Inappropriateness of 81-95 Fairmount Avenue for Historic Designation

for:

Piazza Management Company

401 South Schuylkill Avenue

Norristown, PA 19403

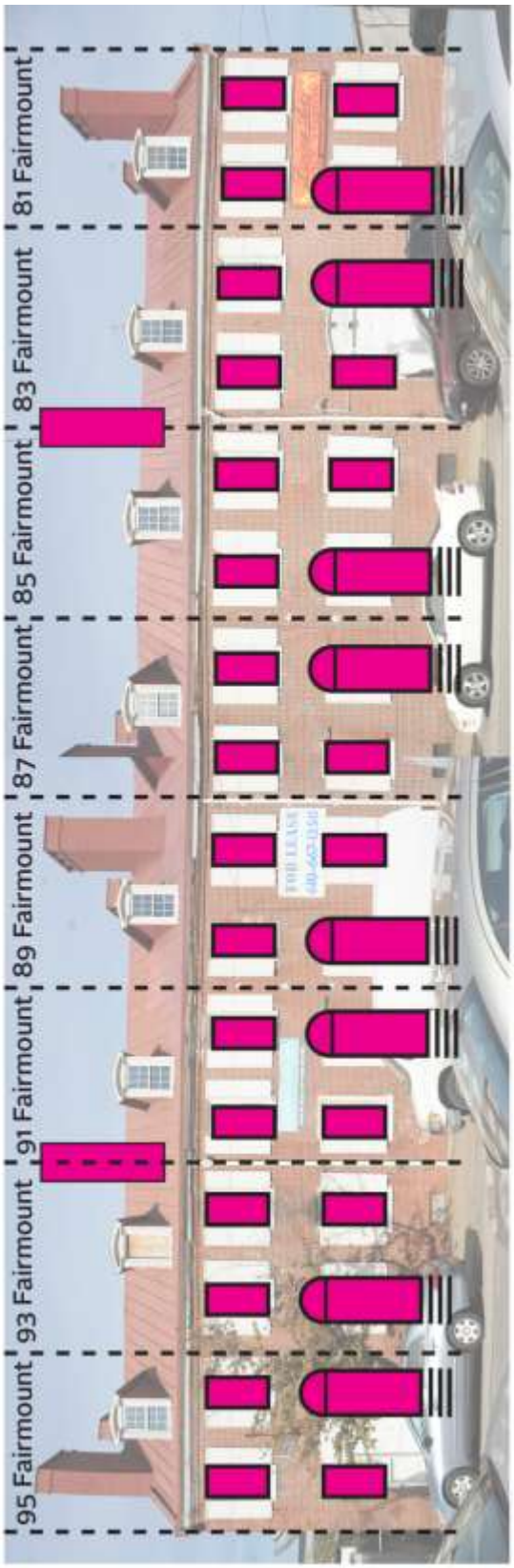
by:

George E. Thomas, Ph.D.

