



HISTORIC PRESERVATION STUDIO II

A STUDY OF BROOKLYN'S COBBLE HILL
& BOERUM HILL NEIGHBORHOODS

Columbia University GSAPP | Spring 2016

This report was developed as part of the Spring 2016 Historic Preservation Studio II at the Columbia University Graduate School of Architecture, Planning, and Preservation. The report is entirely student produced, by the following team:

Tania Alam
Valentina Angelucci
Jessica Betz
Elizabeth Canon
Marisa Kefalidis
Mayssa Jallad
Sarah Menegus
Nicole Mezydlo
Ariane Prache
Alexander Ray
Sara Reddan

Cameron Robertson
Allison Semrad
Andrea Sforza
Teresa Spears
Fei Teng
Stacy Tomczyk
Laura Weinstein
Katrina Virbitsky
Mengjie Zhang
Qi Zhang
Yuanyi Zhang

Studio Faculty:

Erica Avrami, PhD, James Marston Fitch Assistant Professor of Historic Preservation
Ward Dennis, Adjunct Assistant Professor of Historic Preservation
Belmont Freeman, Adjunct Associate Professor of Historic Preservation
William Reynolds, Adjunct Assistant Professor of Historic Preservation
Alberto Sanchez-Sanchez, Student Teaching Assistant

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Cover photo: 195 Dean Street
Source: student photograph

Contents

Introduction

Study aims and rationale	6
Study Area	7
Historic Districts and Landmarking	8
Significance Assessment	12
Methodology	14
Assumptions and Limitations	14
Rapid Field Survey	14
Neighborhood Research	14
Block Research	15
Building/Site research	16

Early History

Pre-Urban history	20
Farm-to-Grid	22
Key factors in urbanization	23

Architectural Development

Periods of construction	29
Building typologies	30
Residential development	32
Commercial development	36
Architectural styles	40
Social history and neighborhood development	53

Changes in the Built and Social Fabric

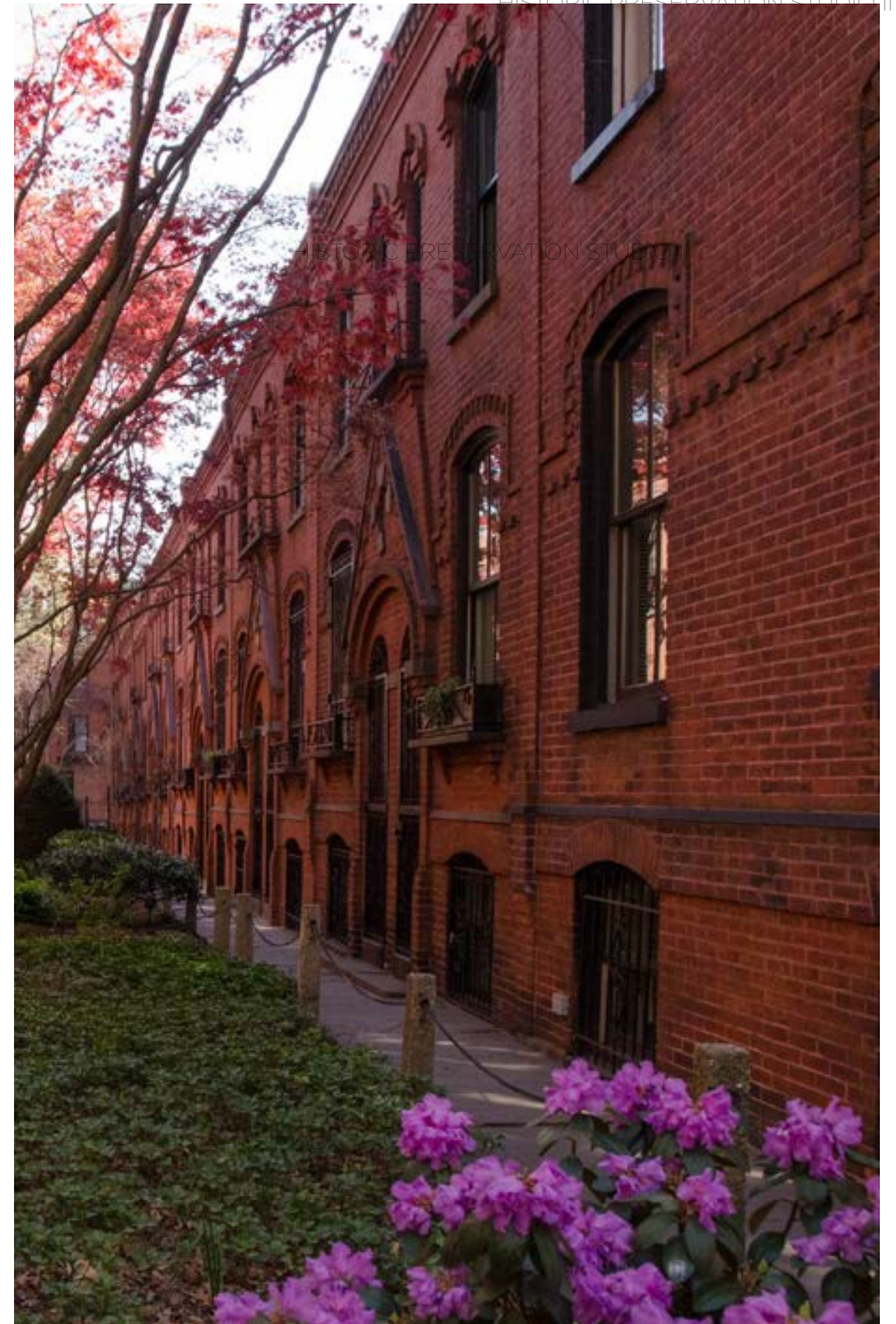
Sense of Community	65
Residential Character	68
Commercial & Industrial Character	72
Materials, Conditions, and Integrity	83
Urban Form	101
Streetscapes	106
Diversity	115
Affordability	121

Findings Summary

Strengths, Weaknesses, Opportunities and Challenges	131
Recommendations	133
Conclusion	150

Design Interventions

Appendix	211
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17 Warren Street
A Street in Brooklyn
Following page: 26-28 Bergen Street
A Street in Brooklyn
Cobble Hills & Bedford Hills Neighborhoods
3



Study Aims and Rationale

The purpose of this study was to investigate the rarely researched long-term impacts of designation on historic districts; specifically on form and aesthetics of the neighborhood, materials and conditions of structures, and socioeconomic conditions of the community.

Based on this investigation and subsequent analysis, we developed design interventions for infill development and adaptive reuse projects, conservation strategies and recommendations for the neighborhood.

With the recent anniversary of the New York City Landmarks Law, we have the opportunity to evaluate the effects of our current preservation tools, in order to assess whether these are the best possible tools for the job. This study is a preliminary attempt to evaluate the effectiveness and unintended impacts of historic districts in particular. Additionally, rapid new development is currently taking place around our study area – larger towers are being erected only a few blocks away, making this a timely study on the role of historic districts, as this development has not yet spread through our study area.

It is important to note that this study was not driven by a pre-determined goal, such as additional landmark designation. The outcomes and recommendations of this study came directly out of the data that was collected and analyzed.



233-237 Warren Street
Source: student photograph

Previous page: 233 Atlantic Avenue
Source: student photograph



State Street
Source: student photograph

Study Area

The study area is located in the southern part of Downtown Brooklyn, and comprises two historic districts: Cobble Hill and Boerum Hill, and the area immediately surrounding and in between the two. The northeast part of the area, specifically the northeast section of Atlantic Avenue, is also a part of the Atlantic Avenue Special Purpose Subdistrict, as well as the Downtown Brooklyn Special Purpose District. These are zoning subdistricts that have their own rules and regulations developed by the Department of City Planning rather than the Landmarks Commission.



Study area in relation to Lower Manhattan



Detailed study area

Historic Districts and Landmarking

Early Preservation History

Historic district designation is one of the many forms of historic preservation land use regulation. While the New York City preservation movement famously took a national stage in the 1960s, the groundwork for such widespread effort and attention dates to the 19th century; the 1853 campaign for Mount Vernon, led by Ann Pamela Cunningham is classically considered the 'start' of the field of historic preservation. While not linear, subsequent legislation and work addressing preservation was constant throughout the 20th century. From the turn of the century there is "the 1906 Antiquities Act, Charleston's historic districting law from 1931, the Historic Sites Act of 1935, the work of the Historic American Buildings Survey in the 1930s, [and] the 1949 creation of the National Trust for Historic Preservation," each demonstrating a growing awareness of the need for regulation, while setting the stage for more significant safeguarding of the built environment by the 1960s.¹

New York Preservation

Preservation cannot be understood within a vacuum, and the field evolved alongside and in conjunction with the 'history industries' of museums, monuments, etc.² But by the mid 20th century, historic preservation had become much more related to and intertwined with political and economic motivators. The preservation movement gained widespread momentum during the 1960s. In 1961, New York City Mayor Robert Wagner appointed a committee for the Preservation of Historic and Aesthetic Structures, which was revised into a 12 person Landmarks Preservation Commission in 1962.³ While legislation was in discussion in the early 1960s, critics felt these decisions weren't unfolding quickly enough, as "old buildings [were] go[ing] down like dominoes."⁴ After a series of very public preservation battles, it was ultimately the 1963 demolition of the old Pennsylvania Station that is considered the watershed moment in the history of New York preservation legislation, prompting national coverage and sympathy. The topic was timely worldwide; UNESCO designated 1964 'International Monuments Year,' launching an international campaign focused on protecting and celebrating historic buildings worldwide.⁵ In 1965 the New York Landmarks law was passed, along with the creation of the Landmarks Preservation Commission by Mayor Wagner.

The new legislation prompted a local designation frenzy of both individual landmarks and historic districts. The earliest preservation efforts were concentrated in Manhattan and Brooklyn. In the first 20 years of the law, between 1965 and 1984, 29 historic districts and extensions were designated in Brooklyn alone.⁶ The commission identified Greenwich Village and Brooklyn Heights as its earliest districts, and established the criterion that "65 per cent of a neighborhood's buildings must have historic interest." Landmark designation was concerned with identifying examples of buildings that represent particular styles and periods, with districts denoting large concentrations of these buildings. Particular emphasis was placed on 19th century styles: Federal Style, Greek Revival, picturesque, etc.⁷ Brooklyn Heights represented "the earliest and most elegant" brownstone neighborhood, featuring a larger concentration of these houses than any other part of New York City.⁸

1 Mason, Randall. *Giving Preservation a History*. Routledge: New York, 2004.

2 Wood, Anthony C. *Preserving New York*. Routledge: New York, 2008.

3 "As the Wrecker's Ball Swings," *The New York Times*. March 15, 1965. 30.

4 "The Disappearing Landmarks," *The New York Times*. September 18, 1964. 34.

5 Ennis, Thomas W. "Moves to Preserve Landmarks Pressed in U.S. and Abroad," *The New York Times*. October 19, 1964.

6 www.nyc.gov

7 Ennis, Thomas W. *Ibid.*

8 Anderson, Jervis. "A Reporter at Large: The Making of Boerum Hill," *The New Yorker*. November 14, 1977.



Corner of Atlantic Avenue and Court Street
Source: student photograph

Boerum Hill & Cobble Hill Designations

The Boerum Hill and Cobble Hill neighborhoods were identified and proposed for designation relatively early in the history of historic preservation. Proposals for both Cobble Hill and Boerum Hill were among the first presented at public hearings in July and December 1966, respectively. During the 1960s, the neighborhoods now identified as Cobble Hill and Boerum Hill were far less distinguishable from one another. The area was understood as a less pristine concentration of rowhouse development with relative proximity to Brooklyn Heights. Cobble Hill and Boerum Hill were proposed for designation on the basis of recognizing their unique architecture of the 19th century. While Brooklyn Heights remained a desirable area between its construction and the mid 20th century, in the 100 years between the construction of these pristine Cobble Hill and Boerum Hill homes and the point of designation, the area had gone from an 'exclusive' residential neighborhood to a concentration of run-down rooming houses.¹

While the houses had been built as single family homes in the 19th century, in the decades leading up to the 1960s Boerum Hill and Cobble Hill rowhouses had suffered from suburban flight, with antiquated homes falling into disrepair as rooming house rental properties. The population and trajectory of the neighborhood wasn't positive: "There were almost no children, and young people were moving out in droves. The area was deteriorating so rapidly that slumdom seemed only a few years away."² Motivations for leaving the city were mixed, ranging from deteriorating homes to "the gradual invasion of the lower classes." It was said that nearly "anyone" could afford to buy a brownstone in the area.

