

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. 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 Mulford Building
other names/site number Metropolitan Building

2. Location

street & number 640 N. Broad Street not for publication N/A
city or town Philadelphia vicinity N/A
state Pennsylvania code PA county Philadelphia code 101
zip code 19130

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.)

Andrew J. Macdonald 7/7/2004
Signature of certifying official 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:
 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

Edson H. Ball Signature of Keeper
8/30/04 Date of Action

other (explain):

Mulford Building
name of property

Philadelphia County, PA
county and State

5. Classification

Ownership of Property

(Check as many boxes as apply)

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

Category of Property

(Check only one box)

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

Number of Resources within Property

(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1	0	buildings
		sites
		structures
		objects
1	0	Total

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

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions

(Enter categories from instructions)

INDUSTRY/PROCESSING/EXTRACTION/manufacturing facility

HEALTH/MEDICINE

Current Functions

(Enter categories from instructions)

VACANT/NOT IN USE

7. Description

Architectural Classification

(Enter categories from instructions)

LATE 19th AND 20th CENTURY REVIVALS/Classical Revival

Materials

(Enter categories from instructions)

- foundation granite
- roof synthetic
- walls brick
- limestone
- other _____

Narrative Description

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

See Attached.

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**National Register of Historic Places
Continuation Sheet**

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The Mulford Building is a 9-story manufacturing loft building located at 640 N. Broad Street in Philadelphia, PA. Constructed in 1912-1913, this flat-roofed building stands at the southwest corner of Broad and Wallace Streets and extends a full city block west to 15th Street. The Mulford Building has a steel frame and reinforced concrete construction, with a curtain wall of buff brick on the main block. The footprint of the Mulford Building is L-shaped due to a 4-story orange brick addition (1934) at the southwest corner of the building; the addition is also steel frame and reinforced concrete construction. A stone church is located to the south of the building; a six-story manufacturing building known as the Snellenburg Building¹ (1903) stands to the north across Wallace Street. With the exception of the windows (which were nearly all replaced in the 1960s), the building has received very few alterations to its features over the years and remains in intact condition. The Mulford Building has served a variety of uses since it was constructed, yet retains its integrity of architectural style, design, setting and materials.

On the primary (east) elevation along N. Broad Street, the building's main block presents a tripartite format consisting of a base, a shaft and a capital. Limestone clads the lower two stories to form the base, crowned by a limestone belt course that wraps the Broad Street elevation and terminates beyond the first bay of the north and south elevations. The third through eighth stories form the shaft portion of the building. The top of the building is distinguished by an articulated ninth story and broad overhanging pressed copper coved cornice that continues in various forms on the other elevations. The east elevation is five bays wide, with a symmetrical fenestration pattern that consists of singular window openings at the outer two bays and three groups of banked three windows at the inner bays. The windows on the 1st floor are filled with glass block, with pressed copper spandrels separating the glass block from the 2nd story windows. The majority of the windows throughout the 2nd through 9th stories consist of 1/1 aluminum windows with a single-light aluminum transom, all lights being of equal size; a few windows are filled with glass block. The outer banks of windows are framed in raised brick adorned with corbelled sills and flush tabular-shaped brackets at the outer ends. The singular window openings have limestone lintels and sills throughout this elevation. The inner banks of windows are ornamented with raised brick frames on the outer edges that are continuous from the 3rd through 8th stories; a limestone lintel adorns the very top of these columns of windows at the 8th story. Pressed copper spandrels with a three-panel gridded pattern divide the windows vertically, while aluminum mullions separate the windows in each tripartite bank. All of the window openings on the 9th story have raised brick window frames, brick sills, and limestone lintels.

The main entrance to the building is located on the east elevation and is articulated with a two-story portico composed of paired limestone Tuscan columns resting on raised limestone pedestals in front of engaged paired Tuscan pilasters. The entrance portico carries a projecting entablature that is headed by a shallow balustrade. The entrance presently contains a wide gray granite front step that leads to a modern aluminum

¹ National Register Nomination for Snellenburg's Clothing Factory, Philadelphia County, PA, 1986.

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enclosed vestibule with a glazed aluminum double-leaf door and flanking wide aluminum framed sidelights. A modest aluminum cased overhang shelters the front entrance area. The area above the entrance door is infilled with a raised patterned buff brick. A secondary entrance to a commercial space at the northeast corner of the building is located at the northernmost bay of this elevation. The entrance consists of a double-leaf glazed aluminum door; the area above and adjacent to the door is filled with an aluminum roll-down security door.

On the rear addition, the east elevation is six bays in width and is modest in character. The 1st to 2nd story has three monumental banks of multi-light windows indicating a high ceiling where the boilers are located; small singular 8-light steel windows are grouped at the north end at the 2nd story. The southern four bays on the 3rd and 4th stories contain banks of three 12-light rolled steel industrial windows, each with awning or hopper style windows in the center; the remaining three bays are narrow and contain singular 12-light steel windows. A terra cotta cap finishes the elevation at the roof line.

The south elevation consists of 19 bays laid out in a symmetrical fashion. The entire elevation is constructed of buff brick accented by limestone sills and lintels. The first story has a number of boarded loading entrances and small windows in place of the original loading doors. A flight of concrete steps with a pipe railing leads a recessed platform to the two central fire stair exit doors. The center of the elevation contains wide recessed balconies for the fire stair on each floor. The majority of the window openings on the upper stories on either side of the balconies hold groups of three 1/1 double-hung aluminum windows with 1-light transoms, all of equal size; a few window openings contain glass block and one opening retains an original 6/6 double-hung wood window. The outer two bays of the elevation contain only two banked windows. A brick enclosed chimney stack between the third and fourth bay from the west alters the otherwise perfect symmetry by covering two window openings; the remaining window banks only contain two windows apiece instead of three. Portions of the original copper cornice remain intact at the outer ends of the elevation; the remainder of the cornice area is now clad in flush stucco with a metal cap.

The south elevation of the rear addition contains six bays of windows on the 4th floor filled with paired and singular 12-light steel industrial windows. The 3rd floor has only one 12-light steel window in place at the east end. A single raised loading bay with a roll-down steel door is located at the first floor of this elevation. The rest of the elevation shows evidence of a formerly adjoined building and is covered with stucco. The majority of the roof line is finished with terra cotta coping; the west end of the elevation shows a flush limestone belt course and a limestone cap crowning the raised brick parapet.

The west elevation faces N. 15th Street and mirrors the east elevation in materials, ornamentation, fenestration and character. Unlike the east elevation, however, the west elevation is constructed entirely of buff brick with only a narrow water table of painted limestone. On the 2nd through 9th stories, the outer two bays have singular window openings; the inner three bays contain banks of three windows. The limestone sills and lintels, the raised brick surrounds with stylized brackets and corbelling, the grilled

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tripartite copper spandrels, and the massive coved copper cornice are all identical to the primary elevation. The ground level windows consist of banks of three 3/3 double-hung wood windows. A painted limestone surround and sill finishes the basement windows. The main entrance on the west elevation is similar in scale to the N. Broad Street entrance, but is less ornamented. A projecting marble-tiled entry vestibule contains a boarded double-leaf aluminum door. The marble continues as a base for the wide limestone entrance surround with a grilled copper panel at the top. A grouping of single-light aluminum windows fill in the area around and above the entrance vestibule.

The west elevation of the addition, constructed of orange brick, contains five bays: four bays with paired 1/1 double-hung aluminum windows with single-light transoms and one bay with exterior balconies and exit doors for a fire stair. Although utilitarian in character, the addition displays ornamentation in the limestone sills, the continuous raised brick frames encompassing the 2nd through 4th floors, a limestone belt course at the top of the elevation and a limestone capped parapet wall. The 1st floor window openings are framed entirely in limestone, as is the loading bay at the southwest corner.

The north elevation, fronting Wallace Street, is 22 bays wide. The 1st floor is accessed from several locations on this elevation. Four freight loading bays that stand at the center of the elevation are presently boarded. Each freight door opening possesses a limestone lintel. The original paneled wood fire stair exit doors are located on either side of the freight loading bays; additional metal-clad doors are adjacent to the fire doors. An additional loading door is located six bays from the east end and is filled with a double-leaf beaded wood door. A more formal entrance is located at the fifth bay from the east and consists of a double-leaf paneled wood door with sidelights and a transom light separated by wide wood mullions. An additional commercial entrance that is presently boarded is located at the easternmost bay, but it still retains the paired 3-light wood transom windows. A granite step is present at this entrance. Several additional loading entrances at the western end of the elevation are entirely boarded.

The north elevation's symmetrical fenestration pattern on the 2nd through 9th floors, consists of four large window openings in the center of the elevation flanked by recessed fire stair openings; the seven bays to the east and west of the center are tripartite groupings of windows; the end bays contain paired windows. All of these window openings contain 1/1 aluminum windows with single-light transoms. The center four bays of windows on the 2nd through 9th floors, corresponding to the four freight elevator shaft ways, are filled with industrial steel windows each with 56 lights. Limestone sills and lintels are found at all of the windows throughout the north elevation. Raised brick surrounds are also evident at the windows. Many of the windows on the 1st story are boarded, but two original 6/6 double-hung wood windows are still intact at the exterior fire stairwells. The original coved copper cornice remains intact on the north elevation and is visible at the ends and at the center of the roof line. In between the areas of coved cornice, a flush copper cornice with a raised vertical pattern adorns the roof line.

The interior of the building's main block is divided into east and west sections, and separated on each floor by a brick fire wall down the center. The building contains two

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interior stairwells, four internal fire staircases, four passenger elevator shafts and four freight elevator shafts. One of the two interior stairwells with flanking passenger elevators is located across from the main entrance on the east end of the building; a nearly identical stairwell with flanking passenger elevators is located at the west end of the building opposite the main western entrance off of N. 15th Street. A utilitarian enclosed fire staircase is located at the center of the building's south wall. This stair case is accessed through sliding metal-clad wood fire doors to an open balcony. The bank of four freight elevator cabs stands at the north end of the building in the center of the Wallace Street elevation. Two fire staircases flank this freight elevator bank, with open balconies on each floor. The four-story rear addition contains two fire staircases located at the north corners.

Upon entering the main building on the east elevation, a small exterior vestibule added in the 1940s leads to the main stair and elevator lobby. The lobby has golden brown and tan speckled terrazzo floors with a green and white mosaic tile border in a Greek key design. From the 1st floor lobby to the 3rd floor stair lobby, the staircase features pink and gray veined marble treads and risers, a metal railing created with a series of oval shaped balusters, a metal handrail on the outer walls, and gray, pink and light gray marble wainscoting on the first floor landing. Above the 3rd floor, the stair becomes utilitarian in character, with brick walls, concrete treads and risers and a pipe railing. All of the stair lobbies throughout the building, however, retain the terrazzo floor with ceramic tile mosaic border. The two elevators flanking the main stair were enclosed in the 1960s with concrete block and gypsum board; these passenger elevator cabs contain modern materials, with laminate panels on the walls and rubber flooring. The west stair tower off of N. 15th Street is nearly identical to the east stair tower in the materials: the terrazzo flooring with ceramic tile mosaic border is the same throughout, as is the marble wainscot, the marble steps from the 1st to 3rd stories, the ornamental handrail on the 1st through 3rd floors. Above the 3rd floor, the stair is utilitarian in character. The elevator cabs throughout retain the original metal safety caging along the stair and above the cab. The grilled metal elevator cab doors are also extant on every floor. Both the east and the west stair/elevator lobbies retain the original bronze mail chutes. The fire stairs throughout the main building and the addition all are finished in the same utilitarian manner: concrete treads and metal risers, concrete walls and a metal pipe railing.

The majority of the interior spaces of the building are open in plan with regularly spaced, round concrete columns. The exposed concrete ceilings have a rectangular girder design of major and minor concrete beams, all with chamfered edges. Much of the original wood flooring resting on the concrete floors remains intact but in poor condition. A few of the floors have gypsum board and glazed partitions dating to the 1980s in the eastern section of the building. The interior is nearly devoid of ornamentation. Only a few of the original windows survive on the south elevation and contain remnants of the original wood window trim. Only the 8th floor contains decorative elements that are not found in the rest of the building, indicating the former office suites for the factory. The 8th floor features a decorative Colonial Revival style pedimented wood door surround at the

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elevator/stair lobby. Throughout the east section of the 8th floor, the columns are wider in diameter than those found elsewhere and feature decorative egg-and-dart capitals. Remnants of an original paneled wall can be found adjacent to an intact washroom on the northeast corner of the 8th floor. The four-story addition is also utilitarian in character and contains a 2-story boiler room on the 1st and 2nd floors and open space on the 3rd and 4th stories, with square concrete columns throughout.