Civic**Visions** LP

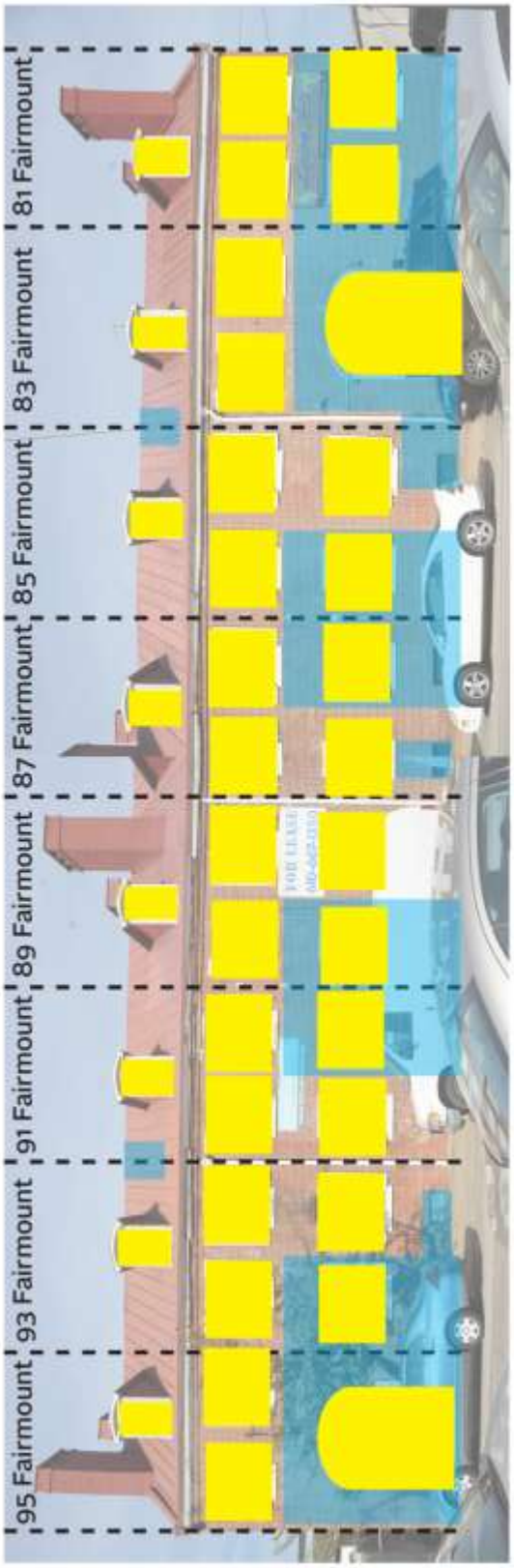
4 March 2016

Existing Fairmount Elevation



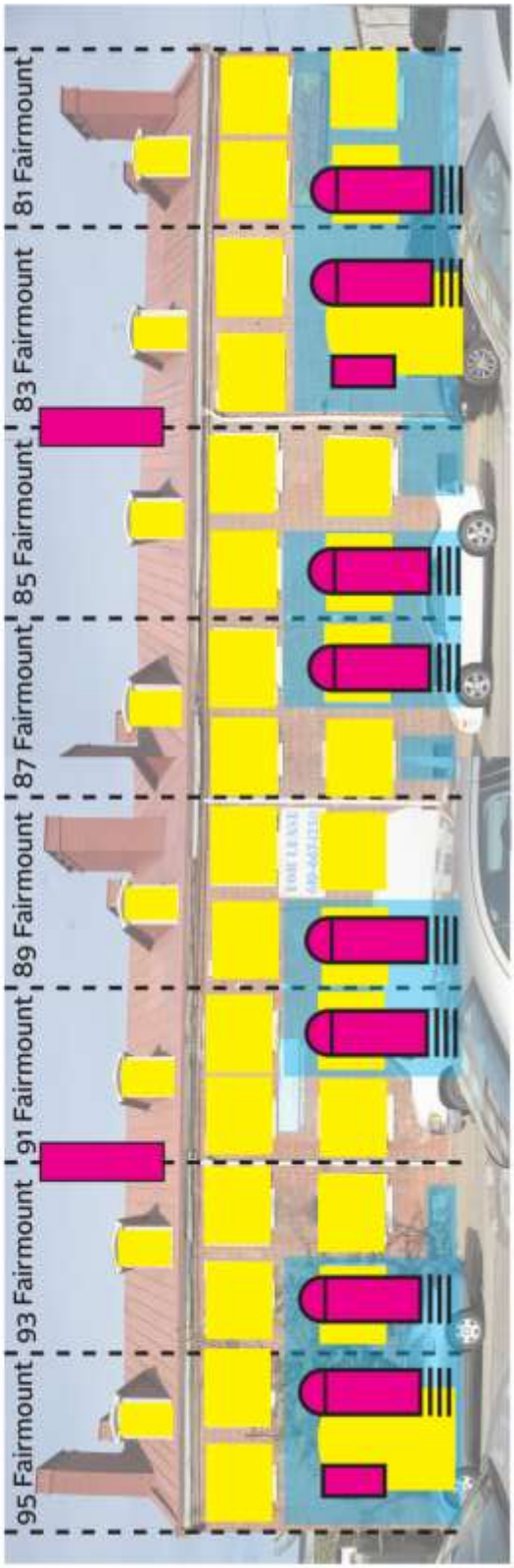
Original Fairmount Elevation: 8 rowhouses each with entrance door; party walls, three shared chimneys and 2 end chimneys

Existing Fairmount Elevation



Original Fairmount Elevation non-historic materials: window units, shutters,dormers (shown in yellow); new brick (shown in blue)

Existing Fairmount Elevation



Original Fairmount Elevation non-historic materials: window units, shutters,dormers (shown in yellow); new brick (shown in blue); missing chimneys and changed openings (shown in magenta)

Summary

The nomination for 81-95 Fairmount Avenue and 704 North Beach Street was submitted to the Philadelphia Historical Commission in April 2015; it was resubmitted on 11 February 2016, listing only 81-95 Fairmount Avenue. The original and the present nominations are without basis in the Philadelphia Historic Preservation Code and both fail to make a case for designation of the subject properties.

The Philadelphia Code provides for designation when a property: has significant character, interest or value as part of the development, heritage, or cultural characteristics of the City, Commonwealth, or Nation or is associated with the life of a person significant in the past; or, b. Is associated with an event of importance to the history of the City, Commonwealth, or Nation; or, c. Reflects the environment in an era characterized by a distinctive architectural style; or, d. Embodies distinguishing characteristics of an architectural style or engineering specimen; or, e. Is the work of a designer, architect, landscape architect or designer, or engineer whose work has significantly influenced the historical, architectural, economic, social, or cultural development of the City, Commonwealth, or Nation; or, f. Contains elements of design, detail, materials, or craftsmanship which represent a significant innovation.

As is demonstrated below, because of the extent of alterations to the building and because the connections to significant individuals and institutions are at best minor and largely removed by the alterations, and because those individuals are better represented by other sites and properties elsewhere in the city, this group of hugely altered and otherwise compromised buildings, whose context is largely demolished, does not meet the criteria for designation by the Philadelphia Historical Commission. Further:

- The nomination is laden with errors too numerous to fully list.
- The nomination fails to discuss or explain the drastic loss of integrity which has removed most of the character-defining features of the building on Fairmount Avenue
- As defined by the National Park Service, integrity expresses a variety of characteristics, most of which are now lacking in the subject property because of the extent of alterations to both the building and the context. This alone should negate designation.
- The current nomination mistakes the loss of original, character-defining features such as the front doors all of which have been removed. The present nomination refers to “some signs of alteration.” In fact as is evident from the attached illustrations the main façade of the building has been largely reconstructed. The removal of the massive mid-row pairs of chimneys is ignored, as is the transformation of the individual row units into an open interior loft.
- Finally the nomination is blind to the extraordinary loss of context, first by changing uses, then by being cut off from its neighborhood by I-95, and now by new development to the east along the river and to the west and north.

The actual condition of this generally undistinguished row, through drastic and irreparable alterations, and the extensive loss of context, does not warrant being designated by the Philadelphia Historical Commission.

