NPS Form 10-900
(Oct. 1990)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

178

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

1. Name of Property

historic name Thomas Maddock's Sons Company

other names/site number American Standard

2. Location

street & number 240 Princeton Avenue [N/A] not for publication

city or town Hamilton Township [N/A] vicinity

state New Jersey code NJ county Mercer code ~~034~~ 21 zip code 08619

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I certify that this [x] 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 [x] meets [ ] does not meet the National Register criteria. I recommend that this property be considered significant [ ] nationally [x] statewide [ ] locally. [ ] See continuation sheet for additional comments.

Signature of certifying official/Title 1/17/08 Date

Amy Cradic, Assitant
State or Federal agency and bureau

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

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I hereby certify that this property is:

[✓] entered in the National Register. [ ] See continuation sheet.

[ ] determined eligible for the National Register. [ ] See continuation sheet.

[ ] determined not eligible for the National Register.

[ ] removed from the National Register.

[ ] other, (explain:) _____

for Signature of the Keeper — Edson H. Beall — Date of Action 3.14.08

Thomas Maddock's Sons Company.
Name of Property

Mercer County, New Jersey
County and State

5. Classification

Ownership of Property
(Check as many boxes as apply)

- [x] private
- [ ] public-local
- [ ] public-State
- [ ] public-Federal

Category of Property
(Check only one box)

- [x] building(s)
- [ ] district
- [ ] site
- [ ] structure
- [ ] object

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

Contributing	Noncontributing	
3		buildings
		sites
3		structures
		objects
6		Total

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

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions
(Enter categories from instructions)

INDUSTRY/PROCESSING/EXTRACTION/manufacturing
facility

Current Functions
(Enter categories from instructions)

WORK IN PROGRESS
COMMERCE/TRADE/business

7. Description

Architectural Classification
(Enter categories from instructions)

OTHER: 20th Century Industrial

Materials
(Enter categories from instructions)

foundation BRICK
walls BRICK
TERRA COTTA
roof ASPHALT
other CONCRETE, STONE/Limestone

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

See Continuation Sheet

8 Statement of Significance

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

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

Criteria considerations
(mark "x" in all the boxes that apply.)

Property is:

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

Areas of Significance
(Enter categories from instructions)

ARCHITECTURE

Period of Significance
1924-1929

Significant Dates
1924-1925, 1929

Significant Person
(Complete if Criterion B is marked above)

N/A

Cultural Affiliation
N/A

Architect/Builder

William E.S. Dyer, Architect

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

9. Major Bibliographical References

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

Previous documentation on file (NPS):

- ☐ preliminary determination of individual listing (36 CFR 67) has been requested
- ☐ previously listed in the National Register
- ☐ previously determined eligible by the National Register
- ☐ designated a National Historic Landmark
- ☐ recorded by Historic American Buildings Survey
- ☐ recorded by Historic American Engineering Record

Primary location of additional data

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

Name of repository

Thomas Maddock's Sons Company | Mercer County, New Jersey

Name of Property | County and State

10. Geographical Data

Acreage of property 65

UTM References
(Place additional UTM references on a continuation sheet.)

	Zone	Easting	Northing		Zone	Easting	Northing
A	18	524-056	4455-042	C	18	525-033	4456-036
B	18	525-043	4456-052	D	18	524-073	4455-045

☐ See continuation sheet

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

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

11. Form Prepared By

name/title Suzanna Barucco, Director of Historic Preservation

organization Kise Straw & Kolodner date 27 August 2007

street & number 123 South Broad Street, Suite 1270 telephone 215-790-1050 ext 131

city or town Philadelphia state PA zip code 19109

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

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

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

Photographs

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

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

Property Owner

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

name Michael O'Neill, Preferred Real Estate Investments, Inc.

street & number 1001 East Hector Street, Suite 100 telephone 484-684-1201

city or town Conshohocken state PA zip code 19428

Introduction

The Thomas Maddock's Sons Company sanitary pottery is located on the former Princeton Avenue[1] near the intersection of Interstate 295 and County Road 649 in Hamilton Township, New Jersey. The Thomas Maddock's Sons Company site encompasses six (6) historic resources: three (3) buildings and three (3) structures. The pottery (Resource 1; building) is a rectangular red brick building; the long south and north elevations are parallel to the tracks of the former Pennsylvania Railroad (now Amtrak) located to the south. (Photograph Nos. 1 and 2) Rail line spurs at one time connected the building directly to the railroad, to allow for delivery of raw materials to six concrete storage silos (Resource 2; structure), still extant, at the northeast corner of the building, and to retrieve finished wares for shipment at the west end of the building (Figure 5). An original small, wood framed Pump House (Resource 3; building) and concrete basin (Resource 4; structure) survive on the south side of the building (Photograph No. 28). The original Boiler House (Resource 5; building) is a free-standing red brick structure on the north side of the building. A red brick smokestack (Resource 6; structure) on the north side of the Boiler House still bears the name "Maddock," a reminder of the Thomas Maddock's Sons Company, which built the original pottery in 1924-1925.

American Standard purchased the Thomas Maddock's Sons Company building in 1929 and continued to produce sanitary pottery there until 2002. The footprint of the building more than doubled during American Standard's ownership. As additional space was needed, American Standard constructed one-story additions to the building, often retaining original exterior building walls within the addition interiors. Rehabilitation of the building in 2006 removed non-contributing additions by American Standard dating from 1941 to 1973 to reveal the north and south elevations of the original Thomas Maddock's Sons building, which were restored and reconstructed. Portions of 1941 additions at the west and east ends of the building were retained (Figure 6). Representative sections of the original Bisque and Glost tunnel kilns were preserved on the interior, and are visible from the exterior at two new driveways cut through the kiln buildings. The site, which had consisted of parking lots on the west and north sides of the building and a single lane (largely unpaved) road around the building, now includes paved parking areas on the west, north and south sides.

Thomas Maddock's Sons Company, 1924-1925

The original building was remarkable for its size—1,743 feet long—and made up of three one- and two-story rectangular blocks, connected to each other by one-story, long, rectangular kiln structures (Figure 1). This linear building form was necessary to accommodate the tunnel kilns, and relates to the original interior functions, organized east to west, following each step in the sanitary pottery manufacturing process. The Cast Shop, where the raw porcelain material (*slip*) was cast to create sanitary wares, was located at the east end of the building in a one- and two-story structure 10 bays wide by 8 bays adjacent to the concrete storage silos (Photograph Nos. 12, 13, 14 and 16). From the Cast Shop, wares were loaded into the Bisque Kilns for the first round of firing (Photograph Nos. 10, 11 and 17). At the center of the original building, flanked by the Bisque Kiln Building to the east and the Glost Kiln Building to the west, was the Bisque Wareroom (Photograph No. 19). This wareroom consists of two contiguous one- and two-story sections: a two-story block to the west (3 bays wide by 8 bays deep) and a one-story block (7 bays wide by 8 bays deep) to the east. In addition to the Bisque Wareroom, this block at one time also contained the employee cafeteria. From the Bisque Wareroom, pottery wares were loaded into kilns in the Glost Kiln Building for the final firing (Photograph No. 7 and 8). Finished wares were packed for shipment in the two-story Glost Wareroom (10 bays wide by 11 bays deep) at the west end of the complex (Photograph Nos. 5, 6, 21 and 22). A railroad siding was originally located along the west elevation of this building for that purpose. Wares were moved between the first and second stories via an exterior, covered ramp on the south elevation (Photograph No. 6). Small one-story shed-roofed structures on the north walls of both kiln buildings housed equipment repair shops and employee locker rooms.

When built, the Thomas Maddock Son's Company pottery reflected the most up-to-date architectural attributes of a pottery plant. The Bisque and Glost Kiln buildings, at 25 bays wide each, outwardly depict the long narrow floor plates required to accommodate two Dressler tunnel kilns each, a significant technological innovation at the time. (A third Swindell-Dressler kiln was constructed on the

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north side of the original bisque kilns in 1973.) The fenestration pattern of the original buildings was established by brick piers and spandrels decorated with simple diaper patterns. These brick piers have a flush panel of headers (five headers wide) bordered on four sides by a single stretcher course. Window sills consist of a sloped rowlock. Under the sills is a soldier course, which is continuous across the elevations, and a short foundation wall laid in common bond. Spandrel panels between the first and second floor windows are a checker pattern consisting of alternating squares of three vertical and three horizontal stretchers. At piers adjacent to the spandrels, the checker pattern is set on the diagonal (Photograph No. 15).

Cornices on the two-story portions of the 1924-1925 buildings consist of a plain fascia (three courses high) topped by a projecting moulded ogee band, all composed of off-white terra cotta. On the south elevation, above the cornice of the center, two-story block, is a clock in a terra cotta surround flanked by two classical, flame urns. Across the fascia below, raised terra cotta letters spell out *Standard Sanitary Mfg. Co* .(Photograph No. 19) Across the fascia on the west and east blocks, respectively, the original Maddock's Sons Company signs survive: *VITREOUS CHINA PLUMBING FIXTURES* and *1859 – OLDEST IN AMERICA – 1924* (Photograph Nos. 13 and 22).

The steel frame building structure allowed for large, multi-pane, steel sash windows. Original windows on the one- and two-story blocks were bays of three and four multi-light metal sash with integral pivot sash. Fenestration on the south walls of the kiln buildings was groups of three 30-light windows (6 panes across by 5 panes high) with integral 8-light awning sash. Transoms above were 12-light sash, also with integral 8-light awning sash. On the north elevations windows were 15-light sash with integral 6-light awning sash, but without transoms, also organized in bays of three windows divided by brick piers. Principal vertical window divisions (wide steel mullions) are on 10'-0" centers, corresponding with the interior structural column grid. Window sills are sloped rowlocks, as found on the main block structures. Original metal doors were a single-leaf, with a recessed panel below a grid of four panes (2 by 2). Original doorway openings occupy the space of one window bay. The door surrounds are composed of a single width of stretcher bricks with a common bond brick panel above the doorway opening (Photograph No. 20).

Saw-tooth roof trusses on all portions of the original building are oriented to provide the interiors with natural light and ventilation through glazing on the north and south elevations (see for example, Photograph Nos. 11 and 16). The steel roof framing also supported a system of mono-rail tracks used to move wares stacked on metal shelving units through the different departments in the building.

American Standard, 1929-2002

The first buildings constructed by American Standard were a group of six concrete storage silos and a one-story Slip Shop at the northeast corner of the building, in 1929. (It is believed that the Thomas Maddock's Sons Company's Trenton pottery provided slip to the Hamilton Township location up until this time.) The new Slip Shop was constructed on the east wall of the existing Cast Shop, and connected to the silos by a one-story passageway, also of concrete construction. A railroad siding on the north side of the silos accommodated the delivery of raw materials (Photograph No. 12).

The most significant period of change was in 1941 when the Glost Wareroom, Bisque Wareroom and Cast Shop all received additions, more than doubling the size of each shop area. The 1941 Glost Wareroom Addition was a large, one-story "U" shaped building that wrapped the first story of the 1924-1925 Glost Wareroom on the west, south and east elevations, and covered an area two bays wide at the west end of the south elevation of the Glost Kiln. The Bisque Wareroom Addition wrapped the first story, south elevation of the original Bisque Wareroom, and the first bay of the Glost Kiln Building, to the west, and the Bisque Kiln Building, to the east. The Cast Shop Addition was a large, one-story rectangular building, which wrapped the first story west, south and east elevations of the one- and two-story 1924-1925 Cast Shop and two-story 1929 Slip Shop at the east end of the original building. The Cast Shop Addition of 1941 was extended an additional six bays to the west in 1955 (Figure 6).

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These additions mirrored the style and materials of the original Maddock's buildings but without any diaper patterning or decorative cornices. Red brick foundation walls and piers between window bays were laid in common bond with a row of headers along the bottom of the walls (at grade). Fenestration was uninterrupted bays of 30-light steel sash with integral 6-light pivot sash above continuous limestone sills. The elevations were periodically punctuated by Art Deco inspired, monumental, buff terra cotta surrounds at doorway openings (Photograph No. 3). These flat arch surrounds are comprised of fluted pilasters that rise above the roofline. The top of the flat arch is a band of terra cotta blocks with alternating projecting and recessed wide vertical ribs. Additions built at this time had flat roofs with long, flat roofed monitors glazed with 15-light metal sash with integral 6-light awning sash, in keeping with the style of windows on the original building (Photograph No. 4).

Construction of two Warehouse additions, by 1948, enclosed the north walls of the 1924-1925 Glost Wareroom and 1941 Glost Wareroom Addition. The west Warehouse Addition was constructed on the west side of the original Glost Wareroom, at the northwest corner. This addition included six truck bay openings, and marked a shift from the railroad to trucks for outgoing shipments. The north Warehouse Addition fully enclosed the north wall of the original Glost Wareroom. Both additions were one story in height, and of concrete block (CMU) construction with poured concrete foundations. These additions had flat roofs and no window openings. Natural light was provided by low, gabled skylights. The interiors were unfinished, open warehouse space: concrete floor, CMU walls, and exposed steel roof decking and framing.

The last major addition to the building was made in 1973. This was a one-story, concrete block addition in the space created by the east wall of the 1941 Bisque Wareroom Addition, the south wall the original Bisque Kiln Building, and the west wall of the 1941 Cast Shop Addition. The original south exterior wall of the Bisque Kiln Building was demolished at that time, as were a pump house and cooling pond (date unknown) in the south yard. The 1973 Cast Finishing Shop Addition was 20 bays wide, although it had no windows; the bays were defined by shallow CMU buttresses, which corresponded to the location of lines of structural columns on the building interior.

As part of the 2006 rehabilitation project, all of the American Standard additions dating from 1941 and later were removed (with the exception of portions of 1941 additions at the west and east ends of the building), and the full length of the south façade of the 1924-1925 Maddock's pottery building restored and reconstructed.

Rehabilitation and Adaptive Re-Use, 2004-2006

By 2004, surviving first-story building walls of the original Maddock's Sons Company building could be seen in several locations on the building interior, although in some cases brick piers and window openings were altered or removed completely. For example, at the two-story portion of the Bisque Wareroom, only the brick piers and spandrel panels survived at the first floor level of the original exterior south elevation wall, within the Bisque Wareroom Addition of 1941. The west wall survived largely intact at the first floor level; however the east wall had been demolished.

