have been built at the time of the construction of Mill No. 1 (1853). An 1856 map, "North Half of Cohoes," shows a building of the size and configuration of this building located on the site. The company's offices were located on the ground floor of the building, with suites for Robert and David J. Johnston, mill superintendents, as well as other company officials. Upstairs was a meeting hall large enough to seat 800, complete with frescoes, pictures, maps, an organ, and a small library for the employees of the Harmony Company.[5] During the winter of 1853-54, the Harmony Mill Union Sabbath School was established in this space. The company provided nondenominational Christian and moral instruction to the workers. David J. Johnston served as superintendent of the Harmony Union School for thirty-nine years.[6] The meeting hall was also used for lectures, festivals, and public meetings of local groups such as temperance societies. The building is as elaborate as the other mill structures, with center-gabled entrance on the north, a prominent two-story blind arch on the eastern facade, an ornate entrance arch on the Vliet Street facade, roof brackets, and 6/6 arched windows with cast hoods. It currently houses an empty storefront, rental offices for the mill complex, and an apartment for the caretaker of the complex. The building is in good condition and contributes to the NHL nomination.

Boiler House (c. 1911). A modern industrial brick building with flat roof and a tall concrete chimney houses the heating plant for the mill complex. It was constructed circa 1911 and is non-contributing due to age, being built outside the period of significance.

Worker housing (1853-1865). (all contributing)
3-5 School Street
1-35 Cataract Street
2-4 Front Street
2-15 North Mohawk Street

Just north of Mill No. 3, an intact neighborhood of forty-three tenements is located in the area bordered by Front Street on the south, Cataract Street on the east, School Street on the north and North Mohawk Street on the west. The earliest of these modest two- and three-story brick houses were built by the Harmony Mills Company in 1853. In 1865, additional housing in this area was constructed for twenty families. All of these dwellings are well-preserved examples of

[5]Richard Allen, "Power Canals 1834-1880," *A Report of the Mohawk-Hudson Area Survey*, p.114. "Harmony Mills Offices," *Cohoes Cataract*, April 3, 1869.

[6]Clark, op.cit. 20.

urban worker housing in a compact ensemble of double houses and rowhouses, just steps away from the mill buildings. The older houses are Greek Revival in style, with rectangular cast iron and stone lintels, 6/6 wooden sash, and frieze-band windows. The 1865 buildings contain cast iron Italianate lintels or Second Empire mansard roofs and dormers. A recently restored row of five three-story Second Empire brick rowhouses, located on the southwestern corner of Cataract and School Streets, was built c. 1869.[7] The northern end of Cataract Street provides access to a public scenic overlook facing northward to the Cohoes Falls and the Mohawk River gorge.

This neighborhood retains an exceptional integrity of form, massing, materials, and style. All of the houses in this section are in good condition and have preserved much of their original appearance, with the minor exception of concrete entrance steps that have replaced the original wooden stoops. Many of the owners were formerly company workers who were able to purchase their homes from the Harmony Mills Company when it went out of business in 1932. The buildings contribute to the NHL district.

Additional housing for mill workers was provided by the Harmony Mills Company to the west of the mill complex, on seventy acres of farm land purchased in 1856. This area, eventually known as Harmony Hill, was completely developed by the Harmony Mills company with a full range of housing designated for the various economic levels of mill workers. Cut off from downtown Cohoes by a steep cliff to the south and bordered by the Erie Canal on the east, the streets of Harmony Hill all converge on Vliet Street, providing easy access for the residents down the hill to their work at the mills. Altogether, Harmony Mills eventually owned 800 tenement houses, five large boarding houses and a company store in this area.[8] The Harmony Hill neighborhood of single, double, detached and row houses, churches, shops and schools is included within the boundaries of the National Register of Historic Places listing for Harmony Mills Historic District, as is the David J. Johnston mansion on Johnston Avenue. Large company boarding houses for unmarried female workers, originally located on either side of Vliet Street west of the Erie Canal, have been demolished, leaving large empty lots that separate the remaining resources from the mills. This housing is not included within the boundaries recommended for the NHL because it is not contiguous to the mills nor as visually connected as those houses in the area bordered by Front, Cataract, School and North Mohawk Streets.

Cohoes Company Power Canal Raceway (1834). The 120-foot head of the Cohoes Falls was harnessed by the Cohoes Company with their construction of a dam across the Mohawk River approximately 4500 feet northwest of School Street. The headrace flowed south to a bridge at the intersection of School and North Mohawk Streets, then roughly parallel to North Mohawk Street to the west of Mill No. 1. The second level of the power canal was diverted to the southeast from this first level at the Pump House across Mohawk Street from the northern end of

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[7] A map of the north half of Cohoes published in 1856 in Beers, S. N. and D. G., *New Topographical Atlas of the Counties of Albany and Schenectady, New York* shows five structures on the east side of Cataract Street and five structures on the west side of the street. One structure, no longer extant, is shown at the northeast corner of the intersection of Cataract and School Street, possibly the school that was at one time located on Cataract Street. The 1856 map shows a solid block of housing on the east side of North Mohawk Street, extending from just north of what was is now known as Front Street. The structure shown on the northwestern corner of Front Street and N. Mohawk Street is no longer extant.

[8] Daniel J. Walkowitz, *Worker City, Company Town: Iron and Cotton-Worker Protest in Troy and Cohoes, New York 1855-84* (Urbana and Chicago: University of Illinois Press, 1978), p. 57. The number of tenements range from 700 to 900, depending upon the source cited. A local historian, William Bean, in his 1873 publication, *The City of Cohoes, Its Past and Present History, and Future Prospects, Its Great Manufactories*, lists 900 tenements, with 600 having been erected since 1860. Edward J. Clark, in his "Economic History of the Harmony Mills," says Harmony Mills had 700 tenements.

Mill No. 3. The water eventually moved through ten canals on six different levels through the city of Cohoes.[9] These lower canals are all covered over now except for the small section to the east of Mill No. 2. The raceway, however, remains in active use from the dam on the Mohawk River south to School Street where it turns to the east and passes through the hydroelectric generators built by the company in 1911. The power canal raceway still follows its 1834 course from the dam south to School Street. In 1911, the western bank was cut away to widen the canal to provide additional water power, and at School street the water was diverted to the east to pass through a new hydroelectric plant. The earth-banked power canal raceway is currently 2500 feet long and 100 feet wide.[10] It contributes to the NHL.

Generator Plant (1911). A rectangular brick generator plant is located immediately north of the intersection of Cataract and School Streets, bridging the raceway. It was built in 1911 to generate electricity directly from the falls. The plant is fully operating and is in excellent condition. It is noncontributing to the NHL because it was built after the period of national significance.

Power Canal Bridge (1874). A cast iron truss bridge crosses the power canal raceway approximately 2000 feet south of the dam. It is marked "Ohio Pat. 1874 W'ght Iron." Typical of the hundreds of bridges that once crossed the canals of Cohoes, this structure retains a high degree of integrity and it contributes to the NHL.

Cohoes Company Dam (1866). The low, solid stone masonry dam stretching 1,443 feet across the Mohawk River was constructed by the Cohoes Company in 1865 on the site of two earlier dams built in 1831 and 1839. It was designed and built under the supervision of engineer William E. Worthen of New York.[11] The dam was raised several feet in 1911 when the system was adapted for hydroelectric power transmission. The structure is intact, in excellent condition, and contributes to the NHL.

Cohoes Company Gate House (1866). The gate house at the head of the power canal was built in 1866 to control the flow of water from the Mohawk River into the canal. It was designed by William Worthen of New York and David Van Auken, the architect-engineer who designed Mill No. 3, also built in 1866. According to local historian Arthur Masten, the dam, head gates, and gate house altogether cost $180,000.[12] The building is T-shaped, with the top of the "T" (the central part of the building) facing northeast onto the dam across the Mohawk River. Two-story brick towers flank either end of this section, connected with one-story gable-roofed sections. Decorative corbeled brick arcades run across the building at the cornice line and along the beltcourse level. The first-story windows are 6/6 sash within narrow hooded and bracketed brick arches. Originally there was a central two-story tower with crenellation and the side towers had steep hipped slate roofs with iron ridge cresting. These have been removed. A slightly higher, one-story brick addition extends to the southwest beyond the original tail of the "T". It is more Colonial Revival in style, with a flat roof and raised brick parapet. This wing houses the additional gates required by the widening of the canal in 1911 when it was converted for direct

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[9]Richard S. Allen, "Power Canals 1834-1880," A Report of the Mohawk-Hudson Area Survey, p. 115. Three levels of the power canal were never completed, although some work was done on each portion.

