NPS Form 10-900
(Rev. 10-90)

OMB No. 10024-0018

United States Department of the Interior
National Park Service

National Register Of Historic Places Registration Form

1. Name of Property

Historic name: Reading Hardware Company

other names/site number: The Hardware

2. Location

street & number: Willow St., south to Canal Street between S. Fifth and S. Sixth Streets
not for publication: N/A
city or town: Reading vicinity: N/A
state: Pennsylvania code: PA PA county: Berks code: 011
zip code: 19602

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this ___ nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ___ meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant ___ nationally ___ statewide ___ locally. (___ See continuation sheet for additional comments.)

_____
Signature of certifying official/Title Date

_____
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 commenting or other official Date

_____
State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is: Signature of Keeper Date of Action

___ 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): _____

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)

_X_ **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.
_X_ **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.

Areas of Significance
(Enter categories from instructions)
ARCHITECTURE
INDUSTRY

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 a 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.

Period of Significance
1875-1947

Significant Dates
1888, 1923

Significant Person
(Complete if Criterion B is marked above)
N/A

Cultural Affiliation
N/A

Architect/Builder
The Ballinger Company

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

9. Major Bibliographical References

Bibliography See Continuation Sheet
(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
_X_ Other
Name of repository:
Historical Society of Berks County

NARRATIVE DESCRIPTION

The Reading Hardware Company is located in the City of Reading at the southwest corner of Sixth and Willow Streets. To the west of the hardware complex is the major north/south thoroughfare, Fifth Street. To the south is the railroad to Philadelphia and the Schuylkill River. The surrounding neighborhood to the east and north consists of late 19th century brick row houses. The westerly neighborhood comprises a mixture of contemporary lowrise warehousing and older brick industrial buildings. The Hardware complex presents an impressive image as viewed from the south while travelling the Route 422 bypass or crossing the Bingaman Street Bridge. The buildings are primarily late 19th century heavy timber and brick construction and early 20th century reinforced concrete structures. The Ballinger Co. of Philadelphia was responsible for the modernist design of the concrete building. Although reduced by partial demolition, the buildings of the Reading Hardware Company form an interesting, courtyard composition which opens to view the Schuylkill River. This nominated property includes five contributing buildings and one previously listed property, The Reading Hardware Company Butt Works. The Reading Hardware Co. buildings are in a good state of repair and retain their original architectural integrity. The complex is further enhanced with brick sidewalks, granite curbing and brick courtyard paving. These four and seven story buildings, boiler house and smoke stack are of a monumental scale which dominate the surrounding buildings. The industrial scale of the Reading Hardware Company is maintained within the context of its neighborhood, the railroad, the Schuylkill River and nearby major arteries.

The following is a summary of the historic appearance of the plant based on the 1924 Associated Mutual Insurance Co. map. To the north was the brick foundry building No. 15 constructed in 1882. This structure was a one story building of three bays with gabeled slate roofs, clerestory windows and dormers. Building No. 15 ran easterly from Pearl Street to the alley and was connected to the south at the Butt Works which consisted of Building Nos. 12, 13, and 14. The Butt Works buildings were constructed as follows: No. 12 in 1892, No. 13 in 1875 and No. 14 in 1880; this group of structures was constructed of brick, was four and three stories high and had tin roofs. The Butt Works extended from the foundry Building No. 15 to Willow Street and was flanked to the east by one story service sheds constructed of wood with brick/stone foundations. (Building No. 15A, 1882; No. 16, 1875; No. 17, 1919; No. 18, 1921; and No. 19, 1912). These ancillary structures were primarily used for materials and castings storage.

Across Willow Street to the southeast were four-story brick Buildings Nos. 4 and 5, built in 1921; brick Building Nos. 1, 2 and 3, built in 1888. These buildings were two and three stories high connected to lower 1 and 2 story receiving structures parallel to the railroad sidings. This group of structures reached from Willow Street to Canal Street and flanked the rowhouses along Sixth Street. Buildings 1A through 4 were primarily used for warehousing and Building No. 5 served as offices and packaging for finished stock.

The central portion of The Hardware consisted of four and five story brick buildings with tin roofs, Building Nos. 6, 7, 8 and 9. Building No. 6 was constructed in 1888; Nos. 8 and 9 in 1889 and No. 7 in 1901. These structures served in an operational capacity in the manufacture of knobs, latches, locks, butts and finishing, plating and cleaning of hardware components. These buildings ran north to south from Willow Streeet to Canal Street.

To the west, the hardware complex was made complete with the recently constructed 1924 concrete Building No. 11 and the brick boiler house and stack Building No. 10. Building No. 11 extended from Canal

Street to Willow and was seven stories high, was built of reinforced concrete with tile infill panels, steel windows and a slag roof. This modern structure was connected to Building No. 9 by a reinforced concrete bridge at the second, third and fourth floors. An interior courtyard between Building Nos. 9 and 11 was served by the Reading R. R. siding as well as an internal rail siding within Building No. 11. Building No. 11 functioned as the brass and iron foundry, machine shop, storage for stock in process and receptor of the raw materials of coal, coke and sand.