In the 1960s, nearly all of the windows were replaced with multi-light aluminum windows and a few window openings were filled with glass block. However, with the exception of the few openings infilled with glass block, each window opening retains the same number of banked windows as it did originally, according to historic photographs. In addition, the spandrels all remain intact and the mullions, while a different material, also remain to provide the paired and tripartite divisions for the window banks. The replacement windows do not affect the integrity of the building or the ability to convey its use as a manufacturing facility.

In summary, the building has been little altered since its construction, with the exception of the 1960s replacement windows, and thus retains a high level of integrity.

Mulford Building
name of property

Philadelphia County, PA
county and State

8. Statement of Significance

Applicable National Register Criteria

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

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

Criteria Considerations

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

- A owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or 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.

Areas of Significance

(Enter categories from instructions)

ARCHITECTURE
HEALTH/MEDICINE

Period of Significance

1912 - 1954

Significant Dates

1912
1934

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Balderston, Charles

Narrative Statement of Significance

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

See Attached.

9. Major Bibliographical References

Bibliography

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

See continuation Sheet.

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: Free Library of Philadelphia

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SUMMARY

The Mulford Building, located at 640 N. Broad Street at the southwest corner of Broad and Wallace Streets in Philadelphia, PA, was built in 1912-1913 as a 9-story, brick and steel frame garment manufacturers' loft and was purchased in 1918 by the H.K. Mulford Company, chemists and producers of biological pharmaceuticals. This building meets National Register Criterion A and C for significance in the areas of Health/Medicine and Architecture.

The Mulford Building is significant in the area of Health/Medicine for its association with the development of the pharmaceutical industry in Philadelphia. The building is also significant in the area of Health/Medicine because it provided an important setting for medical advancement as a result of the "pharmaceutical production" or the packaging of raw drugs into a finished form and the distribution nationally of these biological products and other drugs that were created in this building by the leading firms of H.K. Mulford Company, Sharp & Dohme, Inc. and Merck, Sharp & Dohme, Inc. The building also served as the corporate offices for the H.K. Mulford Company and its successors.

In addition, the building also possesses significance in the area of Architecture as an important example of a manufacturers' loft building type designed by the prominent Philadelphia industrial architect Charles Balderston. The period of significance spans from 1912 to 1954, beginning in 1912 with the construction of the building, continuing through the period associated with the Health/Medicine field, and ending in 1954 to meet National Register eligibility.

BRIEF HISTORY OF THE BUILDING

The Mulford Building, prominently sited on Broad Street, just under a mile north of City Hall, was constructed as a vast tenant manufacturers' loft building in 1912-1913 by the Metropolitan Realty Company, a short-lived development firm.¹ With a rectangular footprint of 400' by 100', more than two dozen garment manufacturers rented space in the Mulford Building (originally known as Metropolitan Building) from 1913 through 1918. According to a 1914 insurance policy plan of the building, nearly 1,100 men and women worked in this building.² The building's 29 tenants each specialized in a different type of garment,

¹ *Philadelphia Real Estate Record and Builders' Guide*, v. 27, n. 16, 17 April 1912, 257. Printer and local entrepreneur/businessman George F. Lasher was noted in this entry in PRERBG as the contact person for this entry. Lasher funded the construction of five printing buildings in Philadelphia from 1893 through 1910, including the Gilbert Building at 147-151 N. 10th Street (National Register, 1986). The Metropolitan Mercantile and Realty Company were located at 617 S. 16th Street in the 1910 Philadelphia city directory; by 1915, the company was not listed.

² Plan of Metropolitan Realty Company [Sharp & Dohme, Inc.], Associated Mutual Insurance Company, Serial Number 11742, original survey, 18 August 1914, Free Library of Philadelphia, Map Room.

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including men's shirts, ladies' dresses, shirtwaists, bathrobes, ladies' cloaks, sweaters, children's dresses, as well as other miscellaneous unrelated trades.³

At the time of construction, the Mulford Building fit in very well with its surrounding neighborhood on North Broad Street. In the late 19th and early 20th centuries, the North Broad Street corridor attracted a variety of skilled industries, as it was well served by street transportation with major rail lines nearby.⁴ At about the time of construction of the loft in 1912, this neighborhood along N. Broad Street north of Vine Street contained a mix of machine shops, garages, automobile show rooms, businesses, churches, schools, and several large-scale factory buildings. A few of the factories included: the Baldwin Locomotive Works complex at Broad and Spring Garden Streets (in operation from 1831 to 1925) south of the Mulford Building; the N. Snellenburg Company Department Store clothing factory (in operation from 1903 to the early 1920s) across from the Mulford Building at 642 N. Broad Street⁵, and the six-story building at 639-643 N. Broad Street that served as the Hensel Silk Manufacturing Company factory (in operation after 1898), a manufacturer of women's trimmings.⁶ Just off of Broad Street were residential row houses, providing ample housing for workers for the many factories and businesses in this area.

The presence of a building such as the Mulford Building, a large-scale center for the garment industry, resulted from a half-century of development of the "ready-to-wear" garment industry in Philadelphia. As one of the nation's major textile and garment centers, Philadelphia contained many sweatshops⁷ and overcrowded factories in the Old City section of Philadelphia in the mid-19th century. The production of ready-to-wear garments as an industry took hold in the 1860s during the Civil War, when the demand for pre-sewn clothing for soldiers prompted garment manufacturers to increase production by building large factories and networks of seamstresses.⁸ After the Civil War, many custom tailor shops were replaced by sweatshop apartments and lofts filled with less-skilled women and children, often immigrants.⁹

³ Plan of Metropolitan Realty Company [Sharp & Dohme, Inc.], Associated Mutual Insurance Company, Serial Number 11742, original survey, 18 August 1914, Free Library of Philadelphia, Map Room.

⁴ The Reading Railroad's Reading Terminal at 12th and Arch Streets was constructed in 1893 and the Pennsylvania Railroad's Broad Street Station at Broad and Arch was built in 1881.

⁵ National Register Nomination for Snellenburg's Clothing Factory, Philadelphia County, PA, Section 8, 3.

⁶ Entry for "Warner Factory, also known as Hensel Silk Manufacturing Company (c. 1898)" Philadelphia Architects and Buildings project, <http://www.philadelphiabuildings.org/pab>.

⁷ A sweatshop generally refers to a workplace where relatively unskilled employees work long hours for substandard pay in unhealthy and unsafe conditions. The term "sweatshop" was first used in the late 19th century to describe aspects of the tailoring trade. Information provided by Smithsonian website, <http://www.americanhistory.si.edu/sweatshops/intro/what.htm>.

⁸ Information provided by Smithsonian website, <http://www.americanhistory.si.edu/sweatshops/intro/what.htm>, "1820-1860".

⁹ Philip Scranton and Walter Licht, *Work Sites, Industrial Philadelphia 1890-1950* (Temple University Press: Philadelphia, 1986), 16. The use of cheap labor allowed for garments to be assembled in pieces using less-skilled workers who were responsible for only a small part of the production of the final garment, instead of a single person completing the garment from start to finish like the custom tailor. The treadle sewing machine, an

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In the late-19th and early 20th centuries, the garment district expanded westward from Market and Arch Streets between Third and Fourth Streets¹⁰ along Market Street towards City Hall at Broad and Market Streets. The garment district directly serviced the dry goods trade that dominated East Market Street in the late 19th century. These dry goods stores evolved by the turn of the 20th century into the large department stores represented by N. Snellenburg Company Department Store, Wanamaker, Gimbels, Lit Brothers and Strawbridge and Clothier, all of which were located along or in close proximity to Market Street east of Broad Street. These department stores also stimulated the demand for ready-to-wear clothing. To meet this demand, several successful Philadelphia department stores in the late 19th century created their own large clothing manufacturing plants that consequently replaced the old system of piece goods production.¹¹

In 1918, 640 N. Broad Street was purchased by the H.K. Mulford Company, chemists, for the pharmaceutical production and distribution and the building's name was formally changed to the "Mulford Building." The H.K. Mulford Company moved its corporate offices, laboratories and distribution plant from the three-building Mulford complex at 412-430 S. 13th Street into 640 N. Broad Street in March of 1919 and continued to occupy the entire building through the 1920s.

The H.K. Mulford Company was acquired by the Baltimore-based pharmaceutical company Sharp & Dohme, Inc. in 1929.¹² Sharp & Dohme, Inc. constructed a four-story addition to the building on the southwest corner in 1934. Although united under the Sharp & Dohme, Inc. name, both companies maintained separate corporate identities and occupied separate offices and packaging areas within the Mulford Building through the early 1950s. In 1953, Sharp & Dohme, Inc. merged with Merck & Company to become Merck, Sharp & Dohme, Inc. The newly merged company continued to produce pharmaceuticals and conduct research from the Mulford Building until 1963, when the MSD relocated their corporate offices and packaging plant at 640 N. Broad Street to its research facility in Westpoint, in neighboring Montgomery County, PA.

Shortly after the relocation of MSD, the Mulford Building was rented to numerous tenants in the clothing industry. In the 1970s and 1980s, the largest tenant of the building was Albert Nipon Dress, owned by a local fashion designer whose company produced high-end

invention by Elias Howe first introduced in the 1850s, allowed for easier production of ready-to-wear garments, but also created a higher demand for goods.

¹⁰ Rosaro Lucy Passero, *Ethnicity in the Men's Ready-Made Clothing Industry, 1880-1950: The Italian Experience in Philadelphia*, Ph.D. dissertation (University of Pennsylvania, 1978), Collection of the Philadelphia College of Textiles and Sciences (Now Philadelphia University), 274. Many of the lofts noted in this source were demolished in the late 20th century, displaced by the Pennsylvania Convention Center, the Market East complex and development accompanying Independence Mall.

¹¹ H. Pasdermadjian, *The Department Store, Its Origins, Evolution and Economics* (London: Newman Books, 1954), 27.

¹² "Sharp & Dohme, H.K. Mulford to Unite Activities," 7 October 1929, *Evening Bulletin*, clippings file for H.K. Mulford Company, Temple Urban Archives, Temple University.

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dresses. Albert Nipon Dress was eventually acquired by the Leslie Fay Company, which employed 600 people at the Mulford Building in 1986.¹³ Other tenants included K & D Clothing and Edelstein belt manufacturers, according to the reverse telephone directory of 1985. In recent years, a portion of the building served as residential lofts for artists. For the past two years, the building has stood vacant.

CRITERION A -HEALTH/MEDICINE

The Mulford Building is significant for housing medical research companies that advanced the development and dispersal of biological products. The building is associated with the prominent H.K. Mulford Manufacturing Company and its successors, Sharp & Dohme Company, and Merck, Sharp and Dohme, Inc.

Pharmaceutical History in Philadelphia

Since the late 18th century, Philadelphia has been a leader in the region in the chemical industries. The city's success in this area can be attributed to the widespread transportation, ports and major railroad hubs and the numerous colleges and universities that "provided sources for advanced learning and research of the chemical sciences."¹⁴ Philadelphia's first hospital, the Pennsylvania Hospital, was established in 1751; a year later, the Pennsylvania Hospital created its own hospital pharmacy, the first of its kind in the city. The Chemical Society of Philadelphia, founded in 1792, was the earliest society of its type created in the new United States. The Philadelphia College of Pharmacy was the first college for pharmacy in the nation, founded in 1821. In 1825, the Philadelphia College of Pharmacy began publication of a pharmaceutical journal that eventually became known as *The American Journal of Pharmacy*.¹⁵ When the Philadelphia branch of the American Chemical Society was founded in 1899, the city was already an established center for the chemical industry.¹⁶

Family-run drug manufacturing companies of the late 19th century laid the groundwork for the emergence of modern pharmaceutical corporations in Philadelphia in the 20th century. By the end of the 19th century, several successful major drug manufacturing firms had formed in Philadelphia. Robert McNeil (later McNeil Pharmaceuticals) opened a pharmacy in the Kensington section of Philadelphia in 1879, where he manufactured and sold high quality medications to hospitals and doctors throughout the city. Other prominent Philadelphia drug manufacturers of the late 19th century included John K. Smith & Company

¹³ Jeremy Feiler, "1986: A Shrinking Apparel Industry," *Philadelphia Business Journal*, 5 August 2002, found at www.bizjournals.com/philadelphia/stories/2002/08/05/focus5.html.

¹⁴ "Chemical Industries in the Philadelphia Region," an exhibit by the Chemical Heritage Foundation, 27 May 1999, excerpts found at the Chemical Heritage Foundation website, <http://www.chemheritage.org/ExternalRelations/New/eventsnew.html>.