[10]The width of the original power canal is unknown at the time of this report.

[11] Richard S. Allen, "Power Canals 1834-1880", *A Report of the Mohawk-Hudson Area Survey,* p. 115.

[12] R. Carole Huberman, "Head Gate House 1866", *A Report of the Mohawk-Hudson Area Survey,* p. 117.

hydroelectric transmission. The building sits on stone masonry foundations, is in good condition and retains its historic and architectural integrity. It contributes to the NHL district.

8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:
Nationally: X Statewide:___ Locally:___

Applicable National Register Criteria: A_X_ B___ C___ D___

Criteria Considerations (Exceptions): A___ B___ C___ D___ E___ F___ G___

NHL Criteria: 1

NHL Theme(s): V. DEVELOPING THE AMERICAN ECONOMY
1. Extraction and Production

VI. EXPANDING SCIENCE AND TECHNOLOGY
2. Technological Applications

Areas of Significance: Industry, Social History

Period(s) of Significance: 1850-1894

Significant Dates: 1853, 1866, 1872

Significant Person(s): N/A

Cultural Affiliation: N/A

Architect/Builder: D. H. Van Auken, C.E.

Historic Contexts: XVIII. TECHNOLOGY (ENGINEERING & INDUSTRY)
Subtheme G (Industrial Production Processes)

State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.

SUMMARY

From the late 1860s through the 1880s, the Harmony Mills Company was one of the largest American producers of cotton fabric for printed calicoes and fine cotton muslins. The mill complex is largely intact, with a full range of mill buildings, housing, and the power canal system. The buildings are unusually elaborate industrial buildings, with the principal mill buildings all being completed in the Second Empire style. The Harmony Mills district in Cohoes, New York has been described as "one of the finest examples of a large-scale textile mill complex outside of New England."[13] The mills were owned from 1850-1910 by Thomas Garner & Company of New York City, which also owned eight mills and two printworks in upstate New York and Pennsylvania.[14] They were managed by a British father and son, Robert and David J. Johnston, during the period of greatest significance, 1850 to 1894.

Harmony Mill No. 3 was the largest individual cotton factory in the world when it was completed in 1872. The building was over 1,100 feet long when complete and contained 130,000 spindles and 2,700 looms, employing 2,500 operatives to produce 700,000 yards of cotton fabric per week. [15] Known locally as the "Mastodon Mill" because of the discovery during its construction of a complete prehistoric mastodon skeleton, this building also received attention for its technological design and massive architectural scale. The eminent British textile engineer, Evan Leigh, published plans of Mill No. 3 in both the 1870 and 1873 editions of his book, *The Science of Modern Cotton Spinning,* citing it as one of the best examples of contemporary technical achievements in American cotton mill design.[16] Leigh also printed detailed drawings of Mill No. 3's powerful turbines and its particularly American system of transmitting the drive to main line shafts on each floor by means of leather belts.

The hydraulic canal system that powered the Harmony Mills was developed by the Cohoes Company to harness the natural power of the nearby Cohoes Falls. With the support of Canvass White, Erie Canal engineer, Stephen Van Rensselaer, Hugh White, Peter Remsen, David Wilkinson and others, the company eventually controlled the entire waterpower of the Mohawk River from half a mile above to one mile below the falls, with a total fall of 120 feet. The canal system was typical of the canals already established in Lowell, Massachusetts; Peterson, New Jersey; and Nashua, New Hampshire; but it was uniquely adapted to the complex requirements of the hillside terrain of Cohoes. The seven fully completed Cohoes canals used the water six different times before returning it to the river, and related tunnels for bypassing mills and

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[13] Waite, op. cit. p. 98.

[14]"Obituary", *Cohoes Cataract,* November 2, 1867; "Harmony Mills Offices" *Cohoes Cataract,* April 3, 1869. Robert Johnston was the general manager of all the mills operated by the Harmony Company in Cohoes, Rochester, Newburgh, and Little Falls, New York, and in Reading, Pennsylvania.

[15]Samuel Reznick, "Cohoes: the Historical Background 1811-1918," in Robert Vogel, *A Report of the Mohawk-Hudson Area Survey,* 124; *Cohoes Cataract*, October 23, 1872.

[16]Waite, op.cit. 102, 104.

controlling the water cross under each other on multiple levels.[17] Company agent Truman G. Younglove was reported to have perfected an ingenious scientific system for measuring the exact amount of power used by each manufacturer on the power canals; they were charged $20 per horsepower per annum.[18] The Garner Company, owner of the Harmony Mills, eventually controlled the Cohoes Company. The hydraulic power company was maintained as a separate business, but many of its directors and officers also held positions in the Harmony Mills in a complex system of interlocking directorates.

The Harmony Mills Company expanded rapidly during the Civil War, taking over all the cotton factories in the city of Cohoes. Its domination of the national market and its profitability were particularly notable by the ambitious building expansion program the company embarked upon in 1872-73, at the height of a severe national economic depression. The company developed substantial worker housing from the time of its inception, eventually managing more than 700 well-maintained tenements that they constructed on the seventy acres of Harmony Hill. The company maintained its own police force, repair crews, street paving, garbage pickup, and sanitary improvements. As late as 1937 the company owned three-fourths of the city of Cohoes.[19] The company contributed to the construction of schools and churches of all faiths in the village, and it founded the Harmony Union Sunday School for the benefit of their workers. The patrimony of the company and the personal involvement of its local managers were important factors in the generally positive relationship between workers and management.

Robert Johnston, general manager of the Harmony Mills, was inseparable from the success of the Harmony Mills. Unheralded by most historians, Johnston became one of the "foremost leaders in the development of the cotton industry in this country."[20] A master mule-spinner, he immigrated to America from England in 1830 and worked with Samuel Slater, who reportedly admired his spinning. In 1850 Johnston took over the management of Harmony Mills. Johnston regularly returned to England to purchase up-to-date machinery and to recruit skilled textile workers. In addition to English, Scots, and Irish workers, the company began to recruit French Canadians after the expansion of Mill No. 3 in 1872.

By constantly improving the technology of the manufacturing process, the cotton manufacturers of the nineteenth century were able to produce ever-larger quantities of cloth with fewer, less-skilled workers. The Harmony Mills company appears to have genuinely concerned itself with the workers' needs during economic downturns and on several occasions chose to cut wages rather than close down or lay off employees during economic downturns. The complex and uneasy balance between technology, workers wages, and economic competition was accomplished primarily through the personal goodwill and respect held in common by the Johnstons and their workforce. Most disagreements were worked out in person without resort to worker unions. A more vocal union presence in the 1880s, a more acculturated immigrant workforce and renewed economic competition from new Southern textile mills hardened positions and precipitated labor unrest. The Harmony Mills strike of 1880, and more particularly

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[17]Allen, op. cit. 115-116.

[18]*Cohoes Cataract*, October 5, 1872.

[19]Clark, ibid. 27-28.

[20]Clark, ibid. 19.

the strike of 1882, got the attention of national labor leaders and were featured prominently in national news.[21]

The Harmony Mills is an intact industrial complex of high integrity with the potential to reveal many nuances in the complicated dance of employee / management relationships during the rapidly expanding days of the capitalist economy in the nineteenth century. It is nationally significant as one of the most elaborately detailed examples of textile mill architecture and one of the most complete mill complexes remaining intact. The production of Harmony Mills was on the same vast scale as the textile mills of northern New England that produced common fabrics such as shirting and sheeting, but the family hiring practices and corporate housing patterns of Harmony Mills are perhaps more typical of the Rhode Island system. The technology of both the canals and the mills shows derivations from the work of the Boston mill associates, but it also contains strong components directly influenced by British sources.[22] In this and the highly self-conscious architectural design of the complex as a single piece, the Harmony Mills follows its own unique path.