Significance:

Among the most egregious problems with the nomination is the creation of a false category of one as the basis for significance. Both the original and the revised nomination assert that the row forms "…the oldest intact row of houses in Philadelphia between the Delaware River and Front Street." In point of fact, the zone between the Delaware River and Front Street, in the course of the regional history, was largely given over to commercial warehouses, shipping sites, and the service streets that immediately bordered the port because this area was always considered too vital to the commerce of the port to be used for housing. Contrary to the nomination, across the older portions of Philadelphia in the immediate vicinity of the port there are dozens of examples of this building typology – a row of houses built at the end of the 18th or the beginning of the 19th century using a so called "London-plan" house with a front and rear room and no rear wing. The nomination misinterprets the *Hexamer Atlas* which only shows the footprint – not the interior plan. The evidence of front and rear chimneys, coupled with the evidence from the fire insurance plan make it clear that these were standard row houses.

> Examples of this type in the immediate Northern Liberties include early houses just to the west on the 100 Block of Fairmount Avenue as well as others on the 100 block of Brown Street, the 200 block of E Allen Street to the north east. Up and down the river front are numerous examples of the type including the well-known and largely original 18th century houses on Elfreth's Alley just west of Front Street and the 100 block of Cuthbert Street immediately to the south of Elfreth's Alley. Carstairs' Row on the 700 block of Sansom Street is a larger version of the typology; more can be found on the 500 block S. Front Street and on and on. Moreover, there are more houses of this type from the same period on the Schuylkill River front, notably the 2400 block of Pine Street, marking the expansion of commerce and residence to the other river in the early 19th century. All of these examples possess far higher integrity than 81-95 Fairmount Avenue, are in settings that better reflect the original design context, and are better examples for understanding the typology.

Conclusion: A category of one created by close definition of the search area is historically meaningless. This row is part of a common building type along both the Delaware and Schuylkill rivers. Many of the factual and historical errors in the nomination could have been avoided if the nominator had referred to the standard literature on the Philadelphia row house beginning with William J. Murtagh's "The Philadelphia Row House," *Journal of the Society of Architectural Historians* 16,4 (December 1957): 8-13. The specifics of the London House plan and other common row house types have now been incorporated into the digital *Encyclopedia of Greater Philadelphia* but was apparently missed in the nomination. The more recent literature includes Donna Rilling's *Making Houses, Crafting Capitalism: Builders in Philadelphia, 1790- 1850.* (2001, Philadelphia: University of Pennsylvania Press). This book does not reference any of the builders or owners cited in this nomination. Reference to the scholarly literature would have avoided numerous assertions that are demonstrably inaccurate and misstate the significance of the building.

Integrity:

The National Park Service has developed an extensive text on the meaning of integrity, including Location, and continuing with Design, Setting, Materials, Workmanship, Feeling, and Association. While none of these categories of integrity are addressed directly in the nomination, the row can be evaluated against these criteria. The nomination makes numerous demonstrably untrue statements regarding the integrity of the buildings.

Location:

While the buildings remain where they were originally constructed, their location has been drastically transformed by the construction of 1-95 to the west, which cut the buildings off from the rest of the City, and by the re-construction of Delaware Avenue, which largely cuts the buildings off from the port. With the decline of shipping on the middle and upper Delaware River front, the site is no more original than if the buildings had been moved to some new location. The transformation of the immediate vicinity and its impact on the row is discussed below in "Setting."

Design:

Much of the discussion of the buildings in the nomination covers what NPS would consider design. At the core of the evaluation of design is the belief that the structure should retain critical features of "form, plan, space, structure, and style." These issues are represented in the nomination with the claim that the buildings form an "intact row."

"Intact Row"

The nomination asserts that "81–95 Coates Street is significant as the oldest intact row of houses in Philadelphia between the Delaware River and Front Street and represents the development of Northern Liberties, as well as Coates Street."

This assertion raises the question of what an "intact row" of houses consists of in Philadelphia. The row house is a well-known historical building type, the most widely used in Philadelphia and its parts and the characteristics of the row house are well known.

- The building typology presumes a continuous façade – usually of brick.
- The front façade is articulated by entrance doors, usually paired, that denote the separate units.
- These entrances in this period are usually accented with a fanlight or transom above the door to light a vestibule.
- In Philadelphia, marble front steps form the transition from the sidewalk to the first floor level providing entrance to each house.
- The façade is articulated with regularly spaced window openings that reflect the interior divisions of the separate building units.
- In the case of the standard row, two or three windows on a story represent one spatial unit each of which is separated from the next by a continuous masonry party wall that provides structural bearing for the wood floor joists and fire and sound separation between the buildings.

- Finally, in the case of earlier houses of this vintage, large chimneys representing the heating and cooking systems are part of the upper elevations.

Despite the presence of the number and pacing of windows that would suggest eight separate houses, the only doors that are to be found today are in the units at the east and west end of the block – the other six doors are missing. In other words, these either were not eight separate houses of the usual sort -- or the row has been drastically altered with the principal defining element of their purpose – the entrances to the house systematically removed.

What does the word "intact" mean? The standard meaning is "not damaged or impaired in any way; complete".

- A row of houses missing all of its front doors by definition is not complete.
- A row of housing missing its front steps by definition is not complete.
- A row of buildings missing its interior structural walls, by definition is not complete.
- A row of buildings missing most of its oversized chimneys, by definition is not complete.
- A row of buildings whose lower façade is largely reconstructed along new lines is, by definition, not complete

The nomination suggests that there may have been a few changes to the buildings but the larger goal appears to be to obfuscate the extent of these alterations. Toward the end of the earlier draft nomination, in the discussion of what the nomination calls the 1920 "restoration," a sentence began: "Aside from rearranging some of the apertures…" This was intentionally misleading. It has since been removed but the present nomination still proclaims misleadingly: "While the façade has remained largely intact, there are some signs of alteration" (p. 1). And following that misleading statement is the remark that "Several of the original doors have been filled in with windows and brick" (p. 1).