¹⁵ National Register Nomination for the Philadelphia Wholesale Drug Company Building, Philadelphia County, PA, Section 8, 1.

¹⁶ "Chemical Industries in the Philadelphia Region."

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(now part of Glaxosmithkline), Joseph Elkinton & Sons (now PQ Corporation) and John Wyeth & Brother (later known as Wyeth Laboratories) and Henry K. Mulford (later H.K. Mulford Company). Another Philadelphia pharmacist, William R. Warner, produced the first sugar-coated pills, a major breakthrough in the delivery of medicine¹⁷ at his factory at 639-643 N. Broad Street from 1888 to 1898.¹⁸

With the application of costly scientific research to the pharmaceutical industry, a handful of large companies dominated the pharmaceutical industry in Philadelphia as new techniques of manufacturing chemical pharmaceuticals led to the specialization of drug manufacturing. One such area of specialization was the manufacturing of biological products to treat deadly diseases and viruses. In short, biological products are medicinal preparations made from living organisms and their products, and include vaccines, serums, toxoids and antitoxins.¹⁹

In the late 19th century biological medicines quickly became an important part of the pharmaceutical industry. The study of biological medicine was an offshoot of the research of germ theory and bacteriology that was pursued in England and Europe in the 19th century. The first modern scientist to produce a vaccine for the deadly disease small pox was English scientist Edward Jenner in 1796. Scientists such as Robert Koch of Germany and Louis Pasteur of France both experimented in preventing infection with the injection of disease-producing bacteria into live animals.²⁰ Pasteur achieved the first rabies vaccine for human use in 1886.²¹

¹⁷ Dennis B. Worthen, "The Pharmaceutical Industry, 1852-1902," at <http://www.aphanet.org/about/sesquisept00.html>, the American Pharmacists Association website.

¹⁸ Entry for "Warner Factory, also known as Hensel Silk Manufacturing Company (c. 1898)" as noted in the Philadelphia Architects and Buildings project, <http://www.philadelphiabuildings.org/pab>. Interestingly, the Warner Factory had transitioned from its initial use as a drug manufactory plant to a textile manufacturing plant by 1898, ten years after construction; the opposite is true of the Mulford Building, as it opened as a clothing manufacturing plan and became a drug packaging and distributing center five years after it was constructed.

¹⁹ General definitions follow for these terms, as they will be used throughout this application. A vaccine is a preparation that contains live or dead micro-organisms for their ability to stimulate the production of specific antibodies in a patient. An antitoxin is a specific type of protein that neutralizes a specific toxin or a serum containing antitoxins. A serum is a blood serum that delivers antibodies to a patient from animals that have been inoculated with bacteria or their toxins; when administered to other animals or humans, antiserum produces passive immunity. A toxoid is a protein substance that has been modified to reduce or eliminate its toxicity, but retains its abilities to stimulate the production of specific antibodies. Anti-diphtheritic serum, for example, was manufactured by injecting a horse with increasing doses of the toxin from the disease. After several months' time, blood was drawn off from a vein in the horse's neck. The liquid portion, or serum, was separated off and was supposed to contain a substance, "antitoxin," which neutralized the poison of diphtheria when injected into humans. This information was derived from the Vaccination News Homepage, <http://www.vaccinationnews.com/DailyNews/June2002/Schick.htm>.

²⁰ Louis Galambos and Jane Eliot Sewell, *Networks of Innovation, Vaccine Development at Merck, Sharp & Dohme, and Mulford, 1895 - 1995* (Cambridge: Cambridge University Press, 1995), 4.

²¹ Galambos and Sewell, 5.

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In the 1890s, the three leading causes of death in the United States were tuberculosis, pneumonia and diphtheria.²² Small pox also posed a serious threat to the population. At the end of the 19th and the beginning of the 20th centuries, the discovery of "causative agents of disease and the emerging science of bacteriology" paved the way for the development of biological medicines as a treatment for these deadly diseases.²³ The use of biological products was poorly understood and seemed a risky investment to many well-established pharmaceutical companies.²⁴ Pharmaceutical entrepreneurs, however, soon realized that the manufacture of biological preparations could lead to even greater profits.

The H.K. Mulford Company

The H.K. Mulford Company was founded by Henry K. Mulford (1866-1937), a Philadelphia druggist who purchased a successful retail drug store known as Old Simes at 12th and Market Streets in 1887.²⁵ Mulford had briefly worked for the owners of Old Simes after receiving his training in pharmacology at the Philadelphia College of Pharmacy.²⁶ Shortly after purchasing the drug store, the 21-year-old Mulford began production of various tablets, syrups, powders, tinctures and antiseptics for local pharmacies and physicians.²⁷ Mulford's compressed tablet-producing machine, patented with a colleague in 1887, was used to launch his medicinal line.²⁸

Rather than simply selling these products from his store, Mulford wanted to expand his operations and manufacturing capability, but was short of financial backing. This was accomplished with the acquisition of partners. The Mulford Company was formally incorporated in 1892 with the addition of two partners, Milton Campbell and E.V. Pechin, and became known as the H.K. Mulford Company, Inc.

In addition to the Old Simes store, after incorporation the H.K. Mulford Company acquired a building at 2132 Market Street and its rear stable for the production of pharmaceuticals, according to the 1892 city directory.²⁹ By 1893, the H.K. Mulford Company made and distributed more than 800 products under the Mulford name from this location.³⁰

²² Galambos and Sewell, 1.

²³ Dennis B. Worthen, "The Pharmaceutical Industry, 1902-1952," *Journal of the American Pharmaceutical Association* (September/October 2001), Vol. 41, No. 5, 656.

²⁴ Galambos and Sewell, 10, see footnote 2.

²⁵ "Pill Machine Invented Here Led to Mulford Drug Empire," n.d., *Evening Bulletin*, clippings file for H.K. Mulford Company, Temple Urban Archives, Temple University.

²⁶ Galambos and Sewell, 10.

²⁷ Galambos and Sewell, 3.

²⁸ Galambos and Sewell, 11; "Pill Machine Invented Here Led to Mulford Drug Empire," n.d., *Evening Bulletin*, clippings file for H.K. Mulford Company, Temple Urban Archives, Temple University.

²⁹ The rear stable had an address of 2137 Barker Street (now Ludlow Street). The building and stable is no longer extant according to a Sanborn map corrected to 1998.

³⁰ Galambos and Sewell, 11.

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The H.K. Mulford Company's partners soon realized that there was a growing demand for the production of biological products to treat and prevent infectious diseases. In 1894, Mulford built the company's first biological and research laboratory to create the much-needed antitoxins on the second floors of large stables located in West Philadelphia.³¹ After much work, the H.K. Mulford Company laboratory was the first of its type in the nation to produce the first reliable commercial antitoxin in the U.S.³² The diphtheria antitoxin serum was the first antitoxin created by Mulford, and it was available for sale in 1895.³³ The Mulford Company soon became widely known for the production of diphtheria antitoxin and produced it for many years.³⁴ By 1895, the H.K. Mulford Company had given up Old Simes store and was located at the 2132 Market Street building, according to the city directory.

To maximize the amount of serum produced, the H.K. Mulford Company purchased a farm for its biological operations in Glenolden Borough, PA, a suburb of Philadelphia. The Glenolden facility, a 200-acre farm established in 1896 (no longer extant), included 42 buildings encompassing laboratories for biological, veterinary and vaccine work, a large stable and cow barn for implantation of vaccines in livestock, dormitories and a powerhouse.³⁵

The H.K. Mulford Company quickly expanded their line of products in the late 1890s and opened branch offices in Chicago and New York City to handle the distribution of the pharmaceutical products in other parts of the nation and abroad. The tetanus antitoxin was pioneered by the company in 1897; the smallpox vaccine followed in 1898.³⁶ In 1898, the company moved its operations to 412 S. 13th street, to a pair of 4- and 5-story Italianate style factory buildings architecturally dating to c. 1875 (no longer extant), where the company remained until 1919. The two buildings contained the corporate offices and laboratories for the purpose of transforming and processing the various serums and drugs

³¹ Galambos and Sewell, 16. City directories do not verify the location of these stables, although it was likely located near the University of Pennsylvania, as Bacteriologist and scientist Dr. John McFarland, a professor at the University of Pennsylvania, was hired to head the laboratories for Mulford. Galambos and Sewell, 13.

³² Dennis B. Worthen, "The Pharmaceutical Industry, 1902-1952," *Journal of the American Pharmaceutical Association* (September/October 2001), Vol. 41, No. 5, 656. This information is based on footnote 2: H.K. Mulford Company, *Diphtheria Antitoxic Serum*, 7th ed. (Philadelphia, PA: H.K. Mulford Company), 1897.

³³ Galambos and Sewell, 17.

³⁴ "Pill Machine Invented Here Led to Mulford Drug Empire," n.d., *Evening Bulletin*, clippings file for H.K. Mulford Company, Temple Urban Archives, Temple University.

³⁵ Galambos and Sewell, 18. Parke-Davis & Company in Detroit also established a similar biological farm of 700 acres in Rochester, MI in the early 20th century to meet the demand for biological products. Parke, Davis & Company, *A Manual of Biological Therapeutics* (Detroit: Press of Parke, Davis & Company, 1914), 169. According to current Sanborn maps, none of the Mulford buildings in Glenolden Borough survives. The 1964 Sanborn Map shows that the majority of the Mulford buildings were demolished by 1964 after two-thirds of the original property was sold to a private developer for residential housing; the last third of the property was sold to Allied Chemical Corporation according to the same map. Present-day maps do not show any evidence of these remaining buildings extant.

³⁶ Galambos and Sewell, 21.

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from the raw state into sterile, packaged pharmaceutical doses, a system referred to in the pharmaceutical industry as *pharmaceutical production*.

By 1900, *King's Views* included an entry for the Mulford Company, with photographs of the executive offices at 412-420 S. 13th Street in Philadelphia, the Farm and Laboratory for Vaccine Virus in Glenolden, Delaware County; and the stables for producing diphtheria antitoxin in West Philadelphia.³⁷ In 1901, the H.K. Mulford Company commissioned the construction of a large 9-story Classical Revival style brick building adjacent to the two Mulford Company buildings at 412 S. 13th Street. This new building was designed by the industrial architect Charles Balderston.³⁸

In response to many deaths from raging epidemics of a variety of infectious diseases in the late 19th century, in 1902 Congress issued the Biologics Control Act that placed the production of biological products under the control of the Public Health and Marine Hospital Service, the forerunner of the Public Health Service. The Hygienic Laboratory, the principal research unit of the Public Health and Marine Hospital Service, was newly located in Washington, DC, and, as its first priority, assumed the task of regulating diphtheria antitoxin, tetanus antitoxin, and smallpox vaccine.³⁹ Under this Act, in 1904 the Mulford Company received License No. 2 from the government to manufacture antitoxins and vaccines.⁴⁰ License No. 1 was awarded to H.K. Mulford's competitor Parke, Davis & Company in Detroit, MI. Another competitor, Lederle Antitoxin Laboratories, created in 1906 in Pearl River, NY by Ernst Joseph Lederle, the former director of the New York Health Department, received License No. 17.⁴¹ By this time, the H.K. Mulford Company was selling more than eight different serums for various diseases.⁴² The firm continued to grow as a result, with sales up from \$1 million in 1902 to \$3 million in 1910.⁴³

The H.K. Mulford Company continued to try to expand its repertoire of products, but was foiled by its main rival Parke-Davis in the sale of adrenalin in the early 20th century. Parke-

³⁷ Moses King, *King's Views of Philadelphia, Illustrated Monographs, Part 2* (New York: Moses King, publisher, 1900), available through www.brynmawr.edu. The photograph included in King's Views shows a tripartite photograph and states the following: "Pharmaceutical chemists and factors of compressed tablets. Pharmaceutical laboratory and executive officers, 412 to 420 South Thirteenth St., Farm and Laboratory for vaccine virus, Glenolden, Delaware County, Penn. Biological laboratories and stables for producing diphtheria antitoxin, tuberculin, etc., in West Philadelphia. Mulford's products received highest awards at Paris Exposition."

³⁸ Philadelphia Architects and Buildings Database for Charles Balderston and *Philadelphia Real Estate Record and Builders' Guide*, v. 16, n. 18, p. 273 (5/1/1901).

³⁹ The original Act authorized the government to inspect manufacturing establishments, to determine whether products were properly labeled with the product name, the name, address, and license number of the manufacturer, and the expiration date of the product, and to determine the manner of manufacture.