The drive for designation coincided with a movement to rebrand and redefine the Cobble Hill and Boerum Hill areas. First, the name changed from North Gowanus, which evoked undesirable images, to Boerum Hill, which was considered more pleasant.³ Similarly, years prior Punkiesberg had become Cobble Hill.⁴ Transforming the demographics was a more hands on process, which required new buyers who planned to occupy the homes themselves. In Boerum Hill, a resident explained this transformation as being in the hands of residents themselves: because real estate agents were hesitant to advertise or market the area, many local early adopters became agents in their own right, marketing the area and finding appropriate buyers for the brownstones.⁵

Designation efforts were equally local and volunteer driven. The research and advocacy was done primarily by local associations, the Cobble Hill Association and Boerum Hill Association, and their local volunteer efforts, in conjunction with the Parks Department. Local resident and neighborhood advocate Mark Zulli, who was involved in the research and designation of the Boerum Hill district, describes the selection and research process as "very informal" saying that they "would meet whenever a few wanted to get together."⁶ Therefore, the buildings inside and outside of the district were, in many cases, located on the blocks where volunteers and advocates lived and researched, with blocks outside of the designation lacking pointed support.⁷ Mr. Zulli also indicated that they did take house condition into account in this selection: "The blocks selected had to be intact blocks, and buildings could not be in an outside state of disrepair."⁸

¹ Interview with Patricia Stegman, 3/31/16

² Wilkes, Joy and Paul Wilkes. *You Don't Have to Be Rich to Own a Brownstone*. New York Times Book Company: New York, 1973.

³ Anderson, Jervis. "A Reporter at Large: The Making of Boerum Hill," *The New Yorker*. November 14, 1977.

⁴ "The Restoration of Cobble Hill: Pride Plus Action Barred Slum," *The New York Times*, February 28, 1960.

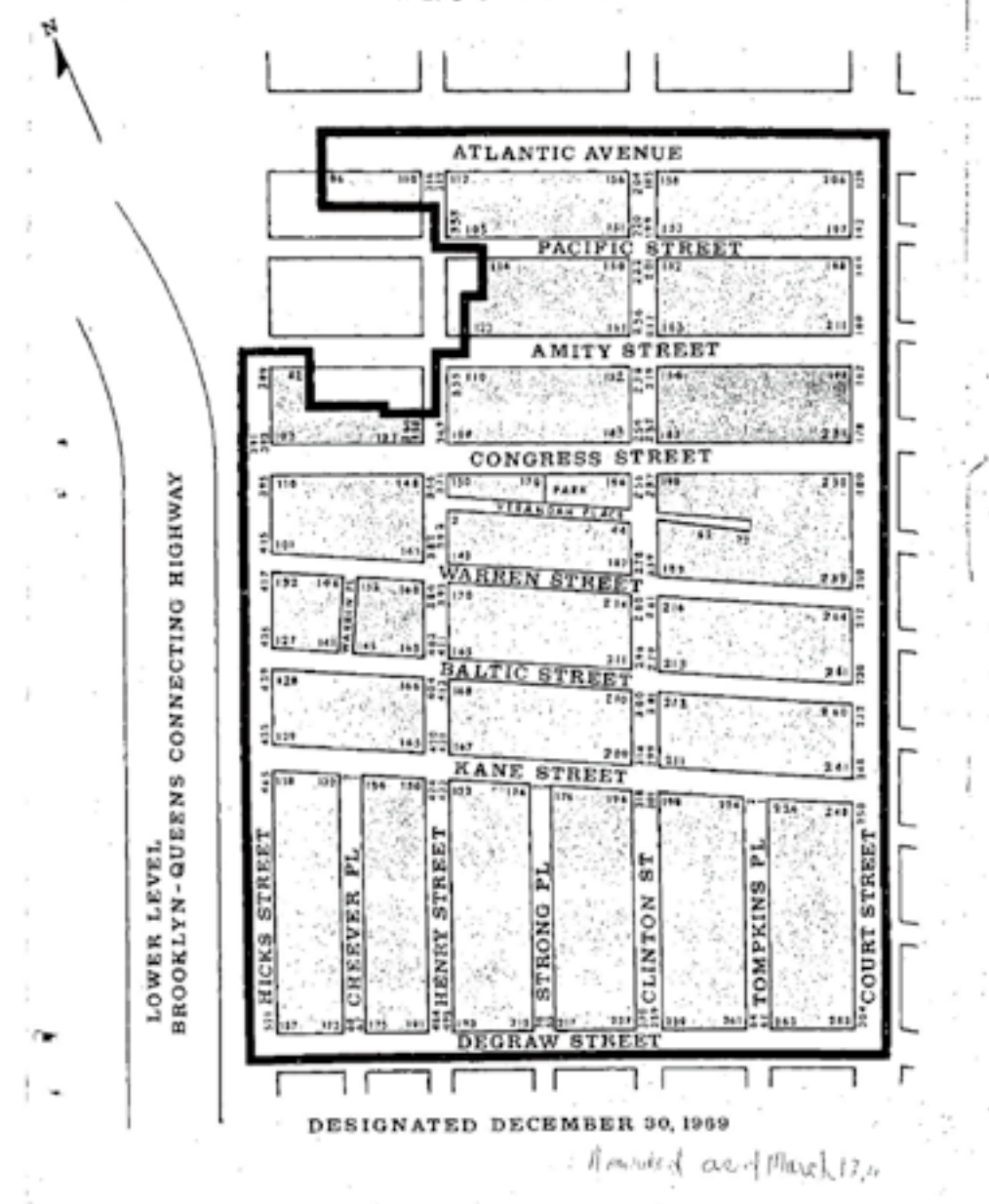
⁵ Interview with Patricia Stegman, 3/31/16

⁶ Correspondence with Nancy Cogen from Mike Zulli Interview 4/20/16

⁷ Interview with Patricia Stegman, 3/31/16

⁸ Correspondence with Nancy Cogen from Mike Zulli Interview 4/20/16

COBBLE HILL HISTORIC DISTRICT BROOKLYN



Cobble Hill Historic District boundaries
Source: Cobble Hill Historic District designation report

In a 1960 article about Cobble Hill, the journalist explains that the city had planned a public housing development in the neighborhood that prompted the community to form its first community group to oppose development. As Cobble Hill “neighborhood pride swelled,” in an area that was described as “on the rise,” residents formed a local association that petitioned and got 1700 signatures, after which the Housing Authority surrendered, preserving the rowhouse neighborhood seen today.¹ Less than a decade later, in 1969, the Cobble Hill historic district was officially designated, with Boerum Hill designation passing a few years later in 1973 (Figure 1).

A devotion to community preservation defines the “brownstoning” movement that took place in Brooklyn during the latter half of the 20th century. With real estate prices at an all time low in the 1960s, buyers from Manhattan looking for more space or a more suburban existence began moving to Brooklyn, buying and restoring these homes. The neighborhood was largely neglected by the larger city infrastructure, even garbage pickup was rare and crime was common. However, these new buyers, who popularized owner-occupied homes, and this practice of “brownstoning,” or restoring and preserving their historic houses, helped transform the neighborhood into the popular and elegant area seen today.

The historic quality of Boerum Hill and Cobble Hill, originally acknowledged by volunteer groups during designation and brownstoners as they restored their new houses, continues to be recognized and celebrated. By 1977 Boerum Hill had applied for a districting extension, which was never passed, although a tiny portion of the Cobble Hill district was successfully expanded in 1988 (Figure 2).² In 2009, former president of the Historic Districts Council, Paul Graziano, proposed a Boerum Hill district extension among a series of other local new districts and additional extensions (Figure 3). The New York SHPO did an initial determination of eligibility for the expansion, however a more formal survey was never conducted, and this work was never entered into the state database. According to a SHPO representative, “effort to formalize this expansion stalled some time ago.”³ However, the districting of Boerum and Cobble Hill remains a fluid history, with local civic groups in Boerum Hill proposing larger districting expansions as recently as January 2016.

The 2016 Boerum Hill district expansion was proposed by the Boerum Hill Association under the leadership of Howard Kolins (Figure 4).⁴ While the group maintains that they have wanted an extension for many years, in light of De Blasio’s discussions of upzoning the area for his affordable housing inclusion act, which would lessen restrictions surrounding building form and appearance, the community is taking action; the association launched a campaign to extend the neighborhood’s historic district. Kolins understands districting as a protection that would “preserve the quality of life in Boerum Hill.” While the organization’s members are passionate about the project, and anticipate considerable local support, they also recognize the growing development pressures within the area.⁵

1 “The Restoration of Cobble Hill: Pride Plus Action Barred Slum.” The New York Times, February 28, 1960.

2 Cobble Hill Designation Report & <http://www.nyc.gov/>

3 Correspondence with Jennifer Betsworth, SHPO, 4/27/16

4 Gill, Lauren. “Boerum Hill group wants to expand historic district to protect against mayor’s upzoning,” Brooklyn Paper. January 27, 2016. Web.

5 Gill, Lauren. “Boerum Hill group wants to expand historic district to protect against mayor’s upzoning,” Brooklyn Paper. January 27, 2016. Web.



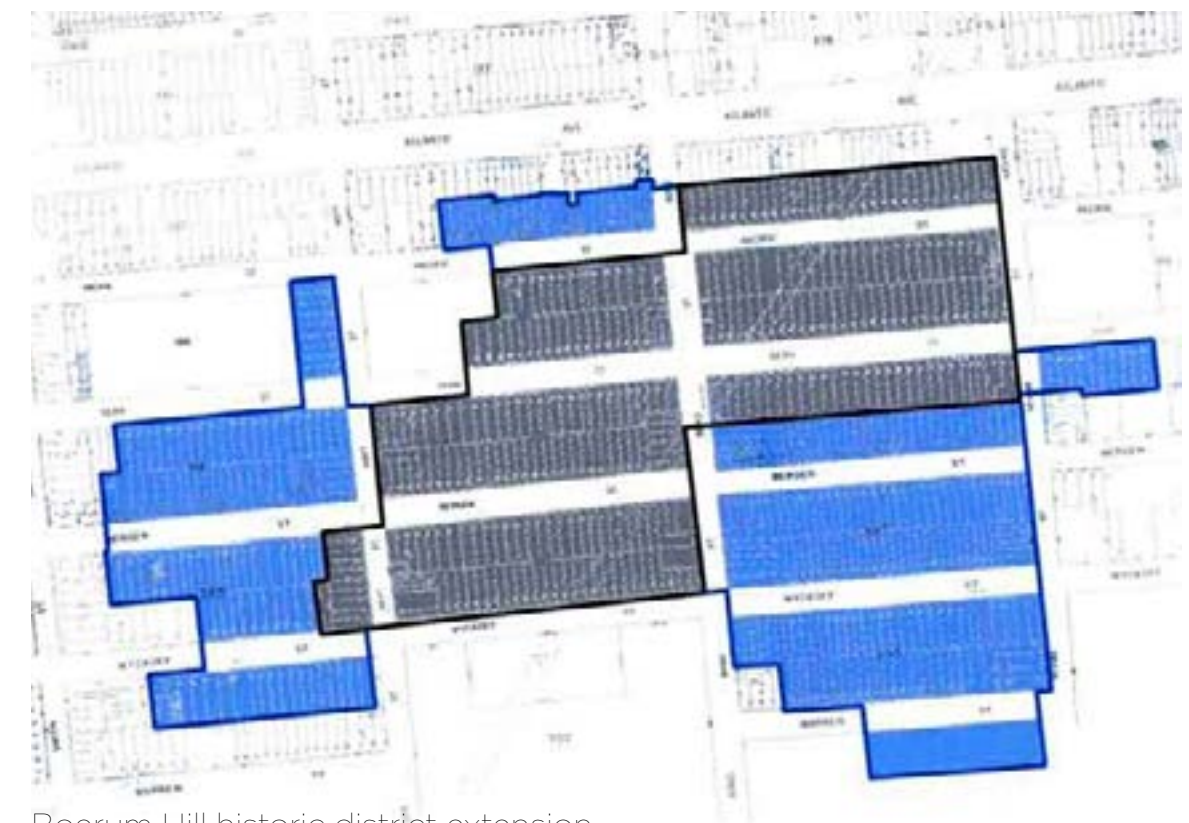
Proposed Cobble Hill historic district extension
Source: 1953 Cobble Hill historic district extension report

The Cobble Hill neighborhood associations have a different approach to protecting their neighborhood's urban fabric. Unlike the Boerum Hill Association, the Cobble Hill Association doesn't see district extension as the solution. A representative from the association, Kathryn Yatrakis, explained that while she feels that the boundaries should long ago have been extended to encompass the hospital grounds, now that the land has been sold for development it is too late. However, in response to the threat of unregulated development that would disrupt the urban fabric and height restrictions of the area, the community is volunteering their time and design services to outline a development plan that would integrate the city's desired affordable housing into the community. The association said that they do not object to inclusionary housing or additional schools, but that the lack of development regulation in De Blasio's plans is concerning. The local volunteer team is still in its design phase at present, conducting surveys on additional school requirements in the area and creating a master plan that integrates housing, and they will soon present these findings to city officials.¹

In conclusion, within the past several decades the act of preservation itself has become an important part of the history of Boerum Hill and Cobble Hill. Given the relatively unchanged scale of the historic building fabric throughout these two neighborhoods, residents have begun to feel the pressure of encroaching development opportunities. As New York City requires more housing, neighborhoods such as these are forced to reflect upon what it means to live in, care for, and protect historic districts in a rapidly changing urban setting.