HISTORY

Cohoes first developed as an industrial center after the completion of the Champlain Canal in 1823 and the Erie Canal in 1825. The two canals joined at the southern end of Cohoes and connected to the Hudson River, providing a waterways system that linked the resources and markets of Canada, the Great Lakes, and the Atlantic seaboard.[23] The falls of the Mohawk River, extending approximately one thousand feet from shore to shore a few miles west of the junction of the two rivers, were early recognized for their potential as a source of power for the industrial development of the area. In 1826 the Cohoes Company was incorporated. They built a wooden dam across the Mohawk (1831-1832) and developed the first power canals in 1834.[24] The company eventually gained control of the entire waterpower of the Mohawk River from half a mile above to one mile below the falls, with a total fall of 120 feet. The water was diverted through an interconnected system of ten canals that used the water six different times before returning it to the river.[25] All the factories and mills of Cohoes developed along this system of power canals in order to use the inexpensive hydraulic power it offered. Engineers from England, Europe, and Japan reportedly came to study the efficiency of this system.[26]

Canvass White, an engineer on the construction of the Erie Canal, developed the Cohoes power canal system with the support of his brother Hugh White and investors such as Stephen Van Rensselaer, Peter Remsen, and David Wilkinson. The Cohoes Company was controlled by the Garner Company after they purchased the Harmony Mills in 1850. The hydraulic power

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[21]Walkowitz, op.cit. 5.

[22] Duncan Hay, director of Museum Services, National Park Service, Boston, in conversation with Rachel Bliven, July 29, 1998.

[23]Reznick, op.cit. 121.
[24]Allen, op.cit. 113, 114.

[25]Allen, op.cit. 114-115.

[26]*Cohoes Cataract,* October 5, 1872; Clark, op.cit. 9-11.

company was maintained as a separate business, but many of its directors and officers also held positions in the Harmony Mills in an intricate system of interlocking directorates.

The first cotton factory in Cohoes, the only one at the time in Albany County, was Prescott's factory of the Cohoes Manufacturing Company. Built in 1817, it was destroyed by fire in 1829 and did not reopen.[27] The local textile industry was resurrected in 1832 when Egbert Egberts and two associates, Timothy and Joshua Bailey, opened a cotton knitting mill, using exclusively water power provided by the Cohoes Company. They perfected the first water-powered knitting machines, giving birth to a new industry in the United States. Cohoes went on to become a major knitting center for cotton and woolen goods, particularly stockings and long underwear, well into the twentieth century.[28]

The Harmony Manufacturing Company was incorporated in 1836, with Peter Harmony as its first president. The following year a substantial mill was constructed between the original Erie Canal bed and the new realigned and enlarged canal of 1837. It began producing cotton cloth with 250 employees, but was poorly capitalized and unprofitable. Between 1837 and 1850, in fact, the company had only one year, 1838, when its books showed a profit.[29] In 1850, the company was sold at a sheriff's auction. The successful bidders were Thomas Garner, a merchant of New York City, and Nathan Wild of Kinderhook, New York. Garner and Wild were convinced to buy the Cohoes mill by Robert Johnston, the superintendent of a cotton cloth mill owned by Wild's father, Alfred Wild, in Valatie, New York. Soon after their purchase of the Harmony Manufacturing Company, Garner and Wild hired Johnston and brought him to Cohoes to supervise the mill operations there. It was a smart move; Johnston brought a wealth of experience to the new job.

Robert Johnston began his work in cotton mills in 1814, at the age of seven, in Dalston-Carlisle, England. By the time he came to America in 1830, he was already an expert mule spinner. He was initially employed by the Providence Steam Mills in Providence, Rhode Island. It was while he was working in a small mill near Providence that he later claimed Samuel Slater, "the father of American cotton spinning," would sit for hours at the end of Johnston's mules and watch him spinning.[30] In 1834 Johnston moved to Valatie, New York to manage Nathan Wild's cotton mill. While there, in 1838, Johnston made the first *mousseline-de-laine* (a worsted fabric) ever produced in America.[31] Johnston's "large practical knowledge and a rare intuition", his "nervous energy and tireless zeal" quickly turned the fortunes of the Harmony Mills under his management. The great success experienced by Harmony Mills during the next forty years can be directly attributed to Robert Johnson's technical expertise and managerial skills. During much of that time, he shared the management of Harmony Mills with his very able son, David J.

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[27]Clark, op.cit. p. 7; Robert Grieve and John Fernald, The Cotton Centennial. 1790-1890 (Providence RI: J. A. & R. A. Reid, 1891), p. 173.

[28]Reznick, op.cit.122.

[29]Clark, "op.cit. 13.

[30]Howell & Tenney, op.cit.953; Clark, op.cit. 19. This would have been in 1835 or before, because Slater died in that year. It is conceivable that Johnston trained under Slater as one of that "generation of millwrights and textile workers [that] was the catalyst for the rapid proliferation of textile mills in the early 19th century." See, Thomas Dublin, "Beginnings of Industrial America," *Lowell: The Story of an Industrial City* (Washington, D.C.: U.S. Government Printing Office, 1991), 24-25.

[31]Walkowitz, op.cit. 56.

Johnston. Beginning as an office clerk at age sixteen, David John was named general manager by the company in 1866 after his successful supervision of the design and construction of Mill No. 3.

By 1853 Harmony Manufacturing Company, now renamed and incorporated as Harmony Mills, had prospered so greatly under the leadership of Robert Johnston that a new and larger mill (Mill No. 1) was built and attached to the north end of the original 1837 mill. The four-story addition with an attic had a capacity of 30,000 spindles and employed 500 hands. In 1857 a third mill (No. 2) was built on the southern side of Vliet Street. Only half of the original plan was constructed at first, and after running it for five years, the building was extended and enlarged to a capacity of 48,000 spindles and 800 hands. (Mill No. 2 was severely damaged by fire in 1995 and demolished.)

To accommodate the influx of new workers for these mills, the company built the simple Greek Revival-styled brick tenements on Cataract Street in 1853. An 1856 map of the northern half of Cohoes shows a solid block of housing on North Mohawk Street, extending northward from Front Street, five units on Front Street itself, and five structures on each side of Cataract Street.[32] That same year the company purchased Hugh White's farm of seventy acres on Prospect Hill, southwest of the original mill. The area was laid out in streets and building lots, and tenements and private homes were soon built. The *Cohoes Cataract* of January 31, 1857 noted a contract with John Blair and W. Wolford for twenty-two brick buildings on Harmony Hill.

Ogden Mills, built by the Cohoes Company at the southern end of their hydraulic canal in 1844, was purchased by Harmony Mills and enlarged in 1860. (This mill still stands several blocks south of the rest of the proposed NHL district.) The Strong Mill, built in 1849, was acquired by Harmony Mills in 1865 and remodeled as Mill No. 5. It was enlarged again in 1873 to hold 13,000 spindles. (The foundations of this building and portions of its power canal system remain on the site, just south of Mill No. 3.) These purchases made Harmony Mills the sole owner of cotton manufacturing mills in Cohoes. By 1861 Garner & Co. had invested $2,500,000 in the mills, tenements, and other improvements of "this busy hive of manufacturing industry, ... a small village of themselves."[33]

Harmony Mills flourished during the Civil War, running 2,101 looms in their three mills to make the white cloth for printed calicoes. (The actual printing was done at Mr. Garner's printworks in Newburgh, and the finished calicoes were then stored in his New York City warehouses.) Harmony Mills operatives worked on a full time schedule and their wages were increased to return to pre-Panic of 1857 standards. Robert Johnston returned to England early in 1862 on "business connected with cotton interests". No doubt part of that business was the 1400 looms in Harmony Mills later noted as stock bought in England.[34] The mills continued to run through the winter months, and in December 1863, the local newspaper noted that Cohoes had more cotton

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[32] S. N. and D. G. Beers, *New Topographical Atlas of the Counties of Albany and Schenectady, New York,* 1856.

[33] *Cohoes Cataract,* March 2, 1861.