In fact, and contrary to the nomination, all not "several" of the doors have been entirely removed and the areas where they were removed has been carefully infilled with twentieth century brickwork and the voids were infilled with twentieth century windows. Given the date of construction and the characteristic doorways of the period, it is likely that what was removed was not just a door and door frame but also a fanlight or a transom light above the door.

The nomination is equally deceptive when it came to describing the doors that were added in the early twentieth century.

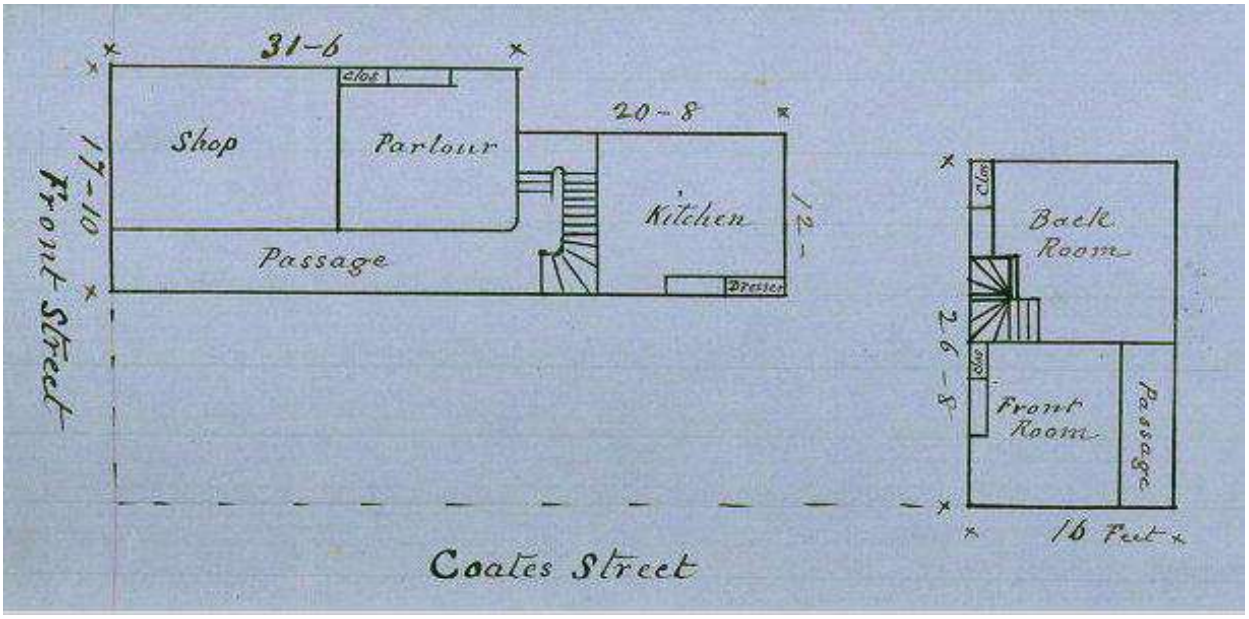
> "Within the western two bays [of 81-83 Fairmount] at the first floor is a very elegant, double Federal style doorway, which may or may not be original" (p.1)

In the history of the standard sixteen-foot wide Philadelphia rowhouse, "extant doublewide, arched doorways" would be a rare, indeed, a unique feature. No such doorways are known that occupy the entire first story of a unit. It is obvious that these giant doors are an alteration – though the nomination comments:

> "Within the western two bays at the first floor is a very elegant, double Federal style doorway, which *may or may not be original."*

Like the earlier statement that the façade "remained largely intact, [but with] some signs of alteration," this statement is either disingenuous or it is intentionally misleading. There is no other Philadelphia row of the period with such a configuration. The oversized doors at each end exist in this building for the very simple reason that this is not an intact row but rather a converted loft office structure. In fact, the row has been so significantly altered in the twentieth century that it no longer functions as a row of houses. Does the nominator not know that row houses have doors in every house – or that in the early 19th century no row house has an entire front given over to a giant door?