The following is a description of the present appearance of the nominated Reading Hardware Co. buildings including the previously listed Reading Hardware Co. Butt Works. These remaining buildings form an interior courtyard grouping facing south. Building Nos. 3, 4, and 5 form the eastern and northern border of this complex and are related to each other in a monolithic form due to the similarity of architectural style, brick color and height. The basement, first, second and third floor interiors of Building No. 3 are characterized by densely columned, open floor plans and heavy timber, post and beam construction with cast iron brackets. Column sizes are roughly 12" x 12" and are spaced 16'-0" on center north to south, and 8'-0" on center east to west. All exterior walls are of exposed brick laid in common bond, with brick, segmented-arched window lintels composed of three rowlock courses. The fourth floor is characterized by two wood trusses running east to west supporting a purlin system with wood plank roof deck.

Building Nos. 4 and 5 form an "L" at the southwest corner of Willow and Sixth Streets; Building No. 3 adjoins the south wall of Building No. 4, completing the long leg of the "L". Building No. 3 is 5 bays wide, 3 1/2 stories high and composed of common red brick laid in common bond with light mortar. The overall dimensions are 50 feet north to south and 72 feet east to west. The main facade, which faces Sixth Street, is simple and unadorned; all openings are crowned with segmented arches composed of three rowlock courses. All first, second and third floor windows are wood, triple hung with 8/8/8 sash. The northernmost, first floor bay extends to floor level to form a door opening. The cornice is of evenly corbeled brick, highlighted by corbeled brick brackets. A three-light, shed-roofed dormer on the east side of the gable roof is of later origin than the construction date of Building No. 3. Two skylights, one on either side of this dormer, are also later additions. The south facade forms a parapet wall which originally served as the internal separation and fire-break between Building No. 3 and the demolished Building No. 2. The numerous door openings on each floor which connected the buildings are now visible. The west facade (rear) is similar in detail to the east facade. The remainder of this facade consists of a stair tower.

Building No. 4 and Building No. 5 appear as one composite building, forming continuous, monolithic facades along both South Sixth and Willow streets. This "composite" building is four stories in height. The overall dimensions of Building No. 4 are 117 feet north to south and 72 feet east to west. The overall dimensions of Building No. 5 are 110 feet east to west and 39 feet north to south. Both buildings are common red brick laid in common bond with light mortar. All windows are wood, capped by segmented arches composed of three rowlock courses and have sills composed of one projecting brick rowlock course. The windows on the street facades (north and east) of Building Nos. 4 and 5 and the west facade of Building No. 4, are recessed in vertical "columns", or bays, which start at the first floor window sill and terminate above the fourth floor window arch with four courses of evenly corbeled brick. The glass-to-masonry area is large. The windows in these recessed vertical bays are subdivided by a center wood mullion forming two pairs of 6/6 sash. The orientation of the rectangular window panes in these sash is horizontal rather than the traditional vertical. The style was briefly popular in buildings dating from around the mid-1910's to early 1920's. These facades have windows with 4/4 and 6/6 sash with nearly square panes and no recessed bays to express the verticality of the

building. The street facades of Building Nos. 4 and 5 feature a cornice which begins with two corbeled brick courses at two brick courses above the corbeled bricks terminating the window recesses; it then continues for approximately seventeen flush courses forming a frieze that contains terra cotta signs on both facades which spell "Reading", "Hardware", and "Company" in an art deco lettering motif. These signs, along with terra cotta "RHCo" logos punctuating each end, are the only ornamentation on the building. The cornice concludes with five corbeled and two flat courses; it is capped with a glazed tile parapet. The tile parapet cap continues around the entire perimeter of the buildings. The main entrance along Willow Street is curiously placed one bay west of the center bay, adding an element of asymmetry. The entrance door and its four-light transom are highlighted with panelled pilasters supporting an architrave formed of corbeled brick. The entrances along South Sixth Street appear as a normal window bay elongated to floor level. The rear (west) facade of Building No. 4 features a loading dock and the exposed south facades of Building No. 5, which are utilitarian.

Separations between Building Nos. 4 and 5 are interior, consisting of a masonry firewall, a change in level on the basement and first floors, and a change in general plan arrangement between the office/light warehouse function of Building No. 5, and the heavy warehouse function of Building No. 4. The interior of Building No. 4 features densely columned, open floor plans, and heavy timber, post and beam construction with cast iron brackets. Column sizes are roughly 12" x 12" and are spaced approximately 16'-0" on center north to south, and 10'-0" on center east to west. (The fourth floor columns, supporting the roof above, are of a smaller cross section, being approximately 8" x 8".) By contrast, the floor plan of Building No. 5 is single span and is sub-divided into smaller rooms and offices by various partition arrangements on each floor. All exterior walls in Building No. 4 are of exposed brick laid in common bond, with brick, segmented-arched window lintels composed of three rowlock courses. Building No. 5 was given a more "finished" appearance with its exterior plastered walls.