Many windows throughout the north elevation had been removed. For example, the 1924-1925 Bisque Kiln Building windows had been replaced with large, aluminum framed awning sash and coated (on the exterior) with a textured (foam) insulation system. Windows elsewhere had been removed and the openings infilled with CMU. All windows and window infill were removed in 2004-2006, and new double-glazed aluminum window units built to replicate the appearance of the muntins and mullions of the original windows, including the integral awning sash, were installed. Original metal doors were retained and restored. Where doors were missing, they were reconstructed based on surviving originals (Photograph No. 15).

☐ See continuation sheet

The 1941 Glost Wareroom Addition and Cast Shop Addition were partially demolished as part of the rehabilitation project. The full lengths of the west and north elevations of the Glost Wareroom Addition were retained. Demolition on the south and east elevations fully exposed the south wall of the 1924-1925 Glost Wareroom, which was restored. What remains of the Glost Wareroom Addition of 1941 is a C in plan, creating a small courtyard on the east elevation (Photograph No. 23 and Figure 6).

Similarly, approximately half of the floor area at the west end of the 1941 Cast Shop Addition was demolished to expose the south walls of the 1924-1925 Cast Shop and 1929 Slip Shop. The south elevation walls of these buildings were restored (masonry was repointed and new windows installed) to their original appearance. Demolition of the Cast Shop Addition resulted in the removal of an area approximately 255'-0" long from the west end of the south elevation. From that point the addition now makes two jogs to the northeast, and then connects with a new west wall to the southwest corner of the 1929 Slip Shop. These removals exposed the original south elevation of the 1924-1925 Cast Shop and created a courtyard between the newly configured Cast Shop Addition and the 1924-1925 buildings (Photograph Nos. 13 and 14). The reconfigured Cast Shop Addition was treated in the same manner as the Glost Wareroom Addition at the opposite end of the building.

At least since 1941 the principal pedestrian building entrances were on the west elevation, providing direct access to the administrative offices located in the southwest corner of the Bisque Wareroom Addition. Beyond these office spaces, the building interior was primarily open warehouse space with the exception of the tunnel kilns. Two terra cotta door surrounds on the west elevation date to 1941. The original doorway in the southern-most of these surrounds was removed and replaced with windows. The west arch continues its original function as a building entrance. Windows, which included some glass block panels dating to 1954 on the west and south elevations, were removed. All windows were replaced with single-pane, double-glazed window units organized in the original fenestration pattern: three windows in each bay divided by the original steel mullions, which were retained. Roof monitors, including original steel sash monitor windows, were retained and restored on the reconfigured building. New walls on the east elevation and within the new east courtyard continue the style and materials of the Addition: brick foundation walls with single pane windows above.

Because of the size (length) of the building, and the need for both vehicular and pedestrian access to and from parking areas on the north and south sides of the building, areas the width of two window bays near the center of both the Glost Kiln Building and the Bisque Kiln Building were removed to create driveways through the building (Site Plan). Only the building walls were demolished; the roofs were retained. The drives slice through all four kilns (two glost kilns and two bisque kilns). Large windows at the kiln cuts allow the kilns to be viewed in section (literally) through new windows on the east and west walls of the driveways (Photograph Nos. 7, 17 and 18). On the interiors, the kilns are integrated into tenant spaces or enclosed but visible through viewing windows (Photograph 25).

The building interiors were rehabilitated following Tenant Design Guidelines based on the Secretary of the Interior's *Standards* to preserve character-defining features (Photograph Nos. 24 and 25). Dropped ceilings were minimized to allow the saw tooth roof trusses and skylights to remain exposed. Interior walls, originally exposed brick, also remain exposed in most spaces. In the Glost Kiln Building, a new shared corridor was located in the space of an original corridor between the two glost kilns. In the Bisque Kiln Building larger sections of the original bisque kilns are incorporated in tenant spaces. Throughout the complex new partitions follow the lines of the original interior column grid. Where the floor plan deviates from that pattern, the columns have been retained and incorporated into new tenant spaces. Concrete stairways in two-story buildings have also been retained.

Boiler House

The Boiler House on the north side of the building was originally two separate buildings: a gas producing plant and a Boiler House with a brick smoke stack. Through later additions, these buildings were joined to create the existing Boiler House, a 3-bay by 5-bay

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building in three sections, each of which is one story, two stories and three stories tall, respectively (Photograph No. 27). Like the main building, the Boiler House windows are large multi-light steel sash in bays framed by brick piers topped with concrete caps. Unlike on the main building, piers on the Boiler House terminate at the window lintels. The spandrel panel above the windows is brick. Two shallow brick corbels form a band around the top of the building, under a concrete coping. Steel sash windows in the west half of the building were retained and restored in 2006. Steel sash windows in dilapidated condition in the east half of the building were removed; new windows to match the originals are scheduled to be installed in 2007.

Conclusion

Rehabilitation of the building in 2006 restored the Thomas Maddock's Sons Company pottery nearly to its original configuration. While kilns could not be saved in their entirety, retained kiln sections serve as a reminder of the primary purpose of the long, narrow, kiln buildings needed for this emerging technology. With the removal of later additions and restoration and reconstruction of the south elevation, the linear form of the original mostly one-story building has been re-established, as have the roof lines and window walls that characterize an important moment in the architectural design of American pottery plants. The sense that the building "begins in Trenton and ends in New York" has been preserved.[2]

End Notes

[1] The site is accessed by a new road, American Metro Drive, although the building address is still 240 Princeton Avenue.
[2] "Maddock's Sons Company Acquired by Merger," Trenton, 5 (September 1929): 13.

The Thomas Maddock's Sons Company building, constructed in 1924-1925, was the largest and most modern sanitary pottery (toilets, sinks) manufacturing plant erected in the vicinity of Trenton, New Jersey, a major center for pottery production in the United States (Figure 1). The building was created to house the rapidly expanding prestigious firm with the most up-to-date, efficient production methods in an effort to maximize productivity and minimize costs to remain competitive. The building's form and aesthetic are representative of trends in sanitary pottery architecture at a time when the industry was experiencing great changes in production methods and labor relations. The Thomas Maddock's Sons Company pottery is significant under National Register Criterion C as an example of a 1920s sanitary pottery that embodies the industry's architectural requirements and ideals of the period. The period of significance is 1924-1929, encompassing the building's construction and its sale to the Standard Sanitary Manufacturing Company (later American Standard).

Thomas Maddock's Sons Company

Thomas Maddock, a Staffordshire, England, potter, established the first china decorating business in New York City with William Leigh in 1847. Maddock and Leigh took advantage of the low tariff on undecorated china imported from Europe, and decorated it for sale in the U.S. Their early success was marked by production of a decorated dinner service for the White House during the administration of President Pierce. They also produced a decorated table service for the famous St. Nicholas Hotel in New York, which opened in 1853.[1]

The reason for Maddock's departure from his business with Leigh is not known; however, he sold his interest to his partner in 1854 and pursued other business opportunities. Maddock operated a hotel in Brooklyn, New York, served in the National Guard from 1856 to 1866, and then purchased a company in Jersey City, New Jersey that produced crockery and glassware.[2] He arrived in Trenton in 1872 and joined the Millington, Astbury, and Colclough pottery company at their Carroll Street Pottery.[3] By the time Maddock appeared in Trenton, the city was one of two major pottery centers in the United States.[4] Trenton offered an extensive transportation network, access to raw materials and markets for finished products, creative entrepreneurs and willing investors, all of which created an atmosphere conducive to developing industries. Numerous English potters moved to Trenton to take advantage of these local conditions. In the mid-19th century, household whiteware and yellow ware were Trenton's primary pottery products.[5]

Millington, Astbury, and Colclough's products included dinnerware, toilet sets, and other household pottery utensils for which they were awarded a medal at the Texas State Fair of 1874.[6] Under the name Astbury and Maddock, after extensive experimentation with clay formulas and firing methods by Thomas Maddock (then a partner in the firm), the company became the first American pottery to successfully produce and market sanitary ware.[7] Soon after, at the United States Centennial Exposition of 1876, Astbury and Maddock was awarded a medal for the "good quality and fitness for the purpose" of their display of "sanitary earthenware."[8] At the time, Astbury and Maddock was the only American pottery producing sanitary ware; all other sanitary pottery products in this country were imported from England. The firm's success with sanitary pottery is attributed to the pioneering efforts of Thomas Maddock, who became sole owner of the pottery in 1878.

In addition to advancing the American industry by producing sanitary pottery, Thomas Maddock pioneered the design of related plumbing improvements. He was granted a patent in 1880 for a brass fitting, known as a "spud," which made a secure connection between the porcelain bowl and the water pipe.[9] Thomas Maddock's 1880 patent contains the essential elements of the fitting still in use today.

After Maddock's initial breakthrough in the production of sanitary ware in America, and the creation of a market for American made products, several other local potteries added sanitary ware to their range of production. The Enterprise Pottery Company began manufacturing sanitary ware in 1879, followed by Taylor & Houdayer, Isaac Davis, Trenton Pottery Works, and the Crescent Pottery (all in 1883), Delaware Pottery (1884), and the Equitable Pottery (1888).[10] In the late 19th and early 20th centuries, the development of

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public sewer systems and indoor plumbing was gaining in popularity, expanding the market demand for sanitary ware. This increased demand prompted the creation of new firms and expansion of existing potteries. By 1921, there were 65 sanitary ware manufacturing plants in the United States, 25 of which were in New Jersey. Nationwide, approximately 6,000 people were employed in the industry.[11]

The firm changed its name to Thomas Maddock & Sons in 1882, recognizing the involvement of Thomas's sons Archibald and Charles in the firm. After a long and innovative career, Thomas Maddock retired in 1883. The firm continued to prosper, and in 1886 bought a neighboring pottery in Trenton and continued to build capacity. Thomas Maddock died in 1899; subsequently, the firm changed its name to Thomas Maddock's Sons Company in 1902.[12] The firm's expansion in the early twentieth century was continuous. The company acquired the nearby John Moses pottery in 1906; in 1907, a portion of the building was demolished and a four-story building with five new kilns rose in its place. Twelve years later, more kilns were added to the former Moses site. By 1920, the Thomas Maddock's Sons Company operated 21 beehive kilns on its Trenton property.[13] Other firms in Trenton expanded in a similar fashion, renovating existing facilities and taking over adjacent properties to increase production rather than taking on the challenge and expense of building an entirely new pottery. As the need for expansion continued, the Maddock's Sons Company realized that there was no room left to expand at their Trenton property, and began investigating alternative sites in the area that could house the projected works. The Company selected a site in Hamilton Township, New Jersey.

The Status of the Sanitary Pottery Industry

The conditions that created the need for the new Thomas Maddock's Sons Company pottery reflected the state of the industry in the 1920s. The sanitary pottery industry was undergoing significant changes at this time, particularly in the areas of technology, labor relations, corporate structure, and the nature of competition. These interrelated aspects of the industry, together with overall market growth, combined to force a sea change in sanitary pottery manufacturing as the Thomas Maddock's Sons Company considered expansion.

Pottery production was historically very labor intensive. A largely skilled workforce executed each required task, and workers were paid by the piece. While skilled workmen often were trained in several areas of pottery making (if not all of them) in a smaller firm, workers specialized as potteries grew. For example, *throwers* and *jiggermen* shaped the pottery pieces, *saggermakers* made containers called "saggers" for pottery to be fired in, and *kilnmen* loaded and operated the kilns, monitoring the heat intensity and duration of firing. Unskilled workers and apprentices assisted these men (for skilled potters were overwhelmingly men) in their work.[14] Ware was produced in batches based upon incoming jobs and the need for different types of products at any given time. As pressure to utilize technology in manufacturing increased, potters often resisted the mechanization of potteries, fearing the loss of jobs and a way of life.

The primary emerging technologies were the casting method of production and the use of continuous tunnel kilns for firing ware. The traditional method of preparing pieces required workmen called *pressers* to evenly press clay into the mold. In contrast, casting consisted of pouring slip into plaster molds to create the form.[15] Casting provided an efficient method of producing pieces, which could be executed by unskilled workers. Likewise, tunnel kilns greatly decreased the labor compared to what was required to operate periodic "beehive" kilns, the primary device used for firing ware at the time.

Periodic kilns were inefficient and lost vast amounts of energy through radiation, release of heat through the flue, and in cooling down the entire kiln after each batch of ware was fired. In the 1920s, tunnel kilns were gaining favor as a way to increase energy efficiency while standardizing production. Additional advantages of tunnel kilns included lower fuel consumption, uniformity of firing resulting in a more consistent product, and lower kiln and equipment maintenance costs. The adoption of these and other mechanized processes would result in a drastically reduced number of jobs available to skilled potters. In the late nineteenth century, unions organized to bargain for better pay and working conditions, job security, and preservation of the operational customs of the industry. A series of

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strikes over wages and customs during this period resulted in contracts that ensured relative peace between labor and pottery owners in the first two decades of the twentieth century, while also staving off the mechanization of sanitary potteries, particularly in Trenton.

Traditionally, potters did not punch a time clock or necessarily work regular hours; pressmen and other senior pottery producers could work four days per week or whatever it took to produce the number of pieces defined in the current labor contract. The semi-autonomous status of the workers and the business interests of shop owners were often at odds, although both parties were clearly invested in the success of the industry. Consortiums of manufacturers established trade organizations in an attempt to stabilize the industry in terms of prices, trade policy, and other common issues. The Sanitary Potters' Association (SPA), assembled circa 1900, took a direct approach to stabilizing the American sanitary pottery market by instituting cost-price compacts among member sanitary potteries to minimize price gouging and other related forms of competition that threatened the health of the industry. Larger firms at the time, such as Trenton's Thomas Maddock's Sons and Tepeco, benefited from the steady and reasonable profits that resulted from SPA arrangements.[16] Archibald M. Maddock II, president of Thomas Maddock's Sons Company, was the second president of the SPA, holding office from 1911 to 1923.[17] Pottery workers organized in unions such as the Operative Potters' National Union (OPNU, 1886)[18] and the National Brotherhood of Operative Potters (NBOP, 1890), which became the primary bargaining group for the sanitary pottery workers. These organizations' operations were based on a long history of collective bargaining.