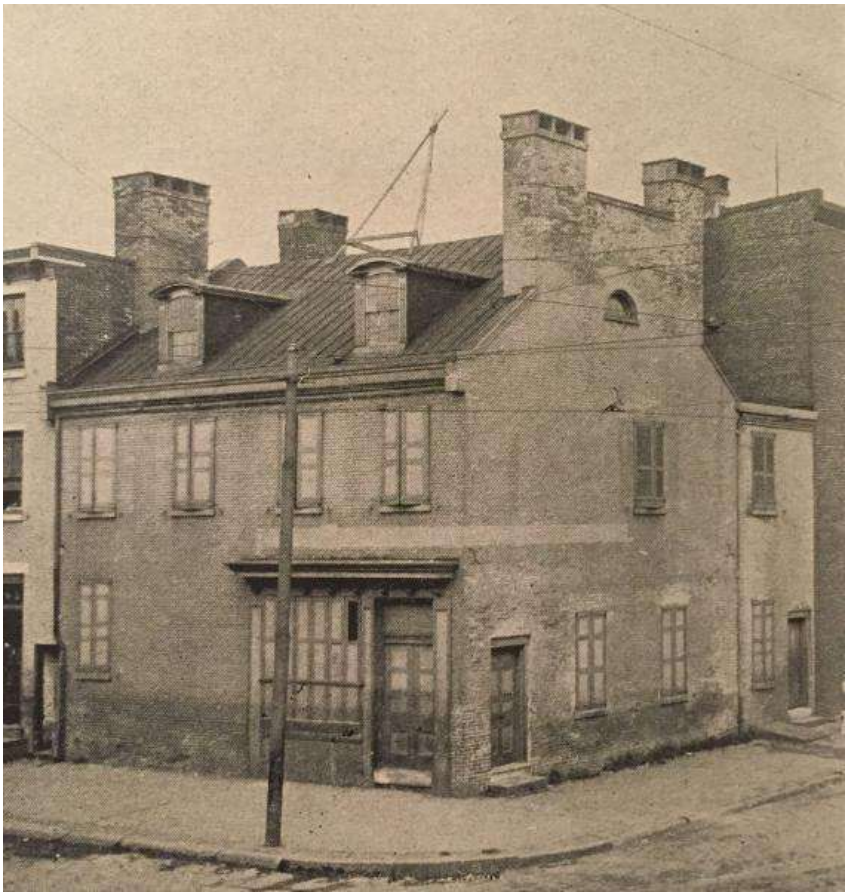
Within the nomination are clues that should have made it obvious that both oversized doorways are the results of alterations. The clearest pieces of evidence are the photograph included in the nomination, showing the east end of the block, and the insurance plan of the west end of the block. The former shows the corner of Beach and Fairmount at the time when the building had been converted to a shop with a door on the right east wall and no giant Federal door anywhere in sight. Clearly this door did not exist when the photograph was taken – and therefore cannot be original. Similarly the insurance plan included in the nomination shows the westernmost house of the row, with a plan that is the standard so-called London house plan with a front and rear room connected by a side passage that opens into the front room and terminates at the rear room. That passage is always entered from the front door, thereby providing clear evidence—again-- that the original front door in 95 Fairmount was on the east side of the unit and not the present oversized door in the center.



Insurance Survey showing plan of 91 Coates Street on right with passage against the party wall and fireplaces serving the front and rear rooms of the house on the west end.

The late 19th century photograph included in the nomination clearly predates the 1920s alteration. This photo shows no large door in the first units at #81 and 83. Therefore it must

have been obvious that the present door was not original to the initial construction because the large present door is not in the 19th century view.



Late 19th century photograph of the corner house showing a commercial shop front on 81 Fairmount; an altered door on the east end wall of the same unit, and faint evidence of the bricking in of the door on the second unit, #83. It also shows banks of oversized chimneys that would have heated the buildings as well as original paneled shutters – all of which have been removed. There is no evidence of the present oversized door in 83 Fairmount Avenue. Also removed is the tiny rear alley door between #83 and #85. This was a common feature of the period and was likely removed from the row as well.

Far from being "intact" the nomination includes images that together demonstrate that the row has been so extensively altered as to have lost its integrity. In the course of their history, the buildings in the row

- have lost all of the original front doors and stoops;
- all of the windows have been replaced,
- all of the shutters have been replaced;
- basement windows with iron lintels have been installed.
- stories have been added and removed;
- finally, careful examination – with the knowledge that the original front doors have clearly been moved shows that nearly a third of the masonry of the front façade is from the 20th century.

In short the exteriors are dramatically different than their original condition and are far from being intact.

But even these egregious errors do not fully capture the extent of the alterations that have occurred in the row between 81 and 95 Fairmount Avenue. The previous state of the nomination recounted what it called the "… 1920s restoration by Thomas Sullivan's Terminal Warehouse Company, paying homage to the Colonial and Georgian Revival styles." This has been revised to state that the later owner combined "the small dwelling units into offices" (p.4). The extent of that combination was not addressed despite clear evidence of the changes.

Apart from removing the doors and front stoops, there is another visual anomaly that should have been obvious in looking at the buildings from the street. At each end of the row, the end walls have a pair of chimneys that served the front and rear fireplaces of the houses of # 81 and # 95 Fairmount Avenue. There is another pair of chimneys between # 87 and # 89. However there are no chimneys for units # 83, #85, # 89, # 91 and #93. In the late 19th century this might have been a minor issue, as stoves with skinny brick chimneys and sometimes little more than stove pipes replaced massive chimneys – but in the case of buildings of this era, the chimneys were an integral and significant visual element that would have reiterated the cadence of the row of houses and, together with the front doors and stoops, would have made evident the individual units. Thus, in addition to the removal of the doors of the main façade, the buildings have lost much of their skyline – the row of large chimneys that marked both the heating and cooking systems of the houses. The removal of the chimneys eliminated the secondary binary cadence of the row as pairs of houses with paired doors and paired chimneys.

The removal of so integral an element as the chimneys should have made it apparent to the nominator that something else had happened to these houses that ended their utility as a row of separate houses. The chimneys were removed because the supporting interior masonry party walls between each unit were also removed to create an open, loft-like work space within the former row. In fact, as a result of the loss of all of the original front doors, most of the interior party walls, and the giant chimneys that formed the skyline, this group of buildings is no longer anything like an "intact" row of houses: instead it is an altered twentieth century office space. While the usual Philadelphia nomination does not take into account interior issues, it should have been obvious, simply from looking at the windows and the lack of doors, that interior spaces are impossibly large for a row of small houses.