Boerum Hill historic district extension
Source:



Boerum Hill historic district extension
Source:

¹ Interview with Kathryn Yatrakis, 4/26/16

Significance Assessment

The Cobble Hill and Boerum Hill historic districts were designated in 1968 and 1973, respectively, which today gives us close to a 50 year period to investigate changes and impacts upon the area.

As per the original designation reports, the neighborhoods are characterized by their low-scale, uniform rooflines, overall visual harmony, historic ironwork and their abundance of mid-19th century row houses that remain relatively unchanged. The residential architecture is predominantly Greek Revival or Italianate row houses with stoops, with brick being the most abundant façade material. The buildings average about 3 to 5 stories in height and are examples of the early development of the area in the 1830s to 1850s. Reading through the original designations, it is clear that the area was considered significant primarily for these residential architectural features.

However, throughout our investigation, we have uncovered other features of equal importance, and feel that the significance of the area can only be truly understood if these are taken into account as well.

While the row houses of the area are a main constituent of the building stock, the area was also an important testing ground for the development of the first reform tenement housing by Alfred T. White at Warren Place. Increasingly during the mid-20th century, in response to new waves of immigration, economic depressions, and changes in infrastructure, single-family rowhouses were broken up into apartments, stores and industry moved or changed, and new housing projects were constructed (such as the Gowanus and Wyckoff Houses to the south of the area). The study area – both in and out of historic districts – still contains many examples of tenements, apartments, and housing projects, which are today an integral part of the history of the area. Also unmentioned in the original designation reports are the diverse immigrant populations' in and outflows throughout the 19th and 20th centuries, contributing to both the built and social fabric of the area including, but not limited to, the Swedish, Irish, German, Syrian, and Puerto Rican communities that will be later discussed in this report.

Though mainly residential in character, these neighborhoods are also defined by their commercial corridors along Atlantic Avenue, Court Street, and Smith Street, which developed during the advancement of transportation and infrastructure in the area. The streets in both neighborhoods contain mixed-used buildings with a noteworthy number of historic storefronts, at the level of which the community is able to interact with small businesses. Although many of these storefronts have been historicized and restored, the prevalence of this small-storefront typology is still an important character-defining feature of the area, and proof of the area's material and typological adaptability to change throughout the 20th century.



State Street
Source: student photo



Pacific Street
Source: student photo

These storefronts are also indicative of another significant aspect of the area: the community's investment and interest in keeping the character of the neighborhood. These various stakeholders, ranging from the Atlantic Avenue Business Improvement District (AABID), the Boerum Hill Association, the original brownstoners of the 1960s and 1970s, to individual business and homeowners of the area, have struggled to keep their store-lined streets largely consistent with the original historic fabric. Following guidelines of the Atlantic Avenue Special Zoning Subdistrict, many owners have renovated or remodeled their historic storefronts. While this will be discussed in further detail in the report, the stakeholders of the area have put much effort into these buildings, and therefore these storefronts remain a character defining feature.

Current high-rise developments to the north (in Downtown Brooklyn), following the construction of the Brooklyn-Queens Expressway to the west of Cobble Hill and of Atlantic Yards to the east of Boerum Hill, are beginning to infringe upon the fabric of the area, causing concern about the future of these districts and the surroundings. Compared to this rapid-tower building, the new construction within the study area seems to have developed in a sensitive fashion, sometimes aligning with the character-defining features of the neighborhoods, such as scale and material, while also retaining the neighborhood's ability to adapt to changes in the population and economy.

While the fear of new, large-scale development is still strong, it is significant that the current development has limited itself to mostly low-scale, height-contextual development.

Today, in the rapidly changing urban environment, where rowhouses are turning back into single-family homes, new luxury apartments are being constructed and stores are changing to meet the needs of the new population, an investigation and perhaps re-evaluation of preservation tools used in historic districts is necessary, to continue to support the claim that historic districts are in fact models of a resilient built environment for the city as a whole.



231 Smith Street
Source: student photo



360 Atlantic Avenue
Source: student photo

Methodology

As we began the process of investigating the area, we realized that the information we could find was fragmented among various agencies and resources. Thus the starting point of the entire study was to first establish a baseline data set that would permit us to establish general trends that would permit us to ask more in-depth questions and draw potential relationships between areas that needed further research. With this information we were then able to divide out into more focused groups, before returning back to the macro level to provide recommendations for the area as a whole.

As mentioned in the previous section, the study area of this project comprises of two historic districts designated primarily for the row house architecture contained within them. However, the area also contains diverse building typologies and uses, making it a prime location to observe how not one, but two, historic districts have affected the change in use over time and how they continue to affect them today. The fact that the two districts are in close proximity to one another also adds to the available data and permits a comparison of the differences between the two

Rapid Field Survey

We started the study with a rapid building-by-building survey of the area – over 2,500 individual structures. Using a survey app called Kobo, we created a survey and used tablets to fill in information about the buildings on site. Each group of two students had around 160 buildings to survey. We investigated material identity, condition, and integrity, located soft sites vulnerable to development, catalogued typology and styles, and researched dates of construction for these buildings

Assumptions and Limitations

Beginning almost immediately we realized that we had both made some assumptions about available data and the collection of data. We discovered that PLUTO data (and almost all city data), was not updated with correct dates of construction, which immediately slowed down our early field survey, as we had to research these construction dates from scratch. We also recognize that aside from correcting the dates of construction, we assumed that much of the rest of the data in PLUTO and other city sources is accurate, as we could not verify the information for each individual property. In attempting to compare these city resources, we realized that shifting boundaries in data and shifting metrics made it difficult to compare data on a year-to-year basis, limiting the definite analyses that we could make.

We also ran into limitations with our own data collection. We collected an enormous amount of data in an exceptionally short time period, which naturally lead to large amounts of data cleaning in order to make the raw data usable. This cleaning lasted several unanticipated months, reducing the amount of time we had to analyze all of the available data in different ways.

After completing the survey for all the buildings, the class broke out into four groups: Planning, History, Conservation, and Design, in order to see the study area through different lenses. Within these groups we performed more in depth and focused investigations on the data collected.



371 - 375 State Street
Source: student photo

History

At the neighborhood level, we researched individual buildings as well as broader patterns of development. Beginning with a thorough understanding of the early history of the study area, we created a timeline of significant events and trends in order to guide our more in-depth analysis of the study area's character-defining features. We refined building dates of construction from the rapid field survey using land conveyance records and real estate publications, and we also examined historic atlases to enhance our understanding of the commercial storefront development along Atlantic Avenue in particular. We concluded that the history of the study area exists not only in its architecture, but in the documented experiences of the people who built and used this historic fabric.

Planning

At the city and neighborhood level we performed in-person interviews with various members of the community, including members of the Boerum Hill Association, the Atlantic Avenue BID, as well as other individuals. We created and send out online community surveys to determine the community's perspective on the impacts of historic districts on property values, the character of the neighborhood, supporting businesses, promoting tourism, etc.

Additionally we performed demographic research, collaborating with the history group to track the change in demographics from past to present using census records as well as surveys of the community to determine present demographics. Using further policy research we created geospatial analyses (by mapping the data we accumulated) to understand how the neighborhoods changed over time.

Conservation

At the block level we chose case study blocks throughout the study area, selecting a series of blocks that fell inside and outside of the study area

We began our analysis by selecting a few case study blocks in the study area. We decided to study a small sample within the greater study area because the time and effort necessary to gather the data and conduct the historic photo analysis for the entire study area would have been prohibitive within the time constraints of this studio. We developed a methodology for data collection with respect to conservation, and we limited our choices according to the availability of early tax photos. For the selection of case study blocks, we used the overall conditions map that was produced using the initial raw data from the initial survey as our starting point. Based on the map, we looked for blocks that exhibited some distinctive characteristics both within and outside the historic districts of Cobble Hill and Boerum Hill. We chose the following eighteen case study blocks:



Wood houses in Cobble Hill
Source: student photographs

Design Overview and Methodology

As a final focus, we used design to hone in on how individual sites were impacted by historic districts - to see how the individual owner or developer could respond to the history of the area (as discovered by the history and planning groups), the surrounding materials, and the regulations applied by historic districts or other zones. Our designs made use of material discovered during research phases and fed back into the study as regulations were questioned - requiring more research - and recommendations were formed based on the manner in which the designers responded to the study area and its constraints.

At the individual site level, we identified soft sites we felt were vulnerable to development and created designs for infill and adaptive reuse based on this assessment.

This studio's design group was challenged to research the history and zoning of various sites within the study area. Each member developed a program that took into account the marketable value, the available developmental rights, and most importantly, the historic context of Boerum Hill and Cobble Hill. Three sites were ultimately chosen, each one presenting challenges and opportunities specific to real-life development opportunities in historic neighborhoods, which are often pressured by insensitive and large-scale development.

The design sites were identified during the studio's initial building by building survey. Certain sites, about 100 total, were flagged as they were considered vulnerable to development. These sites included vacant lots, lots underutilizing their FAR, parking lots, or vacant and abandoned homes or storefronts.

These flagged sites were reviewed again by the design group and Professor Freeman to consider as sites for intervention. Thirty "soft sites" were chosen and considered based on their placement within the historic fabric of the neighborhood, as well as the built FAR and potential FAR of the lot. After further research into these ten sites, we reduced the number of potential sites to 3, based on available development rights and the perceived opportunity due to the size of the lot, immediate adjacencies, and overall context.

Each of the three chosen sites presented a special challenge to the design process: 357-359 Atlantic Avenue is in the Atlantic Avenue Special Zoning District, and required the designers to consider the restrictions and limitations of the Special Purpose District; 188 Pacific Street is in the Cobble Hill Historic District and provided an opportunity to revitalize a parking lot used by the historic school turned co-op; and finally 128 Smith Street is not in a special purpose district, but it challenged the design team to develop the site in present-day circumstances when historic typology is rarely considered.

All programs for each site considered the most economical way to develop the chosen lot. What would a developer most likely build on the site? Each student carefully looked at the zoning and special overlays for the sites and applied these limits to the designs. These rules and regulations for the sites made for interesting challenges that will be explained in each of the individual



Site 1: 128 Dean Street
Source: student photo



Site 2: 188 Pacific Street
Source: student photo



Site 2: Atlantic Avenue
Source: student photo



Soft Sites
source: student-generated GIS map

Following page: 159-163 Atlantic Avenue
source: student-generated GIS map



SCOT 159





Early History

Pre-Urban History

The early history of Brooklyn began with thirteen different tribes occupying Long Island. Native Americans cultivated corn on the productive soil of Boerum Hill and had easy access to the oyster beds of Gowanus Creek to the south.¹ The Canarsies, a peaceful tribe, had their primary village where Brooklyn's Borough Hall now stands, with minor communities near the Navy Yard, Erie Basin and on the southern fringe of Boerum Hill, near Hoyt and Baltic.² The trails uniting these settlements followed the present configurations of Fulton and Flatbush, Hoyt and Court Streets.³

The arrival of the Dutch in the early 17th century led to the ultimate downfall of the Canarsies, similarly colonization elsewhere on the East Coast reduced other Algonkian tribes. Frequent attacks from the raiding Iroquois also contributed to the demise of the Canarsies. By the 1830's, the Canarsies were longer present in South Brooklyn. However, the Dutch population thrived.

Cobble Hill dates back to the 1640's when the Dutch Governor, Willem Kieft, granted patents for farms north of Red Hook, extending inland from the sea to the Gowanus Valley.⁴ In 1646, "Breuckelen" was officially recognized as a village, mainly populated with agricultural Dutch farmers and by 1660, there were 31 families residing here. As the population expanded, it maintained it's Dutch agricultural roots.