[34] *Cohoes Cataract,* November 8, 1862, January 25, 1862.

manufacturing machinery in motion than Lowell, Massachusetts, or "any other single manufacturing place in the Union."[35]

By 1864 the Harmony Mill buildings and worker housing covered 15 acres, "constituting the largest and most complete cotton manufacturing interest in the State, and one that has but few rivals in the United States." In the first eleven months of that year 1,400 employees had turned 6,634 bales of raw cotton into 18,884,000 yards of cloth on which the company had paid an internal revenue tax of $150,000.[36] By 1869 the aggregate number of spindles operated by Harmony Mills in Cohoes was 203,000 -- more than operated by any other single United States firm or corporation in any one locality. Two-thirds of the 3,100 employees were female, and the annual payroll totaled almost one million dollars.[37]

Between 1866 and 1872, Harmony Mills built Mill No. 3, the premier cotton textile mill in this country when constructed. This mill alone contained 130,000 spindles and 2,700 looms, making it America's largest complete cotton mill.[38] Cotton manufacturers in this country and abroad came to Cohoes to study its belt-driven power system and to gawk at its prodigious scale of production.[39]

The mill was constructed in two stages, beginning with the northern half in 1866. Construction was delayed by the discovery of the perfectly preserved skeleton of a prehistoric mastodon during excavations for the foundations, inspiring the nickname still carried by the building, "the Mastodon Mill". The company displayed the bones as they were dug up and eventually donated them to the New York State Museum where the recently restored skeleton is now on prominent display in the lobby. Construction on Mill No. 3 proceeded around the clock with men working double shifts and the first 565-foot section of the mill went into full operation by the beginning of 1869. The building was extended to the south in 1872, doubling the factory floor space with a central tower and a mirror image of the northern portion of the mill. This extension flaunted the financial success of the company with the use of carved sandstone window lintels instead of the less expensive cast iron lintels used in the northern portion of the building. Ironically the stone work has not weathered nearly as well as the cast iron.

A good contemporary description of Mill No. 3 was provided by Cohoes historian William Bean in his 1873 publication, *The City of Cohoes, Its Past and Present History, and Future Prospects: Its Great Manufactories*. Bean provided not only considerable details of what the mill looked like inside and out but much about the technical operation of the mill, which he regarded as a contemporary standard for advanced mill technology. It was, according to Bean's pronouncement, "the largest cotton mill in this country, and probably in the world." Describing the mill, Bean wrote:

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[35]*Cohoes Cataract,* December 19, 1863.

[36]Ibid. December 10, 1864.

[37]Clark, op.cit.26.

[38]Clark, op.cit.29.

[39]Clark, op.cit. 25; Waite, op.cit., 102, 104.

> Mill No. 3 ... is the pet and pride of the Company, and is indeed a model Mill. ... It comprises a large and lofty tower, surmounting and connecting two immense structures or wings, and forming one grand building 1,185 feet in length, 70-76 feet wide and five stories in height, exclusive of the towers -- which are eight in number, of handsome design and finish, and all about 128 feet high, and the entire building is completed with all the massiveness and beauty that modern architecture can impart."[40] The central tower, being "absolutely fire-proof," was used for "the deposit and safe keeping of books and valuable papers, and for measuring and baling the manufactured products of the company.[41]

Bean's description noted that the central tower was to be decorated with "a colossal bronze statue of the late Thomas Garner, one of the principal founders and proprietors, now being prepared by the Ames Manufacturing Company, Chicopee, Mass." (Garner died November 2, 1867.) Bean erroneously attributed the sculpture to "Millman, the great artist of Boston." Company official Silas Owen identified the sculptor as "Millmore, the celebrated artist of Boston" in his 1883 account of Harmony Mills. [42] Research to date suggests that the probable artist was the prominent Boston sculptor, Martin Milmore (1844-1883) who specialized in memorial sculpture.[43] The larger-than-life statue of Garner was typical of the work Milmore did, and the date of the Garner work falls well within Milmore's productive lifetime. The statue was installed in its niche in November 1875, with little fanfare due to a national depression.[44]

The most noteworthy of the equipment installed in Mill No. 3 were the "great vertical turbines, at the time among the largest in the United States."[45] Manufactured by the Holyoke [Massachusetts] Machine Company, the turbines converted waterpower to mechanical energy to operate a belt-driven system used for the wide range of equipment necessary to run the gigantic textile mill. Three smaller turbines were placed in the northern end of the mill. The two largest turbines, 800-horsepower each, with 102-inch-diameter runners, were placed in the lower level of the south end of the mill with their shafts running vertically. Water from the second level of the Cohoes Company power canal system was conveyed through 8 foot-diameter cast iron cylinders from the bulkhead to the turbines, with a drop of twenty-one feet before its discharge into canal level 3. Bevel gearing transferred the power from the vertical shafts of the turbines to a common horizontal shaft that drove 12-foot diameter pulleys to spin two-foot wide leather belts radiating throughout the building, the largest measuring nearly 200 feet in length to the fifth floor. In all, Mill No. 3 contained five miles of shafting and 13 miles of belting that powered 2,700 looms and 130,000 spindles capable of producing 100,000 yards of cloth every sixty hours. The building

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[40]Bean, William, "The City of Cohoes, Its Past, Present, and Future! The Harmony Manufacturing Company. The Largest Cotton Interest in the World!" *Cohoes Cataract,* October 23, 1872. His description of the interior of Mill #3 is reprinted in Crowl and Youngs, "A Self-Guided Tour and Brief History of Harmony Mills Historic District," pp.10-14.

[41]Crowl and Youngs, op.cit. 11.

[42]Howell & Tenney, op. cit., 954.

[43]*The Lincoln Library of Essential Information* (Buffalo: The Frontier Press Company, 1955), 1596-1597.

[44]"The Garner Statue", *Cohoes Cataract*, November 22, 1875.

[45] E.F.C. Somerscales, "The 102-inch Boyden Hydraulic Turbines at Harmony Mill No. 3, Cohoes, New York," American Society of Mechanical Engineers brochure, May 28, 1975.

also contained rooms designated for picking, carding, spooling and warping, and fireproof packing rooms for the finished cloth.

The Boyden turbines installed in Mill No. 3 in 1873 are two of the oldest surviving mill water turbines that remain intact in their original installation. Their design is of the Boyden outward flow type, the first turbine to be manufactured in quantity in the United States and a standard in the textile industry from 1844 to about 1880. They were the largest of the 32 Boyden turbines built by the Holyoke [Massachusetts] Company between 1873 and 1876. The American Society of Mechanical Engineers designated the turbines as National Historic Mechanical Engineering Landmarks in 1975 as "probably the largest and nearly the most powerful water turbines ever built in the United States to supply direct mechanical power to a manufacturing plant."[46]

The Van Benthuysen Paper Mill, the last major mill acquisition by Harmony Mills, was bought in 1872, the same year that Mill No.3 was enlarged. It was expanded and converted for making seamless cotton bags.[47] Renamed Mill No. 4, the Greek Revival brick building was renovated to match the remaining mills in the complex, adding a fourth floor under a mansard roof and a corbeled tower. Underneath the mill is an artesian well 2,100 feet deep, unsuccessfully sunk by the Van Benthuysens in hopes of getting pure water for their manufacture of white paper.

Robert Johnston returned again to England in the winter of 1866-67 to purchase new and improved machinery "of the most approved style in use in the French factories." He also was busy recruiting skilled textile workers from the manufacturing districts to work in the new mills. More than 5,000 operatives and their families sailed to New York the following spring in three emigrant ships chartered by the company. The company paid for their travel arrangements through to Cohoes, and new tenement houses were built on Harmony Hill for their arrival.[48] In addition to Johnston's recruiting of English and Irish textile workers, the Harmony Mills began to advertise for and engage French Canadian workers in the years after completing the expansion of Mill No. 3.

Tenement houses were built in 1865 on Cataract Street in the Italianate style to accommodate the increasing workforce. Between 1866 and 1869, the Harmony Mills Company spent nearly $300,000 to transform the open fields of Harmony Hill into a thriving village of 6,000 people. The hillside above the mills was graded to create 80-foot-wide streets with a 40-foot macadamized roadbed, ten-foot sidewalks on either side, and flower beds or lawns enclosed in neat picket fences between the houses and the sidewalk. Men employed by the company cleaned the streets regularly, collected the garbage, and maintained the 700 tenements. The houses contained four to ten rooms each and were rented to company employees for three to eight dollars a month. Equivalent housing elsewhere in the city could cost as much as twenty dollars per month and frequently consisted of ill-constructed and poorly maintained wooden tenements on dirt streets. The company also built five large boarding houses to house unmarried employees.

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[46]Somerscales, ibid., Waite, op.cit.,104.

[47]Howell & Tenney, op. cit., 954.

[48]*Cohoes Cataract,* November 3, 1866, March 17, 1866.

The well-laid out Harmony Mills community was praised by a writer in the local newspaper:

> The mills have not overlooked in their designs the cultivation of the artistic and beautiful, but have carefully blended utility with refined taste in the arrangement of their factories, grounds, office, and lecture rooms, so that while they present a scene of busy industry, their surroundings have all the attractions of well kept lawns, luxuriant shade trees, trim walks and ample carriage ways.[49]

The housing provided for workers by the company was well-built, "substantial and complete - and possessing every needed convenience." This was a major inducement for recruiting employees, as immigrants sought to improve their quality of life by moving to Harmony Mills. The monthly rent was deducted from the mill worker's salary, and additional family income could be obtained by taking in boarders. Among Irish immigrants, real estate was a means of personal social mobility. Improving one's standard of living while possibly generating some additional income was an important step towards the ultimate goal of purchasing or building one's own home. This was a similar goal for many French Canadian immigrants as well, and later generations from other countries.