The western grouping of the former Reading Hardware Company consists of Building Nos. 10 and 11 of that complex, as identified in a 1950 property survey, prepared by Walter E. Spotts, RPE. Building No. 11 of the former Reading Hardware Company served the manufacturing and warehousing of the newly manufactured items; Building No. 10 was the power house for the complex. These buildings are attached, forming an "L"- shape in outline, with the short leg of the "L", Building No. 10, lying along Willow Street.

Building No. 11 runs the entire depth of the block, from Willow Street on the north to Canal Street on the south. It is 7 stories high (there is no basement as the first floor is directly on grade), 4 bays wide and 11 bays deep. The south facade of Building No. 11 was designed to follow the angle of Canal Street to the adjacent street grid, making the east facade generally two structural bays deeper than the west facade. All facades are flush and monolithic except for the east facade which has a narrow projection that is approximately 12'-0" deep by 7 1/2 structural bays long. This projection houses toilets, elevators, a fire stair and other utilitarian functions. Various bays of this projection terminate at various heights: the roof line, one story above the roof (penthouse) and at the seventh floor line. Despite the projection of the east facade, Building No. 11 can generally be said to be a monolithic, trapezoidal block, further enhancing its character as a dramatic example of early modernist, industrial architecture. This modernist influence is most apparent in the design of the exterior facades of the building. It features an exposed, reinforced concrete frame with brick and glass infill and sparse ornamentation used only to accentuate the frame. The exposed, external, vertical concrete columns are much broader than the narrow, horizontal concrete spandrel beams; the columns rise unbroken from ground to top at the corner bays, and ground to the concrete spandrel beam below the brick parapet at the center bays. The spandrel beam above the center bays is topped with a narrow brick parapet wall

which in turn is capped with a glazed tile cap. The columns at the corner bays integrate shallow, brick and concrete "pediments." The intermediate columns are terminated with peaked tops. This is the limit of the ornamentation of the building and it is executed in a restrained, art deco motif. A brick chimney with a slightly corbeled, flat top, sits atop the concrete frame at the extreme southwest corner of the building. The multi-paned, steel-frame windows extend from concrete column to concrete column. They are divided by steel mullions into three or two segments with three segments predominating, except for the corner bays on the north (Willow Street) facade, which contain a single-segment window surrounded by brick infill. All windows continue to the underside of the narrow, concrete spandrel beam. Window segments on the fifth, sixth, seventh and first floors are five or four panes wide by seven panes high, with two (2), six-paned pivoting, operable sashes per segment. The window segments on the second, third and fourth floors are five or four panes wide by five panes high, with one (1), six-paned pivoting, operable sash per section. All brick spandrel panels, projecting concrete window sills and the top of the narrow, concrete spandrel beams below are composed of common red brick laid in a common bond with light mortar. Historically there was, and remains, one pedestrian entrance on the first floor of the Willow Street facade. Two were on the first floor of the east facade, and a truck entrance was on the first floor of the Willow Street facade. A railroad car entrance on the first floor of the Canal Street facade and a railroad siding still enters the building through this Canal Street entrance. The pedestrian entrances are expressed as doors with sidelights in the bays of the building with no ornamentation or highlighting. Thus, there is no apparent, "architectural", pedestrian entrance to this building. Merely due to their scale, the most apparent entrance is the railroad entrance on Canal Street, and the secondary apparent entrance is the truck entrance along Willow Street, further emphasizing the industrial nature of the building.

The interior of Building No. 11 is characterized by open floor plans and concrete columns with inverted "mushroom" capitals. These columns are approximately 2'-0" in diameter, are spaced approximately 20'-0" on center both ways, and directly align with the exterior bays and exterior, reinforced concrete frame. The only deviation from the open plan is the stair tower located in the bay along Willow Street at the extreme northeast corner of the building. This stair tower is contiguous with an entry vestibule on the first floor occupying the adjacent bay along Willow Street. The floor to floor heights in the building vary according to the purpose that the existing floor served. The first floor (receiving/ shipping/storage) varies from 19'-4" at Canal Street (railroad entrance) to 13'-8" at Willow Street (truck entrance), the second (stock), third and fourth (machine shop) floors are 13'-10", the fifth and sixth (iron foundry) floors are 17'-6" and the seventh(brass foundry) floor is 18'-0" to the low point of the roof slab and approximately another 17' to the high point of the clerestory above. The seventh floor is lit by a continuous clerestory of operable steel windows which run from north to south; a feature which allows sunlight to be seen through the windows of the seventh floor giving it a transparent appearance.

Building No. 10 adjoins Building No. 11 to the east, and contains the brick Power and Boiler Houses. It is characterized primarily by a five bay, one story Power House fronting on Willow Street (the top of the Power House terminates at the third floor line of Building No. 11), and a narrow, four and five story Boiler House which rises to the fourth and fifth floor line of Building No. 11 and runs the entire length of the south facade of Building No. 10. The Willow Street facade is highlighted by large, multi-paned steel windows, a concrete base, corner buttresses and buttresses between each window bay which terminate with beveled concrete "capitals" several courses below the glazed tile-capped parapet. An overhead door with a steel window above occupies the central bay along Willow Street. The most distinguishing feature of the Power House is the tall, round, tapered smokestack composed of yellow brick which rises to a height which appears to be the roofline of Building No. 11.