Boerum Hill can be traced back to 1645, when Jan Eversen Bout, a Dutch settler, bought the first of three land patents in the area. Jacob Stoffelson and Gerrit Wolfertsen van Couwenhoven took the two other land patents, and the three patents together comprised South Brooklyn in what is today now bounded by Fulton Avenue, Smith and Nevins Streets. The hamlet that grew up in this region, between the Wallabout and Gowanus, was known as "Brueckelen", after a city in Holland of the same name and with much the same topographical characteristic as its American counterpart.⁵ The Village of Brooklyn was centered on this area to the north of the study area near the Fulton landing, while the geographic area of Cobble Hill and Boerum Hill remained mainly farmland until the early 19th century development.

On of the first Dutch to settle in the Boerum Hill area was Frederick Lubbertse who took up a grant that included most of Boerum Hill, Carroll Gardens, Cobble Hill and Red Hook. Other prominent land-owning families including the Bergen and the Van Brunt families followed the Lubbertse family to South Brooklyn.

During the 18th century, the town continued to develop. In March 1704, the long Kings Highway, a portion that is today Fulton Street, was laid out from the Fulton Ferry, and linked the several villages comprising the forthcoming Kings County.

¹ "From what is about Court to Nevins and between Atlantic and Dean was the Canarsie corn patch." Butson, T. G. A Short History of Boerum Hill. New York: Long Island University, 1971

² Ostrander, Stephen M. A history of the city of Brooklyn and Kings County. Brooklyn: by subscription, 1984. pg.11

³ Landmarks Preservation Commission. Cobble Hill Historic District Designation Report. New York City: Landmarks Preservation Commission, 1969. pg. 3

⁴ "The place names Red Hook, East River and Gowanus—in their Dutch spelling—all appear on the Dutch patents." Ibid, 3.

⁵ Ostrander, 60



"Nieuw Amsterdam wants to make Dutch its official language." Source: The Web of Language. Accessed April 1, 2016.



"Plan of the City of New York in north America: surveyed in the years 1766 & 1767"

Source: Lionel Pincus and Princess Firyal Map Division, The New York Public Library. New York Public Library Digital Collections. Accessed April 1, 2016.

After the Dutch, the British arrived in the late 17th century. Their rule had little effect directly on the built environment, however the rise of important families, such as the Livingstons, who lived just to the west of present-day Boerum Hill, eventually greatly impacted the history of Brooklyn.¹ The Livingstons were among the leaders of the independence movement, and would soon affect the outcome of the new nation.

A 1766 survey of Brooklyn shows a reference to a "Cobleshill," a very steep conical hill. During the Revolution, General Washington saw his troops defeated in the Battle of Long Island on August 27, 1776, from the ramparts of the Cobble Hill Fort.² Later, the British, during their succeeding occupation, severed the top of Cobble Hill so that it couldn't impede visibility from their headquarters on Brooklyn Heights. The Battle of Long Island resulted in a retreat of the American forces and General George Washington, who had watched the battle from the high ground at Atlantic and Court.³ Washington's surviving troops luckily escaped to Manhattan later that night.

By the early 19th century, Red Hook and Gowanus to the south were central ports for the city, with land speculation of the study area beginning primarily in the 1830's.⁴ These developments brought industry and new residents to South Brooklyn, which eventually spread north to Cobble Hill and Boerum Hill. The establishment of the Fulton Ferry between Brooklyn and Manhattan in 1814 coincided with the incorporation of the "Village of Brooklyn" that same year. (4_Image_EarlyHistory; Source: Hooker's New Pocket Plan of the Village of Brooklyn. New York : William Hooker, 1827. Brooklyn Historical Society Map Collectio`n.)

In the early decades of the nineteenth century, Brooklyn was a satellite community to the metropolis of Manhattan across the East River. Its development was stimulated by its immediacy to Manhattan, which was now linked by ferry service. There even existed an awareness of competition between Brooklyn residents to surpass or at least emulate their Manhattan neighbors. An article in The Long Island Star in 1815 urged that Brooklyn "must necessarily become a favorite residence for gentlemen of taste and fortune, for merchants and shopkeepers of every description, for artists, artisans, mechanics, laborers and persons of every trade in society." The city, however, was still primitive in many respects, specifically to infrastructure, sanitation, and safety.



"2,000 Brave Patriots Lost in Main Engagements of Battle of Long Island 150 Years Ago Today." Source: The Brooklyn Daily Eagle. August 27, 1926.)

1 "The British appropriated the estate of Philip Livingston, a signer of the Declaration of Independence, and occupied it as a naval hospital. The estate ran south of Joralemon Street, and British sheds and huts for the sick were erected on property later owned by Ralph Patchen, south of the present day Atlantic Avenue within the Cobble Hill Historic District." Cobble Hill Historic District Designation Report, 3.
 2 Lionel Pincus and Princess Firyal Map Division, The New York Public Library. "Plan of the city of New York in North America : surveyed in the years 1766 & 1767" New York Public Library Digital Collections.
 3 "Washington issued an order on July 18, 1776 that two guns fired from Cobble Hill are to be the signal that the enemy had landed on Long Island. Washington, General Putnam and other officers witnessed the disastrous battle of August 27, 1776 from the ramparts of Cobble Hill Fort." Stiles, Henry Reed. A History of the City of Brooklyn: Including the Old Town and Village of Brooklyn, the Town of Bushwick, and the Village and City of Williamsburgh, Volume 2. Brooklyn: by subscription, 1869.
 4 Bernardo, Leonard and Jennifer Weiss. Brooklyn by Name: How the Neighborhoods, Streets, Parks, Bridges and More Got Their Names. New York: NYU Press, 2006. pg. 57.

Farm-to-Grid

History of the Urban Street Grid

At the time the British took over Dutch Nieuw Nederland in 1664, there were already six towns in what would become Kings County, or Brooklyn as we know it today. The oldest, Gravesend, was founded by an Englishwoman, Lady Deborah Moody, in 1645, and Breuckelen, which encompassed our study area, was founded in 1646.¹ The first private road in Breuckelen was a country lane called District Street, today known as Atlantic Avenue, which ended on the East River at Ralph Patchen's farm. During the 1700s it was the southernmost boundary of the Village of Brooklyn.² Originally, all of the towns in what is now Brooklyn set up their own grid system, which meant that streets and avenues were not aligned from town to town.

In 1816, the Brooklyn charter was approved and the Village of Brooklyn. The Village of Brooklyn included the small area bound by Atlantic Avenue. At the same time, Red Hook Lane, the US Navy Yard within the Town of Brooklyn, was officially incorporated as part of New York. With this charter the official boundaries of the village were established, sidewalks were repaired and extended, houses were numbered, a fire protection system was designed, and the first maps were drawn.³ According to Chapter 95 of the Laws of 1816, the boundaries were defined as "beginning at the public landing, south of Pierpont's distillery, formerly the property of Philip Livingston, deceased, on the East River, thence running along the public road leading from said landing, to its intersection with Red Hook lane, thence along said Red Hook lane to where it intersects the Jamaica Turnpike road, thence a northeast course to the head of the Wallebought mill pond, thence down the East River to the place of beginning."⁴ Section 18 of the Act also required the Trustees to survey the land and create a map of the village outlining the streets, roads, and alleys that were to be permanently laid out. The official map was adopted on April 8, 1819. However, with the opening the Fulton Ferry and the subsequent rapid pace of urbanization, the recently adopted street map became obsolete.⁵ So in 1824, a new set of laws were passed, authorizing the Trustees to widen and alter all public roads, streets, and highways as they saw fit, but not exceeding sixty feet.⁶ In 1827 the village was divided into five districts, and in 1833 the President and Trustees were authorized to lay out and open new streets, avenues, or squares within the Village, and to widen or extend any old street.⁷

In 1834 the City of Brooklyn was incorporated, comprising the Village and Town of Brooklyn. At the same time, under Chapter 92 of the 1834 Laws, Brooklyn was divided into nine wards. The same year, the new city requested that the state conduct a survey of the surrounding countryside in order to lay out the streets, avenues, and public squares. In 1835, under Chapter 129, the Common Council were authorized to lay out a new plan with regular streets, no more than 100 feet in width.⁸ The new map was completed in 1839 and followed the example put forth by the Commissioners' Plan of 1811 for the Manhattan grid. The plan was based on a rectangular grid crossed by several major diagonal avenues.⁹

¹ <http://ny.curbed.com/2014/7/24/10069912/brooklyns-evolution-from-small-town-to-big-city-to-borough>

² <http://ny.curbed.com/2014/7/24/10069912/brooklyns-evolution-from-small-town-to-big-city-to-borough>

³ <http://thesixthborough.weebly.com/history-of-fulton-ferry-landing.html>

⁴ John Jr. Dikeman, *The Brooklyn Compendium*, Compiled by the late John Dikeman, Jr., Showing the Opening, Closing and alterations in the lines of the various streets, avenues, &c., In the city of Brooklyn, with other information connected therewith, from the year 1819 down, to the date of the close of the compilation, together with Important Data Relative to Grants of Land Under Water, Ferry Rights, Etc., Order of the Brooklyn Common Council, 1870. pg. 5.

⁵ Ibid.

⁶ Dikeman, 6.

⁷ Ibid.

⁸ Ibid.

⁹ <http://thesixthborough.weebly.com/history-of-fulton-ferry-landing.html>



"Hooker's New Pocket Plan of the Village of Brooklyn."

Source: New York :William Hooker, 1827. Brooklyn Historical Society Map Collection.

Key Factors in Urbanization

Development of Transportation and Infrastructure

Early Waterways

Waterways provided the earliest transportation to and from Brooklyn. Cornelis Dircksen operated the earliest known commercial rowboat ferry between lower Manhattan and what was then called Breuckelen, beginning in 1642.¹ Dircksen, a Dutch settler, used his ferry to allow farmers to transport wheat, tobacco, and cattle from Long Island farms to New Amsterdam, the main Dutch outpost at the tip of Manhattan.² In 1704 the road to the ferry was officially laid out in Brooklyn: the 'Road to the Ferry' or the 'Road to Jamaica' represented the main street in Brooklyn spanning from the Ferry landing to Jamaica and then on to eastern Long Island.³ In 1789 the city refused to renew the lease with then ferrymaster Adolph Waldron, and instead established the Catherine Ferry, known as the 'New Ferry' in 1795. The establishment of this new ferry resulted in the growth of a small settlement along the waterfront beneath what is known today as Brooklyn Heights. This area, once occupied by large landowners and farmers, had become more commercially active since before the Revolutionary War, and contained a large public market and adjacent slaughter-houses.⁴ The presence of the 'New Ferry' prompted further development of this area.

In 1814 the New York and Brooklyn Steamboat Ferry Association introduced the "Nassau", the first steam-propelled ferry on the East River. The "Nassau" traveled between Fulton Street in Brooklyn and Fulton Street in Manhattan. This new ferry service could not only accommodate hundreds of passengers, but could transport wagons and horses as well. Additionally, new steam technology dramatically reduced the travel time between Brooklyn and Manhattan from an hour and a half down to just eight minutes.⁵

The steam-powered ferry provided fast, reliable, and inexpensive service, which allowed Brooklyn to become one of the world's first "commuter suburbs" and initiated an era of rapid growth in Brooklyn.⁶ Merchants, professionals, workers, and immigrants moved their families to Brooklyn and traveled by ferry to their daily jobs in Manhattan. Within less than 50 years, what began as a village had grown into the third-largest city in America, in large part due to the introduction of the ferry system.⁷

By 1819 the Nassau ferry was experiencing frequent delays due to the overcrowding of boats, which by then were transporting everything from passengers to cattle to horses, and products such as cotton, lumber, and naval stores. In response to the increasing complaints from passengers, a new ferry called the Steamboat William Cutting opened in 1819.⁸ As the waterfront continued to develop into a hub of transportation and commerce, more ferry service was added. In May of 1836 the South Ferry Company established the South Ferry, which connected Lower Manhattan to the foot of Atlantic Avenue in Brooklyn and the month-old Jamaica Railroad.⁹ Then in 1839, the New York and Fulton Ferry Company merged to form Brooklyn Union Ferry Company, managing the South Ferry and Fulton Ferry under one company.¹⁰ In 1854 the Union Ferry of Brooklyn consolidated the Fulton, South, Main, and Hamilton Avenue ferries under one company.¹¹

1 Everdell, William R. (1973). Rowboats to rapid transit: a history of Brooklyn Heights. Brooklyn, NY: Brooklyn Heights Association.

2 <http://www.brooklynwaterfronthistory.org/story/a-working-waterfront/>

3 Fulton Ferry Historic District Designation Report.

4 *ibid.*

5 *ibid.*

6 <http://www.brooklynwaterfronthistory.org/story/mass-transit-brooklyn-style/>

7 <http://www.brooklynwaterfronthistory.org/story/a-working-waterfront/>

8 *ibid.*

9 "History of South Ferry". Brooklyn Daily Eagle (Brooklyn, NY). August 22, 1886. pg 5.