⁴⁰ Dennis B. Worthen, "The Pharmaceutical Industry, 1902-1952," *Journal of the American Pharmaceutical Association* (September/October 2001), Vol. 41, No. 5, 656. Parke, Davis & Company was the first company to receive the license from the government.

⁴¹ Worthen, "The Pharmaceutical Industry, 1902-1952," 656.

⁴² Galambos and Sewell, 23.

⁴³ Galambos and Sewell, 25, based on various records at the Merck Archives.

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Davis received licenses from the discoverer of the hormone, Jokichi Takamine, to produce and sell purified human adrenalin in 1903. In an attempt to overturn these exclusive product patents, H. K. Mulford attacked the adrenalin patents with the argument that the hormone existed in nature, although it was discovered by Jokichi Takamine.⁴⁴ Mulford persisted in overturning the patent, but in 1911, Judge Hand ruled in favor of Takamine and Mulford was ordered to cease infringing.⁴⁵

The H.K. Mulford Company prospered through the 1910s, and especially during WWI. According to a local newspaper report, the net earnings of the H.K. Mulford Company during 1915 was over \$1 million, a substantial increase from the former net earnings hovering around \$200,000 for the years 1913 and 1914.⁴⁶ The Harrison Brothers & Company pharmaceutical firm, another Philadelphia company, also improved its profits during this time, but trailed behind Mulford's profits of nearly \$700,000 in 1915.⁴⁷

From 1916 to 1917, the H.K. Mulford Company tripled its revenues.⁴⁸ After the U.S. became involved in WWI in 1917, the government placed a substantial order for Mulford's diphtheria antitoxin serum, as well as Mulford's meningitis and influenza serums, to protect the U.S. Army troops.⁴⁹ In order to meet the demand the company expanded again, using 1,500 horses and dedicating 1,200 employees to the production of the serums.⁵⁰

The overwhelming success of the H.K. Mulford Company led to cramped quarters at the existing plant on S. 13th Street. Additional space was leased by the company throughout the city, but ultimately it was not efficient or adequate to meet the increased need for a large facility to house all of the employees. To accommodate the growing workforce, the H.K. Mulford Company purchased the large Metropolitan Building at Broad and Wallace Streets in December of 1918 and renamed it the "Mulford Building".⁵¹ By March of 1919, the company had completely moved from its former location at 412-420 S. 13th Street to 640 N.

⁴⁴ Joan W. Bennett, "Adrenaline and Cherry Trees," *Modern Drug Discovery [MDD]* (December 2001) Vol. 4, No. 12, pp 47-48, 51, as found at MDD website <http://pubs.acs.org/subscribe/journals/mdd/v04/i12/html/12timeline.html>.

⁴⁵ Circuit Court, S.D. New York, April 28, 1911, *Federal Reporter* 189:115. Bennett, "Adrenaline and Cherry Trees," *MDD*.

⁴⁶ "Mulford's Make Big War Profits," 15 February 1916, *Evening Bulletin*, clippings file for H.K. Mulford Company, Temple Urban Archives, Temple University.

⁴⁷ "Mulford's Make Big War Profits," 15 February 1916, *Evening Bulletin*, clippings file for H.K. Mulford Company, Temple Urban Archives, Temple University.

⁴⁸ Galambos and Sewell, 27, see footnote 45.

⁴⁹ "Pill Machine Invented Here Led to Mulford Drug Empire," n.d., *Evening Bulletin*, clippings file for H.K. Mulford Company, Temple Urban Archives, Temple University.

⁵⁰ Galambos and Sewell, 27, see footnote 46.

⁵¹ "New Home of the H.K. Mulford Company, *The Keystone (The H.K. Mulford Company Newsletter)*, v.1, n. 6 (December 1918), 2. Provided courtesy of Joe Ciccone at the Merck Archives. "Moving Done in Record Time," *The Keystone (The H.K. Mulford Company Newsletter)* (March 1919), 2. Provided courtesy of Joe Ciccone at the Merck Archives.

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Broad Street.⁵² Compared to the original complex on S. 13th Street, the new location was spacious and vast. According to a company newsletter, the activities in the new building included "pharmaceutical production [the packaging of the raw drugs], research, laboratories, and the shipping and packing of finished stock."⁵³ The new building also became the corporate headquarters for the company, with business and sales offices replacing those on S. 13th Street. According to a H.K. Mulford Company newsletter, the company still retained an additional laboratory facility at 11th and Catherine Streets (no longer extant) for "drug grinding and milling, storage of crude drugs and special chemical manufacturing."⁵⁴ Through the 1920s, the H.K. Mulford Glenolden facilities continued to handle the biological end of the business.⁵⁵

The H.K. Mulford Company's successes continued to mount during the 1920s. In 1924, the H.K. Mulford Company was awarded a license to produce insulin, one of five firms in the United States allowed to produce and distribute insulin.⁵⁶ One of the other companies was Eli Lilly & Company of Indianapolis, IN, the first pharmaceutical company in the U.S. to produce insulin, commercially known as Iletin, in 1923. According to a newspaper clipping from the period, Mulford's chief scientist Dr. Paul S. Pittinger, conducted insulin research for a year before he received the license to manufacture the insulin from the University of Toronto where it was originally developed; he also worked on a device to enable diabetic patients to self-administer the insulin.⁵⁷ The Mulford Building played an important role in the dispersion of the insulin to the public: after the insulin was derived and processed from pancreases of the hogs and cattle at the Glenolden facilities, the resulting insulin was packaged and distributed from the Mulford Building in Philadelphia. The H.K. Mulford Company had an extensive distribution network for its products, with branch offices in nine cities in the United States and one in Canada by 1925, in addition to ties to foreign distributors worldwide.⁵⁸

The drugs packaged and distributed from the Mulford Building in the 1920s included: a variety of vaccines, including a smallpox vaccine, anti-typhoid vaccine, rabies vaccine, and

⁵² As the 1920 city directory only lists the Broad and Wallace location for the H.K. Mulford Company, the S. 13th Street buildings were presumably sold.

⁵³ "A Word About Moving," *The Keystone (The H.K. Mulford Company Newsletter)* (January 1919), 3. Provided courtesy of Joe Ciccone at the Merck Archives.

⁵⁴ "New Home of the H.K. Mulford Company," *The Keystone (The H.K. Mulford Company Newsletter)*, v.1, n. 6, 6 (December 1918), 2. Provided courtesy of Joe Ciccone at the Merck Archives.

⁵⁵ Galambos and Sewell, 27, see footnote 47.

⁵⁶ "Mulford Co. Gets Insulin License," 4 Jan 1924, *The North American*, clippings file for H.K. Mulford Company, Temple Urban Archives, Temple University. Insulin was discovered in 1920 by Dr. Frederick Banting at the University of Toronto who worked with scientists from Eli Lilly; the first tests on humans were administered in 1922. The insulin, used to treat the chronic disease of diabetes, was derived from the pancreatic glands of pigs and cattle.

⁵⁷ "Mulford Co. Gets Insulin License," 4 Jan 1924, *The North American*, clippings file for H.K. Mulford Company, Temple Urban Archives, Temple University.

⁵⁸ Galambos and Sewell, 27.

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black-leg vaccine for veterinary use; insulin after 1924; antitoxins, including tetanus antitoxin (for use in animals and humans), diphtheria antitoxin; and serums such as anthrax serum for veterinary use, meningitis and influenza serums. In 1925, the H.K. Mulford Company was called on to rush a large order of diphtheria antitoxin to Nome, Alaska to combat a diphtheria epidemic in that city.⁵⁹ The diphtheria serum was delivered by rail from Philadelphia's Mulford Building to the Seattle branch office and then by rail to Nenana, the last railroad stop in Alaska. The serum was then taken via dogsled 650 miles from Nenana to Nome, a journey that has been commemorated every year since then with the internationally known Iditarod Trail Dogsled Race.⁶⁰

The H.K. Mulford Company's size in the 1920s rivaled pharmaceutical companies in the region, such as Sharp & Dohme Company in Baltimore, MD, and Merck & Co., Inc. in New York City. However, only a select few companies in the nation, such as Parke-Davis & Company of Detroit, had biological laboratories similar to Mulford, and could therefore compete in the production of biological medicine and products. From the late 19th century through the 1920s, the chief competitors to the H.K. Mulford Company in the production of the diphtheria serum included: E.R. Squibb & Sons of Brooklyn, NY (1895); Lederle Antitoxin Laboratories of New York, Parke-Davis & Company in Detroit, MI; Snee Pocono Biological Laboratories in Swiftwater, PA (founded in 1897), and the United States Standard Serum Company of Woodworth, WI (founded in 1920).⁶¹ Both Parke-Davis & Company and Lederle Antitoxin Laboratories also made the anti-typhoid vaccine.⁶²

Mulford's local competitors in the general chemical industry included Smith, Kline & French, Harrison Brothers & Company, and Powers-Weightman-Rosengarten. According to the *1922 Industrial Directory of Pennsylvania*, the H.K. Mulford Company had the leading number of employees in the Broad and Wallace building at 997 total workers. Powers-Weightman-Rosengarten Company followed Mulford with a total of 898 workers; Smith Kline & French employed 465 men and women; Wyeth & Brother, Inc. employed 360 persons.⁶³

The H.K. Mulford Company continued to keep its lead over the other chemical firms in the city in the late 1920s. The *1928 Industrial Directory of Pennsylvania* reflects the 1927 purchase of Powers-Weightman-Rosengarten by Merck & Company, Inc.,⁶⁴ but the total employee count, at 715, still trailed behind the H.K. Mulford Company at 905 employees.⁶⁵

⁵⁹ "Rush Serum to Alaska," 9 February 1925, *Evening Bulletin*, clippings file for H.K. Mulford Company, Temple Urban Archives, Temple University. According to this article, all of the company's diphtheria serum was produced in Philadelphia at the Broad and Wallace building.

⁶⁰ Galambos and Sewell, 28, with references to *New York Times*, 30 January through February 4, 1925.

⁶¹ Galambos, 27, see footnote 46.

⁶² Galambos, 23, see footnote 37.

⁶³ Pennsylvania Department of Internal Affairs, *Industrial Directory of 1922*, (Harrisburg, PA: J.L.L. Kuhn Printer to the Commonwealth, 1922), 1204, 1221, 1240, 1265.

⁶⁴ Information provided by the Merck Archives website at http://www.msd/newzealand.com/where_world.htm.

⁶⁵ Pennsylvania Department of Internal Affairs, *Sixth Industrial Directory*, (Harrisburg, PA: J.L.L. Kuhn Printer to the Commonwealth, 1928), 481.

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Smith Kline & French's total employee number, at 119, followed Wyeth & Brother, Inc. at 246.⁶⁶ These four companies were by far the largest noted in the Chemical and Patent and Proprietary Medicine categories for Philadelphia County in 1928.

H.K. Mulford Company Purchase by Sharp & Dohme Company, Inc.

In 1929, the H.K. Mulford Company was acquired by the Sharp & Dohme Company, a successful pharmaceutical manufacturer based in Baltimore. Sharp & Dohme sought to acquire a company like Mulford with an extensive biological research facility in order to expand its product line.⁶⁷ The newly expanded Sharp & Dohme Company became one of the largest pharmaceutical laboratories in the country. Although the H.K. Mulford Company was formally now part of Sharp & Dohme, the Mulford corporate identity was retained and was separately represented on the board of directors of Sharp & Dohme.⁶⁸ Founded in 1845 as a drug store, Sharp & Dohme Company had a thriving firm before the merger, with ten branch facilities in major cities across the country.⁶⁹ By the 1920s, Sharp & Dohme had only a small research and development department and was not producing any of its own vaccines or antitoxins. After the merger, Henry K. Mulford left the new company to work for the National Drug Co. (formerly Slee Labs) in Swiftwater, PA.

At the time of the takeover in 1929, the combined assets of the companies were \$11 million.⁷⁰ Sharp & Dohme, Inc. moved its central offices and pharmaceutical production operations to the Mulford Building in Philadelphia shortly thereafter, with the Mulford Company retaining its own separate office and packaging areas of the building. The Mulford Building remained the chief location for the pharmaceutical production and distribution of many over the counter drugs and prescription pharmaceutical products for Sharp & Dohme, including a popular cough drop known as Sucrets.⁷¹ In addition, the sales offices for the company continued to be housed at 640 N. Broad Street. The Glenolden facility became known as the Mulford Biological Laboratories at Sharp & Dohme, and continued to produce serums and vaccines.⁷²

After Sharp & Dohme, Inc. acquired the H.K. Mulford Company, the number of employees increased at the Broad and Wallace building. According to the 1931 *Seventh Industrial Directory of the Commonwealth of Pennsylvania*, Sharp & Dohme, Inc. employed 1,198 men

⁶⁶ Pennsylvania Department of Internal Affairs, *Sixth Industrial Directory*, (Harrisburg, PA: J.L.L. Kuhn Printer to the Commonwealth, 1928), 485.