The existing buildings of the Reading Hardware Company Butt Works, which are previously listed on the National Register, include Building Nos. 12, 13, 14 and 16. Building No. 12 is a four story brick structure with a gabled roof and corbeled eaves that runs east-west along Willow Street between Pearl Street and an unnamed alley. The windows are wood, capped by segmented arches composed of three rowlock courses, with 9/9 sashes. Building Nos. 13 and 14 extend perpendicular from Building No. 12 along the unnamed alley and are three stories high brick structures with separations between the building evident only on the interior. Building No. 16 is a 1 1/2 story brick building, formerly the boiler house and lockers/washroom for the employees. The interior is lit by clerestory windows in the monitor skylight that extends perpendicular from Building No. 12. The high gabled roof with exposed wood structure currently houses the original furnace in the entry foyer of the renovated apartment complex.

Despite demolition of many original structures this industrial complex still conveys an image of the former hardware complex. The various buildings described were constructed at differing dates obviously as an outgrowth of manufacturing and business demands. Although these structures were often constructed as additions or as single entities they all relate to one another in terms of materials, scale, window rhythms and overall design integrity. With each building there are almost no recent intrusions or alterations which effect the integrity of the original construction. The dormer and skylight additions circa 1920 to Building No. 3 are but a few of the changes which could be considered alterations. Other than some superficial overcladding of windows, Building No. 11 is totally intact and original. In summation, the integrity of the remaining buildings is remarkable and does convey the image of an industrial hardware complex.

STATEMENT OF SIGNIFICANCE

The Reading Hardware complex is significant under Criterion A in the area of Industry for its association with one of the nation's leading hardware manufacturers and one of the leading firms in the City of Reading's industrial history. The Reading Hardware Company is also significant under Criterion C in the area of Architecture. Despite demolition of several buildings which formerly made up Reading Hardware, the remaining buildings are a locally significant assemblage of industrial buildings and convey its historical associations. Additionally, Building No. 11 is an excellent example of reinforced concrete factory design by the prominent Philadelphia architectural engineering firm, Ballinger and Company. The period of significance begins with the 1875 construction date of the Reading Hardware Company Butt Works and ends with the current 50-year cut off date under National Register guidelines. (The hardware company continued in operation until 1950.) The nominated property includes the Reading Hardware Company Butt Works, which was previously listed in the National Register.

The city of Reading in 1928 is described in Fox's A History of Reading and Berks County as the "Third Industrial City" in the Commonwealth of Pennsylvania and fifty-fourth among cities of the United States. It was also noted that Reading was America's second largest center of hosiery and builders' hardware. The Reading Hardware Company and Penn Hardware Company were among the leading industrial complexes south of Penn Street which were densely constructed along the Reading and Pennsylvania rail lines. Historically, the industrial growth in this area developed along the Schuylkill Canal which connected Reading to the Philadelphia markets. Numerous iron related industries developed here with ready access to coal and iron ore. The Sanborn Map and Publishing Company map of Reading dated November 1887 shows the location of numerous industrial sites which had once been neighbors of the Reading Hardware Company. Among them was the Penn Hardware Company established in 1887 at the foot of Spruce Street. Once a multi-structural complex which employed five hundred men, this site is now reduced to one building. Other industrial sites now gone include the Reading Wheel Company established in 1897 on Canal Street between Second and Spruce Streets, the Winter and Goetz Tannery on Canal Street between Third and Spruce Streets, the Keystone Iron Works located at Pine and Third Streets, the Reading Iron Company at South Fifth and Canal Streets and the United Tractor Company at Third and Pine Streets. Many were among the leading industrial sites which were razed and used as fill for the remaining segments of the Schuylkill Canal bed during the 1950s in preparation for new industrial development.

The history of "The Hardware," as it is locally known, narrates the growth of an industry from a small forge to a major manufacturer. The beginning of the hardware manufacturing business in Reading began as early as iron ore and limestone were found in the hills of Berks County. Industrial facilities sprang up around the sources of raw material, and some of the earliest related furnaces reportedly supplied cannon balls for the Revolutionary War. The advent of coal led to blast furnaces required to more easily remelt and recast the iron "pigs" into usable shapes and forms. The foundries and the various laborers and artisans needed to produce their products followed. Thus Reading became a center for the manufacturing of hardware. "The Hardware" reached its importance in Reading industrial history as a leader particularly from the years of 1880 into the late 1920's. Its significance as an industrial leader culminated in the year 1925 when the Reading Hardware Company employed 1500 workers, occupied 5 acres of fully developed city land and was identified as one of the nation's leading hardware manufacturers supplying hardware to the White House, Washington, DC; Marshall Field & Co's Building, Chicago; the New York Athletic Club, New York; and many other noteworthy buildings.