As Harmony Mills expanded its operations, it constantly incorporated the latest improvements in technology. According to a company official in 1883, Mill No. 3 was filled with "the latest improved and most perfect cotton machinery in the world." Its self-acting mules and all the carding machines were made in England. The yarn was sized on six improved "slashers," or dressing frames. Two frames imported from England were capable of dressing two beams at once, while the remainder were built by the Cohoes Iron Foundry and Machine Company, a local foundry owned by members of the Johnston family.[50] Other technological improvements improved workplace safety, such as better gearing for shifting the belts and the new patent "in use by Harmony Mills for some years" that linked elevator door operation to the hoisting mechanism, thereby preventing workers from falling down elevator shafts, a common accident of the time.[51]

The new textile machinery simplified, yet accelerated the work processes. When the power loom was introduced, a single weaver tended one loom that ran 80-100 picks per minute. By 1850 she tended four looms with 600 picks per minute, and by 1895 she had to operate eight looms with 1,500 picks per minute.[52] Machine improvements and automation obliged workers to tend more and faster machines, while reducing the skill level required. The new English slashers introduced in Mill No. 3 replaced the well-paid skilled female dressers who once were needed to size the yarn, and by the end of the 1870s, double slashers halved the number of slash-tenders required.[53] As technology continued to reduce the level of skill required to operate textile machinery, the number of women and children operatives increased proportionately. Between

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[49]*Cohoes Cataract*, December 10, 1864, in Walkowitz, op.cit.105-106.

[50]Howell & Tenney, op. cit., 954.

[51]*Cohoes Cataract,* December 10, 1874.

[52]Walkowitz, op.cit., 55

[53]Ibid. 153.

1860 and 1880, the percentage of women in Cohoes' cotton mills increased from 60.6% to 67.4% compared to a national decrease from 62 to 57 percent in cotton mills elsewhere.[54]

In 1860 more than half of the employees of Harmony Mills were Irish immigrants or their children. The typical cotton worker was an unskilled and unmarried Irish female between the ages of fifteen and twenty-five. By 1880 more than one-third of the workforce was French-Canadian. Thousands of Canadians were put out of work in Canada's shipbuilding and timber businesses as result of the 1873 depression; others were unable to earn a living on farms in the province of Quebec. Harmony Mills actively recruited these workers with French-language booklets describing the advanced machinery and substantial housing available for its workers.

Two of every three French Canadian or Irish cotton workers in 1880 were female. The primary exception to this pattern was among the English immigrant workers who more often were older married men who worked in skilled positions. In 1880, only 16.6 percent of Harmony Mill's operatives were males over twenty years old.[55] Women continued to receive lower wages than men for the same work, and the better-paid jobs, such as those of mule-spinners, remained closed to women.[56] Because of the employment opportunities for women and children, Cohoes had a high proportion of one-parent families. On Harmony Hill, one out of every four cotton-worker families was headed by a female, and in eighty to ninety percent of these cases, she was a widow.[57] The security of company housing and the stability of employment and income were major attractions for these families, even if it meant working an exhausting seventy-two hour week for as little as fifty cents a day.[58]

For many Harmony Mills operatives, mill work was a family undertaking, with children as young as nine years old working long hours for very low pay. Whole families were encouraged to work in the mills, and the children's wages were often necessary for the family's survival. Worker interviews conducted by an 1882 state legislative committee investigating child labor revealed the delicate balance of most workers' budgets. Often only the children' wages made the difference between getting by or going into debt. The need for as many family members as possible to work prompted parents to send young children only to elementary school, which was provided by the company. As a rule, children did not remain in school beyond the age of twelve because of the necessity to work to provide sufficient income.[59]

Technological upgrades allowed Harmony Mills to expand its overall production with the same number or fewer skilled workers. Between 1853 and 1876, the output doubled for each Harmony Mills cotton hand.[60] An 1880 report announced that "the improvements introduced during the

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[54]Ibid. 52.

[55]Ibid. 66-67,186.

[56]Ibid. 52.

[57]Ibid. 112.

[58]Ibid. 67.

[59]Ibid. 114.

[60]Ibid. 55.

past twenty-five years have enabled the same number of employees to produce thirty percent more work than formerly, the quality of which is better."[61] The end result of increased production throughout the textile industry at large was an increase in the market supply of cotton cloth, bringing about a fall in the prices paid for finished goods. This in turn increased the pressure felt by the company to reduce wages and cut production costs in order to compensate for the lower market prices.

The first labor protest of any consequence by Harmony Mills employees came in 1858, with a strike lasting three weeks. The national panic and depression of 1857 led the Harmony Mills to run on half time, and then close altogether for two weeks in hopes of reducing the supply of cotton cloth and increasing demand. Management finding this a "ruinous sacrifice," it decided on full production with a temporary 25% wage decrease. When wages were not restored after four months, the workers went out on strike. After three weeks, they settled for a 12 1/2 percent restoration of their wages. More noteworthy than the amount of the "raise" in salary was the symbolic significance: "For the first time in Cohoes's history, workers had collectively forced the town's largest and most powerful corporation to raise their wages" and no one was fired for participating in the strike.[62] The workers' organization did not remain active and seems to have soon disbanded. The next strike came in November 1863, when the weavers walked out for a little more than a week and demanded a wage increase. The management refused to budge, blaming the high price of cotton, and the strikers soon returned to work. Another strike did not occur until 1880.

During the national depression from 1873 to 1877, there was little protest by Harmony Mills workers. The mills provided steady and reliable employment for as many family members as desired to work, at a time when many other businesses like the local knitting mills either shut down for extended periods or drastically cut back production. The Harmony Mills shut down for one month in the fall of 1873, then reopened with an average wage reduction of 12 1/2 percent. At the same time, however, rents on company tenements were halved. There would be three more reductions in wages over the next three years. In October 1875, after another twelve percent reduction, workers unsuccessfully suggested that the workday be reduced rather than wages. Seven months later the company announced a third reduction of ten percent in wages because of the continued market situation. This time, the cotton workers sent two representatives from each room in the mill to ask general manager, Robert Johnston, to operate at three-quarters time with full wages rather than full time at reduced wages. The general manager refused to comply with their request, maintaining that he could not reduce inventories because competing mills would only increase their production, thereby obtaining a larger share of the market. The following year, June 1876, workers walked off the job for one day in an unsuccessful attempt to force Johnston to agree to a cut back in production to alleviate the market glut.[63]

"One of the Poor," wrote to the editor of the *Cohoes Daily News* after this third wage cut and spoke tellingly of the impact of economic cutbacks on the dreams of workers. "I, for instance, know of a great many people who, by economy, had saved a little money and bought lots and

[61]Ibid. 152-153.

[62]Ibid. 84-85.

[63]Ibid. 189-190.

intended to build homes for themselves, but instead of giving employment to carpenters and masons, etc., they have got to take their money to get the necessaries of life, as their pay since the reduction, is not sufficient, and what in God's name are we going to do if we have to stand another reduction?"[64]

A growing self-consciousness on the part of Harmony Mills workers paralleled the growth of union activity throughout the textile industry in the late 1870s. Textile workers of Cohoes as well as those in Paterson and Passaic, New Jersey, and Fall River, Massachusetts were being organized by the newly established International Labor Union, under the leadership of Marxist Socialist J. P. McDonnell and "Yankee eight-hour advocates." Attempts were being made by "textile and iron manufacturers everywhere… to reduce wages, break up new unions, and otherwise dominate the industries," but the union movement was developing new tactics to meet such attempts, and working-class resistance was becoming widespread.[65] The skilled mule-spinners of Harmony Mills formed a union in 1878.