10 Fulton Ferry Historic District Designation Report.

11 Fulton Ferry Historic District Designation Report.



Curve at Brooklyn Terminal, 1898
(Source: *A Picture History of the Brooklyn Bridge*)

Curve at Brooklyn Terminal, 1898
source: *A Picture History of the Brooklyn Bridge*

Establishment of Early Railroads

The incorporation of the Village of Brooklyn in 1816 spurred major advances in infrastructure, which would improve travel within Brooklyn. Under the incorporation charter, official boundaries were established, sidewalks were repaired and extended, houses were numbered, a fire protection plan was devised, and the first maps were made.¹ The first rail systems appeared less than two decades later. The Long Island Rail Road was incorporated in 1834, prompting construction of a ten-mile route along Atlantic Avenue running from the East River to Jamaica (with the ultimate goal of connecting New York to Boston). The Jamaica Railroad opened on April 18, 1836.²³

1844 marked the opening of the Atlantic Avenue tunnel. This tunnel is the oldest known underground rail tunnel in the world and represents an important precursor to the subway. The tunnel ran beneath Atlantic Avenue, between Columbia Street and Boerum Place. The tunnel was constructed because early steam engine trains lacked reliable brake systems, and therefore were dangerous to operate along city streets. The tunnel provided a safe grade separation from the pedestrian street and was built as a response to public concerns.⁴⁵ The LIRR constructed the tunnel, and in exchange the City of Brooklyn granted the LIRR permission to operate their steam locomotives on Atlantic Avenue from the stretch between Parmentier's Garden (today Fifth Avenue) and South Ferry (today Pier 7).⁶ With the train underground and hidden from sight, property values on the street above the tunnel began to rise. It was at this time that Atlantic Avenue became built up into a major commercial hub. A major expansion of residential development also occurred south of Atlantic Avenue.

In 1859 the Anti-Steam Party passed legislation in Albany which banned the use of steam power within city limits. As a result, the Atlantic Avenue tunnel became illegal and was closed in 1861. In 1873, the New York State Legislature passed a law authorizing the Atlantic Avenue Railroad to build a branch north of their existing line on Boerum Place and Adams Street to Front and Water Streets, allowing it to connect to the Fulton Ferry.⁷

Horsecars

In addition to the steam powered rail lines, Brooklyn also developed a track system for cars which were pulled by horses. The horsecars developed in tandem with the railroads. In 1853, Brooklyn's pioneering horse car company, the Brooklyn City Railroad, was founded. It soon established four lines radiating outward from Fulton Ferry.⁸ With the ban of steam power within city limits and the closure of the the Atlantic Avenue Tunnel in 1861, Atlantic Avenue was instead slated for horsecar transit. Atlantic Avenue was smoothed and restored to 120 feet in width and tracks were laid along the street from South Ferry to the city limits so that freight and passengers could be transported by the horse cars.⁹

1 <http://thesixthborough.weebly.com/history-of-fulton-ferry-landing.html>

2 <http://www.lirrhistor.com/lirrhist.html>

3 This line would later turn into the Atlantic Avenue Rail Road's streetcar line, and later still part of the Long Island Rail Road, now called the Atlantic Branch (need source other than wikipedia)

4 "Atlantic Avenue Tunnel Built In Response To Public Outcry Demanding LIRR Trains Be Removed From The Street Surface, And A Tunnel Built Instead". Brooklyn Daily Eagle, Jan 16, 1844, p 2.

5 "LIRR Trains Lacked Brakes Sufficient To Run On City Streets." Journal Of Long Island History, Winter-Spring, 1969, pgs 39- 40"

6 "LIRR To Build The Tunnel In Exchange For The Right To Use Steam Power on Atlantic Avenue." Brooklyn Daily Eagle, February 21, 1844, p 2

7 "Boerum Place Railroad". Brooklyn Daily Eagle (Brooklyn, NY). August 11, 1873. p. 3.

8 Park Slope Designation Report.

9 "Brooklyn Has the Oldest Subway in the World," Brooklyn Daily Eagle. July 23, 1911. pg 3



Fulton Street Elevated, West to Hoyt Street circa 1905.
Source: Brooklyn Heights and Downtown



Brooklyn horsecar
Source: Brownstoner

The Brooklyn Bridge

The Brooklyn Bridge, which connects Brooklyn and Manhattan, opened in 1883. While not directly located within the Boerum Hill/Cobble Hill study area, the overarching effects of the bridge and the impact it had on Brooklyn and its infrastructure cannot be understated. The Brooklyn Bridge spans the East River and was designed and built by John Roebling and later his son Washington Roebling upon his father's death. Construction began in 1869. Roebling said the bridge, "will not only be the greatest bridge in existence, but will be the greatest engineering work of the continent and of the age."¹ The bridge opened in a formal ceremony on May 24, 1883.² Once opened, it was intended for simultaneous use by multiple means of transportation including pedestrians, vehicles, and cable cars. An elevated pedestrian promenade was located at the center of the bridge, and cable cars ran underneath.³ It is estimated that cable cars were carrying 30,000,000 passengers a year across the bridge by 1888.⁴ Vehicles occupied the roadway on either side of the cable cars. Eventually lines for trolleys were added, followed by tracks for elevated trains. Much later during the 1950s, the Brooklyn Bridge was converted into a 6-lane highway to accommodate car traffic.

Elevated Railroads and Electric Trolleys

With the opening of the Brooklyn Bridge, further infrastructure development in Brooklyn proceeded at an exponential pace, and a large number of new rail lines began to appear. Many of the new rail lines were now being built as elevated trains. The lines that were still constructed at street level would all undergo later electrification and conversion to trolley lines between the years 1893-1900.

1865 saw the opening of the Hoyt-Sackett Street Crosstown, which had cars on Bergen, Hoyt, and Sackett Streets. By 1885 the crosstown was one of three branches on the Bergen line serving the South, Fulton, and Hamilton ferries. Marcy Avenue eventually absorbed this line in 1899.⁵ The Boerum Place line opened in 1883, and 1885 marked the opening of the Bergen Street Line that ran from Hamilton Ferry along Sackett Street, Hoyt Street, and Bergen Street to Albany Avenue. It was converted to electric trolleys in 1893. 1885 also saw the opening of the Adams Street and Boerum Place Line, which was also changed to electric trolleys in 1893. In 1889 the Hicks Avenue Line opened, which ran between the 15th Street Line in Hamilton Avenue and Atlantic Avenue.⁶ In 1898, the Brooklyn Union Elevated Railroad opened, which ran along 5th Avenue.⁷



Transformation of the Brooklyn Bridge into a six-lane highway: 1954

Source: A picture History of the Brooklyn Bridge

¹ Armstrong, James B.; Bradford, S. Sydney "The Brooklyn Bridge" National Register of Historic Places Inventory-Nomination. National Park Service. (February 24, 1975). p.3.

² Ibid p.18.

³ Armstrong, James B.; Bradford, S. Sydney "The Brooklyn Bridge" National Register of Historic Places Inventory-Nomination. National Park Service. (February 24, 1975). p.3.

⁴ Ibid . p. 4

⁵ Branford Electric Railway Association, "Images of Rail Brooklyn Streetcars," Arcadia Publishing 2008. pg.80

⁶ "Richardson's Hicks Street Line". Brooklyn Daily Eagle (Brooklyn, NY). November 11, 1888. p. 8.

⁷ Park Slope Designation Report

The addition of so many new rail and trolley lines in Brooklyn in such a short span of time had a significant impact on the character of the Cobble Hill and Boerum Hill neighborhoods. In the 1880s, only Atlantic Avenue and Court Street comprised the commercial streets of the area, while Smith Street was largely residential. However, the expansion of trolley and rail lines during the 1890s along Smith Street caused Smith Street to also become fully commercialized as a result of its new proximity to transit lines.¹ Interestingly, even after these lines later closed (they were gone by 1968), Smith Street remained and continues to remain a major commercial hub in the area.

UNDERGROUND SUBWAYS

The arrival of the 20th century also marked the arrival of the underground subway in Brooklyn. The first underground subways were part of the IRT Eastern Parkway Line. The first four stations to open on May 1st, 1908 were the Borough Hall Station, the Hoyt Street Station, the Nevins Street Station, and the Atlantic Avenue Station. The next subway to open near the Cobble Hill/Boerum Hill area was the IRT Broadway-Seventh Avenue Line which opened at the Borough Hall subway station in 1919. A new BMT line connecting Manhattan and Brooklyn Heights opened in 1920.² In 1936 subway services were extended in the Cobble Hill/Boerum Hill area when the Hoyt-Schermerhorn Streets Station opened as part of the Fulton Street Line.

The arrival of the subway contributed to the commercialization of Atlantic Avenue, Court Street, and Smith Street. Furthermore, increased subway service combined with the growing automotive industry meant less passengers had to travel by ferry, resulting in the eventual closure of the Fulton Ferry in 1924.³

TRANSPORTATION TODAY

Between 1940-1968, Brooklyn's iconic trolleys were discontinued from service. Today, all trolley lines have been replaced by bus routes. Brooklyn continues to be serviced by its subway system, however there has been a recently renewed interest in ferries and waterfront transportation due to overcrowding of the subways. In 2011, the East River Ferry began service with stops along the Manhattan, Queens, and Brooklyn waterfront. The ferry is used by tourists as well as commuters, and it stops at Pier 1 in Brooklyn Bridge Park near the original Fulton Ferry Landing.

¹ 1904 Land Use Maps

² Cunningham, Joseph and Leonard de Hart. A History of the New York City Subway System.

³ <http://thesixthborough.weebly.com/history-of-fulton-ferry-landing.html>



Thursday
9am - 10:30am



246

244



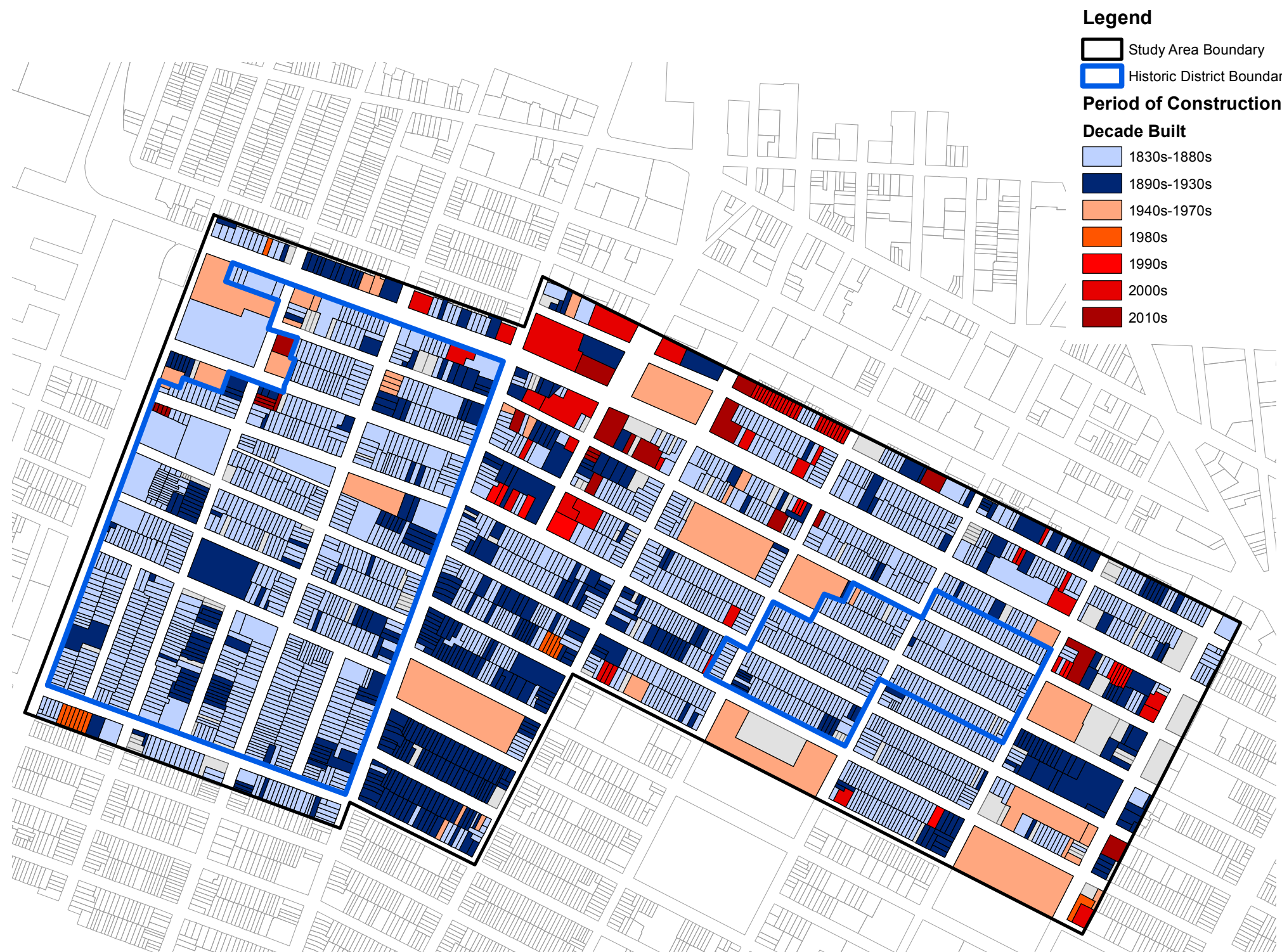
ARCHITECTURAL DEVELOPMENT

Period of Construction

This map illustrates the period of construction of the buildings in the study area. The light blue color is the most prominent in our study area. These are all the buildings built between 1830s-1880s, which aligns with the years of early development of the area. The majority of buildings in both Cobble Hill and Boerum Hill Historic Districts were also built during this time frame.