In 1851, *William Harbster, a grandson of German immigrants and a native of Berks County, opened a* small blacksmith shop "at the foot of South Sixth Street" near Canal Street. In 1852, the business became known as "Harbster Brothers" with the association of his brothers Matthan and John. In these early days, the firm mostly produced "thimble skeins, wagon boxes, coal shovels, coffee mills, hinges, iron buckets and thumb latches". The proprietors themselves worked at the forge, furnace, counting room and shipping departments. Their goods were delivered to the dealers and shipping offices by means of a small push-cart. Their products soon gained a favorable reputation. In 1858, William M. Griscom, became associated with the Harbster Brothers, and the firm name was changed to Harbster Brothers & Co. In 1862, the business became known as the Reading Hardware Company. The works passed from private to corporate hands in 1886, and by 1888, the Reading Hardware Company reportedly occupied several brick buildings over five acres of ground at its site along Willow Street. On January 1, 1888, the Reading Hardware Company purchased control of the Manhattan Hardware Company in Reading, making it a large producer of such items as "builders' hardware, jail padlocks, a complete line of Japan, German, American, Albion and Geneva bronze hardware, bronze metal, royal bronze and plain bronze finishes, warm-air registers, ventilators and stationary goods". The Manhattan Hardware Company was located at Third and Bern Streets and at Rose and Richmond Streets in Reading. It ceased operating at those locations after 1887 upon purchase by the Reading Hardware Company.

On July 2, 1888, fire destroyed "a large portion of the works". The remaining buildings, along with fully stocked branch offices in New York, Philadelphia and Chicago assisted in keeping product demand supplied after the fire. The company quickly rebuilt. It would appear from atlas and map evidence that Building No. 3 may predate 1884 and survived the 1888 fire, however the 1924 map prepared by the Associated Mutual Insurance Co. dated Building Nos. 2 and 3 to 1888, clearly indicating that they must have replaced buildings of similar size and type. The 1924 map indicates an evolution of construction following the fire of 1888, which focused on building south of the surviving Butt Works Building Nos. 13 and 14. From this map it can be determined that a succession of construction occurred which was dictated by the needs of hardware manufacture rather than what would depend upon physical placement. The newly constructed complex began with Building Nos. 1, 2, 3 and 6, built in 1888, followed by Building Nos. 8 and 9 in 1889, the main structure of the Butt Works, Building No. 12 in 1892, and Building No. 7 in 1901. Smaller ancillary structures were added from 1912 through 1921 with a final burst of construction accomplished in 1923 and 1924 with the addition of the seven story reinforced concrete Building No. 11 and the associated brick power house, Building No. 10.

The Reading Hardware Company complex of buildings contained "warehouses, finishing shops, baking ovens (in the "Japan Building"), lock and register buildings, a machine shop, shops for drilling, plating, bronzing and finishing; brass and iron foundries; and butt and brace factories" employing hundreds of skilled artisans. The value of the production in the 1880's averaged at least one million dollars per year. The narrow, vertical orientation of the manufacturing process reached its peak with Building No. 11. In 1923, this 150,000 square foot, seven story, steel and concrete building was added to the already imposing collection of multi-story buildings at the Reading Hardware Company. This building has a curious layout in that the brass foundry was on the sky-lit seventh floor, the iron foundries were on the sixth and fifth floors, machine shops were on the fourth and third floors (with a churn room on the fourth floor), stock in process was stored on the second floor, and coal, coke and sand was stored on the first floor. This provided for a unique vertical production process: the raw materials, sand, pig iron, coke, limestone, and brass ingots were brought into the first floor by railroad car and lifted by to the top floor by elevator, where they found their way down throughout the manufacturing process again to the first floor, where they were shipped out by railroad car as beautiful, finished hardware

products. No one knows exactly why the building was constructed this way; one theory surmises that it was to keep the smoke and fumes above the polishing, plating and packing rooms where they would "blow away" before damaging the precious finishes of the finished products.

Building No. 11 is an outstanding example of reinforced concrete architecture as well as a finely tuned, well-engineered machine. The Ballinger Co. designed the structure and interpreted the manufacturing process into beautifully engineered form. The unique, vertical top-down manufacturing process and constraints of the urban site are illustrated in the deft interrelationship established between the resultant constructed form and the manufacturing process. The seventh floor clear span structure with its ventilating clerestory is most noteworthy achievement of this building. This feature coupled with the exquisite simplicity of column design and the subtle interweaving of rail shipping and receiving make this building an outstanding example of its type. Both Building No. 11 and Building No. 10 (the boiler house) are listed as Ballinger Co. projects in the Biographical Dictionary of Philadelphia Architects in 1924 and 1925. This architectural and engineering firm was among the first to experiment with reinforced concrete in the Philadelphia area as early as 1902. Few firms were involved with both engineering and design of reinforced concrete buildings as was the Ballinger & Perrot firm (later to become The Ballinger Co.). Innovative engineering led to creative patented steel transverse truss design which led to vast improvements in clear span design. Innovations in reinforced concrete led to multi-story manufacturing and warehouse buildings. Superb natural lighting, effective ventilation, minimalized structure and the elimination of excessive column design are all features found in Building No. 11.