In early 1879 Harmony Mills cut their operations back to half time with a ten percent cut in wages. Full time production was restored in two months, but the wage cut stayed in place. This wage cut, the fourth since 1873, reduced the millhand's salary overall by thirty percent to its 1863-1864 level. Up to this point, the workers had absorbed successive wage reductions with comparatively little protest.[66] There was short-lived optimism on the part of the workers late in 1879 when the company raised wages by ten percent. The raise, however, was combined with a management decision to increase the number of yards to be cut, and a new policy of docking weavers for every imperfectly woven piece of cloth. A further reduction in wages was the net result of the new policy.[67]

The women weavers at Mill No. 1 went on strike in late February 1880. They sought a ten-percent increase in wages, a lengthening of their lunch break from forty minutes to one hour, and an end to the "docking system." The strike became general throughout Harmony Mills a day after the walkout started, when nearly five thousand women, men and children unanimously resolved to walk out. Three committees were organized to run the strike. While women exclusively made up the negotiating committee, the walkout was led by men, in particular, two ex-weavers: Samuel Sault, a French Canadian, who was now the editor of the *Regulator*, a Cohoes labor paper, and Mark Duerden, owner of a news room in the Harmony Mills community. The female negotiating committee did the conferring with the mills' superintendent, but they deferred to the male union leaders to tell a mass strike meeting what had transpired at their conferences. [68]

Union organization was widespread. The Weavers' Union recruited over 1,700 members and the Mule-Spinners' Association organized all but six of Harmony Mills mule-spinners. The Card

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[64]*Cohoes Daily News,* June 2, 1876.

[65]Walkowitz, op.cit. 219.

[66]Ibid. 191.

[67]Ibid. 220.

[68]Ibid. 174, 220-221.

Room Union had enrolled almost 300 members, and the cotton-twisters had also begun to organize. The workers revealed unusual collective power. After nine days, they won a ten-percent wage increase, got their lunch break extended from forty minutes to fifty minutes, and obtained an agreement that would restrict the docking system.[69]

Management clearly was not satisfied with the situation and denounced the influence of outsiders. The union treasurer was given two weeks notice for collecting funds for a sick friend during working hours and a spinners' committee representing him was denied permission to speak with company officers. When a representative of that committee went to speak with management without permission from his overseer, he was promptly fired. With the union treasurer and his supporter both discharged, a general strike of the mule-spinners followed in late March. The strikers demanded that the overseer be dismissed and that no union member be blacklisted. The Johnstons responded that they would "not allow anyone else to attempt to tell [them] what to do." Weavers joined the strike, and section hands voted to strike against the docking system which was still partly in effect.

Retaliation by the company intensified. The striking spinners were given thirty days notice to vacate company tenements and management told those in company boardinghouses that there would be no food provided while the strike lasted. The company tried to intimidate the workers by having a detachment of police patrol the mills and by announcing that it would be recruiting Canadian non-union labor. Pressure was put on non-striking members of the families of striking workers to have the striking members return to work or risk losing their jobs and their housing. In fact, some relatives of striking spinners lost their jobs. This kind of company action was partially successful; some workers returned and limited production was resumed. But all of the spinners and most of the weavers and carders maintained their firm position.[70]

When word of the second strike got out, support began to come in from other textile centers such as Lawrence and Fall River in Massachusetts and from Harmony Mills cotton workers' long-time supporters, members of the Troy, New York iron molders' union. The Troy union pledged $500 per week. As the strike moved into April, Joseph McDonnell, head of the International Labor Union, who had just been released from jail, came up to Cohoes from Paterson, New Jersey to direct the strike. McDonnell convinced the union that rather than focusing on having the errant overseer discharged, it should be concentrating on its most important grievances: management's attempts to crush the union, its use of the blacklist, and its retention of the workers' back pay. Influenced by McDonnell's recommendations, the union issued a new list of resolutions, with the emphasis being on the rights of the union and asking only that the overseer be "restrained." Now, the strike had the unqualified support of McDonnell and the union's local leader, Samuel Sault.

When management remained adamant in their right to fire whomever they pleased, workers sued the company to recover the pay they had lost by not giving the company advance notice of the strike. On April 15, a West Troy justice of the peace served company superintendent David J. Johnston with 414 summonses "to show cause" why the two weeks pay held by the company should not be refunded to the workers. On April 21, a committee of spinners met with David and Robert Johnston. Apparently, the legal action got management's attention. The two sides

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[69]Foner, *Women and the American Labor Movement*, 182; Walkowitz, *Worker City, Company Town*, 222.

[70]Walkowitz, op.cit. 120, 222-223.

quickly reached an agreement; the second 1880 strike ended after one month with a paper victory for the workers. Management agreed to settle the "no notice" suit out of court by returning the withheld money to the workers with the proviso that "No trade union will or shall be recognized." The workers were permitted to organize a "Benevolent Association," and there was to be no blacklisting or interference with the spinners' "Society." Thus, any sort of union-like organization could not be called a union, but was admissible as a benevolent association. [71]

Almost two years passed before there was any further labor trouble at Harmony Mills. In the interim, the primary leaders of the 1880 strikes left town and the worker organizations seem to have disbanded. [72] Joseph Delehanty emerged as the principal spokesman for the cotton workers by 1882. Born of Irish parents in Stonebridge, England, he had learned the trade of cotton-spinner at an early age and he and his children worked for many years at Harmony Mills. In 1874 he was elected to represent the Harmony Mills community on the Cohoes City Commission, and by early 1882 he had assumed positions of leadership across the spectrum of Irish working-class institutions. He was elected first vice-president of the Albany Trades' Association and the Cohoes Irish National Land and Labor League, and he was elected school commissioner from the Harmony Mills section of the city. [73]

A continued depression in the cotton goods market led management to post notice on April 6, 1882 that wages would be reduced about ten percent. Immediately the cotton workers gave two weeks notice that they would stop work rather than accept the pay cut. Labor did not want another major strike. On April 16 a committee of spinners proposed to D. J. Johnston that the company shut down the mills for a month or two, or run the operations on a reduced work schedule for a few months, rather than cut the workers' wages. Johnston rejected both suggestions, maintaining that other large eastern cotton manufacturers would not agree to a production cutback and would consequently profit at the expense of Harmony Mills. In July an attempt to mediate the labor dispute was undertaken by Robert Blissert, president of the New York City Central Labor Union, but management rejected his proposals. Blissert's attempt at mediation made the news not only in the Cohoes and Troy papers, but in the *New York Tribune,* the *New York Times* and the national labor press as well.[74]

The weavers, spinners, and carders now reorganized their unions and began to investigate the possibility of a "combination union for the future." In late July, the various trade unions at Harmony Mills began to transform themselves into an assembly of the Knights of Labor. In the meantime, committees had been formed, as in the 1880 strikes, to manage the strike. Some workers left Cohoes to find employment in other cities and hundreds of Harmony Mills cotton workers found work in the woolen mills of Cohoes. Before the strike ended, from a third to one-half of the Harmony Mills workforce had found work elsewhere.

Harmony Mills was such a major employer in Cohoes that the 1882 strike directly involved about 10,000 people and indirectly affected every one of the city's 19,000 inhabitants. Extensive

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[71]Ibid. 224.

[72]Samuel Sault moved to Iowa and Mark Duerden was shot in an unrelated incident. See Walkowitz, op.cit.224.

[73]Walkowitz, op.cit. 175, 224.

[74]Ibid. 225, 245.

efforts were made to provide both financial and moral support to the striking families. Weekly rallies were held where thousands gathered to hear state and national leaders such as John Swinton, Robert Blissert, and Samuel Gompers, as well as local labor leaders such as Joseph Delehanty and Dugald Campbell of Troy. The rallies were used by labor leaders to attack Harmony Mills and to encourage the strikers to continue their resistance. Picnics and vaudeville shows were regularly scheduled to raise funds. Donations came in from other unions, with the largest amount again being given by the Troy iron molders. Contributions were used to keep the newly established workers' supply store well stocked with food. There was general community support of the strikers, including that of various merchants.[75] Such activities helped to develop solidarity between Irish and French Canadian workers. Recognizing the involvement of two distinct cultures, mass meetings were often addressed in both English and French.[76]

In mid-July the company announced that it was bringing in fifty Swedish families to replace the families that had left the city to work elsewhere. At the same time, eviction notices were served on fourteen strike leaders and 150 women who lived in company boardinghouses. The first to be evicted was Joseph Delehanty, for non-payment of advance rent. His refusal to pay and his eviction made him a martyr in the eyes of the strikers and caused them to intensify their resistance.[77]

As the strike continued into its fifteenth week, the company reopened for a third time, with non-striking employees and with non-union workers hired to replace those who had left. In the meantime, it still threatened non-striking workers such as carpenters, painters, and laborers with being dismissed if striking members of their families did not return to work. More eviction notices were sent out, but the workers' resistance hardened. Management then hired five deputy sheriffs to guard the mills, as it had done in the 1880 strikes. The workers' protest remained mostly non-violent intimidation such as gathering at the mills in crowds to "hoot" those returning to work, or applying social ostracism toward neighbors who had someone in the family going back to work. Some violence did occur, however, in the form of gathering in front of the tenements occupied by the Swedish families and throwing stones through their windows.[78]

By August it became apparent to the strikers that they could not hold out much longer. Accounts of near starvation increased. To meet the needs of hungry families, workers began to return to work in greater numbers. By August 26, the destitute and demoralized strikers agreed to return to work with the wage reduction intact. Management contended that the walkout ended only after neighborhood unity was broken. Although the operatives lost their four-month battle, they voted to join the national labor movement and to continue their struggle against Harmony Mills. Their resolution stated "we do not consider it a defeat neither do we consider the question of capital and labor settled in Cohoes. We have shown the corporation that they under-estimated the strength and intelligence of their work people.... *Resolved*, [we shall] join and unite in that

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[75]Ibid. 170.