The SPA and NBOP successfully collaborated on labor and workplace agreements through the early twentieth century. However, unsuccessful contract talks in 1922, and the SPA's ongoing efforts to manage the market, had major consequences for the direction of the sanitary industry. An industry-wide strike in 1922-23, including sanitary pottery workers and their general ware counterparts, brought an end to union shops in most sanitary potteries, creating opportunities for owners to revamp production processes. One industry observer at the time noted, "In the greatest sanitary ware center, Trenton, casting has not made much headway due to opposition on the part of the union operatives. In the newer plants of the Middle West casting has been extensively employed. Owing to the present strike among employees of the potters in the Sanitary Potters' Association, it is likely that casting will receive a great impetus in the East."[19] Indeed, during this strike local pottery owners found that the casting method of production could be employed with unskilled laborers at cheaper cost than the skilled laborers that were previously needed. Thomas Maddock's Sons brought in unskilled workmen, many with no experience in the shops, to run the pottery. After the first week the company claimed to have achieved up to 25% of regular output.[20] The end of union-negotiated labor agreements left shop owners able to move ahead with the implementation of technological advances, such as the use of casting and continuous kilns, and the hiring of unskilled labor at cheaper wages to operate the plants. This swift change in operating methods during the one-year strike (1922-23) effectively removed "old world" practices from the shop floor, and also removed the skilled workmen, unions, and culture that previously held significant influence in sanitary pottery operations.

Pottery manufacturers faced additional problems apart from the ongoing strike. The United States government filed suit against the SPA and its members for market manipulation and related charges pursuant to the Sherman Anti-Trust Act; the case proceeded in March 1923. By May of that year, all twenty-three indicted firms and twenty of the twenty-three indicted individuals had been convicted, including Archibald Maddock II.[21] The sentence: six to ten months in prison and a $5,000 fine. (Prison sentences were commuted on appeal.) The SPA subsequently disbanded, opening the door to "a new industrial order geared to mechanization and competition. Takeovers by integrated plumbing supply manufacturers were coming; large corporations sought to capitalize on the boom market. Selling mattered more than price controls in the resulting market environment."[22] Without the price controls previously implemented by the SPA, and without the interference of organized labor, direct competition among potteries ensued. In this business climate, large corporations often fared better largely owing to their ability to afford the shift to more efficient mechanized production processes. Thriving new housing construction in the early 1920s fueled the expanding market.[23]

After the strike, labor relations calmed somewhat. A labor agreement was reached in 1924, and this was renewed relatively quietly in 1926.[24] A report by the U.S. Government in 1925, which surveyed a number of potteries for information on wages, hours and

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productivity, found evidence of a changing profession. Where once pressers, printers (decorators) and apprentices were numerous, their numbers had greatly diminished with the increasing mechanization of production.

Nationwide, mergers and consolidations were becoming increasingly common, and large companies bought smaller companies at a brisk pace, thereby increasing production scale and market share. Sanitary or ceramic potteries had often teamed with cast iron producers to take on large jobs that needed both products: the sanitary pottery would produce lavatories and water closets, while the plumbing firm would produce enameled cast iron bath tubs. Maddock's Sons often partnered with the Standard Sanitary Manufacturing Company of Pittsburgh and the Kohler Company of Wisconsin to win these large contracts; however, this became increasingly difficult with the introduction of colors in the marketplace, which neither firm in the partnership could guarantee would match the other.[25] The large plumbing firms began to extend their reach nationwide by purchasing complementary firms, such as potteries. For example, the Kohler Company of Wisconsin purchased sanitary ware producer Cochran-Drugan Company of Hutchinson's Mills, near Trenton, and the Crane Company of Chicago took over the Trenton Potteries Company.[26] Business conditions favored large conglomerates and facilities with newer, more efficient production methods. The greater efficiencies of mechanized processes, particularly of the tunnel kiln, were realized when operating at full capacities, sometimes requiring the stocking of finished products through dips in the market. Carrying this sort of financial load often required the backing of a large corporation, and this is mainly the sort of company that survived this period of transition in the industry. In addition to such mergers, significant capacity was added to the industry, often through the erection of new plants with the technology required to remain competitive.

Design and Construction

Responding to the firm's need for additional space for increased capacity and improved efficiency in production, Thomas Maddock's Sons Company built a new pottery – the subject of this nomination – just outside Trenton, at Hamilton (also known as Hamilton Mills), Hamilton Township, New Jersey, in 1924-1925. Although the company would occupy the building for only four years, the plans for the new factory reflected a high level of optimism. Approximately 125 acres of land were purchased to accommodate the new pottery and allow room for future expansion.[27] Land was also to be set aside for a baseball field and tennis courts for employees. A large portion of the property was also intended for employee home sites.[28] Within the pottery plant employees enjoyed recreation and club rooms, a modern cafeteria, and even company sponsored dental examinations.[29]

On April 13, 1924, an article in The Trentonian announced that work would soon begin on a $500,000 plant for the Thomas Maddock's Sons pottery.[30] At that time, the company was noted as "one of the largest pottery manufacturing concerns in the world," a distinction no doubt enhanced by the erection of the new facility. Company president Archibald M. Maddock, II cited the development of the industry since World War I, and the limits of the company's existing property in Trenton, as reasons for the new site and expanded facilities.

Project architect William Elmer Siebert Dyer of Philadelphia noted that the building would be "one of the most attractive in this section of the country."[31] Charles J. Smith Construction Company was selected as the general contractor for the job.[32] In September, *The Ceramist* reported that Thomas Maddock's Sons had raised $1,000,000, the proceeds of a bond issue, to finance the new plant and its machinery.[33] It is unknown whether this bond was intended to cover the originally projected cost of the building or whether cost overruns had forced the company to seek financial assistance to complete the project.

William E. S. Dyer was a Philadelphia-based engineer and architect who specialized in the design of industrial buildings. Dyer was trained as a mechanical engineer and apparently did not work as an architect until 1915. In a 1927 Philadelphia city directory he advertised his services as, "Registered Professional Engineer: Industrial Buildngs[sic], Textile Mills, Factories, Power Plants, Special Processes and Devices."[34] According to a contemporary account, the building Dyer designed for the Maddock's Sons Company was,

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> ...a long two-story structure of pleasing design. The old beehive kiln, that had come to be symbolic of the pottery, is nowhere to be seen. Instead there is a gas-producing plant higher than the general structure and the only pipes to be seen are the ventilators on the roofs. The building itself is 1743 feet long. It is said that when the Maddock plant was mentioned by a Trenton traveling salesman to another, his friend replied, "Oh, yes, I know that pottery. It begins in Trenton and ends in New York.[35] (Compare Figures 1 and 2.)

Prior to the Hamilton plant, the existing Thomas Maddock's Sons pottery plant in Trenton was considered to be the largest in the U.S., and it was anticipated that the new plant would "rank among the largest manufacturing plants of any kind in the country."[36] The new building included continuous tunnel kilns, manufactured by American Dressler Tunnel Kilns, Inc. of Cleveland, which were rapidly becoming the industry standard. The traditional beehive kilns required *kilnmen* to pack, carry and place wares to be fired into the kiln, and then brick the kiln opening closed for firing. With the new tunnel kilns, wares were stacked on trolleys that ran on a railroad track as they were mechanically pushed through the kiln. Thus, trolleys could be loaded for firing, and fed continuously into the kiln. The energy efficient tunnel kilns also decreased the kiln time required, greatly improving production efficiency and reducing fuel costs.

Other technologies were employed to mechanize operations, reduce labor costs, and provide consistent products. The casting shop at the new plant used mixing machines to mix plaster to create molds for the ware. This process was mechanized with equipment for pouring plaster and slip, and two miles of overhead monorail system for transporting components.[37] The facilities for testing finished products, which were also novel, were considered the "height of modernization."

> ...in the assembling and testing rooms sufficient equipment will be installed and every detail will carefully be considered. The different fittings will be assembled under ideal working conditions and it is being planned so that every fixture can be tested under water before leaving the factory.[38]

The location of the new plant adjacent to the main line of the Pennsylvania Railroad provided direct access to shipments of raw materials and transfer of finished goods; eight freight cars could be loaded simultaneously at the new Maddock's Sons plant (Figure 1). The railroad had long surpassed the nearby canal as the preferred method of transportation.

The building was introduced to the ceramic industry in the July 1925 issue of The Ceramist; information about the new pottery filled nearly the entire issue, including text, photographs, and advertisements for project participants. The single-page item leading into the issue lauded the facility as a breakthrough in modernity and efficiency – the vanguard in new pottery design toward smart, competitive production that would be a hallmark of the industry's future.[39] The evolution of the industry in the early twentieth century, and architectural preferences for the design of manufacturing buildings then in vogue influenced the building's materials and form.

The design of manufacturing facilities in the early twentieth century increasingly favored single, rather than multiple, story buildings. An article in the American Ceramic Society Bulletin in 1928 explored the advantages and disadvantages of single-story pottery plants.[40] The most desired features included plenty of daylight, a minimum number and advantageous location of columns, and room for expansion (Figure 3). A one-story facility was deemed most practical, given the increasingly linear nature of production, easier accommodation of heavy equipment, and the ease of providing ventilation and daylight, often through skylights and glazed saw tooth roof trusses (compare Figure 3 and Photograph No. 26). Although showing periodic/beehive kilns rather than tunnel kilns, the accompanying sketch of a typical plant generally reflects the layout of the Thomas Maddock's Sons facility. In practice, the Maddock's Sons facility later followed the route of expansion as illustrated in the article. Other items noted as favorable in the article were evident at the Maddock's Sons' plant, such as the use of white paint in the interior to reflect light and maintain cleanliness, the embellishment of the exterior with brick, and the use of saw tooth roof trusses to increase day lighting in the plant's interior.

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The preferences expressed in the 1928 article were consistent with overall trends in industrial architecture at the time. The use of steel, concrete and glass, distinctive roof types for maximum daylight (saw tooth, monitor, etc.), expandability, single-story scale, and minimal ornament were characteristics of industrial construction in the first half of the twentieth century. Early automobile factories led the way in this new aesthetic and the consideration of plant workflow in project planning. Firms such as Albert Kahn and Associates were pioneers in this field. The evolution of this concept is illustrated in two of Kahn's major works for the Ford Motor Company. The Highland Park plant, completed in 1914, splits production operations among the plant's four levels, similar to Trenton's existing potteries. Ford's River Rouge Plant, completed in 1917, consolidated production on one floor, creating a building that was ½-mile long.[41] These lessons were applied throughout the manufacturing world in the first half of the twentieth century, including ammunition, aircraft and other wartime and peacetime production facilities.

One pottery that exhibited these design features was the Mount Clemens Pottery Company in Mount Clemens, Michigan, which constructed a building housing two direct-fired tunnel kilns in 1920 for the production of dinnerware (Figure 4). As described in 1921, "The building which houses the kilns is 825 ft. long by 70 ft. wide; is of modern daylight factory construction with brick walls, steel sash windows, steel roof trusses and a wide center monitor the full length of the building. Space is provided for a duplicate pair of kilns and also for additional drawing and loading tracks."[42] Although exceedingly large at the time, this building was less than half the size of the Thomas Maddock's Sons Company plant built only a few years later.[43] These principles applied at the Thomas Maddock's Sons Company pottery resulted in a departure from earlier multi-story Trenton plants with beehive kilns and the ad hoc assembly of facilities (Figure 2).

> The contrast between the new Maddock plant and the pottery of former days is nothing short of startling – truly the trade is fast leaving its traditional status as an art and advancing to a position of scientific, industrially and mechanically controlled production. This pottery seems to mark a new era in the sanitary ware pottery craft.[44]

The Sale of the Thomas Maddock's Sons Company Pottery

The optimism surrounding the plant's opening lasted only a few years. The Thomas Maddock's Sons Company, although apparently still a successful concern, fell prey to the expansionist policies of the large plumbing conglomerates. During a business trip in the spring of 1929, when Archibald Maddock proposed to discuss whether the "newly formed American Radiator and Standard Sanitary Manufacturing Company... wouldn't go along with us and be willing to accept the order for the enameled ware and not interfere with our getting the vitreous-china water closets and lavatories on those large jobs...," Maddock instead found himself with an offer to buy the Thomas Maddock's Sons Company.[45] After internal discussions with his brother Charlie and cousin Harold, the other Maddock owners, the family decided to sell. In September 1929, the Standard Sanitary Manufacturing Company purchased Thomas Maddock's Sons Company, one of the oldest and most successful sanitary potteries in New Jersey. As of its sale, the Maddock pottery was reported to be "the largest single plant in this country, if not in the world, devoted to the manufacture of sanitary earthenware pottery," a distinction the plant had retained since its construction.[46]

While the opening of the Thomas Maddock's Sons plant in 1925 had garnered nearly an entire issue of coverage in The Ceramic Age, the same publication carried less than two pages on the plant's sale in 1929.[47] The kilns had been in continuous operation during most of Maddock's Sons' ownership of the facility, and the works were as productive and efficient as planned.[48] However, the efficiencies put into practice at Maddock's Sons' Hamilton plant were not sufficient to impede the advancement of increasingly larger, more diverse competitors.

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American Standard

The Standard Manufacturing Company was founded in 1875 by two Irish immigrants, James Arrott and Francis J. Torrance. The partners purchased a bankrupt kitchenware factory in Pittsburgh, Pennsylvania, and embarked on the production of cast iron water closets (toilets), washstands and bathtubs. In 1883 the company perfected a process for coating cast-iron with pulverized enamel, which formed a smooth, waterproof surface that was also easy to clean. This process was first applied to bathtubs; the enameled cast iron tub would eventually replace sheet metal and wooden tubs, which were standard at the time. Standard Manufacturing merged with two other leaders in the cast iron enamel sanitary-ware business, Ahrens and Ott, and Dawes and Myler, in 1898. By 1900 this new company, the Standard Sanitary Manufacturing Company, was producing 150 cast iron enamel tubs per day, and was the largest supplier of plumbing goods in the world.[49]

To take advantage of their shared base of cast iron production, the American Radiator Company and the Standard Sanitary Manufacturing Corporation merged to become American Radiator and Standard Sanitary Corporation in March 1929, the same year Standard Sanitary Manufacturing Corporation purchased the Thomas Maddock's Sons Company pottery.[50] After the sale, the Thomas Maddock's Sons Company name and trademark continued, and several managers and executives stayed on to operate this subsidiary, including Maddock's Sons' Company president, Archibald M. Maddock II, who became a director at American Standard. He then served as a Vice President of sales until his retirement in 1948.[51]

American Standard's level of operation at the Hamilton, New Jersey pottery from 1929 through circa 1942 is not known. The stock market crashed a month after the purchase, and layoffs at the pottery followed.[52] The pottery was temporarily closed from 1932 to 1933, but otherwise operated continuously until 2002. American Standard made several additions to the Thomas Maddock's Sons plant through the latter part of the 1900s, beginning with slip making facilities and continuing with additions to house expanded operations (Figure 5). These and subsequent additions were readily accommodated by the building's original design. Dyer's layout anticipated future expansion, a feature consistent with contemporary pottery design trends. The post-World War II building boom, with its need for new toilets, sinks and other sanitary ware, likely necessitated major expansions executed at the facility, including additions to the cast shop and ware rooms, construction of new warehouse space, trucking bays and a railroad siding. The cast shop was extended again after 1973 (Figure 6).