The new manufacturing plant in Building No. 11 must have made the butt works/churnhouse across Willow Street obsolete, because in 1932, the Reading Hardware Company leased the building to the Junior Hosiery Mill which operated there until 1955. In 1939, under the direction of Robert Sullivan, the Reading Hardware Company began manufacturing the finest armor plate in the world. During World War II, the manufacture of hardware was ceased, and the company went full-time into the manufacture of ordnance materials such as armor plate, shells, helmets, bomb fuses and metal skins for aircraft as protection against anti-aircraft fire. After World War II, the Reading Hardware Company resumed production of hardware and lawn mowers. During this period, management did not foresee changes occurring within the industry and suffered financially due to inventory and labor union problems. Plastic hardware design was a concept pursued but produced no results. Tubular locksets were a revolutionary idea in the hardware business and the Reading Hardware Company was late to pursue this engineering. When operations ceased entirely in 1950, they sold all their machinery and leased the entire complex to the Army Air Corps for use as a distribution warehouse to ship parts all over the world. In 1951 and 1952, several of the buildings on the site were demolished by the owners. Fortunately, Buildings 3, 4, 5, 10 and 11, as well as the National Register-listed "Reading Hardware Company Butt Works" complex across Willow Street, were spared demolition. The surviving buildings represent various eras of the factory and the most architecturally significant structures built there, giving us an invaluable picture of mid-nineteenth through mid-twentieth century hardware manufacturing. The scale of these structures is monumental due to the height of five and seven stories and nearly 300' in length. The boiler house with its imposing cylindrical stack commands the open yard between buildings, and one can sense the power of this once thriving industrial complex.

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VERBAL BOUNDARY DESCRIPTION

Starting at a point at the northwest corner of the intersection of South Sixth Street and Canal Street and proceeding approximately 384 feet north to the southwest corner of the intersection of South Sixth Street and Willow Street; then proceeding approximately 125 feet west along Willow Street; turning north and crossing Willow Street to include the previously National Register listed Reading Hardware Co. Butt Works; then proceeding south (following the boundary of the NR listed Reading Hardware Co. Butt Works) along Pearl Street to the north facade of Building No. 10; then proceeding west approximately 130 feet to a service driveway/alley; then proceeding south 227 feet to the northeast corner of the intersection of this service driveway and Canal Street; then proceeding approximately 394 feet east-southeast along Canal Street to the starting point.

BOUNDARY JUSTIFICATION

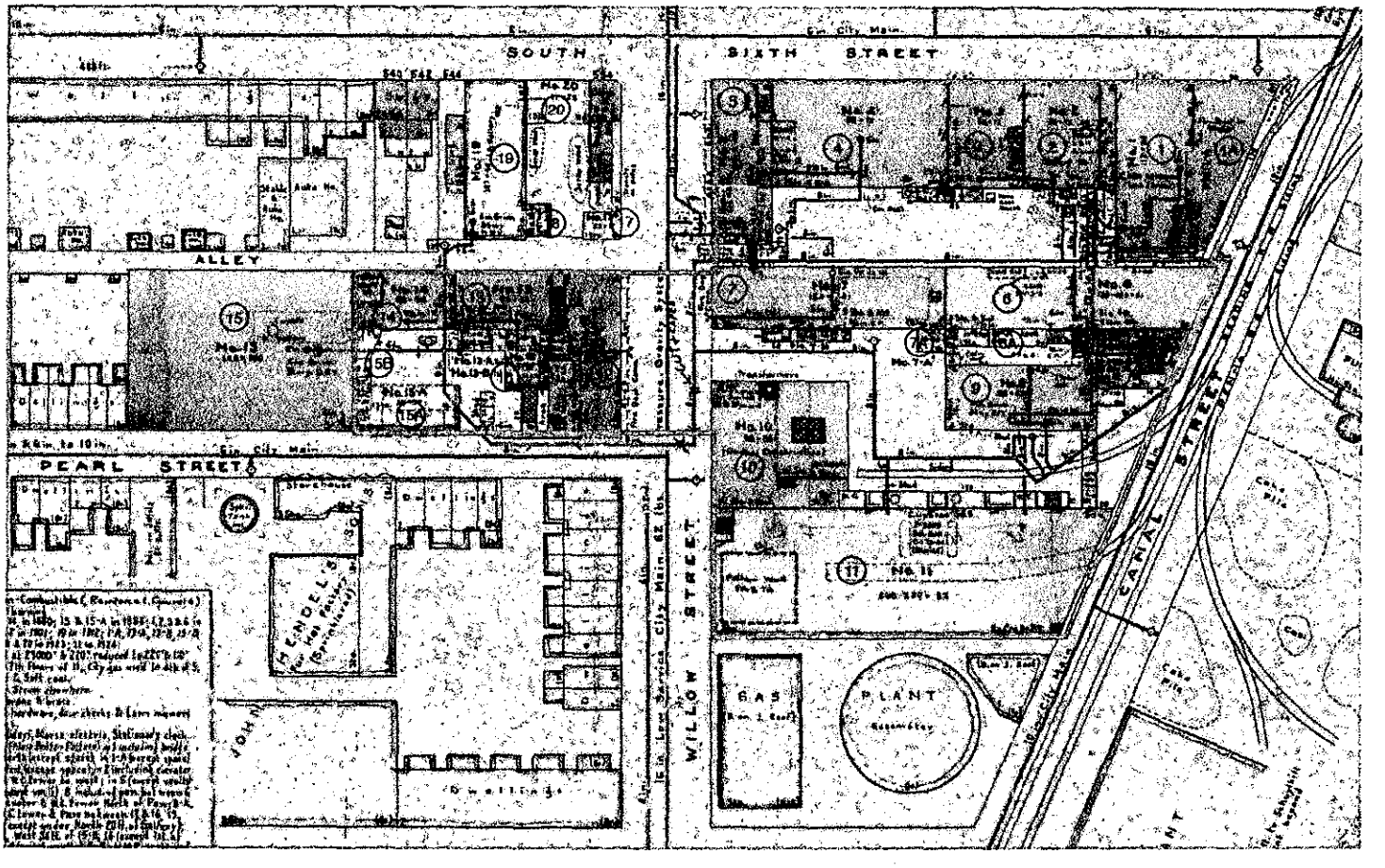
The site as described contains all currently standing buildings in both the Reading Hardware Company (Building Nos. 3, 4, 5, 10 and 11) and the Reading Hardware Company Butt Works (Building Nos. 12, 13, 14 and 16) and the immediate setting. The boundary excludes those portions of the historical complex as recorded in the 1924 insurance survey map where other development has taken place. In particular, the former locations of Building Nos. 15, 17, 18, 19 and 20 now are occupied by two to three-story brick rowhomes.