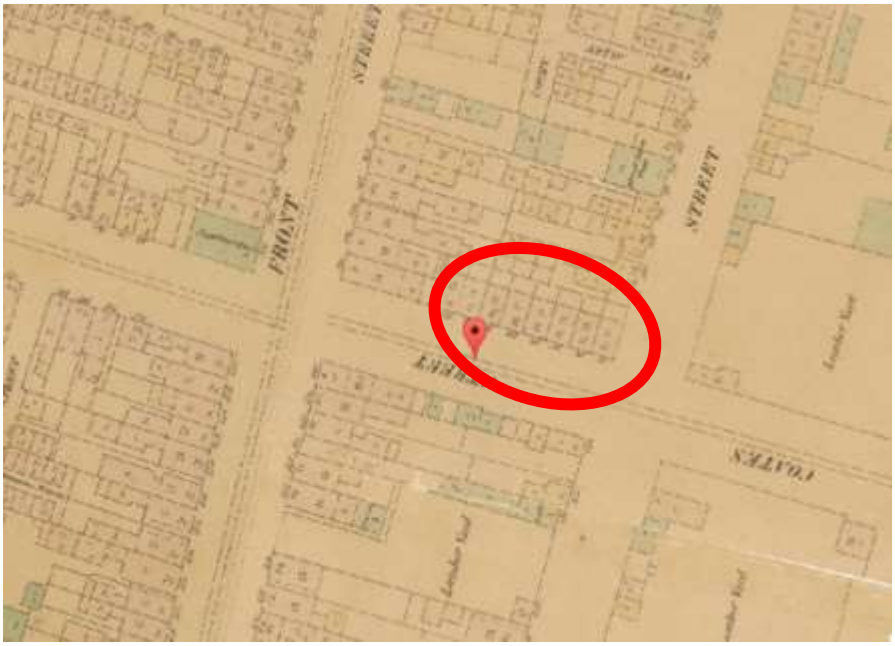
Conclusion: As demonstrated above, the design of the row has been severely compromised to the point that the row functionally does not exist; its original design features are largely gone, and its original materials have been largely replaced. The work in the 1920s was not, as described in the original nomination, a "restoration," but was instead a massive alteration that eliminated nearly all of the critical craft features of workmanship. What survived that massive alteration has since been replaced in later alterations.

Setting:

Integrity in setting, according to the NPS is achieved by maintenance of the physical environment around a structure.

A walk around the neighborhood reveals the extent of transformation. If the neighborhood remained in largely original condition, it might be possible to make a case that the row, despite its massive alterations, somehow contributed to the character of the neighborhood. However, the immediate vicinity has been utterly transformed, not just once, but twice since the original construction of the row. In the 19th century property atlases show an area that was largely residential in the immediate vicinity and with work sites along the Delaware River. By 1870, several of the business along the Delaware had expanded west across Beach Street, but the area remained residential with corner stores, and small houses.

The earliest detailed atlas of the area is the Hexamer and Locher *Atlas of Philadelphia* of 1858, which shows the original row with numerous small frame band-box type houses to the rear, accessed through an archway from Beach Street that filled out the remainder of the block. Larger brick houses faced on to Front Street including the house shown in the insurance plan included above. Already by 1858 however, the seeds of change were in evidence with lumber and coal yards predominating to the east of Beach Street where they were part of the bulk shipping sites of the waterfront. This pattern persisted in the 1862 Samuel Smedley *Atlas of the City of Philadelphia*. After the Civil War, the district shifted toward industrial, light manufacturing, and warehousing as secondary aspects of these uses crossed Beach Street.



The Hexamer *Atlas* (Philly Geohistory) shows the immediate vicinity of the block in 1858 as largely residential with numerous small workingmen's houses filling in to Beach Street but with bulk shipping and warehousing to the east.

To the north of the Fairmount row (the street had been renamed before the 1880 census from its earlier name of Coates Street), much of the block was taken over by the A. Wilt & Sons Sash, Door & Shutter Factory (*Hexamer General Surveys*, 1873, 1889). These uses are confirmed by the G. M. Hopkins *Atlas of Philadelphia* of 1875 that shows the planing mill and a variety of heavy industrial uses in the vicinity. By the 1910 Bromley *Atlas of Philadelphia*, the district was largely given over to chemical and medical manufacturing plants with the planing mill and the adjacent building materials uses continuing. The J. M. Brewer 1934 "Appraisal Map" of

Philadelphia shows the district with its large mills in dark red, indicating that the district was "controlled" by its industrial buildings extending east to Front Street and with the neighborhood to the west largely African American in population – and therefore "red-lined.".

A significant change occurs again in the 1940s, as evidenced by the City's Works Public Administration map of 1942, which shows the arrival of the Philadelphia Transit Corporation's electrical substation and warehouse to the south, and Department of Public Works Garage across Fairmount Avenue. The ultimate transformation of the area occurred beginning in the late 1950s when the Delaware Expressway (I-95) project was begun that extended through the eastern side of the City roughly bordering the Delaware River. This resulted in the clearing of the entire route and the isolation of the area from its former network of streets and urban fabric. Aerial views from Google Earth show that most of the area was already cleared by the time of the earliest posted Google aerial of 1992. According to the 1962 "Land Use Map of the City of Philadelphia" (Philly GeoHistory) the area east of Front Street was almost entirely devoted to industrial uses with vacant properties and transportation related sites predominating.

Conclusion: The extent of change to the district means that there is no integrity of setting.

Materials:

While the brick of the façade was relatively carefully matched in the massive reconstruction of the lower façade, it should be obvious from the extent of the removal of the original doorways that as much as one third of the main façade has been rebuilt. The other secondary elements of the façade have been entirely replaced with twentieth century materials while other elements are entirely missing.