The intense expansion at the plant in the mid-20th century was followed by American Standard's near bankruptcy in 1971. Once again, an increase in residential construction in 1977 helped to return the corporation to solvency. American Standard subsequently re-emerged as a leader in the sanitary pottery industry, a position that it retains today.[53] Sanitary ware production ended at the Hamilton plant in 2002.

A New Life for the Old Pottery

A developer purchased the property in 2002 and rehabilitated the pottery and boiler house for multiple-tenant office use. The project was in keeping with the Secretary of the Interior's *Standards for Rehabilitation*, and qualified for the federal rehabilitation tax credit program. The goal of the project was to rehabilitate the buildings for a new, marketable use, while retaining significant architectural features. Several additions were removed, both to provide more marketable office space and to return the building to a form more reflective of its original design and scale. By removing several American Standard-era additions, original exterior walls were exposed, particularly along the southern elevation. Portions of the circa 1952 additions at the east and west ends remain (Figure 6 and Site Plan). Large multi-pane windows and the original saw tooth roof allow light to reach the interior of the building. Original signs grace the buildings, such as "Maddock" painted on the boiler plant stack, and letters spelling "VITREOUS CHINA PLUMBING FIXTURES" below the roofline (Photograph Nos. 22 and 27). The clock and "Standard Sanitary Mfg. Co." sign, which replaced the "Thomas Maddock's Sons Co." sign after the 1929 sale of the building, remains above the entrance at the Bisque Wareroom (Photograph No.

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19). The original fenestration pattern and materials were preserved; original patterned brickwork and terra cotta cornices adorn the south façade. The roofline extends across new driveways that pierce the building at two locations; large windows here reveal portions of the original tunnel kilns that were retained in place and integrated in the building's layout (Photograph Nos. 17 and 18). The interior features exposed brick walls and ductwork, and ceilings are open to the original monitors and glazed saw tooth trusses to retain its industrial feeling. The building currently reflects the overall form, scale, massing, and materials present during the Thomas Maddock's Sons Company's ownership of the plant, and the building is a clearly recognizable historic element of the local landscape. Several business tenants now occupy the former pottery.

Conclusion

The Thomas Maddock's Sons Company sanitary pottery embodies the significant changes in the American sanitary pottery industry in the early twentieth century. The building was constructed in the midst of a market boom for sanitary pottery, and on the heels of significant changes in the industry as a result of the labor strike of 1922-23 and the conviction of SPA members and ultimate dissolution of the SPA. As a result of the strike, manufacturers essentially drove the unions from the plants, and were then able to automate much of the pottery production process in the absence of union influence. Direct competition, more aggressive upon the removal of SPA's price control strategies, pressed firms to seek ways to reduce production costs to remain competitive, further increasing the desire for mechanization. The consistently successful Thomas Maddock's Sons Company seized the opportunity to build a new, mechanized plant, in an advantageous location, to replace existing facilities and grow their business in a time of increasing market demand for their products.

The design of the Maddock's Sons Company's new plant followed the trends in industrial architecture, such as single-story massing, plentiful windows, open floor plans, and the use of concrete, glass and steel to form the needed spaces. Furthermore, the layout of the plant responded to the linear workflow of the newly mechanized sanitary ware production process. The massing, materials, and layout of the Thomas Maddock's Sons Company plant exemplify the evolution of the architecture of sanitary ware production facilities of the day, and the building is a full embodiment of significant industry trends in the construction and design process. As stated in trade journals at the time of construction, the Thomas Maddock's Sons Company pottery marked the vanguard of sanitary pottery design in the 1920s. Today, after the building's recent rehabilitation, it once again exhibits the features that define the pottery's character and convey its original form and significance.[54]

End Notes

[1] Archibald M. Maddock, II, The Polished Earth: A History of the Pottery Plumbing Fixture Industry in the United States (Trenton, NJ: The Estate of Archibald M. Maddock, II, 1962), 207.
[2] Olga Chesler, "An Archaeological Investigation of the Maddock China Company Dump Site (28 Me 94) in Trenton, Mercer County, New Jersey," report, prepared for the Office of New Jersey Heritage, Trenton, NJ (1983), 5. Available at the New Jersey Historic Preservation Office, Trenton, NJ.
[3] In 1859 the firm of Millington, Astbury and Poulson built the Carroll Street Pottery in Trenton. Poulson retired, and was replaced by Colclough. Colclough left the firm in 1873, and was replaced by Thomas Maddock, at which time the firm name changed to Millington, Astbury and Maddock. Millington retired in 1874, and Astbury died in 1878, at which time Thomas Maddock became the sole proprietor; the firm's name changed to Thomas Maddock & Sons. (Maddock, II, 51.)
[4] The other pottery-making center in the U.S. was East Liverpool, Ohio. The Trenton Museum Society, "A Brief Introduction to the Pottery Industry of Trenton," n.p. Ellarslie Pottery Collection, The Trenton Museum Society, Trenton, NJ.
[5] Hunter Research, Inc., "From Teacups to Toilets: A Century of Industrial Pottery in Trenton, Circa 1850 to 1940" (Trenton, NJ: New Jersey Department of Transportation, 1998), 2-3.

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[6] Maddock, II, 207.
[7] Ibid, 209-212.
[8] Ibid., 208; "Maddock's Sons Company Acquired by Merger," Trenton, 5 (September 1929): 12.
[9] Patent No. 229326, 20 June 1880. Maddock, II, 251.
[10] LeRoy H. Minton, "The Sanitary Ware Industry in America," The Ceramist, 4 (September 1924): 338. This article appears to be an update and expansion on an earlier article by this author in the Journal of the American Ceramic Society in 1923.
[11] LeRoy H. Minton, "New Jersey's Part in the Ceramic History of America," The Ceramist, 2 (Winter Quarterly, 1921): 275.
[12] "Largest Single Pottery for Sanitary Earthenware Production: New Plant of the Thomas Maddock's Sons Co., Trenton, N.J.," The Ceramist, 6 (July 1925): 567.
[13] Ibid.
[14] Hunter Research, Inc., 7-8.
[15] Thomas Maddock's Sons Company, Pottery: A History of the Pottery Industry and its Evolution as applied to Sanitation with Unique Specimens and Facsimile Marks from Ancient to Modern Foreign and American Wares (Trenton, NJ: Thomas Maddock's Sons Company, 1910), 54-55.
[16] Marc Jeffrey Stern, The Pottery Industry of Trenton: A Skilled Trade in Transition, 1850-1929 (New Brunswick, NJ: Rutgers University Press, 1994), 130.
[17] Maddock, II, x.
[18] The OPNU was a trade district of the Knights of Labor.
[19] R. H. Minton, "Sanitary Ware Manufacture in America," Journal of the American Ceramic Society, 6 (January 1923): 320.
[20] Stern, 205.
[21] Ibid., 210.
[22] Ibid.
[23] Ibid, 185.
[24] "The Trend in the Domestic Pottery Industry," The Ceramic Age, 9 (February 1927): 62.
[25] Maddock, II, 325.
[26] This Cochran-Drugan plant was not in service very long. By 1928 the plant had been sold two additional times, finally to the Pennsylvania Railroad. The 80,000-square feet of pottery buildings had been idle since 1927. ("Cochran-Drugan Plant Resold," The Ceramic Age, 12 (July 1928): 30); "Trenton Pottery Acquired by Kohler," The Ceramist, 6 (September 1925): 742-743.
[27] "Maddock's Sons Company Acquired by Merger," Trenton, 5 (September 1929): 13.
[28] "Start Work Soon on Maddock Plant," The Trentonian, (April 13, 1924): n.p.
[29] "Dental Inspection in Factories Here," The Trentonian, (May 27, 1923): n.p.
[30] "Start Work Soon on Maddock Plant," The Trentonian, (April 13, 1924): n.p.
[31] Ibid.
[32] "N.J., Trenton," The Ceramist, 4 (May 1924): 118.
[33] "N.J., Trenton," The Ceramist, 4 (September 1924): 386.
[34] The general contractor for the project was the Chas. J. Smith Construction Company, Trenton. Structural steel was erected by the N.A.K. Bugbee & Company, also of Trenton. The Athenaeum of Philadelphia, "Dyer, William Elmer Seibert (1880-1955), Engineer and Architect, Biography, "Philadelphia Architects and Buildings" project, http://www.philadelphiabuildings.org, accessed 10 December 2002; and "Thomas Maddock's Sons Company Building Large Plant," Trenton, (18 September 1924): n.p.)
[35] "Maddock's Sons Company Acquired by Merger," Trenton, 5 (September 1929): 13.
[36] "Thomas Maddock's Sons Company Building Large Plant," Trenton, (September 18, 1924): n.p.
[37] "Largest Single Pottery for Sanitary Earthenware Production: New Plant of the Thomas Maddock's Sons Co., Trenton, N.J.," The Ceramist, 6 (July 1925): 571-579. This article notes the use of plant-wide air conditioning although no evidence of such a system was present in the building prior to rehabilitation.

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[38] "Thomas Maddock's Sons Company Building Large Plant," Trenton, (18 September 1924): n.p.
[39] "A Notable Pottery – And a Prophesy," The Ceramist, 6 (July 1925): 553.
[40] H. S. Jacoby, "Modern Trend of Design for Pottery Plants," American Ceramic Society Bulletin, 7 (1928): 184-190.
[41] R. Christopher Goodwin & Associates, "Historic Context for Department of Defense Facilities World War II Permanent Construction" (May 1997), report, prepared for the U.S. Army Corps of Engineers, http://aec.army.mil/usace/cultural/ ww2_pc.doc, accessed December 20, 2006.
[42] C. B. Harrop, "Continuous Tunnel Kilns at the Plant of Mount Clemens Pottery Company," Journal of the American Ceramic Society, 4 (1921): 673. The Mount Clemens Pottery was demolished in 1993.
[43] The length of the Maddock's Sons kilns was directly related to the needs of sanitary ware production, as opposed to the dinnerware fired at Mount Clemens.
[44] "Largest Single Pottery for Sanitary Earthenware Production: New Plant of the Thomas Maddock's Sons Co., Trenton, N.J.," 565.
[45] Maddock, II, 325-326.
[46] "Maddock's Sons Company Acquired by Merger," 12.
[47] "Thomas Maddock's Sons Company Acquired by American Radiator & Standard Sanitary Corporation," The Ceramic Age, 14 (August 1929): 59, 62.
[48] "Tunnel Kilns Operate Continuously for More Than Three Years," Ceramic Age, 12 (August 1928): 56-58.
[49] Jeffrey L. Rodengen, The History of American Standard (Fort Lauderdale, FL: Write Stuff Enterprises, Inc., 1998), 34.
[50] At the time the American Radiator & Standard Sanitary Corporation functioned as a holding company for American Radiator and for the Standard Sanitary Corporation, which functioned as a separate entity under its original name until 1939 (Stern, 217). By circa 1948, the company began to refer to itself as American-Standard, for short. The name was officially changed to American-Standard in 1951.
[51] Maddock, II, x.
[52] Jon Blackwell, "1929: Celebrating on the brink," The Trentonian, (n.d.): n.p., available at http://www.capitalcentury.com/1929.html, accessed February 28, 2007.
[53] In 1971 American Standard's debt reached a record high of $426 million (Rodengen, 110).
[54] The Part 3 Historic Preservation Certification Application (NPS Project Number 10982) was approved by the National Park Service in April 2007.

Major Bibliographical References

Blackwell, Jon. "1929: Celebrating on the brink." The Trentonian: n.p. Retrieved from http://www.capitalcentury.com/1929.html on February 28, 2007.

Chesler, Olga. "An Archaeological Investigation of the Maddock China Company Dump Site (28 Me 94) in Trenton, Mercer County, New Jersey." Report, Office of New Jersey Heritage, Trenton, NJ, 1983. Available at the New Jersey Historic Preservation Office, Trenton, NJ.

"Cochran-Drugan Plant Resold." The Ceramic Age 12 (July 1928): 30.

"Dental Inspection in Factories Here." The Trentonian (May 27, 1923): n.p. Available at the Trenton Public Library, Trenton, NJ.

Department of Planning and Development, City of Trenton. An Inventory of Historic Engineering and Industrial Sites: Trenton, New Jersey. Trenton, NJ: City of Trenton, 1975. Available at the New Jersey Historic Preservation Office, Trenton, NJ.

Harrop, C. B. "Continuous Tunnel Kilns at the Plant of Mount Clemens Pottery Company." Journal of the American Ceramic Society 4 (1921): 673-680.

Hunter Research, Inc. "From Teacups to Toilets: A Century of Industrial Pottery in Trenton, Circa 1850 to 1940." Trenton, NJ: New Jersey Department of Transportation, 1998.

Jacoby, H. S. "Modern Trend of Design for Pottery Plants." American Ceramic Society Bulletin 7 (1928): 184-190.

"Largest Single Pottery for Sanitary Earthenware Production: New Plant of the Thomas Maddock's Sons Co., Trenton, N.J." The Ceramist 6 (July 1925): 565-600.

Lawrence, John W. et. al. "Cultural Resources Survey, Replacement of Southard Street Bridge over U.S. Route 1 and Conrail Structure No. 1100-049, City of Trenton, Mercer County, New Jersey." August 2000. (Report.) Available at the New Jersey Historic Preservation Office, Trenton, NJ.

Lucas, Dorothy F. "Pottery and Glass." The Story of New Jersey, vol. 3. New York: Lewis Historical Publishing Co., Inc., 1945.