⁶⁷ Galambos and Sewell, 33.

⁶⁸ "Sharp & Dohme, H.K. Mulford to Unite Activities," 7 October 1929, *Evening Bulletin*, Temple Urban Archives, clippings file for H.K. Mulford Company, Temple University. Henry K. Mulford, the founder of the H.K. Mulford Company, left the company to work for the National Drug Co. in Swiftwater, PA after the merger with Sharp & Dohme.

⁶⁹ Galambos and Sewell, 33.

⁷⁰ "Sharp & Dohme, H.K. Mulford to Unite Activities," 7 October 1929, *Evening Bulletin*, Temple Urban Archives, clippings file for H.K. Mulford Company, Temple University.

⁷¹ Information provided from e-mail correspondence with author Louis Galambos, 28 April 2003.

⁷² Galambos and Sewell, 41.

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and women at the Broad and Wallace building. Sharp & Dohme's leading competitors followed far behind: Wyeth, Inc. at 269 employees, Merck & Co., Inc. at 240 workers; and Smith Kline & French at 126 workers.⁷³

In the 1930s, the board of Sharp & Dohme, Inc. appointed a team of managers to promote the company. John S. Zinssner was named president in 1935 and given the job of upgrading the firm's operations.⁷⁴ In the 1930s and 1940s, in addition to the full line of biologicals for human and veterinary use, Sharp & Dohme Company began producing sulfonamides (pre-antibiotics) in order to stay competitive with firms such as Merck & Co., Inc. and Eli Lilly. Sharp & Dohme Company ventured into antibiotics such as penicillin in the late 1940s.⁷⁵ The Sharp & Dohme company profits reflected the success of its new products, when sales increased by 252 percent from 1939 to 1948.⁷⁶

While the company continued to produce vaccines and serums, it worked to find ways of preserving human blood plasma. Sharp & Dohme Company pioneered the development of dry blood plasma, a preserved powder form of human blood that could be shipped without refrigeration.⁷⁷ The dried blood plasma soon became an essential treatment for the loss of blood during WWII. By the end of the war, thirteen pharmaceutical companies (Abbott, Armour, Ben Venue, Cutter, Hyland, Lederle, Lilly, Parke-Davis, Reichel, Sharp & Dohme, Squibb, Upjohn and Wyeth) were involved with the production of dried plasma and albumin for the government and military.⁷⁸ The Sharp & Dohme Company also developed an influenza vaccine for the U.S. military during WWII that proved so successful that the government licensed Sharp & Dohme to produce and sell the influenza vaccine to the public.⁷⁹ Another product packaged in the Mulford Building was Diurel, the first diuretic ever created for blood thinning.⁸⁰

Sharp & Dohme, Inc. continued to hold its leading position in the Philadelphia chemical market into the 1950s. The *Twelfth Industrial Directory of the Commonwealth of Pennsylvania (1950)* listed Sharp & Dohme, Inc. as having 1,155 employees. By 1952, Sharp & Dohme opened a new research facility in West Point, Pennsylvania to assist in the development of new products. Smith Kline & French, with factories at Front and Poplar and

⁷³ Pennsylvania Department of Internal Affairs, *Seventh Industrial Directory*, (Harrisburg, PA: J.L.L. Kuhn Printer to the Commonwealth, 1931), 486, 490.

⁷⁴ Galambos and Sewell, 34.

⁷⁵ Although Alexander Fleming discovered penicillin in 1928, the first full-scale production of the drug didn't begin until the 1943. The first human trials were administered in 1941. Merck & Company was one of the first producers of penicillin. "Alexander Fleming, Pharmaceutical Achiever" from *Pharmaceutical Achievers*, by Mary Ellen Bowden, not yet published, excerpts found on the website for <http://www.chemheritage.org/classroom/pharm/antibiot/readings/fleming.htm>.

⁷⁶ Galambos and Sewell, 38.

⁷⁷ Galambos and Sewell, 41.

⁷⁸ Worthen, "The Pharmaceutical Industry, 1902-1952," 658.

⁷⁹ Galambos and Sewell, 48.

⁸⁰ Telephone interview with Joe Ciccione of the Merck Archives, August 22, 2003.

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1530 Spring Garden Street, was served by 715 workers for both facilities; Wyeth, Inc., also having two facilities at this time, listed 266 persons.⁸¹

Merger with Merck & Co.

Merck & Co., Inc. merged with Sharp & Dohme Company in 1953 to complement its production of fine chemicals and pharmaceuticals.⁸² Under its new name, Merck, Sharp & Dohme, Inc., the new company was able to distribute throughout the world. Research and development remained an important part of the firm. In the 1950s, the firm focused on creating and testing new drugs, including a vaccine for polio. Through the 1950s and early 1960s, the 640 N. Broad Street building remained the center of operations for packaging drugs and the sales offices.⁸³ In 1963, Merck & Company sold the building to realtor Myer Gottlieb.⁸⁴ It has served a variety of uses in the last forty years and is presently vacant.

In summary, the Mulford Building is significant for the role that it played in the development of pharmaceuticals and biological medicines for the H.K. Mulford & Co. Inc., Sharp & Dohme, Inc. and Merck, Sharp & Dohme from 1919 through 1954, the end of the National Register period of significance. The contributions of the Mulford Company and its successors have had a strong impact on the health and welfare regionally and nationally, and even internationally.

CRITERION C – ARCHITECTURE

The Mulford Building is significant in the area of Architecture as an example of a manufacturers' loft building of the early 20th century and also a significant example of the work of industrial architect Charles Balderston.

Born and raised in a Quaker family in Colora, Maryland, Balderston (1852-1924) arrived in Chester County, PA in 1867 to attend Westtown School, an elite Quaker boarding school.⁸⁵ He quit the following year to work for his brother, Mark Balderston, in the building firm of Balderston & Albertson. After four years of apprenticeship, Charles Balderston found work in 1873 at the renowned architecture firm of Samuel Sloan, a fellow Quaker architect practicing in Philadelphia. Two years later, Balderston switched his place of employment to

⁸¹ Pennsylvania Department of Internal Affairs, *Twelfth Industrial Directory*, (Harrisburg, PA: J.L.L. Kuhn Printer to the Commonwealth, 1950), 414. Merck & Company, Inc. was not listed in Philadelphia County in the 1950 directory.

⁸² Merck & Company was founded by George Merck, a German businessman who came to the United States in 1891 to establish a branch office of his family's pharmaceutical firm.

⁸³ Information provided by Merck Archivist Joe Ciccone via e-mail correspondence, 28 April 2003.

⁸⁴ Philadelphia Architects and Buildings Database listing for 640 N. Broad Street and Philadelphia Historical Commission files, Information provided by Merck Archivist Joe Ciccone via e-mail correspondence, 28 April 2003.

⁸⁵ Sandra L. Tatman, "Charles Balderston," Philadelphia Architects and Buildings project, <http://www.philadelphiabuildings.org/pab>.

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Section number 8 Page 15 The Mulford Building, Philadelphia County, PA

Addison Hutton's architectural office located in Philadelphia, who was also Sloan's former partner and a Quaker. In 1876, Balderston was welcomed into Sloan's firm as a full partner, and under the firm name of Sloan & Balderston (and briefly with Isaiah Young), the partnership remained in operation until 1883.

After 1883, Balderston worked independently largely specializing in industrial building design. By the time that the Mulford Building was constructed in 1912-1913, Balderston was well established as an industrial architect. Between 1893 and 1916 alone, Balderston designed over 50 commercial and industrial buildings.⁸⁶ Balderston's documented projects during his career included a plethora of factories and warehouses for the baking, printing, and pharmaceutical industries. He designed multiple buildings for clients such as the Penn Iron Works, the Kolb Bakeries and the Roig and Langerdorf Cigar Company. His residential commissions focused on additions to existing houses. Among his most notable non-industrial Philadelphia commissions is the significant enlargement of the Crescent Boat Club in 1891 (at #5 Boat House Row).⁸⁷ The Hanson Haines House, a Medieval Revival style dwelling designed for a bank president 1903, located in West Philadelphia (National Register, 1984) represents one of Balderston's residential commissions.

Balderston developed regional repute for designing industrial buildings for prominent pharmaceutical manufacturers. Balderston's design the 6-story factory for chemist William R. Warner at 639-643 N. Broad Street (extant) was constructed in 1888.⁸⁸ In 1901, Balderston designed an 9-story, Classical Revival style building (no longer standing) for the H.K. Mulford Company at 420 S. 13th Street, adjacent to the existing H.K. Mulford and Company complex at 412 S. 13th Street (no longer standing).⁸⁹ That same year, Balderston received the commission to design the antitoxin laboratories and stables for the H.K. Mulford Company in Glenolden Borough, Delaware County, PA.⁹⁰ Balderston's expertise with pharmaceutical facilities was recognized by the National Vaccine Company in College Station, Maryland when he received the commission to design two buildings for their campus in 1902.⁹¹

⁸⁶ National Register Nomination for the Gilbert Building, Philadelphia County, PA, Section 8, 2.

⁸⁷ National Historic Landmark Nomination for Boat House Row, Philadelphia County, Section 8, 2.

⁸⁸ "Warner Factory, also known as Hensel Silk Manufacturing Company (c. 1898)" Philadelphia Architects and Buildings project, <http://www.philadelphiabuildings.org/pab>.

⁸⁹ Moses King, *Philadelphia and Notable Philadelphians* (New York: Blanchard Press, Isaac H. Blanchard Co., 1901), 48A. Also see Moses, King, *King's Views of Philadelphia, Illustrated Monographs*. Part 2. (New York: Moses King, 1900), Found at the website www.brynmawr.edu.

⁹⁰ *Philadelphia Real Estate Record and Builders' Guide*, v. 16, n. 29, p. 461 (7/17/1901) as listed in the entry for Charles Balderston at <http://www.philadelphiabuildings.org/pab>.

⁹¹ *Philadelphia Real Estate Record and Builders' Guide*, v. 17, n. 50, p. 817 (12/10/1902) as listed in the entry for Charles Balderston at <http://www.philadelphiabuildings.org/pab>.

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Balderston completed a number of printing factories in the late 19th and early 20th centuries in Center City, Philadelphia for speculative builder and printer George Lasher.⁹² These included the Lasher Building, a printing factory, at 147-151 N. 10th Street in 1893 (demolished), the George F. Lasher Printing Plant at the southwest corner of Race and Hutchinson (near 9th) in 1909, and the Gilbert Building at 1315-1329 Cherry Street in 1910 (National Register, 1986).⁹³

The Mulford Building was constructed at the height of Balderston's career, after he had already established his reputation as an industrial designer. Many of Balderston's light industrial and warehouse commissions were located just north of Center City's central business district, but close to local transportation lines and vehicular routes. Several other manufacturing buildings designed by Balderston near Center City have been lost in the last twenty years, including the following buildings at these locations: Yarnell's Paint Factory at 1028 Race Street (1893), the Lasher Building at 147-151 N. 10th Street, the Dannenbaum Factory at 806-810 Arch Street (1899), and 1338 Cherry Street.⁹⁴

The Mulford Building, originally intended as a garment manufacturers' loft for multiple tenants, is by far the largest building Balderston designed during his career. Stretching east to west along an entire city block, this building is massive compared to other manufacturers' lofts of the period, with approximately 360,000 square feet. The Belmont Building at 211 N. 13th Street in Philadelphia, also built as a multi-tenant garment factory, is far smaller in size. Like the Mulford Building, the Belmont Building stands 9 stories in height, but contains only approximately 78,537 square feet.⁹⁵

The Mulford Building is typical of the manufacturers' lofts found in Philadelphia in the early 20th century, when from the 1880s through the 1910s large manufacturing lofts north of City Hall (outside the business center) gradually replaced the small manufacturing sweatshops and apartments in the older sections of Philadelphia near the waterfront.⁹⁶ The opening of the Reading Terminal in 1893 also "ignited a flurry" of loft construction on the blocks north of the station.⁹⁷ Unlike earlier lofts confined to narrow lots and cramped neighborhoods near the Delaware River, these modern loft buildings were generally located on larger lots, and built more than five stories in height utilizing new technologies such as heavy timber frame,

⁹² *Philadelphia Real Estate Record and Builders' Guide*, v. 27, n. 16, p. 257 (4/17/1912) as listed in the entry for Charles Balderston at <http://www.philadelphiabuildings.org/pab>.