- Shutters which would have been made of the standard frame and panel construction were replaced twice – the most recent of plywood with a raised edge.
- Windows that were the standard small pane wood sash have been entirely replaced with a cheap metal sash with plastic snap-in muntins.
- Roofing for the period would have certainly been of wood shingles. The roof was replaced at some point before the late 19th century photograph with a standing seam metal roof.
- The Google Earth view shows that the rear half of the roof, not visible from the street, is now black roofing paper.

All of these changes undermine the materiality of the building and mark the use of later industrial rather than craft processes.

Conclusion: As much as one-third of the front façade – including the area represented by the replacement windows, shutters, the replacement doors, transoms, and steps, and the related masonry infill are 20th century.

Workmanship:

Under the category of "Workmanship" would come such features as the original door casings, the paneled doors, the fan or transom lights above the doors– all of which have been removed. These would have given the building a hand-crafted character – which is now lost.

City of Philadelphia Archives, Photograph, April 10, 1954 showing the altered entrance at the east end of the row as well as different operable panel shutters on the upper stories from those on the late 19th century photograph above (p. 10).

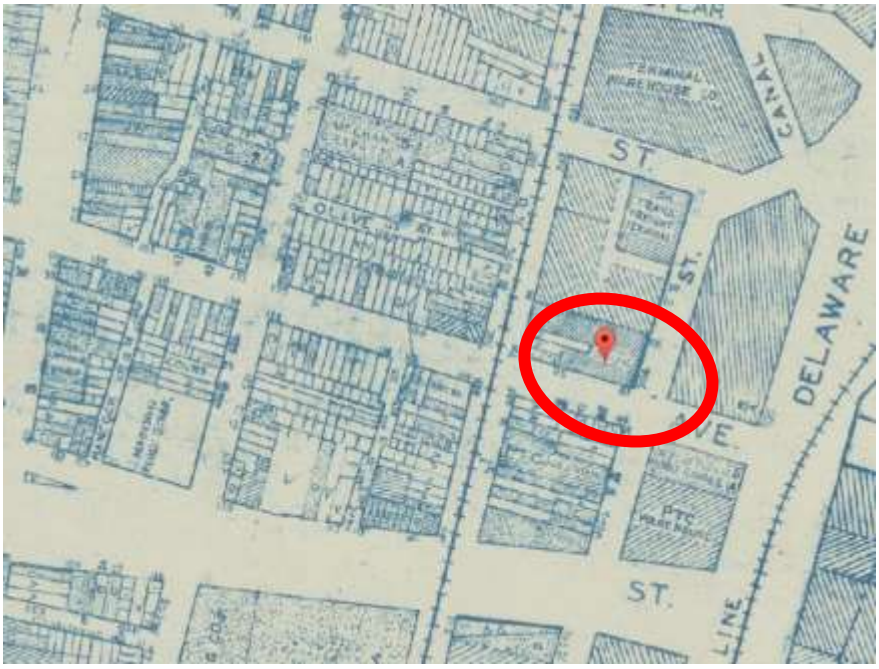
- Another example of twentieth century industrial era workmanship replacing earlier craft-era workmanship are the louvered shutters that flanked the windows of the houses in this 1954 view.
- Evidence of the original shutters is clear in the late 19th century photo (p. 10 above).
- The small paned wood sashes, evident in the 1954 city of Philadelphia photograph, were presumably made for the 1920s renovation. These have been entirely replaced with modern aluminum sash with snap-in muntins.
- The 1954 photograph shows that the row was painted, presumably brick red. That paint has been removed on the Fairmount facade, evidently by sand-blasting, which accounts for another significant and visually apparent loss of integrity – the degraded surface of the brick. This will create a long term maintenance issue for the building evidenced in the extreme weathering of large areas of the front facade.
- The extent of rot and water damage of the underside of the roof at the front edge of the house is further demonstration of the deteriorated condition of the buildings.
- One final piece of disinformation also might have been readily corrected. The nomination discusses the metal roof: “The roof appears to be the original standing-seam metal material or a nineteenth century replacement. Some parts of the roof have been patched.” Again there is an extensive literature on metal roofing that is made readily accessible in the National Park Service’s Technical Preservation Services brief “Roofing for Historic Buildings” by Sarah M. Sweetser. Given that galvanized metal was not available until the late 1830s, it is obvious that the original roofs were shingled. Moreover, given the ready access to Google maps it should also be evident that the rear half of the roof, visible in the overhead satellite view, has been replaced with tar paper.

Conclusion: These buildings are clearly not as claimed in the nomination (#4) in “good” or “fair” condition with workmanship representing the period of their construction. Instead they are significantly damaged with critical pieces of the usual stabilization of a row of houses missing. Further the brick surface has been degraded by sandblasting which can only accelerate deterioration in freeze-thaw cycles. Finally much of the original fabric has been replaced.

Feeling

The Park Service uses the idea of feeling to represent the contextual and experiential nature of the present versus the original experience.

The 1895 Bromley *Atlas of Philadelphia* shows the transition of the immediate vicinity into workshops, many related to building construction, with wharves and transportation to the east and west.



PhilaGeoHistory, 1962 Land-use map shows the area turning into garages and freight terminals.

Present day conditions: Google Maps 2016, shows the area cut off from the Northern Liberties by the Delaware Expressway to the upper left; apartment houses along the Delaware replacing the warehouses to the right and most of the area now given over to surface parking with a few new row-houses being built to the west. Yellow outlines parking and other losses of context.

The visual evidence of both the historic planning maps and the current aerial photographs makes it clear that the site is now largely surrounded by parking that has resulted from the demolition of most of the buildings in the vicinity.