Maddock, Archibald M., II. The Polished Earth: A History of the Pottery Plumbing Fixture Industry in the United States. Trenton, NJ: The Estate of Archibald M. Maddock, II, 1962.

"Maddock's Sons Company Acquired by Merger." Trenton 5 (September 1929): 12-13.

McVarish, Douglas C. "Historic American Engineering Record Documentation of the Enterprise Pottery (HAER No. NJ-105), Route 1SB Over New York Avenue, City of Trenton, Mercer County, New Jersey." 1996. (Report.) Available at the New Jersey Historic Preservation Office, Trenton, NJ.

Minton, LeRoy H. "New Jersey's Part in the Ceramic History of America." The Ceramist 2 (Winter Quarterly, 1921): 275.

Minton, LeRoy H.. "The Sanitary Ware Industry in America." The Ceramist 4 (September 1924): 337-350.

Minton, R. H. "Sanitary Ware Manufacture in America." Journal of the American Ceramic Society 6 (January 1923): 319-321.

"N.J., Trenton." The Ceramist 2 (May 1924): 118 and 4 (September 1924): 386.

"A Notable Pottery – And a Prophesy." The Ceramist 6 (July 1925): 553.

Patent No. 229326, 20 June 1880.

R. Christopher Goodwin & Associates. "Historic Context for Department of Defense Facilities World War II Permanent Construction." U.S. Army Corps of Engineers May 1997. (Report.) Retrieved from http://aec.army.mil/usace/cultural/ ww2_pc.doc on December 20, 2006.

Rodengen, Jeffrey L. The History of American Standard. Fort Lauderdale, FL: Write Stuff Enterprises, Inc., 1998.

"Start Work Soon on Maddock Plant." The Trentonian (April 13, 1924): n.p.

Stern, Marc Jeffrey. The Pottery Industry of Trenton: A Skilled Trade in Transition, 1850-1929. New Brunswick, NJ: Rutgers University Press, 1994.

Tatman, Sandra L. "Dyer, William Elmer Seibert (1880-1955)." Retrieved from http://www.philadelphiabuildings.org on 10 December 2002.

Thomas Maddock's Sons Company. Pottery: A History of the Pottery Industry and its Evolution as applied to Sanitation with Unique Specimens and Facsimile Marks from Ancient to Modern Foreign and American Wares. Trenton, NJ: Thomas Maddock's Sons Company, 1910.

"Thomas Maddock's Sons Company Acquired by American Radiator & Standard Sanitary Corporation." The Ceramic Age 14 (August 1929): 59-62.

Thomas Maddock's Sons Co. "Trenton, New Jersey, Centrally located plant, Suitable for any kind of manufacturing or Storage." [Circa 1924]. (Pamphlet.) Available at the Trenton Public Library, Trenton, NJ.

"The Trend in the Domestic Pottery Industry." The Ceramic Age 9 (February 1927): 62-64.

The Trenton Museum Society. "A Brief Introduction to the Pottery Industry of Trenton." Ellarslie Pottery Collection, The Trenton Museum Society, Trenton, NJ. Retrieved from http://www.ellarslie.org/pottery.htm on January 26, 2004.

"Trenton Pottery Acquired by Kohler." The Ceramist 6 (September 1925): 742-743.

"Tunnel Kilns Operate Continuously for More Than Three Years." Ceramic Age 12 (August 1928): 56-58.

Geographical Data

Verbal Boundary Description

As shown on the accompanying site map, beginning at the intersection of Princeton Avenue and Coleman Road, the northwest site boundary runs 550 feet northeasterly along the south side of Princeton Avenue to a point. Then easterly 3,075 feet to a point. Then southeasterly 800 feet to a point adjacent to the Amtrak Northeast Corridor rail road line. Then westerly 3,475 feet west along a line parallel to the Amtrak Northeast Corridor rail road line to a point. Then northwesterly 125 feet, and westerly 200 to a point on the east side of Coleman Road; then northwesterly 400 feet to the place of beginning.

Boundary Justification

The National Register boundary follows the original Thomas Maddock's Sons Company property lines along the northwest, west, south and east site boundaries. The north National Register boundary is a straight line on the north side of the building that corresponds with (and encompasses) an original access road established and used by the Maddock's Sons Company pottery. Land beyond this National Register boundary was owned by the Thomas Maddock's Sons Company but never developed for any specific use.

☐ See continuation sheet

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

The following information applies to all photographs.

Property Name:	Thomas Maddock's Sons Company
County and State:	Mercer County, New Jersey
Photographer:	Suzanna Barucco
Date:	June 2007
Location of Original Negatives:	Kise Straw & Kolodner, 123 South Broad Street, Philadelphia, PA 19109

1 View to northwest.

2 View to northeast.
January 2005

3 View to northeast. West wall of Glost Wareroom Addition.

4 View to southeast. North wall of Glost Wareroom Addition in foreground.

5 View to east. West elevation of Glost Wareroom at center photo; north wall of Glost Wareroom Addition at right photo.

6 View to east. North wall of Glost Wareroom at right photo.

7 View to southwest. North wall of Glost Kiln Building at left photo.

8 View to southeast. North wall of Bisque Wareroom at left photo; Glost Kiln Building beyond.

9 View to east. Boiler House at left photo; north wall of Bisque Kiln Building at right photo.

10 View to east. North wall of Bisque Kiln Building at right photo; south wall of Power House just visible at left photo..

11 View to southeast. North wall of Bisque Kiln Building. Concrete Silos and Bisque Wareroom just visible at left photo.

12 View to the southwest. Concrete Silos at left photo; Cast Shop at right photo.

13 View to the northwest. Cast Shop at left photo; Cast Shop Addition at right photo

14 View to the east. Cast Shop at left photo; Cast Shop Addition at center and right photo.

15 Typical window bay; west end of east elevation, Cast Shop.

16 View to northeast. Cast Shop; Bisque Kiln Building at left photo.

17 View to northwest. New driveway viewed from the south elevation of the Bisque Kiln Building.

18 View to northwest. East wall within driveway in Bisque Kiln Building.

19 View to north. South elevation, Bisque Wareroom. Glost Kiln Building at left photo; Bisque Kiln Building at right photo.

20 South elevation. Glost Kiln Building, typical door.

21 View to west. East wall, Glost Wareroom. Bisque Kiln Building at right photo.

22 View to northwest. South wall, Glost Wareroom.

23 View to west. Glost Wareroom Addition.

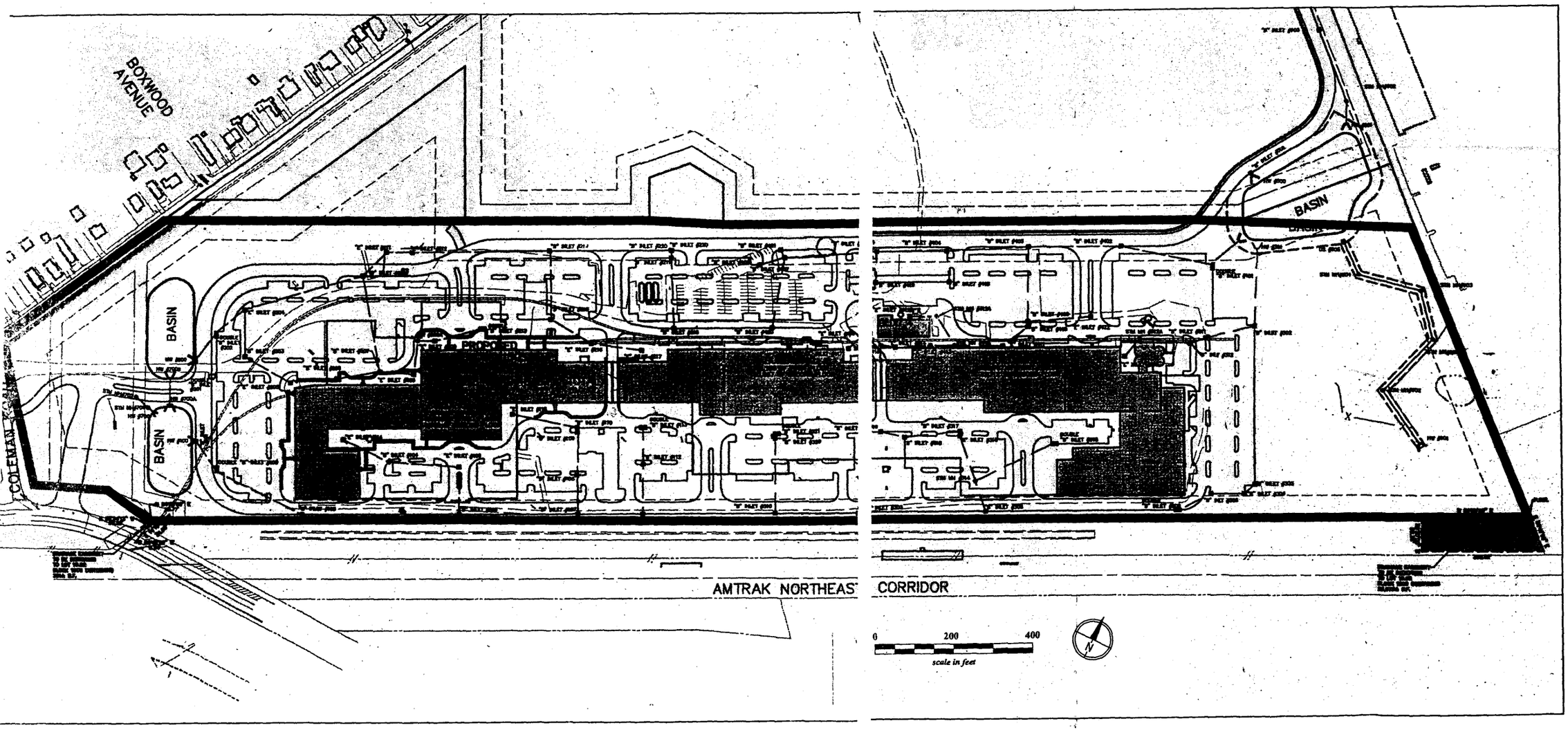
24 View to southwest. New lobby, first floor, Bisque Wareroom.

25 View to east. Rehabilitated office space, Bisque Kiln Building.

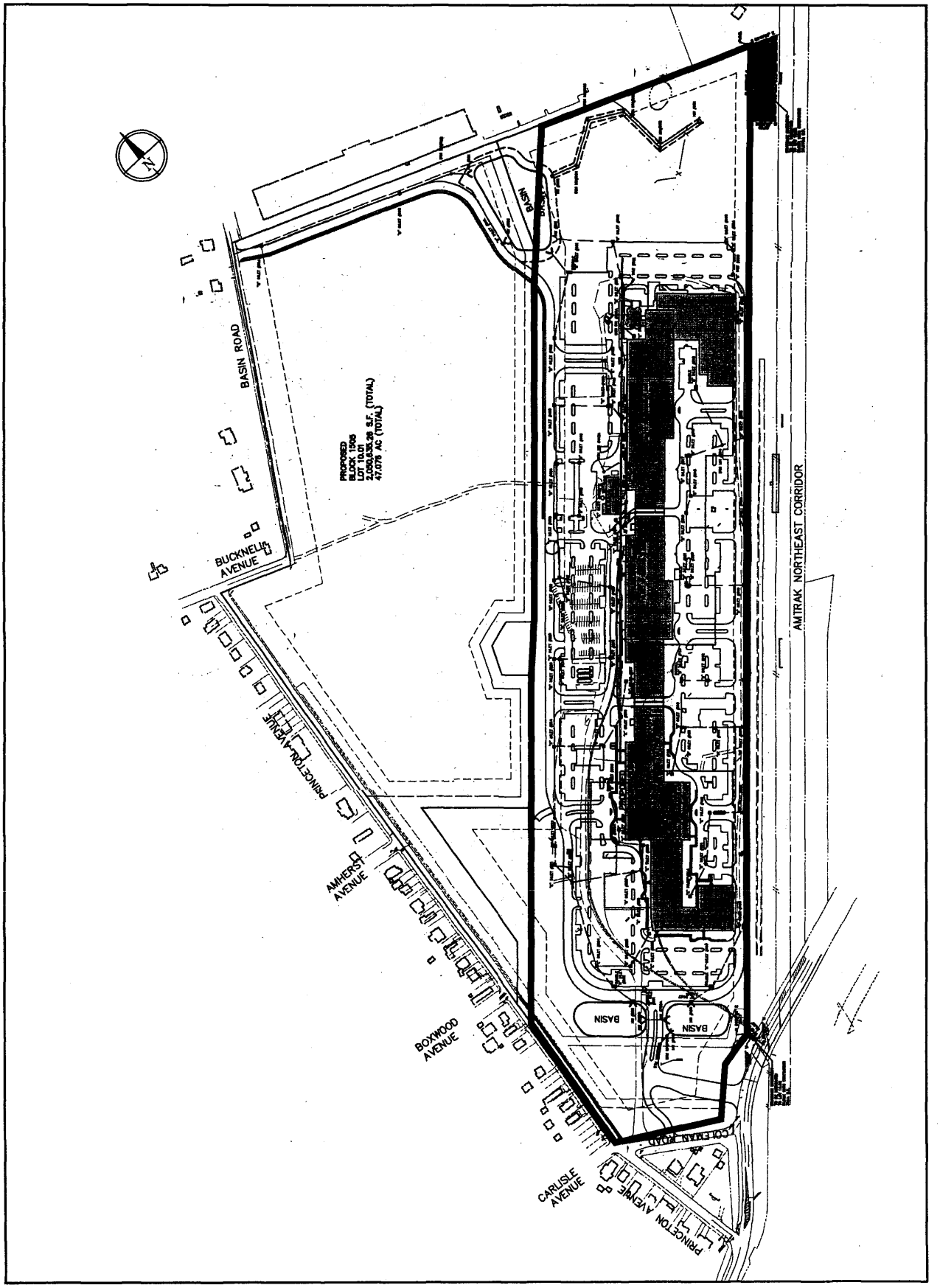
26 View to east. Cast Shop.