The next prominent period of construction are the buildings built between 1890s-1930s, which are represented by the dark color. Buildings of this time of construction are scattered around our study area, which large pockets in the area between the Historic Districts.

Finally, the shades of peach and reds on the map represent later developments. These mostly fall on the edges of the study area, with most of the latest development along the north end. These development will be discussed in more detail later in the report.



Period of Construction Map
Source: student-created GIS map

Building Typologies

The neighborhood is characterized by a number of typologies. Rowhouses make up the majority of structures built during the 1830s until the 1880s. Also erected during that era are mixed-use buildings for residential, industrial and commercial use, and institutional buildings, namely churches and schools.



Institutional Building, 401 Atlantic Avenue
(Belarusian Autocephalous)
source: student photograph



Rowhouses along Bergen Street
source: student photograph



Commercial/Industrial Building, 194-200 Court Street
source: student photograph

Although 67% of the buildings in the study area are rowhouses, most of them are within the historic districts. In contrast, the area between these two historic districts is not dominated by rowhouses. Instead, it contains a wide variety of building typologies, including walk-up apartments, institutional, industrial, and commercial buildings. This pattern is evident in the map showing the distribution of the building typologies through the study area.

Although majorly residential, the Cobble Hill historic district contains a considerable number of apartment buildings and institutional buildings, whereas the Boerum Hill historic district shows almost no variation in building typology. This can be related to the overall development of the two historic districts; Cobble Hill is relatively older and much larger in area than Boerum Hill. Another interesting and apparent pattern throughout the study area is that the commercial and mixed-use buildings have mostly developed along the three primary commercial streets (which were also the earliest transportation routes of the area); Atlantic Avenue, Court and Smith Streets.



Distribution of Building Typologies in the Study Area.
Source: student-generated GIS map

Residential Development

Historic Ownership

When the City of Brooklyn was incorporated in 1834, nine families owned the land comprising Boerum Hill. The Gerritsen and Martense families, who were related by marriage, owned the land within the boundaries of the designated Boerum Hill Historic District and its surrounding areas. The present State, Smith, Warren and Bond Streets roughly bounded Samuel Gerritsen's property, while George Martense's estate extended from State to Baltic Streets, and from Bond to Nevins Streets

During the subsequent Federal period, Cobble Hill belonged to prosperous farm lords, who constructed country mansions on vast tracts of land that inclined westward East River. A principal force in the development westward from Cobble Hill to Boerum Hill was Charles Hoyt. He overcame resistance to initiate the first subdividing streets south from Brooklyn Heights to build up Cobble Hill (Hicks and Henry Streets). In alliance with R.H. Nevins and the Gerritsen and Martense families, Boerum Hill began to subdivide in 1835

Speculative Development

It was a few years before speculative row houses began construction in Boerum Hill after the land subdivision by the Gerritsen and Martense families in 1835, but a great boom in the early 1850s populated the entire area. By 1840, a tax list and street directory presented 45 houses and 112 residents in Cobble Hill. A building boom, particularly with the construction of row houses, started to transform the study area into an urban community. Row houses were typically built individually or in rows, ranging anywhere from three houses to groups which occupied half a city block.¹ At the end of the 1840s, construction began in Boerum Hill in the Historic District, in its northern section along Pacific and Dean Streets.

City water didn't arrive to the study area until the 1850s. Despite this speculative building and property acquisitions by affluent English, German, and second-generation American residents continued at a rapid pace. Industrial pollution from the factories along Bergen Street was documented, as well as frequent outbreaks of cholera and yellow fever. Into the 1860s a more diverse socioeconomic population brought racial and religious riots, particularly between Irish and German immigrants.

Atlantic Avenue, the main commercial street through the study area, first rose to prominence during the Civil War, 1860-1864, when shipping activity along the Brooklyn waterfront became vital and integral to supply troops and supplies south to troops. By 1860, Cobble Hill had developed into a community, complete with a bank, stores and other services, including religious and institutional structures. The buildings along Bergen and Wyckoff Streets in the Boerum Hill Historic District were constructed after the Civil War, at the end of the 1860s and early 1870s.

At the turn of the century, the demographic character of the community changed with the influx of immigrants from Ireland, Italy, Syria, and Germany. The town houses became multi-family dwellings, but the substantial exteriors of the structures remained essentially unaltered.²



Map outlining the Patchen, Heeney, Gerritsen and Martense family tracts of land in 1834
Source: student-created infographic



Map outlining the subdivisions of land in 1835
Source: 1866 Johnson Map of New York City and Brooklyn

Rowhouse development

The 1840 tax list assessment shows 45 houses in Cobble Hill to the 112 residents listed in the district. Urbanization was especially apparent in 1840 and 1841, between Court and Henry Streets, on Pacific, Warren and Baltic Streets, as well as Strong Place. Construction of row houses started to transform Cobble Hill into an urban community. It is worth mentioning that the development of Cobble Hill could be largely credited to New Yorkers, such as Henry Winthrop Sargent, Abraham J.S. Degraw, Gerald W. Morris.¹ In Boerum Hill, construction began at the end of 1840s from the northern area with the block fronts of Atlantic Avenue, Dean Street, Pacific Street and State Street largely filled in by the 1850s. Buildings along Bergen and Wyckoff Streets were constructed after the Civil War, at the end of the 1860s and early 1870s.

One factor that affected the residential development of the study area is the Brooklyn Fire Limit, which outlawed wooden structures in the portion of the study area west of Smith Street in 1852 and expanded to include the rest of the study area in 1866.²

Apartment house development

Early development from the 1830s to 1860s was preserved, with few newly constructed apartment houses appearing after the 1920s. Though apartment houses began to appear in the study area during the 1880s, they were built in a complementary low scale, similar to the scale of early 19th century rowhouse construction. Though a different typology, these new structures didn't detract from the uniform rooflines.

At the beginning of the 1900s, waves of Scandinavian, German, Irish, Syrian, and Italian immigrants settled within neighborhoods throughout South Brooklyn. Cobble Hill and Boerum Hill, close to downtown Brooklyn, the waterfront and to the industries along the Gowanus Canal, were a natural settling place for new immigrants. A period of rehabilitating interior structures to allow higher occupancy brought subdivisions of rowhouses and conversions of previously industrial buildings to residential typologies. In many cases, these conversions had little effect on the exterior architectural styles.

¹ ibid

² The wooden house projects, last modified August 3, 201, "Brooklyn Fire limit 1852" <http://woodenhouseproject.com/index.php/2011/08/03/brooklyn-fire-limits-1852/>.

Tenements and Tenement Reform

By 1860, Cobble Hill was largely developed into an urban community with banks, stores and other services, as well as churches. Development continued to spread inward from the waterfront reaching Boerum Hill in the 1870s where the suburban character formed a community of wage earning, working class citizens. Although early row houses were designed as private single family dwellings, owners often took in working gentlemen as boarders. As the working class population increased in the area, and with it, the need for moderately-priced rentals, a collective form of residence known as the "tenement" arose.

By 1865, this early form of multiple dwelling housed labors and workers, as well as the majority of immigrants that lived and worked in this area. These tenements were constrained by the typical gridiron of 25x100 foot lots meant to accommodate row houses, so the multi-family dwellings were usually four to six floors and maximized densities within the fixed building lot system by extending the structural footprint to the extend of the lot's length and width. These long tenements were commonly called "railroad flats" because the rooms were organized like cars on a train, with no standards for minimum space, light, or ventilation.

Devoid of these standards for light and ventilation, tenements generated poor living conditions and caused a series of reforms in the housing industry. One of the earliest philanthropic efforts to experiment with housing reform is located in Cobble Hill, on 423 Hicks Street. (image of this building) Alfred T. White developed this landmark in the field of tenement house reform in association with architects William Field & Son, architects to house a multitude of ethnicities including Native Americans, Irish, Swedes, Norwegians, English, and Germans.

The history of New York City housing reform falls into three categorical phases: Pre-law(-1879), Old-law(1879-1901), and New-law(1901-) eras. In 1865, the Council of Hygiene and Public Health appointed by the Citizen's Association published a report based on the investigation of existing tenement house conditions. As a result of the report, the city passed the first tenement law, the Tenement House Act of 1867, giving legal definition to the term "tenement" for the first time. Reform efforts extended from this act to the passage of the "old law," Tenement House Act of 1879, and ushered in the popularity of "dumbbell" plan inspired by James E. Ware's design for The Plumber and Sanitary Engineer's competition. fig The "dumbbell" scheme featured a small air-shaft to ensure air and light for each room. This plan was quite influential in our study area, since most of the tenement houses in this area were built after 1880. Since the airshaft was designed to combine with other lots, this plan incentivised development of adjacent buildings. Complementary to the early nineteenth century row house development, these multi-family dwellings were low in scale and didn't detract from the uniform rooflines of the study area.

However, with the scale limit, the air-shafts usually became a well of garbage, smell and disease, and lacked privacy. The "dumbbell" plan fell from favor in 1901, when the "new law" created the Tenement House Department and required a higher standards for multi-family dwellings that affected not only new buildings, but also required alterations to existing tenement houses.



423 Hicks Street

Source: student photograph

Still pre-law examples can be found in the area on No.100-102 Wyckoff street. Both of the buildings were 27.5 feet wide and 65 feet long. These two pre-law tenements date to before 1874. Their 1903 alteration plan shows a typical "railroad flat." With their Flemish bond red brick façades, wooden cornice, and heavy cast-iron lintels and seals with brackets, these Italianate houses are modest in stature compared to other multiple dwellings that came later in this area.

Despite the economical nature of old-law tenements use, the building façades were often very decorative to lure tenants. This trend of exterior decoration is best illustrated by the Albemarle and Devonshire which are a matching pair of tenement buildings situated at 371 and 375 State Street in Boerum Hill, Brooklyn, respectively. (image of these buildings) Brooklyn architect, Marshal J. Morrill, built these five-story buildings circa 1887 with two units per floor, and ten units per building.

Classified as "old law" tenements, these buildings show an adaptation of the dumbbell plan with central light shaft. The handsome facades of these buildings, composed of red brick, a brownstone base and terra cotta ornament, are a beautiful contribution to the block in the early Queen Anne style. Both of these tenements underwent significant alterations in 1935 when the New York Housing Authority (NYCHA) was established to eliminate the unsanitary and dangerous housing conditions.