Conclusion: Nothing of the original feeling of the setting remains nor does the industrial and small-scale work settings of the late 19th century context of the houses remain. The roar of the trucks along Delaware Avenue to the west replaces the sounds of wood planing and craft activities that characterized the zone in the late 19th century; on the east, no ships arrive to unload their cargoes. High rise towers and rows of modern townhouses are the future of the district

Association:

The final area of integrity that the Park Service addresses is association, a topic that assesses the relation of the building to its significant tenants. Again, because of the extent of alterations to both buildings and site, most of the associations raised in the nomination have no remaining connection. The original builder's design is largely removed along with almost all evidence of original craftsmanship; the retail function as a whiskey store was removed when the exterior was reconstructed; the Friends' Neighborhood Guild association is better represented by the Venturi and Rauch Guild House that the organization built on Spring Garden Street. The transformation of the building to offices removed most of the exterior features of #81 and 83 Fairmount that were visible in the late 19th century photograph. The only other connection to its past is the to the Thomas Sullivan era when it provided offices for the Terminal Transfer Company. The Terminal Transfer Company, while large, is not of particular consequence in the history of the City and the demolition of the warehousing and transportation businesses that

once lined the waterfront again undermines the significance of the property in that dimension The Guild operated several other sites, the longest serving of which was at 4th and Green Streets, beginning in 1913 and remaining there, refining its mission to serve the East Poplar Redevelopment zone. Since the early 1950s it has been located at 8th and Fairmount Avenue with the Friends Housing Cooperative.[1]

Conclusion: As a consequence of changes in every dimension to this site, this isolated and much altered building, shorn of context, has lost its integrity in every dimension – and does not warrant designation.

General notes:

Apart from the failures to describe with clarity the actual extent of the alterations, the nomination misrepresents the regional and cultural history. The United States census is readily available to understand the residents of the community. These include large clusters of Irish and English immigrants, together with native born workmen, ranging from tavern operators and engineers to laborers and hucksters.

George E. Thomas, Ph.D.

CivicVisions, LP

February 12, 2016

[1] The history of the organization is briefly treated in Alyssa Ribeiro, "Friends Neighborhood Guild, "*The Encyclopedia of Greater Philadelphia* *http://philadelphiaencyclopedia.org/archive/friends-neighborhood-guild/* (accessed February 2016). See also the Temple Urban Archives Finding Aid for Friends Neighborhood Guild, https://library.temple.edu/scrc/friends-neighborhood-guild (accessed February 2016).

Attic: single interior space, party walls removed

Second floor, single interior space, party walls removed

Second floor corridor, party walls removed

INTEGRITY

The National Register traditionally recognizes a property's integrity through seven aspects or qualities: location, design, setting, materials, workmanship, feeling, and association. These qualities should also be discussed under the Statement of Significance, Section 8 of the registration form.

Location

Location is the place where the historic property was constructed or the place where the historic event took place. Integrity of location refers to whether the property has been moved or relocated since its construction. A property is considered to have integrity of location if it was moved before or during its period of significance. Relocation of an aid during its active career if the move enhanced or continued its function is not a significant loss of integrity. For example, in 1877, the 1855-built Point Bonita Light was relocated from a high bluff to a rocky promontory to improve its visibility to mariners. Aids to navigation relocated to serve new purposes after being decommissioned suffer a serious loss of integrity of location, but are not automatically precluded from listing.

Design

Design is the composition of elements that constitute the form, plan, space, structure, and style of a property. But properties change through time. Lighthouses may be raised or shortened; buildings may be added or removed from a light station; sound signal equipment and optics may change to reflect advancing technology. Changes made to continue the function of the aid during its career may acquire significance in their own right. These changes do not necessarily constitute a loss of integrity of design. However, the removal of equipment that served as the actual aid to navigation--a fog signal, lens and lamp, or the distinctive daymarkings on a tower--has a considerable impact on the property. Removal of an optic from a lighthouse, a fog horn or bell from its building, or painting over a historic lighthouse's pattern has a serious adverse effect on its design integrity. The design integrity of light stations is reflected by the survival of ancillary buildings and structures. The decision to nominate a station should include an assessment of the design integrity of the property as a complex. The loss or substantial alteration of ancillary resources, such as keeper's quarters, oil houses, cisterns, and tramways, for example, may constitute a significant loss of design integrity.

Setting

Setting is the physical environment of a historic property that illustrates the character of the place. Integrity of setting remains when the surroundings of an aid to navigation have not been subjected to radical change. Integrity of setting of an isolated lighthouse

would be compromised, for example, if it were now completely surrounded by modern development.

Materials

Materials are the physical elements combined in a particular pattern or configuration to form the aid during a period in the past. Integrity of materials determines whether or not an authentic historic resource still exists.

Workmanship

Workmanship is the physical evidence of the crafts of a particular culture or people during any given period of history. Workmanship is important because it can furnish evidence of the technology of the craft, illustrate the aesthetic principles of a historic period, and reveal individual, local, regional, or national applications of both technological practices and aesthetic principles.

Feeling

Feeling is the quality that a historic property has in evoking the aesthetic or historic sense of a past period of time. Although it is itself intangible, feeling is dependent upon the aid's significant physical characteristics that convey its historic qualities. Integrity of feeling is enhanced by the continued use of an historic optic or sound signal at a light station. The characteristic flashing signal of a light adds to its integrity. While sounds themselves, such as the "Bee-oooohhhh" of a diaphone, cannot be nominated to the National Register, they enhance the integrity of feeling. The mournful call of fog horns on San Francisco Bay is an integral part of experiencing life there.

Association

Association is the direct link between a property and the event or person for which the property is significant. A period appearance or setting for a historic aid to navigation is desirable; integrity of setting, location, design, workmanship, materials, and feeling combine to convey integrity of association.