⁹³ Sandra L. Tatman, "Charles Balderston," Philadelphia Architects and Buildings project, <http://www.philadelphiabuildings.org/pab>.

⁹⁴ National Register Nomination for the Gilbert Building, Philadelphia County, Part 8, 2.

⁹⁵ The 1916 Sanborn Fire Insurance Map of Philadelphia noted that this building was a garment factory tenant loft. The Belmont Building was designed by industrial architect Charles Oelschlager in 1916. See entry for architect Charles Oelschlager, Philadelphia Architects and Buildings Database, <http://www.philadelphiabuildings.org/pab>.

⁹⁶ Scranton and Licht, 18; National Register Nomination for the Young, Smyth, Field Company Building, Philadelphia County, PA, Section 8, 1.

⁹⁷ National Register Nomination for the Pitcairn Building, Philadelphia County, PA., Section 8, 4.

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cast iron, steel beam and reinforced concrete. These improved construction methods designed to support heavy machinery allowed for spacious interiors with high ceilings, minimal use of columns, and wide expanses of windows. The facade and publicly viewed elevations of these lofts were typically more ornate than the other elevations and often employed architectural elements and the academic symmetry of the Classical Revival and Beaux Arts styles; rear and side elevations were often utilitarian and less structured in character. The manufacturer's loft building generally featured a tripartite organization based on classical ideals and proportions, with a base, a shaft and a capital. The ground floors were often rented out for retail or commercial use, and for that reason they often contained large storefront windows.

The Mulford Building follows the typical manufacturers' loft format with its clear demarcation of a base, a shaft section and a cap. Symmetry is evident on three of the four elevations of the Mulford Building that are most visible to the public. The ornamentation on the building also expresses the Classical Revival style, with paired limestone Tuscan columns flanking the centered main entrance on N. Broad Street. Additional elements, like the limestone balustrade atop the entrance portico and the modest limestone cornice crowning the 2-story base, also reflect the formality of the Classical Revival style.

Although constructed more than a decade apart, Balderston's design for the former Mulford Laboratory Building located at 420 S. 13th Street (demolished), completed in 1901, and the his design for 640 N. Broad Street both show the influence of the Classical Revival architectural style. Both are similar in height (420 S. 13th St. at 8 stories and Mulford Building at 9 stories) and are similar in shape with rectangular box shapes and flat roofs. The detailing is subtly different, with the earlier building displaying Renaissance Revival and Beaux Arts elements, whereas the newer building is more streamlined and classical in material and ornamentation. According to an illustration of the building from King's *Philadelphia and Notable Philadelphians* (1901), the original Mulford building on S. 13th Street was adorned with two vertical columns of continuous bay windows topped with Renaissance Revival style arched windows, a swag-patterned frieze crowned by a heavy modillioned cornice, bands of lighter stone at the top of the windows on the façade and roundel windows at the second and top stories. In contrast, 640 N. Broad Street shows a refined sense of the Classical Revival, with a sleek coved copper cornice and the Classical Revival style ornament limited to the entries and window surrounds.

The manufacturers' loft at 640 N. Broad Street provided an ideal setting for the H.K. Mulford Company: in lieu of building a new production facility, the H.K. Mulford Company instead opted to buy the entire manufacturers' loft to meet its needs for more space in a consolidated location. The early 20th century brought success to many pharmaceutical firms in Philadelphia, prompting the building of "modern" large scale factories. In 1905 Smith, Kline & French constructed a new factory using prominent industrial architects Ballinger &

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Perrot at 5th and Appletree Streets behind the original 429-435 Arch Street plant.⁹⁸ Harrison Brothers & Company rebuilt their existing plant at 23 Grays Ferry Avenue in 1913, also using Ballinger & Perrot as the architects.⁹⁹ Powers-Weightman-Rosengarten, another prominent Philadelphia medicinal drug company successful in the production of quinine beginning in the 1880s, erected a chemical plant in North Philadelphia at 9th and Parrish Streets along the Reading Railroad line. In 1914, the company rebuilt the plant in the same location using successful industrial designers William Steele and Sons.¹⁰⁰

Three buildings on the 1200 block of Arch Street in Philadelphia display the typical attributes of manufacturers' lofts: the Young, Smyth, Field Company Building (National Register, 1992), constructed in 1902 at 1216-1220 Arch Street; the A.H. Mershon Building at 1214 Arch Street, completed in 1907; and the Breintnall Building, finished in 1909 at 1228-30 Arch Street. Like the Mulford Building, they are all more than five stories in height, exhibit elements of the Classical and Beaux Art style on the front elevation, and possess storefront windows for office or retail use on the ground floor and banks of large windows on the upper stories.

The Niessen Building at 1201-1205 Race Street (at the northwest corner of Race and 12th) in Philadelphia can also be compared to the Mulford Building in use and design. Built in 1911 and designed by prominent industrial designers Ballinger & Perrot¹⁰¹, this 7-story concrete-framed factory has a curtain wall of buff brick, a granite base and applied Classical Revival style details on the south and east (primary) elevations. Like the Mulford Building, the Classical Revival style elements appear at the ground floor and entry area and at the top of the building. The Classical Revival style elements include pedimented masonry entrances at the outer edges of the façade, a first story cornice adorned with a stylized floral frieze, a wide pressed metal cornice with heavy modillions and massive paired pendants.

Another building similar to the Mulford Building in use, size and ornamentation, but differing in materials, is the Packard Motor Corporation Building (National Register, 1979) located nearby at 317-321 N. Broad Street in Philadelphia. Constructed from 1910 to 1911, this seven story, reinforced concrete factory has a rectangular block form nearly a block in length, simple lines, a heavy Classical Revival cornice, and symmetrical fenestration placement, all similar to the Mulford Building. Using a steel frame skeleton, architects Kahn and Wilby of Detroit dressed the building in decorative white terra cotta panels, a modern mass-produced material of the period. Both the Packard Motor Corporation Building and the

⁹⁸ Entry for "Smith, Kline & French Factory," Philadelphia Architects and Buildings project, <http://www.philadelphiabuildings.org/pab>.

⁹⁹ Entry for "Harrison Brothers & Company," Philadelphia Architects and Buildings project, <http://www.philadelphiabuildings.org/pab>.

¹⁰⁰ *Philadelphia Real Estate Record and Builders' Guide*, v. 29, n. 11, p. 171, 3/18/1914, found at "Powers, Weightman & Rosengarten Company Factory," Philadelphia Architects and Buildings project, <http://www.philadelphiabuildings.org/pab>.

¹⁰¹ "Niessen Building," Philadelphia Architects and Buildings Database, <http://www.philadelphiabuildings.org/pab>.

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Mulford Building were used for manufacturing and offices, with separate retail space on the ground floor (indicated by storefront windows).

In conclusion, the Mulford Building represents an important example of a manufacturing building that was in keeping with the many light industrial loft buildings in the neighborhood north of Market Street in the early 20th century. With the advantage of being at a distance from the high-rent areas surrounding City Hall, the resulting speculative loft building was able to accommodate many tenants in a fireproof, ventilated setting that encouraged a new standard for the garment industry. The large size and vast square footage of this building undoubtedly attracted the H.K. Mulford Company and assisted in making this pharmaceutical company and its successor firms the largest of its type in Philadelphia and ultimately led to its national success. Architecturally, the building is significant as an example of a manufacturers' loft and also as an important example of the work of industrial architect Charles Balderston.

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Section number 9 Page 1 The Mulford Building, Philadelphia County, PA

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National Park Service

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Section number 9 Page 2 The Mulford Building, Philadelphia County, PA

Associated Mutual Insurance Company. Plan of Metropolitan Realty Company [Sharp & Dohme, Inc.].
Serial Number 11742, original survey 18 August 1914. Free Library of Philadelphia, Map Room.

Bromley, George W. and Walter S. *Atlas of the City of Philadelphia*. Philadelphia: G.W. Bromley &
Company, 1901.

Hexamer, Ernest & Son. *Insurance Surveys of the City of Philadelphia*. Philadelphia: Ernest Hexamer &
Son, 1909, 1916. Volume 3, plate 75.

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1950, 2000.

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Merck Archives. P.O. Box 100, WSCUP-50. Whitehouse Station, NJ 08889-0100. Joseph M. Ciccone,
J.D., Corporate Archivist

Philadelphia Architects and Buildings Database at <http://www.philadelphiabuildings.org/pab>.

Mulford Building
name of property

Philadelphia County, PA
county and State

10. Geographical Data

Acreage of Property < 1 acre

UTM References

(Place additional UTM references on a continuation sheet)

1 18 485140 4423780
Zone Easting Northing

2 _____ _____ _____
Zone Easting Northing

3 _____ _____ _____
Zone Easting Northing

4 _____ _____ _____
Zone Easting Northing

____ See continuation sheet.

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

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

11. Form Prepared By

name/title Sheryl Jaslow

organization Powers & Co., Inc. date September 10, 2003

street & number 211 N. 13th Street, Suite 500 telephone 215-636-0192

city or town Philadelphia state PA zip code 19107

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 _____

street & number _____ telephone _____

city or town _____ state _____ zip code _____

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

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

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Section number 10 Page 1 The Mulford Building, Philadelphia County, PA

Verbal Boundary Description:

Beginning at the intersection of the Westerly side of Broad Street (113 feet wide) and the Southerly side of Wallace Street (50 feet wide); thence extending Southwardly along the said Westerly side of Broad Street 125 feet, 3 ½ inches to a point; thence Westwardly parallel with Wallace Street, 54 feet, 00 inches to a point; thence Northwardly parallel with Broad Street 3 feet, 0 Inches to a point; thence Westwardly parallel with Wallace Street, 35 feet, 00 inches to a point; thence Northwardly parallel with Broad Street, 21 feet, 7 inches to a point; thence Westwardly parallel with Wallace Street, 61 feet, 00 inches to a point; thence Southwardly with Broad Street, 100 feet, 8 ½ inches to a point on the Northerly side of Mount Vernon Street (50 feet wide); thence extending Westwardly along the said Northerly side of Mount Vernon Street, 245 feet, 8 inches to a point on the Easterly side of 15th Street (50 feet wide); thence Northwardly along the said Easterly side of 15th Street, 201 feet, 5 inches to a point on the said Southerly side of Wallace Street; thence Eastwardly along the said Southerly side of Wallace Street, 395 feet, 8 inches to a point on the said Westerly side of Broad Street, being the first mentioned point of beginning.

Boundary Justification:

The nominated property includes the entire parcel historically associated with the Mulford Building.