——— NRHP Nomination site boundary, including Building Nos. 3, 4, 5, 10, and 11; also Building Nos. 12, 13, 14, and 16 which are currently listed on the National Register under the "Reading Hardware Company Butt Works"

Building No. 3	3 1/2 story & bsmt; brick circa 1888
Building No. 4	4 story & bsmt; brick circa 1921
Building No. 5	4 story & bsmt; brick circa 1921
Building No. 10	1 and 3 story masses + brick smoke stack; brick circa 1923
Building No. 11	7 story; concrete circa 1924

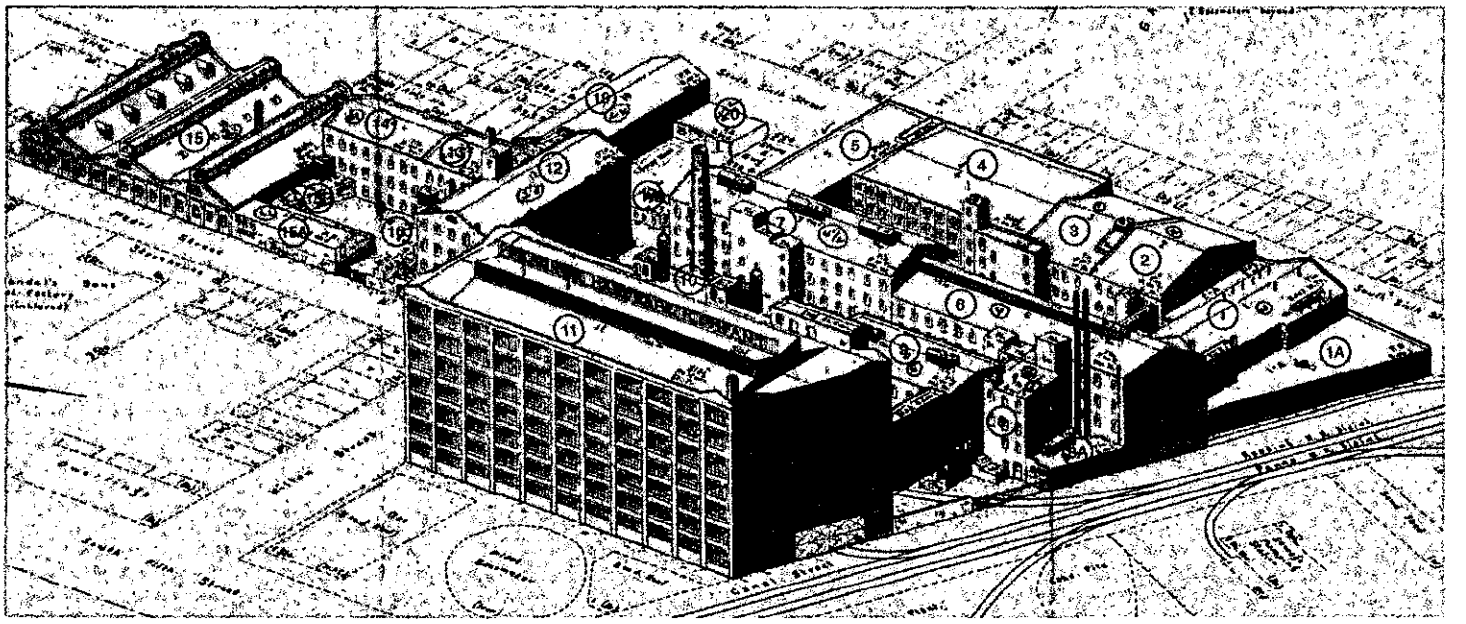
Reading Hardware Company Butt Works

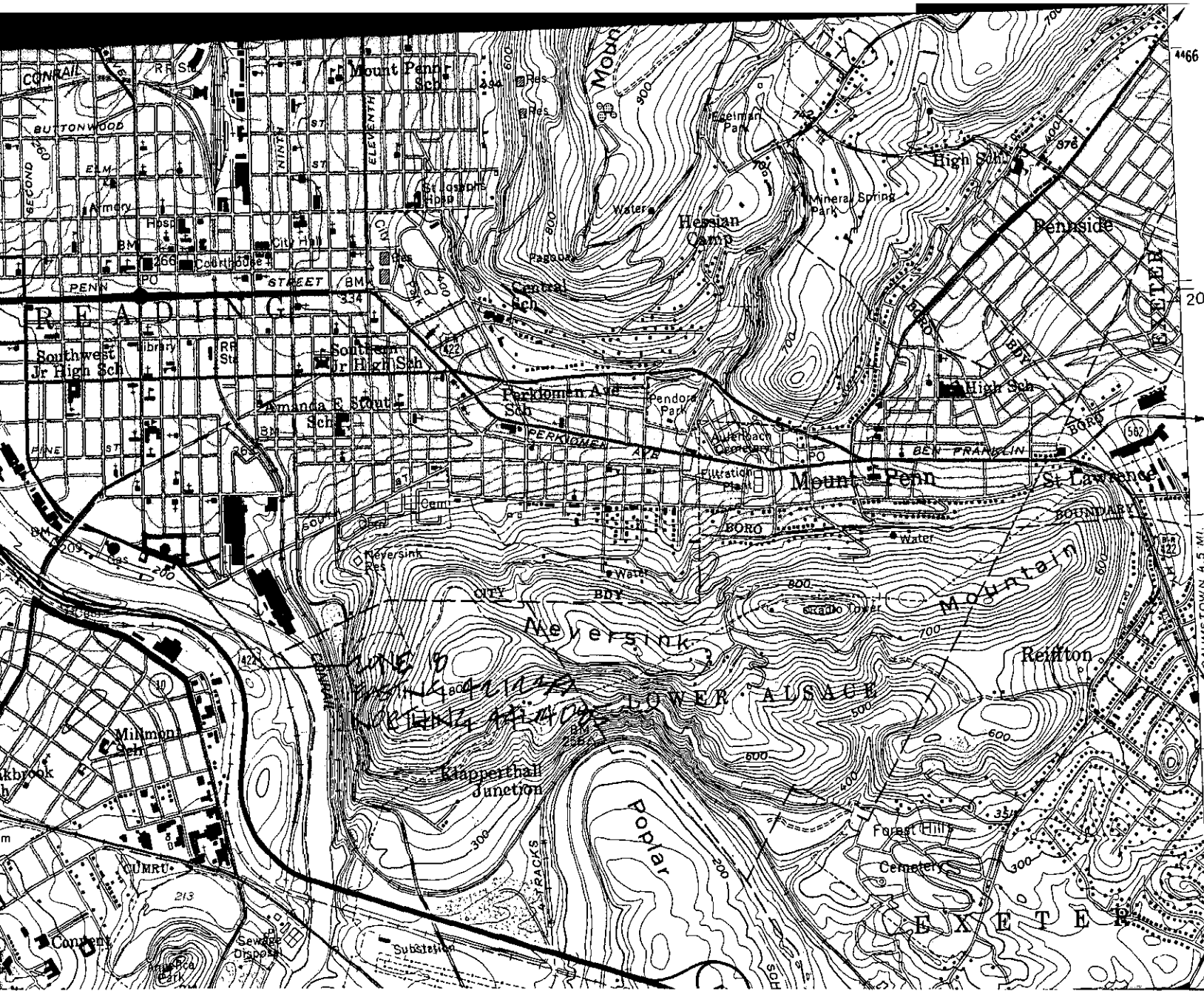
Building No. 12	4 story & bsmt; brick circa 1892
Building No. 13	3 1/2 story & bsmt; brick circa 1875
Building No. 14	3 1/2 story; brick circa 1880
Building No. 16	1 1/2 story; brick circa 1875



BUILDING KEY FOR 1924 INSURANCE MAP

Building No. 1	demolished
Building No. 1A	demolished
Building No. 2	demolished
Building No. 3	existing, part of present NRHP nomination
Building No. 4	existing, part of present NRHP nomination
Building No. 5	existing, part of present NRHP nomination
Building No. 6	demolished
Building No. 6A	demolished
Building No. 7	demolished
Building No. 7A	demolished
Building No. 8	demolished
Building No. 8A	demolished
Building No. 9	demolished
Building No. 10	existing, part of present NRHP nomination
Building No. 11	existing, part of present NRHP nomination
Building No. 12	existing, previously listed on the National Register as part of Reading Hardware Company Butt Works and part of present NRHP nomination
Building No. 13	same as Building No. 12
Building No. 14	same as Building No. 12
Building No. 15	demolished
Building No. 15A	demolished
Building No. 15B	demolished
Building No. 16	same as Building No. 12
Building No. 17	demolished
Building No. 18	demolished
Building No. 19	demolished
Building No. 20	demolished





Reading Hardware Company
Berks Co, PA
Zone 18

E 421235

N 4416095