[76]Ibid. 226.

[77]Ibid. 227.

[78]Ibid. 229. The arrival of the Swedes may have occurred after the strike ended, because the account of the stone throwing appeared in the *Cohoes Daily News*, September 18-19, 1882.

grand phalanx of labor that is known as the Knights of Labor."[79] Within a year the company rescinded the wage cut which had triggered the extended strike.[80]

The 1880 and 1882 strikes took place in the political arena as much as in the factory. The workers' leader, Joseph Delehanty, used his concern for labor as a political springboard and became a leading figure in the New York labor movement, chairing the state labor convention meeting that September in Buffalo. Harmony Mills cotton workers had their political say in the fall election of 1882 by electing Delehanty, under the banners of the Democratic Party and the Cohoes Working Men's Party, to represent Cohoes in Albany County's Fourth District in the New York State Assembly.[81]

After the strike of 1882, there seems to have been no further major union activity at the Harmony Mills. As general economic conditions improved in the cotton industry and Harmony continued to dominate the national market, workers undoubtedly returned to their personal agendas of saving for their own homes and for improvements in their individual standards of living.

The wide-reaching influence of the Harmony Mills in the "company town" of Cohoes was another influence on local labor actions for much of the nineteenth century. The company was intimately connected with the city, for it employed one out of every four residents.[82] Managers and officers of the mills doubled as directors of local banks and other businesses. Both David John Johnston and William E. Thorn, company treasurer, served as mayor of the city. Equally important, all the industrial manufacturers in Cohoes relied on the power canals of the Cohoes Company, which was also owned by the Garner & Company, the New York City backers of the Harmony Mills.[83] The Harmony Mills company was the primary contributor for all the local educational and religious institutions.

Company employment was required to receive company housing, and company employees assured its regular maintenance and services. In addition to the physical needs of its employees, the company did what it could to improve the less tangible mental and social aspects of its operatives' lives. A reading and lecture room with a "well-selected" library was provided in the large meeting hall above the company offices. During the winter of 1853-1854, the Harmony Mill Union Sabbath School was established in that space. David J. Johnston, general superintendent of Harmony Mills, served for thirty-nine years as superintendent of the Harmony Union School, as it was later called. Associated at times with Baptist, Methodist and Lutheran denominations, the Sunday school was in later years nondenominational, providing many of the residents of Harmony Hill their only source of religious or moral education.[84]

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[79]Walkowitz, op.cit. 229.

[80]Foner, *Women and the American Labor Movement*, 194.

[81]Walkowitz, op.cit.229.

[82]Ibid. 51.

[83]Clark, op.cit. 9-11; Walkowitz, op.cit., 48, 57-58. William E. Thorn, the Harmony agent and treasurer from 1867 to 1910, also served on the board of the Cohoes Company; as secretary and treasurer of the Cohoes Gas Light Company, director and first president of the Manufacturer's Bank of Cohoes, and elected mayor of Cohoes in 1878 and 1880. Robert Johnson was president of Mechanics' Savings Bank and his son, David Johnston, frequently served as president of the village, and later as mayor of the city.

[84]Clark, op.cit. 20-21.

Many of the Harmony Mills employees had personal acquaintance with David John Johnston, the superintendent of the Mills from 1866-1894, both through his work with the Sunday School Union and as a neighbor on Harmony Hill. A young worker in the early 1890s remembered Mr. Johnston as "a very kind man ... loved by all the millhands, as his father was before him."[85] The local newspaper of 1871 described Robert Johnston as a "patriarch ... prudent in council, active in philanthropy, and devoted to the public good." His son David John "stands foremost in the regard of our citizens. As a civic administrator, a merchant and a philanthropist he is second to none."[86]

Although his Harmony Hill home was a "mansion in the sky" instead of a brick tenement, David John Johnston often walked to work among his workers and made himself available to them as needed. "I leave myself open to hear complaints from any of my employees, and especially from children.... I will always be ready to hear what is to be said and to hear recommendations, and if there is any thing good I am ready to take it up, and if there are any real abuses I want to know what they are...." [87]

The Johnstons, like many of the best paternalistic managers, felt a moral obligation to help improve the lives of their workers. Speaking to a State Assembly interviewer investigating child labor practices, Johnston expressed his personal convictions: "Taking the condition of things as they exist and their necessities, I think a condition where [children] can earn their living, and help to support each other and get good places like ours in which to be housed, that they are better off." He was open to suggestions from his workers, but he was also not willing to ignore his obligations to the company owners. "We have got to get out good work and do it as cheap as he can, for otherwise there will be no work here and the shops would have to be shut up."[88]

Convinced of Johnston's personal goodwill, the employees of Harmony Mills seemed to be willing to rely on his expertise and understanding of the larger economic issues for the management of the mills in the 1860s and 1870s. The next decade brought an increased understanding of capitalism (and alternative economic systems), and more experience in labor organization. Immigrants newly arrived in Cohoes at mid-century had by then acculturated and established both community connections and personal resources to support them in joint actions. It is interesting to note that company officials of the time attributed "the only serious disagreement" between the company and its employees (the strike of 1882) as being caused by the interference of outsiders. "Differences have always been adjusted directly between the hands and the management. Outside parties have been listened to, and politely dismissed, with the assurance that the company were perfectly competent to manage their business."[89] The workers' faith in the company's abilities, and their perception of the value of company benefits such as housing and credit, has not yet been fully assessed by historians in order to measure their impact on labor organization activities in Harmony Mills.

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[85]Harrigan, Margaret Sheridan, "Memories Held by a Golden Thread", typed manuscript at RiverSpark Cohoes Visitor Center, p.24.

[86]*Cohoes Cataract*, June 10, 1871.

[87]New York. Bureau of Statistics of Labor. Third Annual Report, 1885. Legislative Assembly Document no. 26 (1885). "Establishing the Fact of the Existence of Child Labor in the State," p.64.

[88]Ibid. pp.60-64.

[89]Mr. Silas Owen, supervisor of the company tenements, in Howell & Tenney, op. cit., 956.

Robert Johnston died in 1890 at the age of 83, and his son David John died on vacation in Quebec only four years later. The death of the two managers most personally associated with the success of Harmony Mills marked a turning point in the company's fortunes. The aggressive expansion policies of previous decades and the company's domination of the cotton print goods market could not continue unchecked. In 1890 the assets of Harmony Mills were listed at a book value of $22,000,000 but the company faced increased competition from Eastern and Southern mills. Without a Johnston at the helm, skilled workers apparently began to leave Cohoes for other places in great numbers. David Stuart Johnston, grandson of Robert, was brought in as General Manager in 1903 in hopes of stemming the outward tide and seems to have encouraged enough skilled workers to return to bring the mills back into full operation.[90] Johnston remained as manager until October 1910 when he resigned due to ill health.[91]

In 1910 the Garner estate sold their interest in the Harmony Mills to the Draper Corporation of Hopedale, Massachusetts, for approximately $600,000 worth of company stock, or roughly the value of the water rights alone. As part of the stock transfer, Draper Corporation, a manufacturer of high-speed looms, installed their looms in the Cohoes mills. Similarly, the Saco-Lowell Company installed their machines in payment for Harmony Mills stock. The two companies then incorporated the Harmony Mills under the laws of Massachusetts.[92]

At the same time, Garner & Co. also divested themselves of the Cohoes Company, and the Cohoes Gas and Electric Light Company, selling them to New York Power and Light Company. Between 1911 and 1915, the Mohawk River was rerouted from the power canal system to a single hydroelectric plant. The water that had previously powered textile mills directly was now used to generate electricity and the Cohoes power canal system became obsolete.[93] Over time most of the canals were covered over or filled in. Many still remain as subterranean tunnels used as conduits for sewer lines and other utilities.