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National Park Service

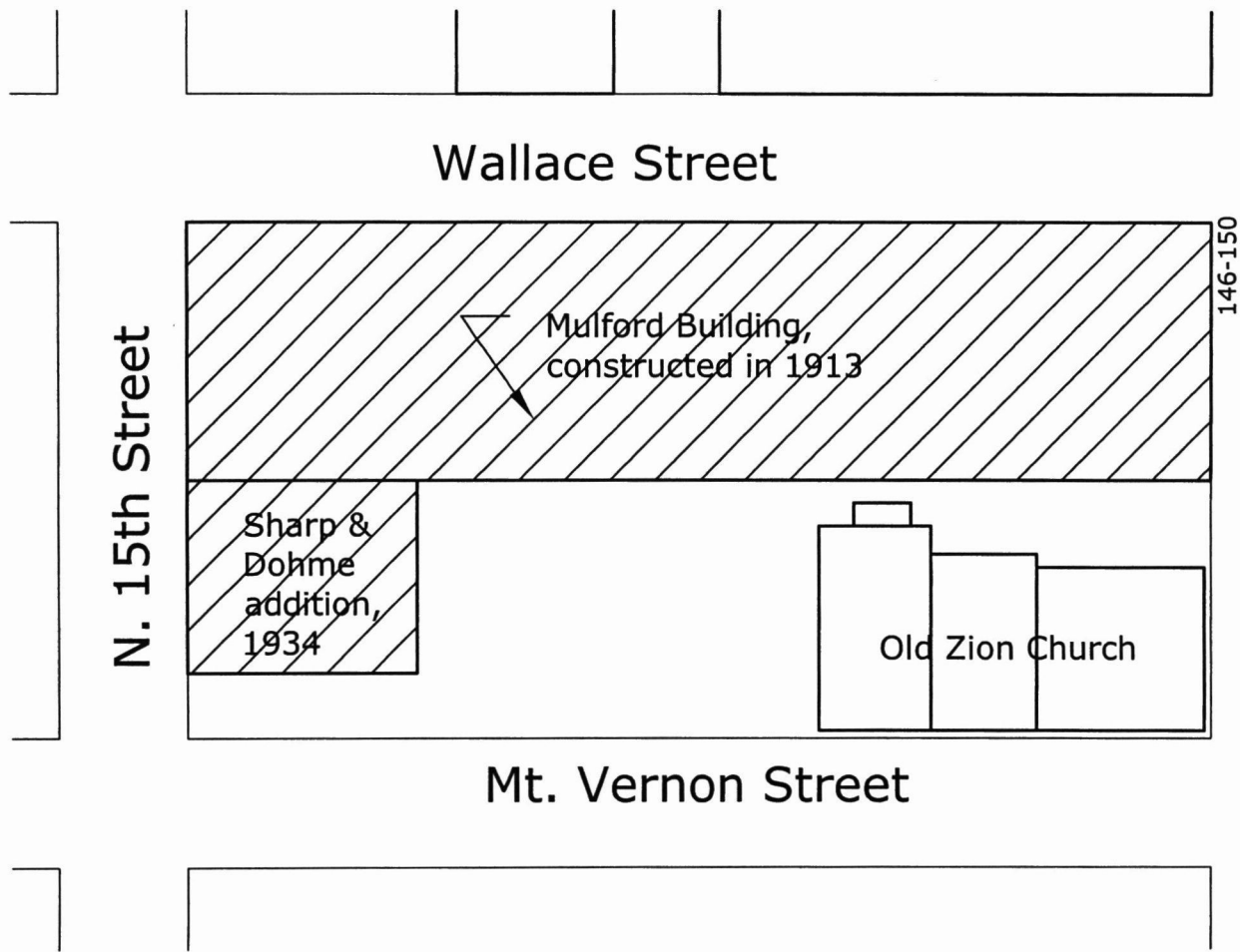
National Register of Historic Places Continuation Sheet

Section number Photographs Page 1 The Mulford Building, Philadelphia County, PA

The following information pertains to every photograph:

Mulford Building
Philadelphia County, Pennsylvania
Robert Powers
May 2003
Powers & Company, Inc.

<u>Photograph #</u>	<u>Description of View</u>
1	East and north elevations, looking SW
2	South and west elevations, looking NE
3	View of 4 th Floor, west section, looking W

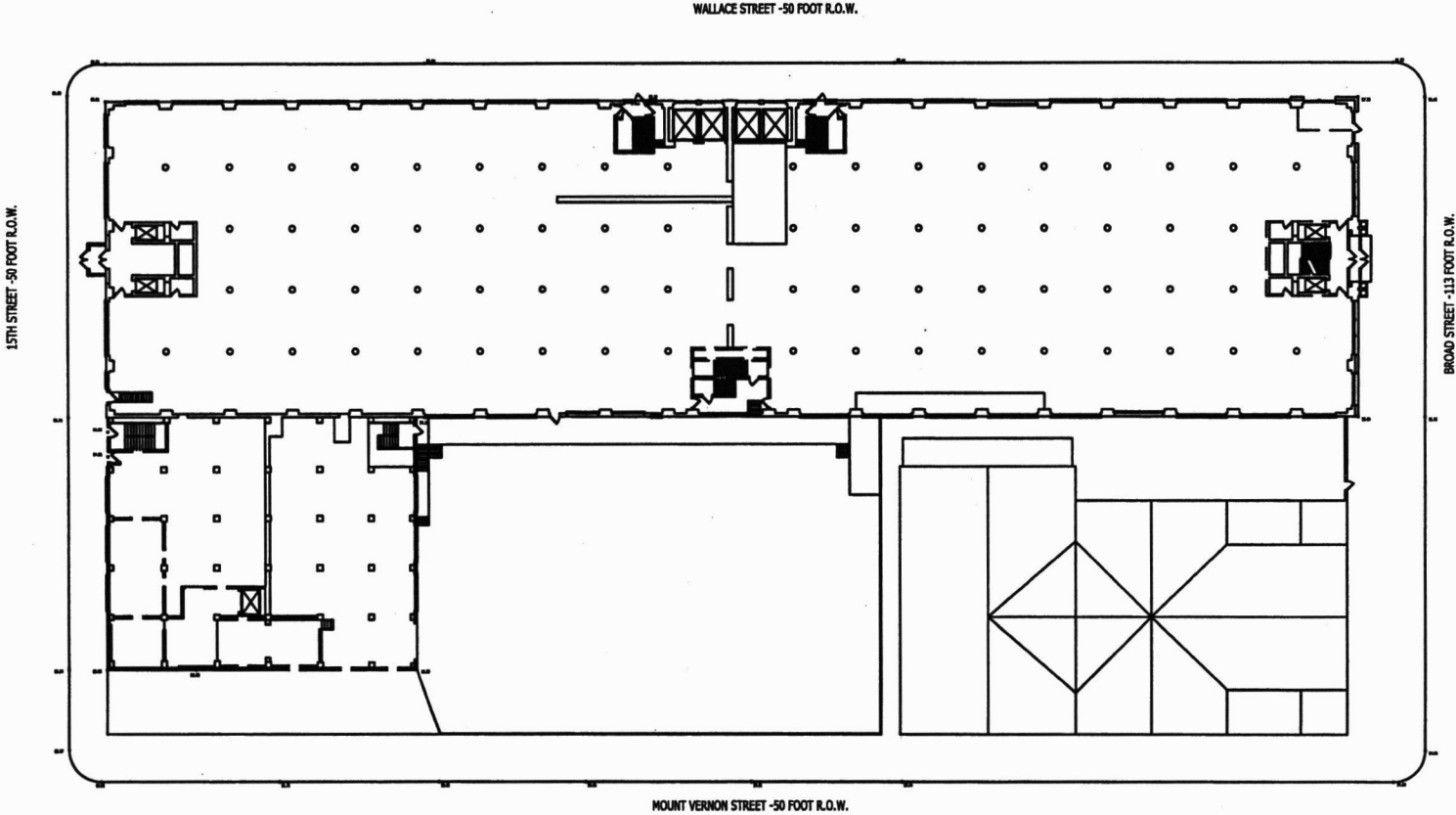


SITE PLAN (n.t.s.)

Mulford Building
 640 N. Broad Street
 Philadelphia County, PA

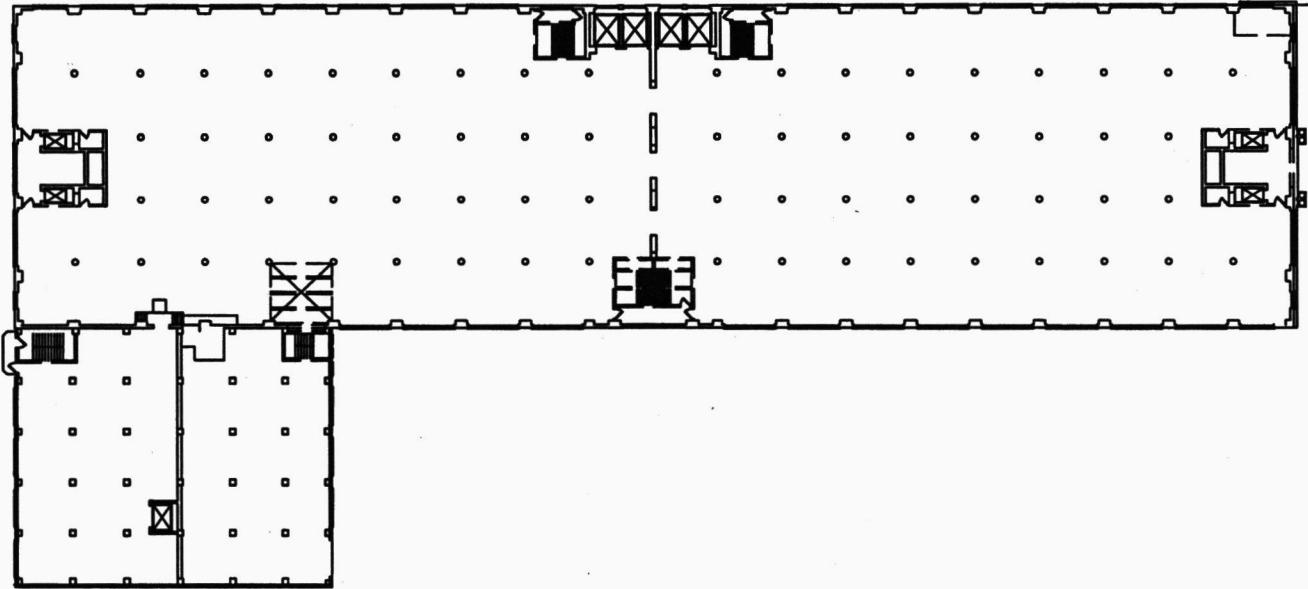


Mulford Building
640 N. Broad Street
Philadelphia County, PA



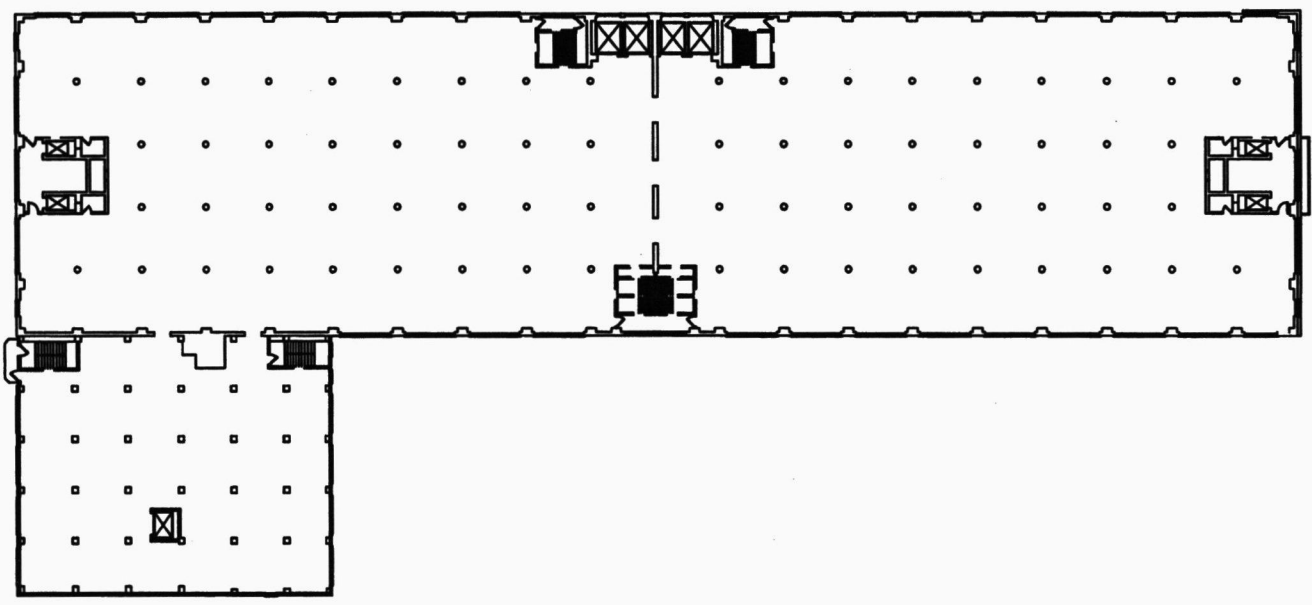
Existing 1st floor plan

Mulford Building
640 N. Broad Street
Philadelphia County, PA



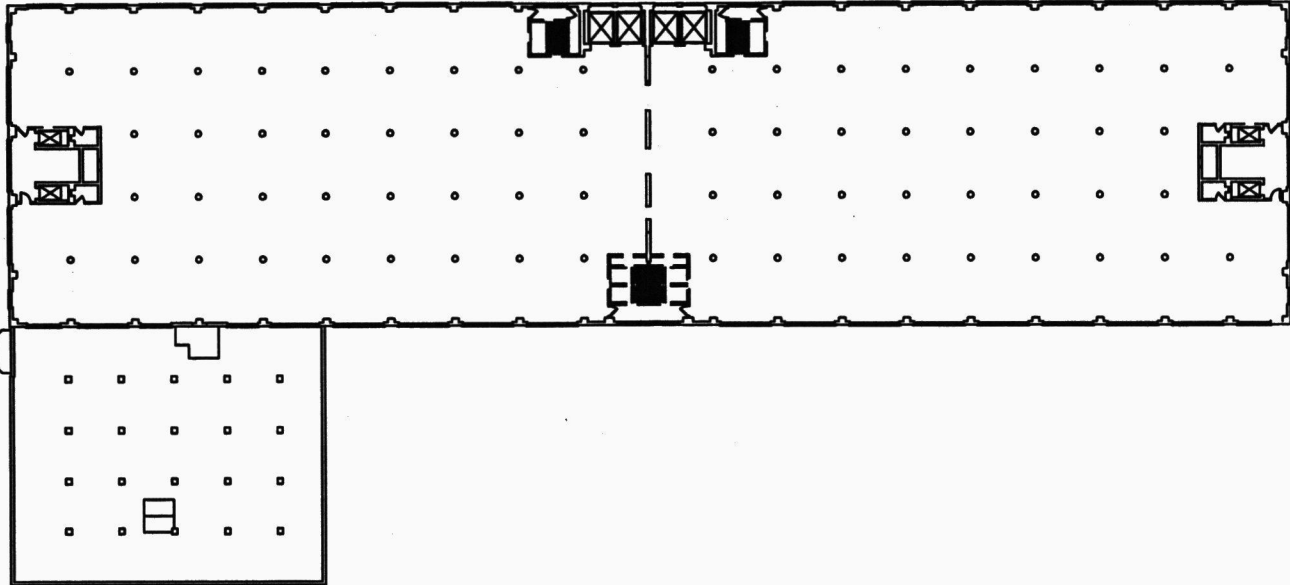
Existing 2nd floor plan

Mulford Building
640 N. Broad Street
Philadelphia County, PA



Existing 3rd and 4th floor plans

Mulford Building
640 N. Broad Street
Philadelphia County, PA



Existing 5th - 9th floor plans

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
EVALUATION/RETURN SHEET

REQUESTED ACTION: NOMINATION

PROPERTY Mulford Building
NAME:

MULTIPLE
NAME:

STATE & COUNTY: PENNSYLVANIA, Philadelphia

DATE RECEIVED: 7/09/04 DATE OF PENDING LIST: 7/27/04
DATE OF 16TH DAY: 8/11/04 DATE OF 45TH DAY: 8/22/04
DATE OF WEEKLY LIST:

REFERENCE NUMBER: 04000882

REASONS FOR REVIEW:

APPEAL: N DATA PROBLEM: N LANDSCAPE: N LESS THAN 50 YEARS: N
OTHER: N PDIL: N PERIOD: N PROGRAM UNAPPROVED: N
REQUEST: N SAMPLE: N SLR DRAFT: N NATIONAL: N

COMMENT WAIVER: N

ACCEPT RETURN REJECT 8/29/04 DATE

ABSTRACT/SUMMARY COMMENTS:

Entered in the
National Register

RECOM./CRITERIA _____

REVIEWER _____ DISCIPLINE _____

TELEPHONE _____ DATE _____

DOCUMENTATION see attached comments Y/N see attached SLR Y/N

If a nomination is returned to the nominating authority, the nomination is no longer under consideration by the NPS.



Mulford Building
Philadelphia County, PA
Photograph 1

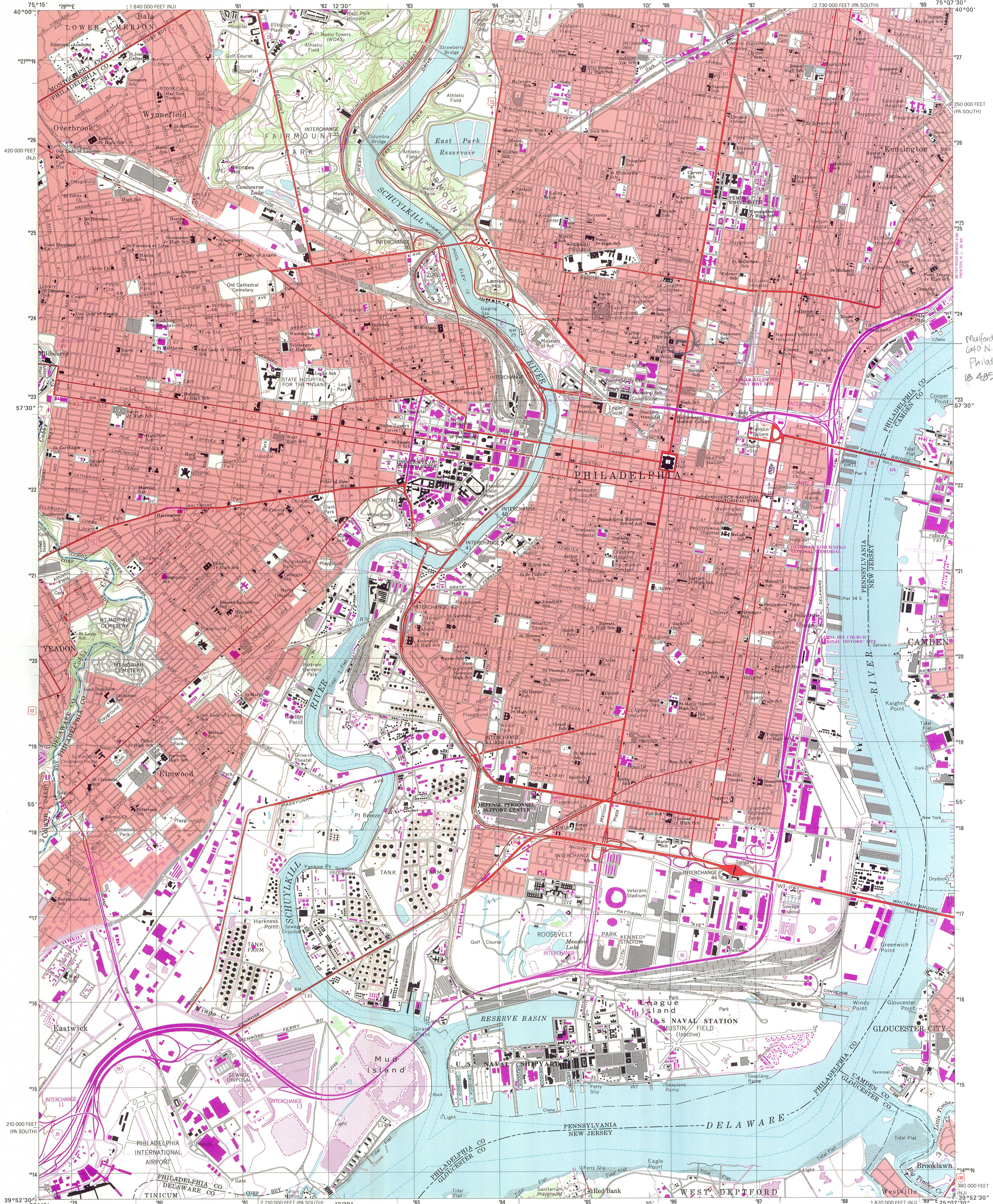


Mulford Building
Philadelphia County, PA
Photograph 2



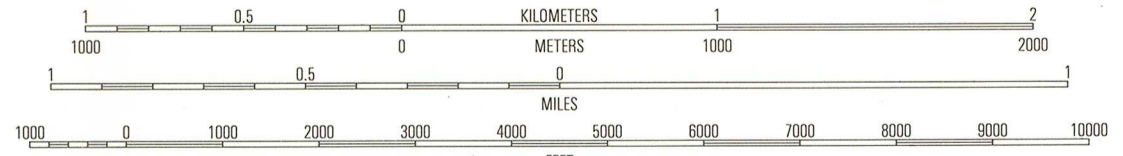
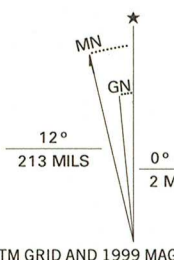
EXIT

Mulford Building
Philadelphia County, PA
Photograph 3

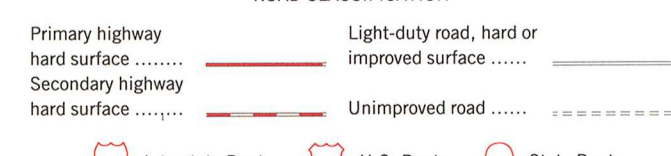
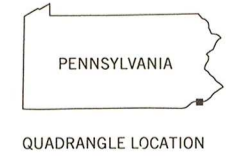


Mulford Building 400 N. Broad St. Philadelphia County, PA 19102-1400

Produced by the United States Geological Survey Topography compiled 1965. Planimetry derived from imagery taken 1990 and other sources. Photorevised using imagery dated 1995; no major culture or drainage changes observed. Survey control current as of 1967. Boundaries, other than corporate, revised 1999 North American Datum of 1927 (NAD 27) Projection: Pennsylvania coordinate system, south zone (Lambert conformal conic) 10 000-foot ticks: Pennsylvania coordinate system, south zone and New Jersey coordinate system 1000-meter Universal Transverse Mercator grid, zone 18 North American Datum of 1983 (NAD 83) is shown by dashed corner ticks. The values of the shift between NAD 27 and NAD 83 for 7.5-minute intersections are obtainable from National Geodetic Survey NADCON software. There may be private inholdings within the boundaries of the National or State reservations shown on this map Information shown in purple may not meet USGS content standards and may conflict with previously mapped contours



CONTOUR INTERVAL 20 FEET NATIONAL GEODETIC VERTICAL DATUM OF 1929 TO CONVERT FROM FEET TO METERS, MULTIPLY BY 0.3048



ADJOINING 7.5' QUADRANGLE NAMES

1	2	3	1 Norristown
			2 Germantown
			3 Frankford
4	5	6	4 Lansdowne
			5 Camden
			6 Bridgeport
			7 Woodbury
6	7	8	8 Runnemede

PHILADELPHIA, PA-NJ 1995

NIMA 5963 1 NW-SERIES V831



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CITY OF PHILADELPHIA

PHILADELPHIA HISTORICAL
COMMISSION

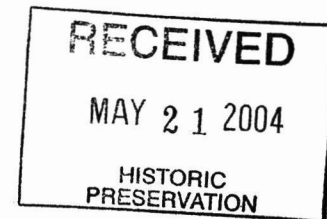
Room 576, City Hall
Philadelphia, Pennsylvania 19107
(215) 686-7660
Fax (215) 686-7674

MICHAEL SKLAROFF, ESQ.
Chairman

RICHARD TYLER, Ph.D.
Historic Preservation Officer

18 May 2004

Jean H. Cutler, Director
Bureau for Historic Preservation
Pennsylvania Historical and Museum Commission
Commonwealth Keystone Building - 2nd Floor
400 North Street
Harrisburg, Pennsylvania 17120-0093



Dear Ms. Cutler:

At its meeting of 14 May 2004, the Philadelphia Historical Commission considered the nominations to the National Register of Historic Places of Beatty's Mills Factory Building, 2446-2468 Coral Street, and of the Mulford Building (Metropolitan Building), 640 North Broad Street, Philadelphia. Prior to the meeting, each member of the Commission received copies of the nominations.

Beatty's Mills Factory Building, 2446-2468 Coral Street

I reviewed with the Commission several aspects of the statement of significance for Beatty's Mills Factory Building with emphasis on its place in the history of textile production in Philadelphia and the Kensington neighborhood and the differences between the manufacture of textiles in Philadelphia and in New England. The Commission also noted the importance of the use of heavy timber construction in Beatty's Mills Factory Building and the relationship of this to fire insurance and protection against fire. This has obvious significance to industrial building design and construction in a predominantly manufacturing city.

Although the nomination contains several flaws, the Commission unanimously agreed that Beatty's Mills Factory Building meets Criteria A and C of the National Register and voted to recommend its listing on the National Register. Note, however, that the Delaware River did not power mills this far down stream; Frankford is northeast, not southwest, of the pre-1854 city limits, and textiles as a cottage industry had a strong base in Germantown well before 1800.

Mulford Building (Metropolitan Building), 640 North Broad Street

In its consideration of the Mulford Building, the Commission recognized the extraordinary importance of the pharmaceutical industry to the economic history of

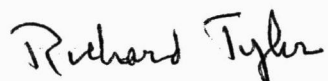
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Philadelphia from the eighteenth century to the present. It took particular note of the place of the H. K. Mulford Company, now a part of Merck, in that history. It also recognized the work of Charles Balderson, a prolific designer of industrial and commercial buildings in Philadelphia and vicinity from 1883 to 1916.

In the Commission's judgment, the Mulford Building clearly meets Criteria A and C of the National Register.

Thank you for your consideration of this letter.

Yours truly,

A handwritten signature in cursive script that reads "Richard Tyler".

Richard Tyler
Historic Preservation Officer