371 and 375 State Street
Source: student photographer

Commercial / Industrial Typology

Commercial Development: Case Study Blocks

Block 176 - bounded by Atlantic Avenue, Smith Street, State Street, and Hoyt Street

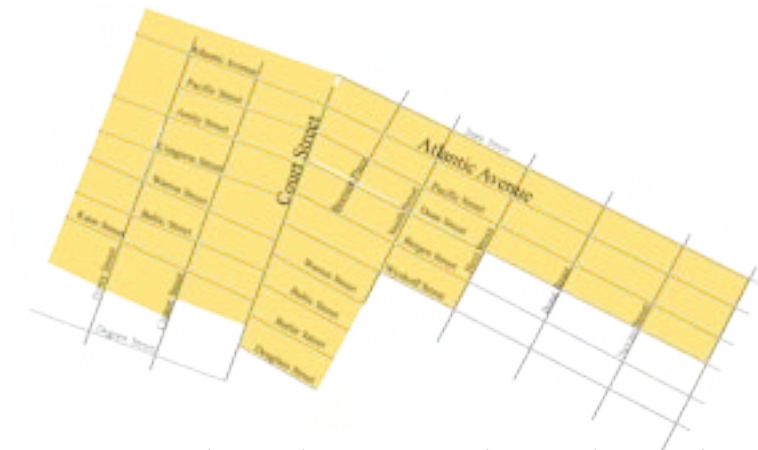
By 1855, block 176 was highly developed. Long rows of ten or more houses had been built on the north, south, and east sides of the block. The north and east sides of the block were residential, but the south side of the block on Atlantic Avenue featured eleven residential brick buildings with stores below, as well as five wood frame buildings. Today, only five historicized storefronts remain on the Atlantic Avenue side of the block. Notable businesses from 1855 include the Metropolitan Marble Works and the Atlantic Wood & Coal Yard; these types of businesses indicate the area's industrial character at the time. In 1855 the northeast corner of the block was underbuilt compared to the rest of the block; although by 1880 the whole block had been built upon. The building stock was made up entirely of row houses in 1880, with the exception of two buildings with irregular footprints that were built on the lot where the Atlantic Wood & Coal Yard had once stood. Notably, the five wood frame buildings from 1885 remained in 1880, and in fact still stood as late as 1898. The block remained relatively unchanged in 1904, although by this time only two wood frame buildings with frontage on Atlantic Avenue were still standing. By 1929, all of the buildings on Atlantic Avenue on this block were classified as brick, and the south, west, and east sides of the block were almost completely filled by stores. On the Atlantic Avenue (south) side of the block, there were 25 buildings that contained 28 stores between them (three buildings had 2 stores each). In fact only one building on Atlantic Avenue did not have a storefront in 1929. By 1979, the overall scale of the block had changed very little, with the exception of three large lots that were formed on the east side of the block. Today this lot contains the twelve-story Nu Hotel (lot 7501), and also has retail on the ground floor. A new apartment building was also constructed in 2014 at 333 Atlantic Avenue.

Source: Fire insurance atlases



Commercial Development in the study area by 1840

Source: student-created infographic



Commercial Development in the study area by 1850s

Source: student-created infographic



Commercial Development in the study area by 1870

Source: student-created infographic

Block 177 - bounded by Atlantic Avenue, Hoyt Street, State Street, and Bond Street

This block was significantly developed as early as 1855, with only about 125' of frontage on the Atlantic Avenue side of the block not yet built upon by that time. However, an undeveloped area spanned through the whole block near its center. The early buildings in 1855 were small and residential. Only five buildings on Atlantic Avenue had storefronts in 1855; four of which were in wood frame buildings. In total there were seven wood frame buildings on the Atlantic Avenue side of the block, all of which remained in 1880. By 1880, the block was fully built on and consisted entirely of row houses, most of which were brick. By 1904, the four original wood frame buildings with storefronts remained on Atlantic Avenue and a comparison with an earlier fire insurance map indicates that a new wood frame building was built on the Atlantic Avenue side of the block between 1898 and 1904. The high density of buildings throughout the whole block remains a characteristic of the block today, especially on the more commercial Atlantic Avenue side. In 1911, there were 25 stores on the Atlantic Avenue side of the block, only two of which were in wood frame buildings that survived from 1855; by 1929 the wood frame buildings were no longer standing but Atlantic Avenue still had a high concentration of store frontage. The collection of 1930s tax photos also indicate 25 storefronts along the Atlantic Avenue side of the block, compared to 15 historic/historicized storefronts in this same area in 2016. Even today, the block still consists almost entirely of row houses, with the exception of one large through-lot that existed as early as 1979 (359 Atlantic Avenue). A "later" commercial building from 1904-1911 with a significant storefront still stands at 351 Atlantic Avenue (Figure 1).

Block 285 - bounded by Pacific Street, Henry Street, Atlantic Avenue, and Clinton Street

Block 285 is part of the Cobble Hill Historic District. It is bordered by Atlantic Avenue to the north, Pacific Avenue to the south, Henry Street to the west, Clinton Street to the east. This block is located within the Western portion of Atlantic Avenue, which during the period between the 1840's and the 1880's, was "one of the finest commercial areas in Brooklyn."¹ A combination of close proximity to the waterfront and the arrival of railroad are ultimately responsible for the commercialization of Atlantic Avenue. This particular block of Atlantic Avenue contains some of the larger commercial buildings in the area, and demonstrates a grander scale and size than most of the smaller-scale commercial counterparts more typical to Atlantic Avenue. One significant structure found on this block is the 1851 four-story Italianate building located at 124-128 Atlantic Avenue that once housed Journey and Burnham's, one of the most iconic dry goods shops in Brooklyn.² With its large ground-floor display windows to show off the latest fashions and entice customers to enter the shop, Journey and Burnham's catered to affluent clientele and "all the ladies from Brooklyn Heights went with their shiny black shopping books, in which the week's purchases were written up."³ The store was so successful that it required an expansion, and in 1879, built an annex at the rear of the store that extends through the block onto Pacific Street.⁴ Journey and Burnham's left Atlantic Avenue for a new location in 1898. Today the building has been converted into luxury apartments.



124-128 Atlantic Avenue
Source: student photograph



Corner of Atlantic Avenue and Court Street
Source: Brooklyn Athenaeum, 1922 from Merlis, Brian. Brooklyn the Way it Was Brooklyn : Israelowitz Pub., 1995. p. 75

¹ "Cobble Hill Historic Designation Report" Landmarks Preservation Commission (1969). p. 19

² ibid

³ ibid

⁴ "Cobble Hill Historic Designation Report" Landmarks Preservation Commission (1969). p. 62

Block 292 - bounded by Amity Street, Clinton Street, Pacific Street, and Court Street

Block 292 is part of the Cobble Hill Historic District. It is bordered by Pacific Street to the north, Amity Street to the south, Clinton Street to the west, Court Street to the east. The Pacific Street section of this block is considered extremely important because of "its fine examples of Victorian and Romanesque Revival architecture, which occur only occasionally in the rest of the Cobble Hill Historic District."¹ Perhaps the finest example of Victorian era architecture can be seen in Public School No. 78 (built 1888-1889) which is built over 174-186 Pacific Street.² Today this building has been converted into luxury housing apartments.

Block 276 - bounded by Atlantic Avenue, Clinton Street, State Street, and Court Street

Block 276 falls outside the boundaries of both the Boerum Hill Historic District and the Cobble Hill Historic District. It is bordered by State Street to the north, Atlantic Avenue to the south, Clinton Street to the west, Court Street to the east. The south side of this block comprises a portion of Atlantic Avenue with an eclectic variety of mixed-use structures that feature storefronts on the ground floor. The corner of Atlantic Avenue, now a food store, was once home to the Brooklyn Athenaeum. The Brooklyn Athenaeum, which opened in 1853, was an important cultural center in Brooklyn.³ The building contained a library and sponsored local theater productions through the turn of the century.⁴ The building was demolished in 1942.⁵ The south side of State Street on this block contains residential rowhouse buildings, many of which have had later upper story additions and now reach up to five (5) stories in height.

Block 414 - bounded by DeGraw Street, Court Street, Douglass Street, and Smith Street

Block 414 falls outside the boundaries of both the Boerum Hill Historic District and the Cobble Hill Historic District. It is bordered by Douglass Street to the north, De Graw Street to the south, Court Street to the west, Smith Street to the east. A carriage house on De Graw Street (lot 61) was home to a Fire Engine Company in the 1860's.⁶ This historic building still stands, but heavily graffitied and seemingly vacant, it is in very poor condition today. The Court Street side of the block contains several mixed-used commercial buildings. The residential Douglass Street side of the block contains mostly Italianate rowhouses. Most are well-maintained, though several have had a fourth story added. There are also several historic or "historicized" storefronts along the Smith Street portion of the block.



Corner of Atlantic Avenue and Clinton Street
Source: Brooklyn Athenaeum, 1922 from Merlis, Brian. Brooklyn

1 "Cobble Hill Historic Designation Report" Landmarks Preservation Commission (1969). p. 61

2 ibid

3 Merlis, Brian. Brooklyn the Way it Was : Over 200 Vintage Photographs from the Collection of Brian Merlis. Brooklyn : Israelowitz Pub., 1995. p. 75

4 ibid.

5 ibid.

6 1860 Perris Map

Institutional - Religious

Religious congregations also influenced the built environment of the study area, despite its association with residential building typologies. One of the earliest surviving religious structures, St. Paul's Church, at the corner of Court and Congress Streets in Cobble Hill, was completed in 1838. It was the second Catholic Church built in Brooklyn, mainly for the increasing Irish immigrant community in the mid-19th century. St. Paul's is also the oldest Catholic Church in continuous use in the state of New York, though the demographics have mainly shifted to the growing Hispanic community of Cobble Hill.¹

Christ Episcopal Church, built in 1841-42 and founded in 1835, was the first religious organization in the district.² Designed by Cobble Hill resident and the future architect of Trinity Church on Wall Street, Richard Upjohn, the Gothic Revival church also features interior furnishing by Louis Comfort Tiffany.³ (Image 16: Christ Church, Richard Upjohn)

The former Middle Reform Dutch Church, now the Kane Street Synagogue, was established in 1855.⁴ (Image 17: Kane Street Synagogue) Prior to the founding of this synagogue, the population of German and Prussian Jewish immigrants in the area had to travel to lower Manhattan for services. The synagogue houses Congregation Baith Israel Anshei Emes, the oldest Jewish congregation in Brooklyn.



Christ Church, Richard Upjohn
Source: student photograph



Kane Street Synagogue
Source: student photograph

¹ "But its own 60,000 baptismal records go back to the Irish immigrant community which settled the area around Court and Congress Streets in 1838; By 1977, 40% of the congregation is Hispanic; "People continue to live in this area just because they love the church," said Father Real." Bay Ridge Church Brochure; Sleeper, James. "St. Paul's Holds Re-dedication Mass After Parishioners Rally To Save Church's 140 Year Heritage." The Phoenix, December 15, 1977.

² Today, services are conducted for a Spanish-speaking community.

³ Rothstein, Mervyn. "A Stroll Through Cobble Hill's Streets and Homes." The New York Times, September 30, 1983.

⁴ "The synagogue had its beginnings on January 22, 1856, when a small group of Brooklyn Jews established a temporary synagogue under the name of "Baith Israel" or "House of Israel" at 155 Atlantic St. (now Atlantic Avenue)." Gross, Geraldine K. "A Synagogue's History Enhances." Brooklyn Heights Press. June 3, 1976.

Architectural Styles

Early Development

With connectivity to industry, ports, and Manhattan to the west, original development in Cobble Hill and Boerum Hill began in the 1830s. Cobble Hill developed prior to Boerum Hill due in part to its proximity to the South Ferry, which opened in 1836. Large family farms were subdivided beginning in the 1830s and sold to speculative builders. Early development of the area was meant to attract affluent residents who had the ability to commute to Manhattan from South Brooklyn via newly established transportation. The oldest house now standing in the study area is located at 122 Pacific Street, built in or shortly before 1833 on the 13-block farm that once belonged to Ralph Patchen. The house's Greek Revival door remains intact, but other features have been altered through the years.¹

As row house construction continued, religious, institutional, and commercial development began to support the growing community. Cornelius Heeney, a wealthy bachelor and Roman Catholic with the land plot next to Patchen in Cobble Hill, gifted his land to St. Paul's Catholic Church. Built in 1838, it is the oldest Catholic Church in contiguous use in New York State.²



122 Pacific Street
Source: student photograph



St. Paul's Catholic Church
Source: student photograph

¹ Landmarks Preservation Commission. Cobble Hill Historic District Designation Report. New York City: Landmarks Preservation Commission, 1969.

² Sleeper, James. "St. Paul's Holds Rededication Mass After Parishioners Rally To Save Church's 140 Year Heritage." The Phoenix, December 15, 1977.

Greek Revival

The earliest houses in the study area were fashioned in the Greek Revival style. This Revivalist style not only recalled previous linkages between Ancient Greek democracy and the newfound American independence, but was also practical, relatively inexpensive, and quick to erect by speculative builders.¹

Archeological discoveries in Pompeii and Herculaneum in the mid-18th century revived an interest in Classical antiquities, extending to the interest of architects. Minard Lafever, a prominent architect who also designed the Strong Place Church in 1851 in Cobble Hill, remarked on the influence of Antiquities of Athens on architectural designs and builder's guides.²

The Greek Revival style remained fashionable throughout the late 1840's. Although wood and brick were used simultaneously, brick became the predominant material as the affluence of speculative builders and residents rose and they required a more durable material. An excellent example of these early brick Greek Revival buildings are the six row houses at 228-238 Warren Street, constructed from 1833-1835.³ Mayssa Jallad's study of wood frame construction in Studio I indicated 235 existing wood frame buildings within Boerum Hill in 1855. By 2015, only 20 wood frame buildings remained. Interestingly, Boerum Hill actually has a higher number of wood frame buildings intact, though it developed later than Cobble Hill.