The modern equipment installed in the mills by the Draper and Saco-Lowell companies helped Harmony Mills compete with other textile firms, but the company never operated all of the mills that it had purchased. In 1928 their 5,000 looms employed 1,400 hands to produce 37,500,000 yards of cloth a year. Competition and the Great Depression proved to be too much, however. By 1932, although still claiming to be "one of the largest cotton plants in the east," the Harmony Mills had dropped to 70% of normal production and was losing money. The stockholders voted on May 24, 1932 to adopt a plan of "orderly liquidation."

Over the next four years existing orders were filled; raw materials used up; machines and equipment were sold off. Much of the machinery was sold to firms abroad, including firms in Russia and the Far East. In May 1937 the tenements were sold at public auction for about 51% of their assessed valuation. Many former Harmony Mills employees were thus able to buy their own homes. The mill buildings were also sold at auction several months later. Mill No. 3, with

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[90]Elmer Adams, "History of the Harmony Mills, Cohoes, New York." Typed manuscript in Troy Public Library. Cohoes, 1932, p. 13.

[91]Clark, op.cit.32.

[92]Ibid. 35-36.

[93]Reznick, op.cit.125.

an assessed value of one-half million dollars, was sold for $2,500. [94] The elaborate industrial buildings and the range of the resources that remain make Harmony Mills a significant candidate for NHL status

Small manufacturing companies, both textiles and others, continue to use the buildings in the Harmony Mills complex to this day. While most of the original knitting mills in Cohoes have burned over the years, the Harmony Mills remain essentially intact on their hilltop. Former company housing is still in use, often by the same families who once worked in the mills. The original power canal raceway is still used for generating power, albeit now hydroelectric and not direct. The social and cultural legacies of the Harmony Mills continue to imbue the city with a unique character. Cohoes, and Harmony Hill in particular, was clearly a "company town" where a powerful national cotton manufacturer attracted and retained employees with a wide range of worker benefits.

[94]Clark, op.cit.45-48.

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Previous documentation on file (NPS):

___ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.
_X_ Previously Listed in the National Register.
___ Previously Determined Eligible by the National Register.
___ Designated a NHL.
___ Recorded by Historic American Buildings Survey: #
_X_ Recorded by Historic American Engineering Record: # HAER NY-8, HAER NY-9, and HAER NY-9A

Primary Location of Additional Data:

___ State Historic Preservation Office
___ Other State Agency
___ Federal Agency
_X_ Local Government
___ University
_X_ Other (Specify Repository): RiverSpark, 97 Mohawk Street, Cohoes, New York 12047-2897

10. GEOGRAPHICAL DATA

Acreage of Property: 45

UTM References:

	Zone	Easting	Northing
A	18	605285	4739000
B	18	605129	4738586
C	18	605619	4737575
D	18	606214	4736710
E	18	605743	4737062
F	18	605383	4737538
G	18	605024	4738747
H	18	605171	4739077

Verbal Boundary Description:

See attached sketch map, "Harmony Mills Historic District, NHL."

The NHL is located in the northeast section of the city of Cohoes, New York. The landmark is bordered on the north and the east by the Mohawk River, on the west by the remains of the enlarged Erie Canal of 1837-42, and on the south by the commercial center of the city of Cohoes. The boundary begins at a point where the north side of School Street would make contact with the river bank, if the street were so extended. The boundary proceeds for approximately two thousand feet along the west bank of the river to a point approximately two hundred feet from the southeast corner of Mill No. 3. From there, it continues in a southwesterly direction until it reaches the east side of North Mohawk Street. It then, continues in a generally southeasterly direction along the east side of North Mohawk Street until it reaches a point approximately two hundred feet from the southeast corner of Mill No. 4 (Van Benthuysen Mill), then proceeds in a southwesterly direction to a point approximately three hundred feet from the southwest corner of Mill No. 4. The boundary continues in a northwesterly direction, running approximately two hundred to two hundred and fifty feet west of Mill No. 4 across the site of Mill No. 2 until it crosses Vliet Street. From that point it continues in a northwesterly direction along the outer edge of the eastern wall of the enlarged Erie Canal (where exposed), parallel to the western wall of Mill No. 1. At the northwestern corner of Mill No. 1, the boundary extends at a forty-five degree angle for approximately two thousand feet to the west side of North Mohawk Street. It then continues along the west side of North Mohawk Street until it reaches a point opposite the northern side of School Street. It then crosses North Mohawk and proceeds along the eastern edge of North Mohawk Street for approximately 4500 feet to the western bank of the hydraulic canal at its intersection with the Mohawk River. The boundary then turns in a northeastern direction and extends to the eastern side of the Mohawk River in a line 50 feet north of and parallel to the power company dam. It then turns to the southeast until it reaches a point fifty feet south of the edge of the dam, whence it turns in a southwesterly direction and proceeds parallel to the dam to the point where the dam meets the western bank of the Mohawk River. From thence the boundary proceeds in a southeasterly direction in a line fifty feet east of the eastern bank of the power canal until such point as the power canal turns to the east, when the boundary also turns to the east and proceeds in a line parallel to School Street to a point on the bank of the Mohawk River 200 feet northwest of the eastern end of School Street. From thence it proceeds in a southeasterly direction along the riverbank to the point of beginning.

Boundary Justification:

The boundaries encompass the primary features associated with one of the largest cotton textile operations in this country during the 19th century. Those features include the power canal dam, gate house, gates, and raceway from the Mohawk River that provided the water power to operate the mills, all of the contiguous extant buildings associated with the mill and an extraordinarily well preserved nearby group of company houses. All of the mill buildings and tenement houses, as well as the power canal structures, are in good to excellent condition. The buildings retain a high level of integrity and continue to reflect an unusually intact high-style 19th century mill environment.

11. FORM PREPARED BY

Name/Title: Rachel D. Bliven, History Consultant
Original draft by John Bond, 1995
Additional research provided by Walter Lipka & Richard A. Hogan
Photographs by Christopher Quick, 1998

Telephone: (518) 283-6353

Date: June 20, 1998

APPENDIX: ADDITIONAL PHOTOGRAPHS, 1998

1. Aerial view of Harmony Mills complex, looking south along North Mohawk St. & Mohawk River
2. Original Harmony Mill (1837), western facade
3. Harmony Mill #1 (1853), western facade
4. Harmony Mill #1, detail of entrance, western facade
5. Harmony Mill #1 (1853), eastern facade
6. Lock # 16, Enlarged Erie Canal (1837), to west of Mill #1
7. Lock # 16, Enlarged Erie Canal (1837), exterior wall, to west of Mill #1
8. Harmony Mill #2 original power canal with control gate on left, Mill #2 stood to right (west); Mill #5 to rear
9. Harmony Mill #3 on east side of North Mohawk St., aerial view of building
10. Harmony Mill #3, detail of central tower, western facade
11. Harmony Mill #3, southern end (1872), detail of western facade
12. Harmony Mill #3, detail of statue
13. Harmony Mill #3, Rear (eastern) facade and wings, showing proximity of Cohoes Falls
14. Cohoes Falls, from Cataract Street Overlook Park
15. Harmony Mill #3, interior of top floor
16. Harmony Mill #3, interior detail of staircase
17. Harmony Mill #3, interior detail of belting and shafting still in place
18. Harmony Mill #3, interior detail of bracket
19. Harmony Mill #5 (van Benthuysen Mill), eastern facade; Johnston mansion on hilltop to rear; Strong Mill site is in foreground
20. Harmony Mill #5, detail of southwestern facade and tower
21. Harmony Mill #5, cast iron detail in turbine room
22. Office & Sunday School building (c. 1853), northeastern facades
23. Storerooms, paint & carpenter shops (c. 1853-1866), eastern facades, on North Mohawk St., attached to Mill #1
24. Worker housing, looking east towards School and North Mohawk Streets
25. Worker housing, Front Street
26. Worker housing, Cataract Street, east side
27. Worker housing, Cataract Street, west side
28. Worker housing, Southwestern corner of School and Cataract Streets