27 View to northeast. Boiler House.

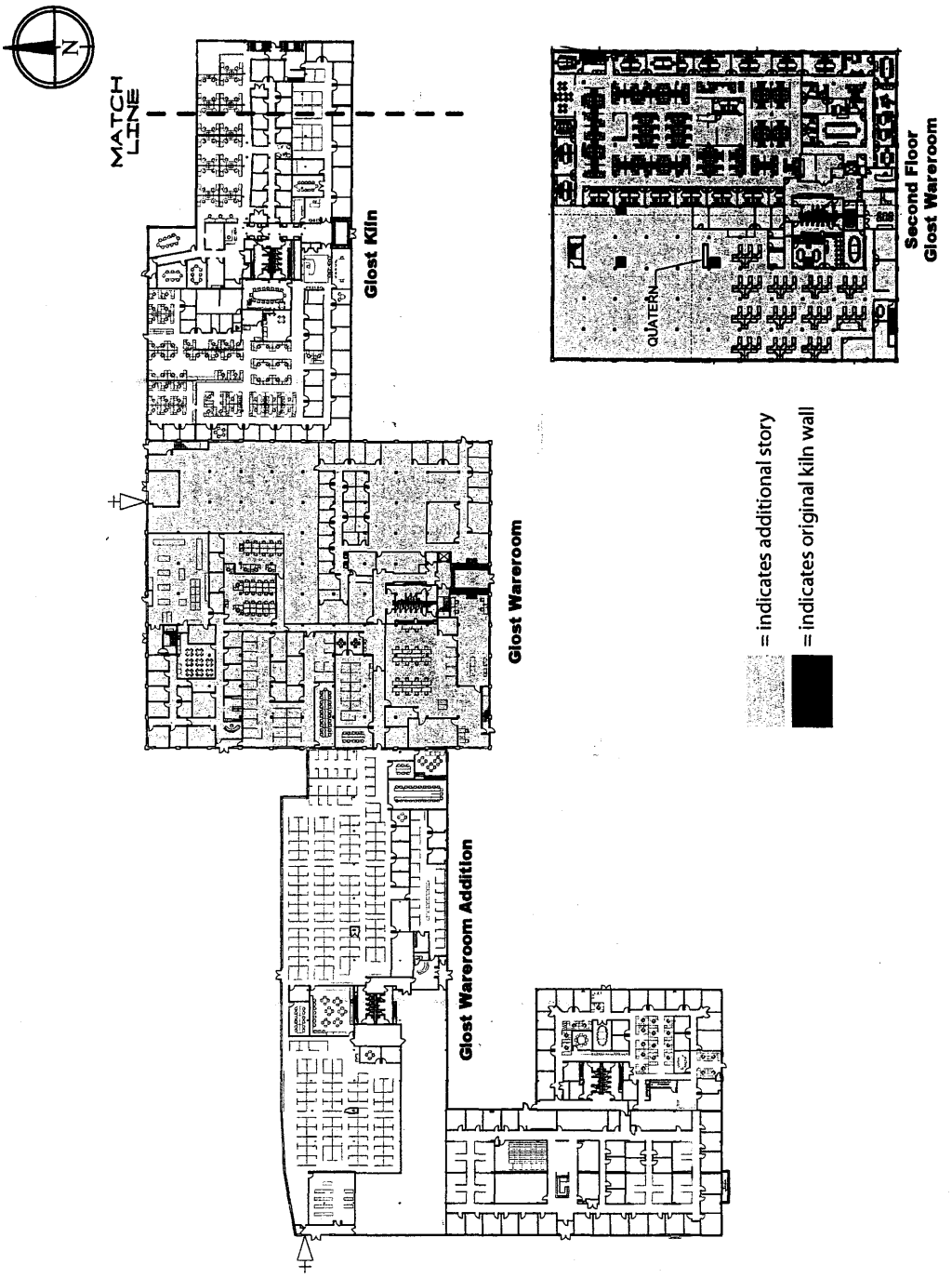
28 View to southwest. Pump House and Cooling Pond.



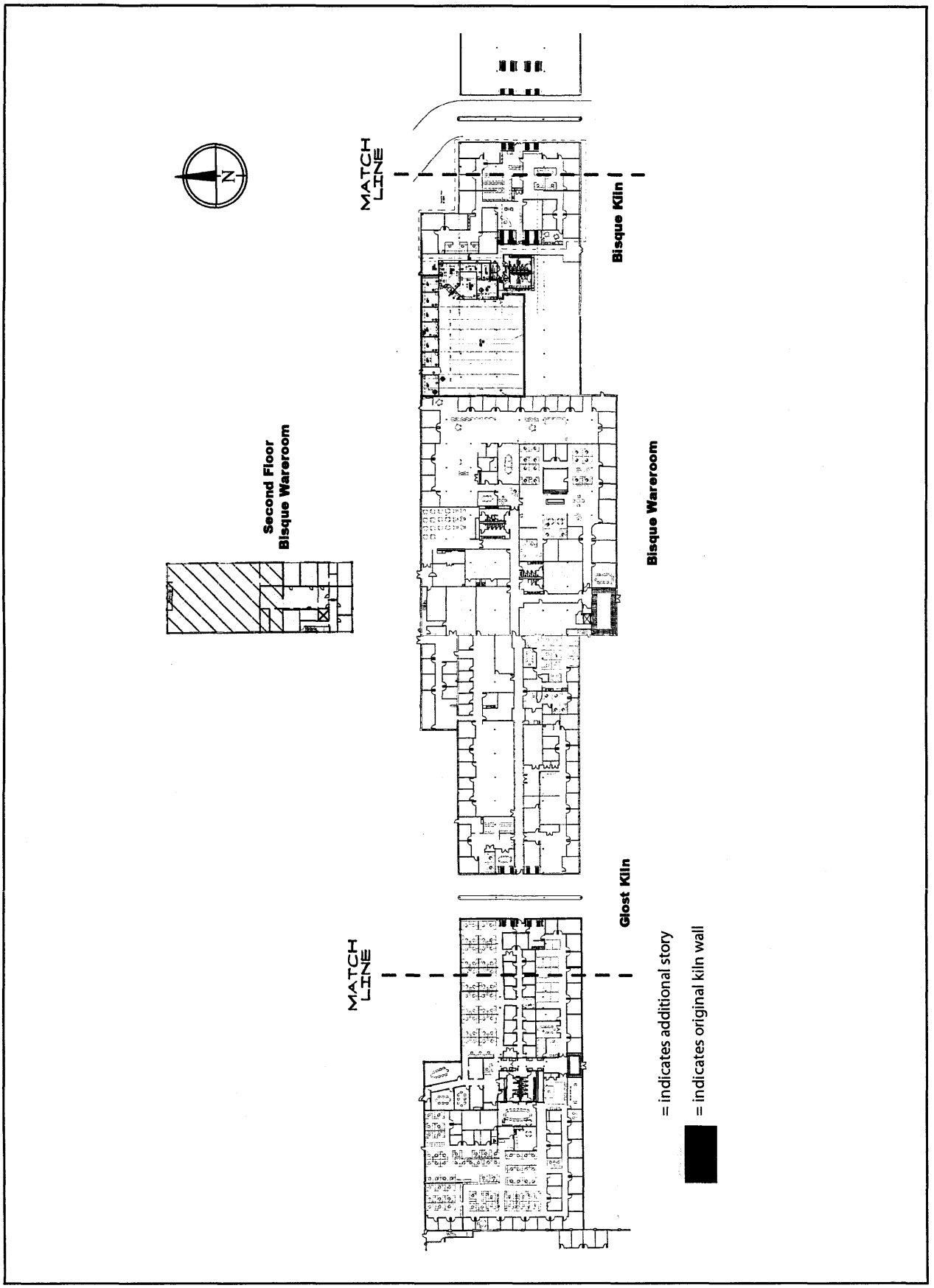
Sons Company
Jersey



Resource Boundaries
Thomas Maddock's Sons Company
Mercer County, New Jersey

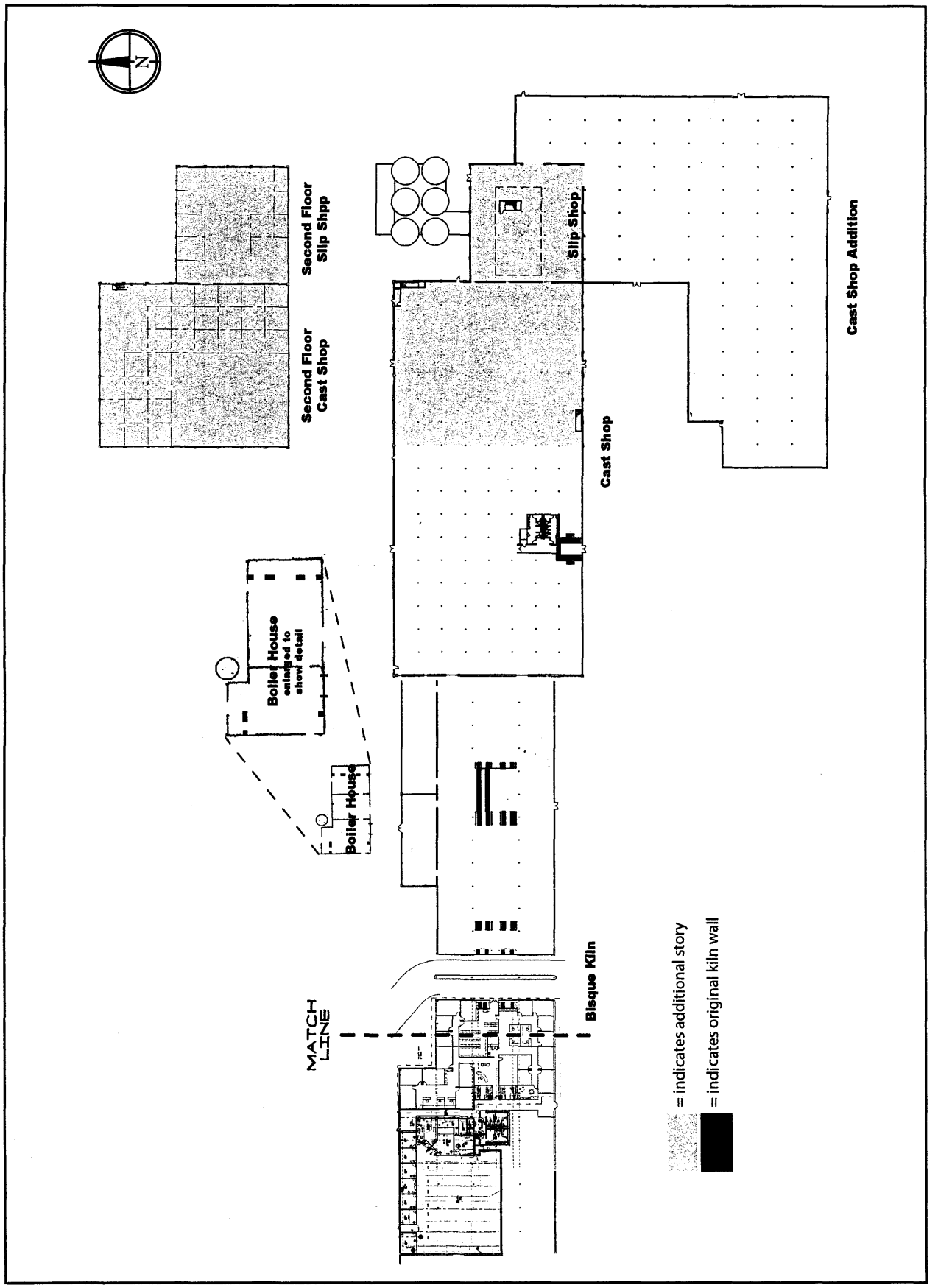


Floor Plan (as rehabilitated): **Glost Wareroom Addition, Glost Wareroom, Glost Kiln**
Thomas Maddock's Sons Company
Mercer County, New Jersey



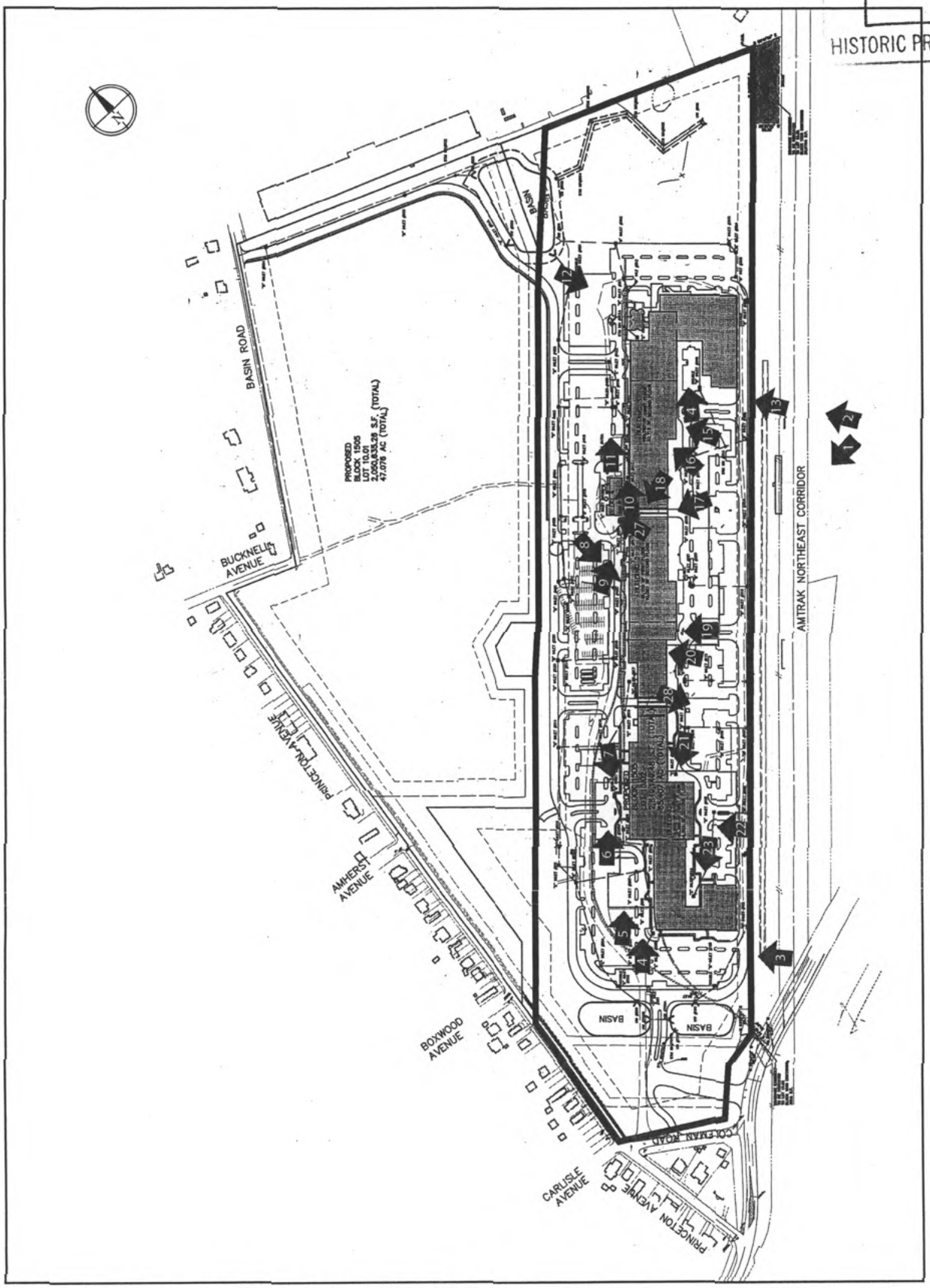
Floor Plan(as rehabilitated): **Glost Kiln, Bisque Wareroom, Bisque Kiln**

Thomas Maddock's Sons Company
Mercer County, New Jersey

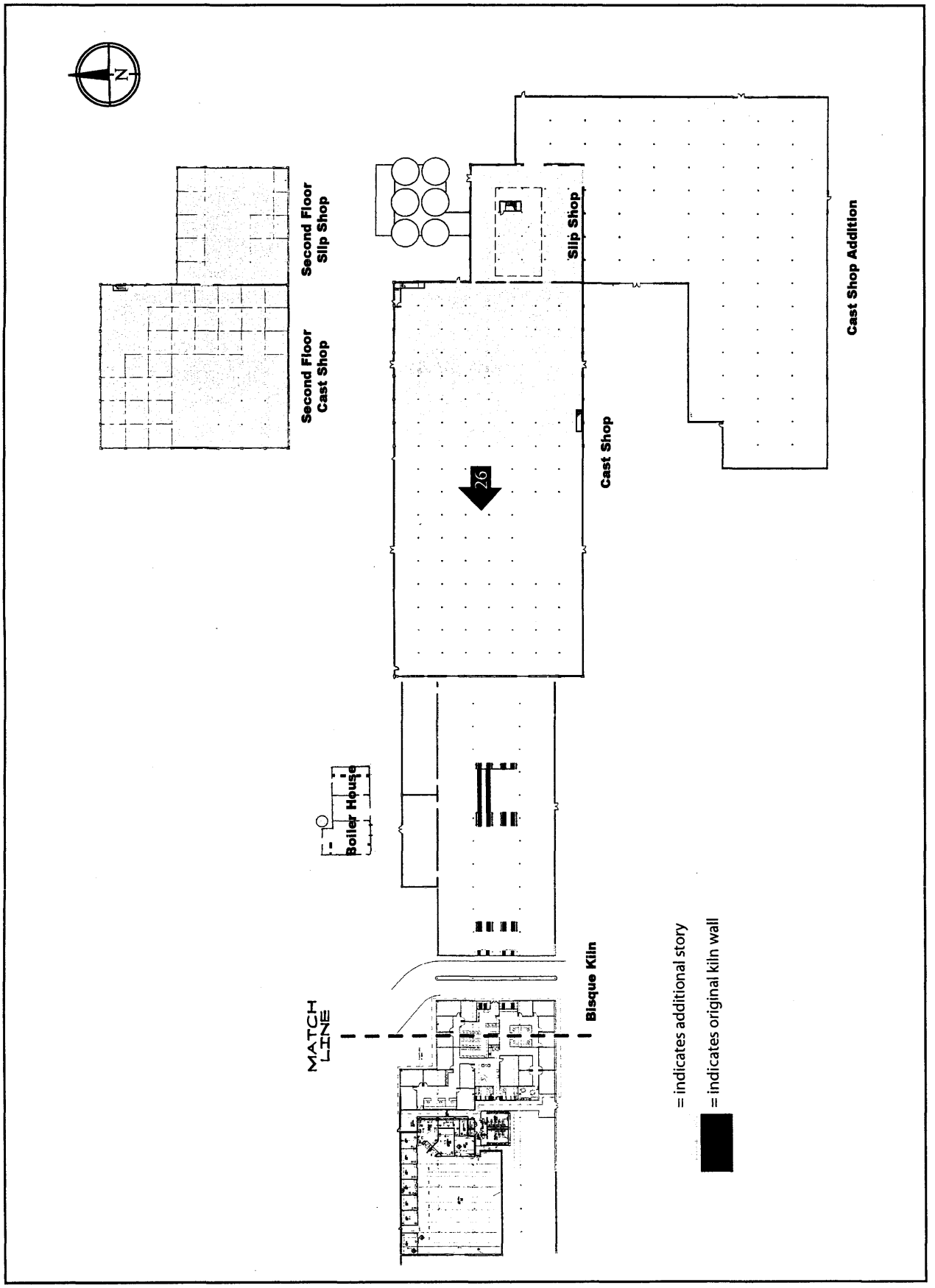


Floor Plan (as rehabilitated): **Bisque Kiln, Cast Shop, Slip Shop, Cast Shop Addition, Boiler House**

Thomas Maddock's Sons Company
Mercer County, New Jersey

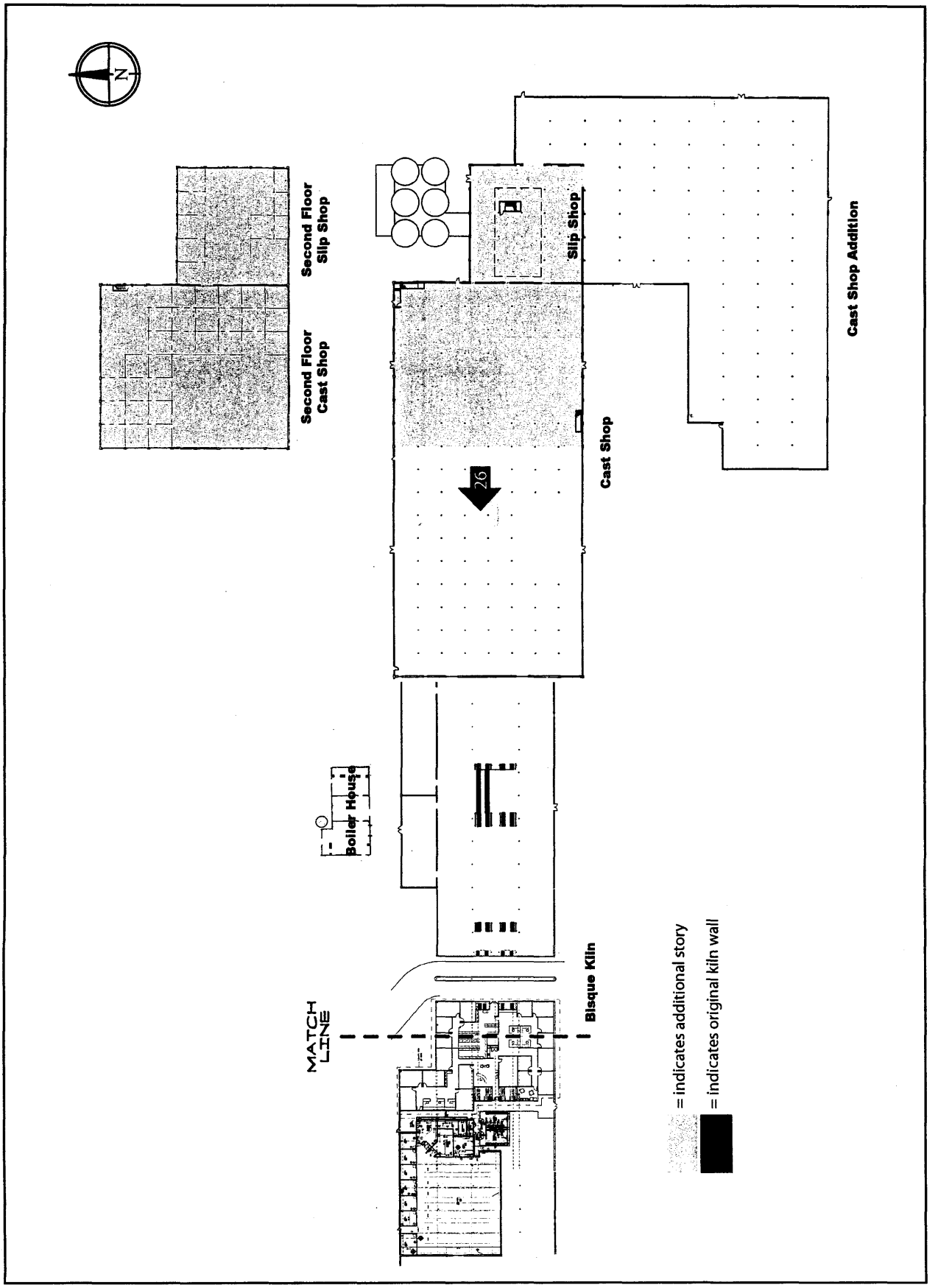


Photograph Key Plan (as rehabilitated): Site Plan
Thomas Maddock's Sons Company
Mercer County, New Jersey



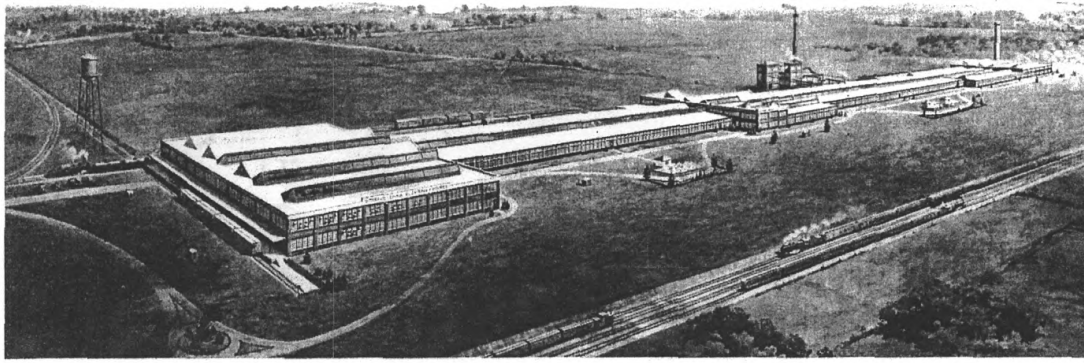
Photograph Key Plan (as rehabilitated): Bisque Kiln, Cast Shop, Slip Shop, Cast Shop Addition, Boiler House

Thomas Maddock's Sons Company
Mercer County, New Jersey



Photograph Key Plan (as rehabilitated): Bisque Kiln, Cast Shop, Slip Shop, Cast Shop Addition, Boiler House

Thomas Maddock's Sons Company
Mercer County, New Jersey

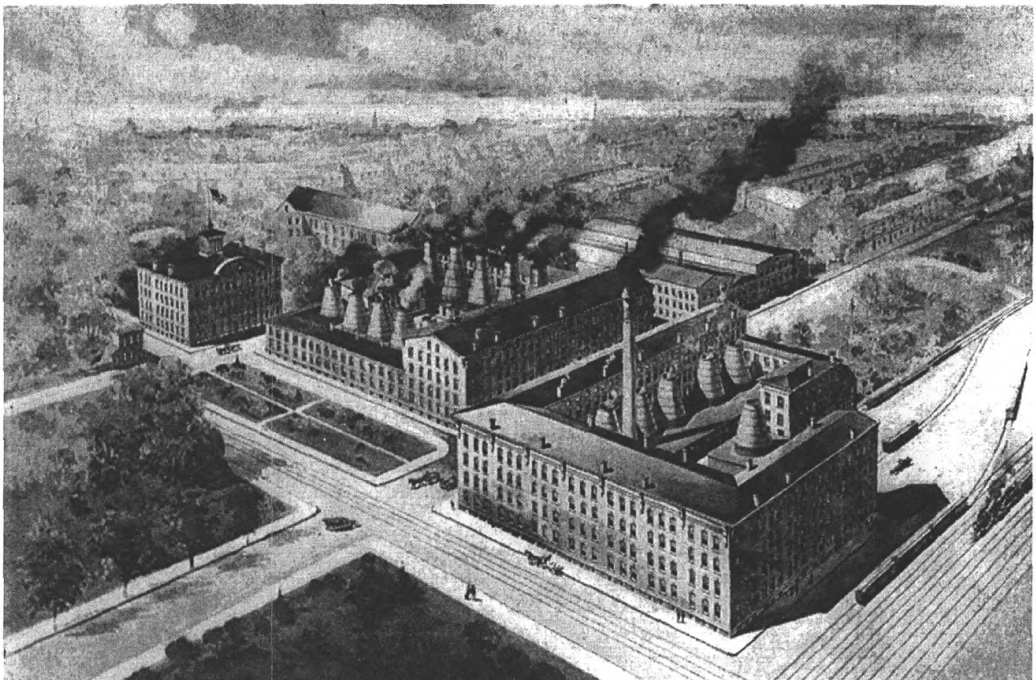


THE THOMAS MADDOCK'S SONS COMPANY PLANT

THOMAS MADDOCK'S SONS COMPANY, MERCER COUNTY, NEW JERSEY.

FIGURE 1. Thomas Maddock's Sons Company Hamilton Township, Mercer County pottery, c. 1929.

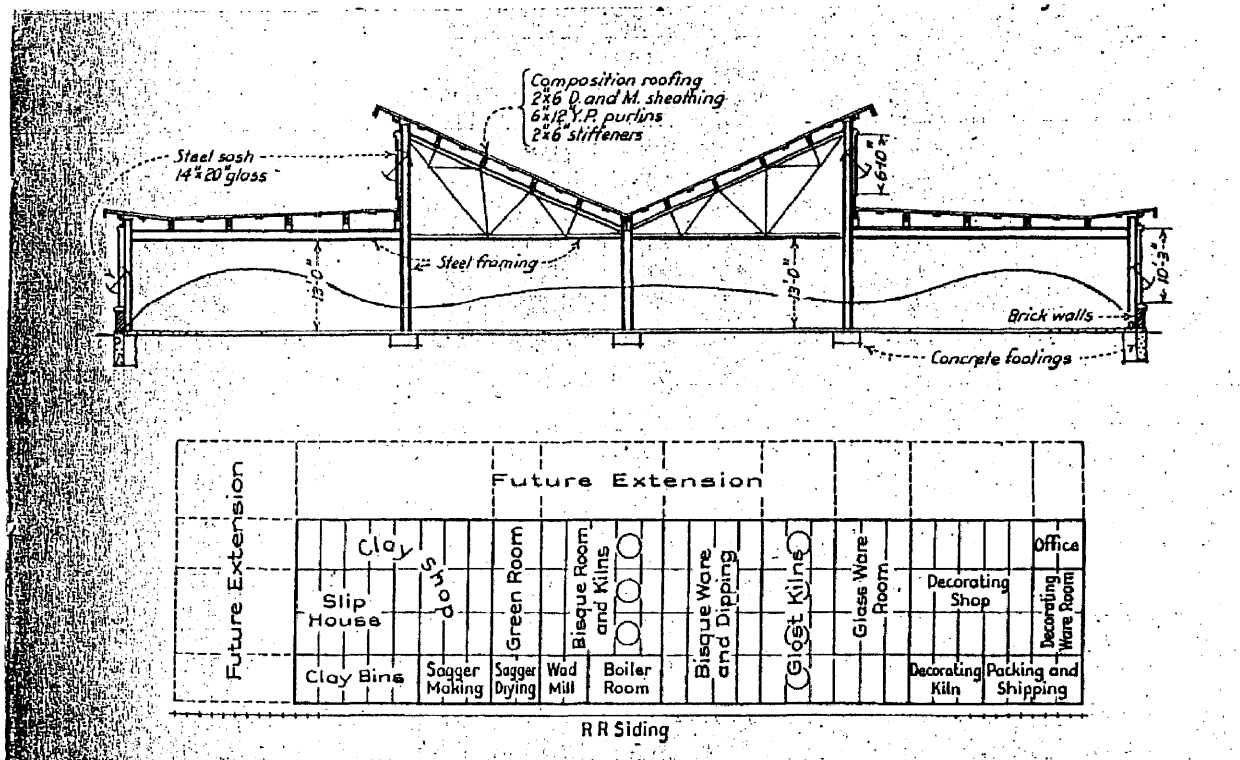
Source: "Maddock's Sons Company Acquired by Merger," Trenton 5 (September 1929): 12.



THOMAS MADDOCK'S SONS COMPANY, MERCER COUNTY, NEW JERSEY.

FIGURE 2. The Thomas Maddock's Sons Company Trenton pottery circa 1910.

Source: Thomas Maddock's Sons Company, Pottery: A History of the Pottery Industry and its Evolution as applied to Sanitation with Unique Specimens and Facsimile Marks from Ancient to Modern Foreign and American Wares (Trenton, NJ: Thomas Maddock's Sons Company, 1910), p. 69.



FIGS. 1*a* and 1*b*.—Typical plan and cross-section of periodic kiln plant showing provision for future extension. Contour line indicates distribution of natural lighting.

THOMAS MADDOCK'S SONS COMPANY, MERCER COUNTY, NEW JERSEY.

FIGURE 3. Source: H.S. Jacoby, "Modern Trend of Design for Pottery Plants," American Ceramic Society Bulletin 7 (1928): 185.

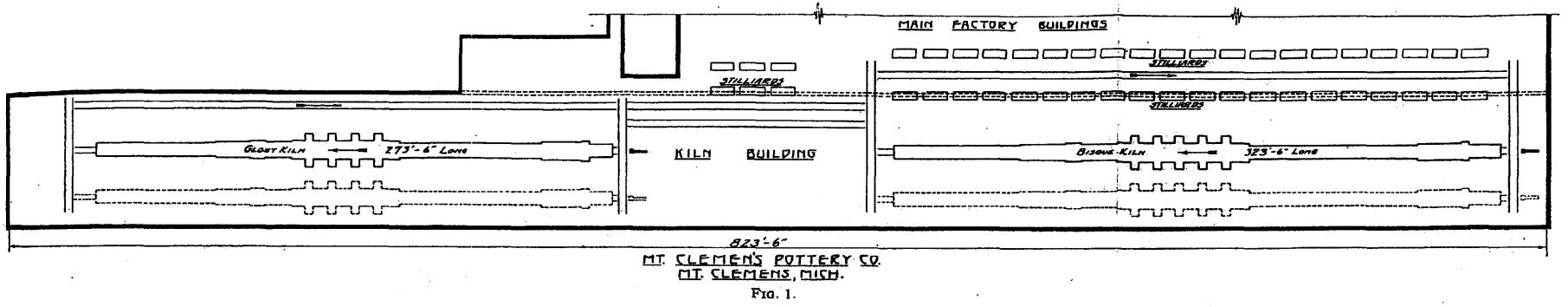
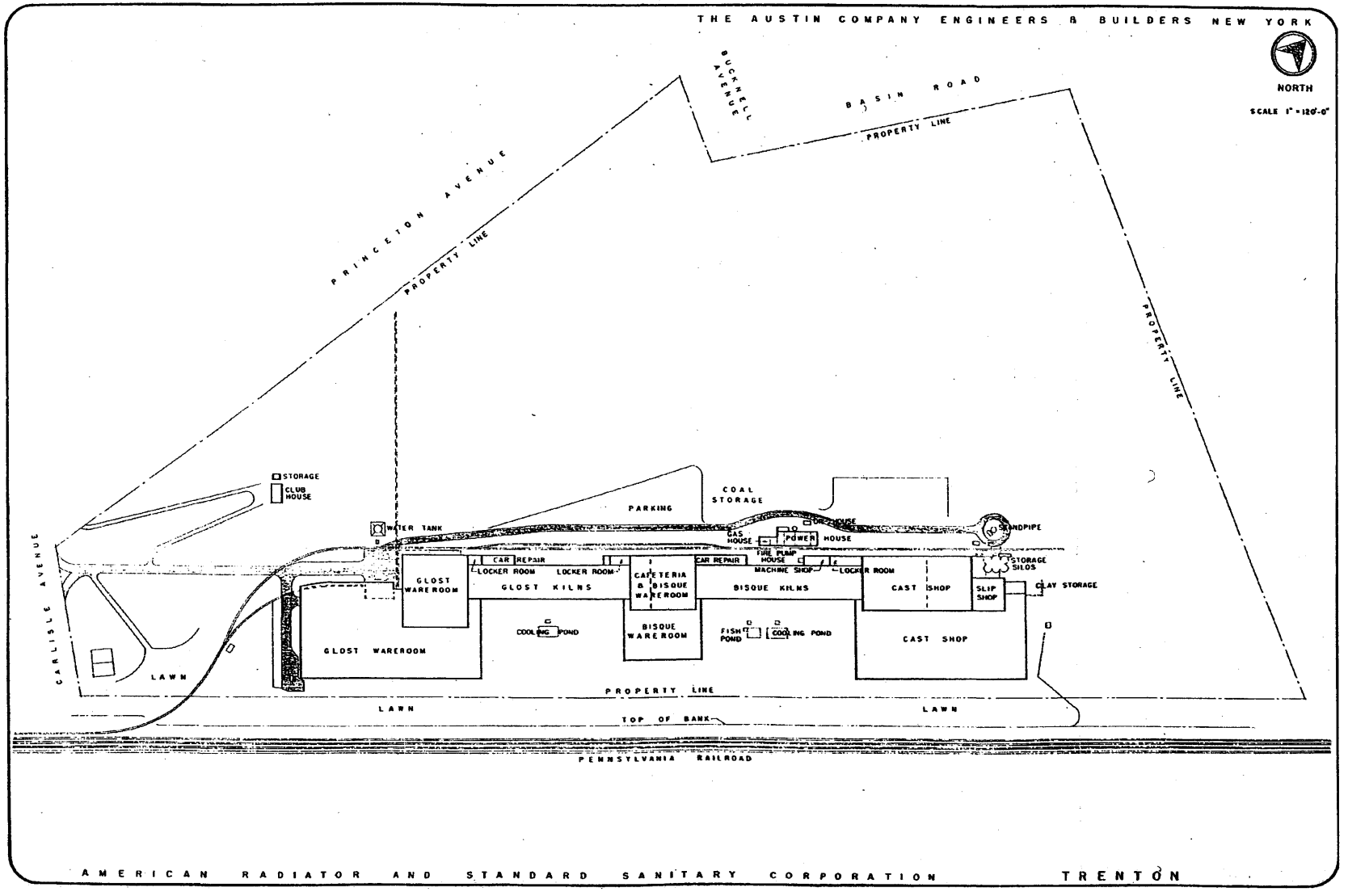


FIG. 1.

THOMAS MADDOCK'S SONS COMPANY, MERCER COUNTY, NEW JERSEY.

FIGURE 4. Direct-fired tunnel kilns, shown in plan, at the Mount Clemen's Pottery Company, Mt. Clemens, Michigan.

Source: C.B. Harrop, "Continuous Tunnel Kilns at the Plant of Mount Clemens Pottery Company." Journal of the American Ceramic Society 4 (1921): 675.



THOMAS MADDOCK'S SONS COMPANY, MERCER COUNTY, NEW JERSEY.

FIGURE 5. Thomas Maddock's Sons Company Mercerville pottery site and building plan circa 1952.

Source: The Austin Company Engineers & Builders, "American Radiator and Standard Sanitary Corporation, Trenton," (The Austin Company Engineers & Builders, New York, n.d. Private collection.

1924-1925 Thomas Maddock's Sons Company pottery is constructed in Hamilton Township.

1929 Pottery purchased by Standard Sanitary Manufacturing Company (later American Standard)
Slip Shop and concrete Silos constructed

1941 Glost Wareroom Addition, Bisque Wareroom Addition and Cast Shop Addition are constructed on the south elevation of the original Maddock's building, at the west, center, and east end of the building, respectively.

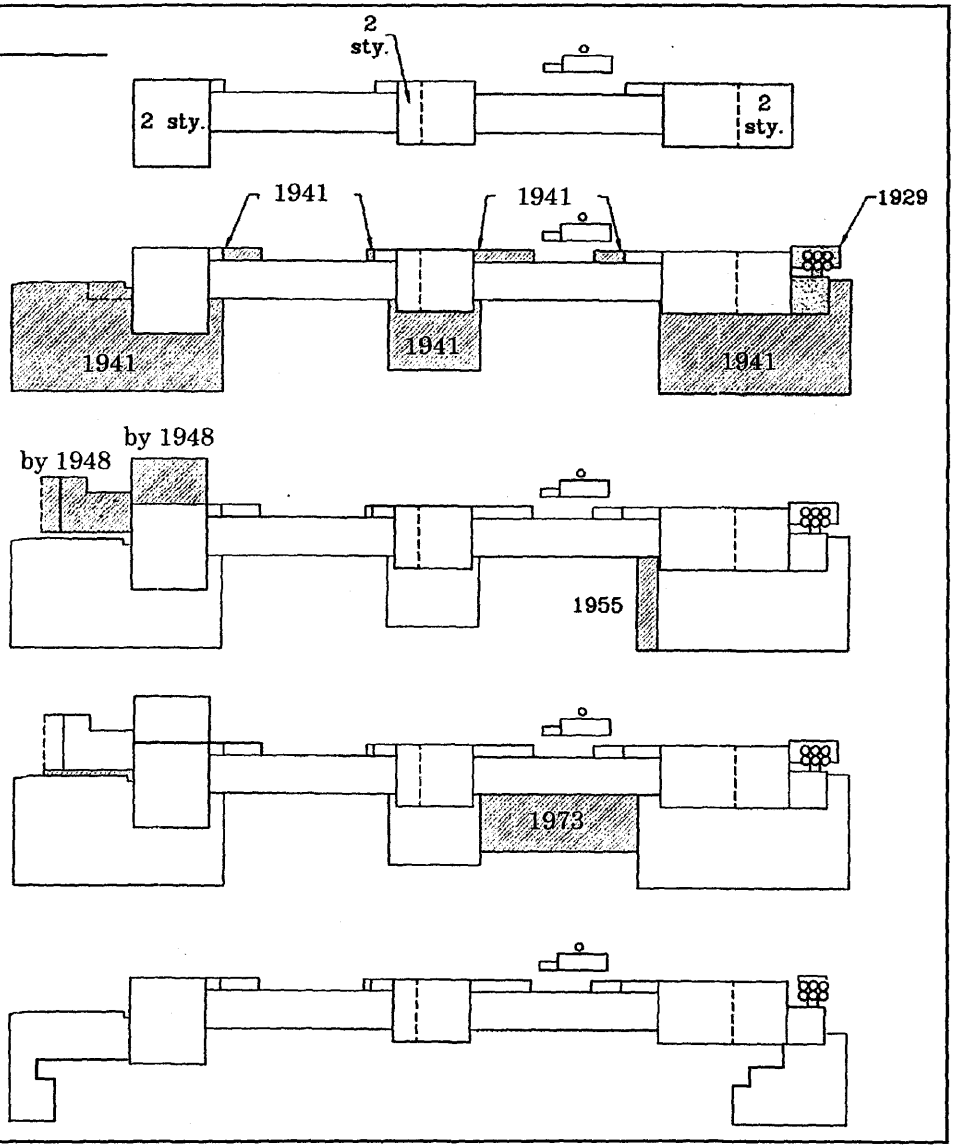
By 1948 Two Warehouse Additions are construct ed on the north and west walls of the original Glost Wareroom.

1955 The Cast Shop Addition is extended an additional six bays to the west.

After 1954 and by 1963 The railroad siding in the Glost Wareroom Addition of 1941 is enclosed.

1973 The Cast Finishing Shop Addition is constructed, joining the Bisque Wareroom Addition, Bisque Kiln building and Cast Shop Addition on the interior.

2004-2006 All major additions after 1929 were removed with the exception of C-shaped portions of the Glost Wareroom Addition and Cast Shop Addition at the west and east ends of the building, respectively. The building and Power Plant are converted to multi-tenant office space following the guidelines of the federal historic tax credit program.



THOMAS MADDOCK'S SONS COMPANY, MERCER COUNTY, NEW JERSEY.

FIGURE 6. Evolution of the Thomas Maddock's Sons Company Trenton pottery, 1924 to the present.

Source: Kise, Straw & Kolodner, Philadelphia, PA, 2007.