¹ "The shift from the Federal Style, which reminded the American public of its British associations, to Greek Revival signaled a renewed effort of a nationalistic architectural style, that was uniquely "American"." Lockwood, Charles. Bricks and Brownstone: The New York Rowhouse 1783-1929. New York: Rizzoli, 2003, 56.

² "Especially influential to the Greek Revival was James "Athenian" Stuart's and Nicholas Revett's four-volume Antiquities of Athens, published between 1762 and 1816, a detailed study of ancient ruins in Greece with numerous illustrations and restorations... Minard Lafever remarked, "perhaps there are none superior to it." Ibid, 57.

³ Chambers, Marcia. "Reliving Past in Cobble Hill." The New York Times. December 3, 1976.



228-238 Warren Street
Source: student photograph



Wood Frame Buildings (235), Boerum Hill, 1855

source: Lionel Pincus and Princess Firyal Map Division, New York Public Library Digital Collections. 1855.



Wood Frame Buildings (20), Boerum Hill, 2015

source: Lionel Pincus and Princess Firyal Map Division, New York Public Library Digital Collections. 1855.

Greek Revival (cont.)

In the mid-1840s, the first houses in the Boerum Hill Historic District that still stand were erected along Dean Street and State Street, on the former Gerritsen land holdings. These houses are Greek Revival in style with modest triangular pediments like 144-154 Dean Street, and some feature pilastered doorways topped by an entablature as seen at 310-322 State Street.¹ Later Greek Revival rowhouses are represented at 140-150 Bergen Street, constructed from 1849-50. The rowhouses retain their original cornices with brick dentils and fascia, present in all except No. 140.

Greek Revival architecture sought to reinterpret Athenian democracy and adapt it to the new American Republic. American architects and builders drew from elements of Greek architecture to suit current necessities, such as population increases due to immigration and connectivity of development through infrastructure. Architectural handbooks, which proliferated in the 1840s, made the basic Greek forms readily available to builders and could be interpreted across a multitude of economic standards. The handbooks contained illustrations of columns, cornices and pilasters, all of which were relatively inexpensive to reproduce and could be quickly adhered to the façade of a structure.

The doorway became the focal point of the Greek Revival façade, while other details were articulated in a restrained manner. A simplified version of the Greek Revival style continued to be used by builders in the study area well into the 1850s. At the same time, houses began to be designed to incorporate the newly fashionable Italianate style, and a number of transitional Greek Revival/Italianate rowhouses demonstrate the fluidity

¹ Landmarks Preservation Commission. Boerum Hill Historic District Extension Proposal. New York City: Landmarks Preservation Commission, 1977, 8



140-150 Bergen Street
source: student photograph



144-154 Dean Street
source: student photograph



528-534 State Street
source: student photograph

Italianate

The Italianate style allowed New Yorkers to inhabit more impressive and picturesque buildings that projected the city's increasing wealth and the rise of the Romantic movement in architecture.¹ Developing technology, specifically in the mechanization of iron stoop railings, fences, and interior details allowed builders to purchase Italianate ornamentation from local factories at a fraction of the cost.

The Italianate style was inspired by the 15th century Italian city palace or palazzo.² Though modest when compared to grand Italianate mansions and public buildings in Manhattan, Italianate motifs introduced Corinthian capitals, inset paneling, pedimented entablatures (as opposed to rectangular pediments seen in Greek Revival styles), arched forms, deep cornices, and elaborately foliated stoop and fenceway ironwork. Bold Italianate facade details created deeper shadows, enhancing the streetscape and enticing the growing middle-income population to inhabit these buildings with a sense of pride, however modest the decorative features.

Although a number of speculative builders, and in some cases architects, were responsible for the construction of these structures, a sense of coherence and unity was maintained throughout the study area. Relatively uniform facades with easily applied decorative details and identical interior plans facilitated the quick construction necessary for speculative building. The Italianate style dominated from the 1840s to the 1870s. The continued success of industry, factories, and shipyards to the West and South of the study area also brought a new socioeconomic group of immigrants to search for housing nearby their places of work.

The block fronts along Atlantic Avenue, Dean Street, Pacific Street and State Street were largely completed by the 1850s, with houses selling for around \$5,000 each (approximately \$114,000 in 2015).³ The prosperous owners of these row houses generally commuted to work in the Wall Street area, but a number had businesses around the ferry landing at the foot of Fulton Street. Residents included merchants, lawyers, restaurateurs, a medicine dealer, the author J. S. Denman, the builders William Alexander and Peter Bageley, and a tax collector.⁴

¹ "Along the East River, New Yorkers admired the swift clippers and international packet ships; dry goods and foodstuffs filled merchants' warehouses and often overflowed onto the sidewalks; and the renowned East River shipyards built some of the finest ships in the world. "One needs to come down to the river quays to see the greatness of New York City," wrote one Scottish visitor in the late 1840's." Lockwood, 125

² "Several years later, the Italianate style replaced the long-lived Greek Revival style on New York rowhouses, and in 1854, one magazine stated that, "the Grecian taste... has within the last few years been succeeded and almost entirely superseded, both here and in England, by the revival of the Italian style." Lockwood, 131

³ Landmarks Preservation Commission. Boerum Hill Historic District Designation Report. New York City: Landmarks Preservation Commission, 1969, 4

⁴ Ibid.



State Street Italianate Row Houses
Source: student photograph



Wyckoff Street Italianate Row Houses
Source: student photograph

Delay of Fashionable Architectural Styles

It is interesting to note that stylistically, a time lag exists between the study area and Manhattan, ranging anywhere from five to fifteen years. For example, an Italianate building, typical of 1850s Manhattan, may not emerge in Cobble Hill until almost a decade later in the 1860s. The lag was probably due to the conservatism of economy and taste that South Brooklyn builders employed relative to their Manhattan counterparts.¹

Prominent Architects and Builders

Famous 19th century architects Richard Upjohn and Minard Lafever completed two impressive churches in the Cobble Hill Historic District: Christ Episcopal Church and Strong Place Baptist Church. (Image 14: Christ Episcopal Church and Strong Place Baptist Church) Upjohn, and later his son, Richard M. Upjohn, both lived in Cobble Hill at 296 Clinton Street, which was originally constructed in the 1840s. (Image 15: 296 Clinton Street) In Cobble Hill, early builders beginning with Asa Stobbins in the 1830s, and later William Johnson, Horatio White, Thomas Sullivan, Michael Markoy, Jeremiah O'Donnell, and Jacob Carpenter all occur frequently as the builder or architect of record.²

Despite the number of varying builders responsible for the early development in the Boerum Hill Historic District, the buildings harmonized well with one another. One of the major builders in the 1850s was John Doherty, who later worked in nearby Park Slope. Doherty, like many other American builders of the time, used both the Greek Revival and Italianate styles. Other builders who were active in the area include Thomas Maynard, James P. Miller, Michael Murray, Thomas Skelly and John Monas. All of these builders constructed rowhouses to be sold exclusively on a speculative basis.



296 Clinton Street
Source: student photograph



Christ Episcopal Church and Strong Baptist Church
Source: student photograph

¹ Landmarks Preservation Commission. Cobble Hill Historic District Designation Report. New York City: Landmarks Preservation Commission, 1969, 2

² Ibid, 3

Gothic Revival

By the 1840s and 1850s, the Gothic Revival style had emerged in the study area. The asymmetrical massing, dark-colored building materials, and rich ornamentation of the Gothic Revival were better suited to larger buildings rather than narrow urban lots.¹ Though rare in the residential development of this area, a row house at 374 Pacific Street within the Boerum Hill Historic District exemplifies Gothic Revival characteristics. Built in the 1840s, the row house represents an overlap with the popular Italianate style. In Cobble Hill, 271 Degraw Street, constructed in 1850, retains original Gothic Revival applied details and an unusual sense of asymmetry for a rowhouse.² Gothic Revival, with its pointed arches and labor-intensive stone carvings, was usually not desirable for speculative builders constructing middle-income housing.

Another original Gothic Revival residential townhome was constructed in 1841 at 140 Pacific Street, but was later modified in 1865 to include Italianate features, specifically the triangular pediment above the main entrance, window enframement, and cornice.³ Gothic Revival motifs were often added to facades to provide a fashionable modernization of an earlier row house.⁴ Gothic Revival was a more popular choice for religious structures, such as St. Paul's Church and Christ Church, mentioned previously.

French Second Empire and Neo-Grec

Beginning in the 1870's, the French Second Empire and Neo-Grec styles became desirable for speculative builders. The French Second Empire frequently manifested as a mansard addition to previously Italianate rowhouses. The popularity of the style was inspired by mid-19th century Paris and the influences of the Ecole des Beaux-Arts, and had many decorative similarities to the Italianate style.⁵ It is also important to note that the mansard roof alone does not make the design Second Empire, since additions of "French" roofs were also common to modernize and provide additional space necessary to accommodate growing population density.⁶

The Neo-Grec style developed as a reaction to the ostentatious ornamentation that defined the Italianate and Second Empire styles, and also spoke to the growing industrial and mechanized character of America, and of South Brooklyn in particular with its proximity to the shipyards and factories. The rectilinear features embraced a contrast to the curved and foliated forms of the Italianate and Second Empire styles, but were also more economical to produce.⁷

¹ Lockwood, 99 "Only after the triumph of the Romantic movement in art and literature, which glorified pastness and untamed Nature, did the Gothic Revival emerge as a genuine architectural force in the United States."

² Ibid, 119.

³ Rothstein, Mervyn. "A Stroll Through Cobble Hill's Streets and Homes." The New York Times, September 30, 1983.

⁴ Lockwood, 119

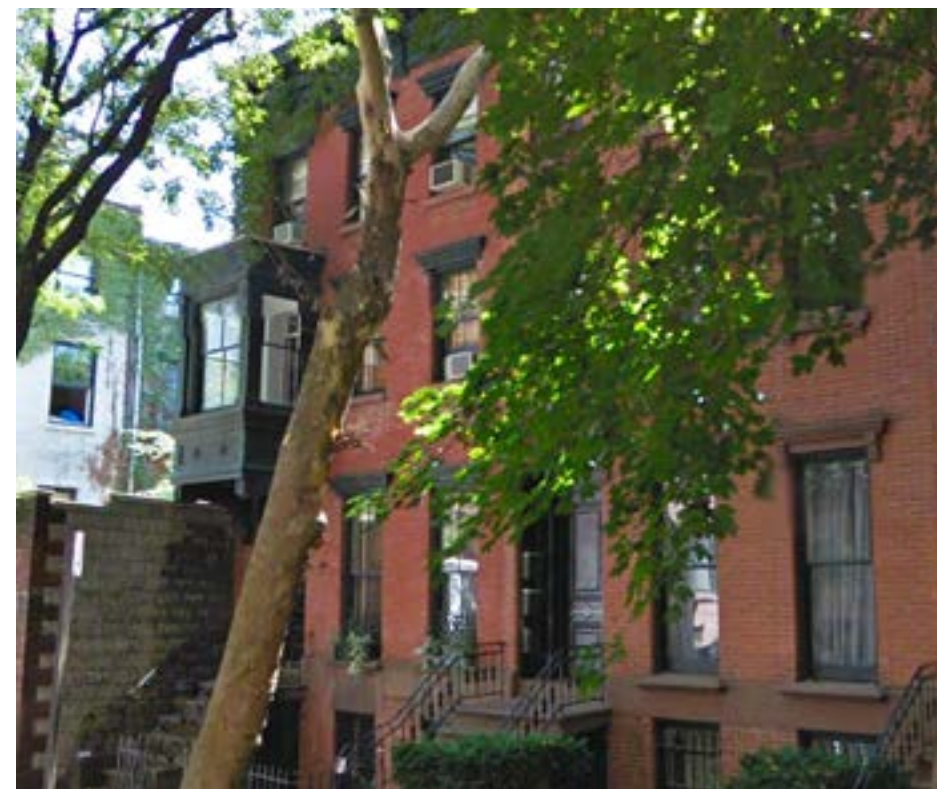
⁵ Ibid, 159. "In the 1860's, architects and builders throughout the United States adopted the Second Empire style with an enthusiasm that was matched throughout the Western world. Farmhouses, freestanding villas, fine row houses, and even carriage houses supported the fashionable mansard or "French" roof."

⁶ Ibid, 164. "These modernizations usually are easy to detect, because the builder rarely updated the plain Federal or Greek Revival doorway, window lintels, or cornice to conform to the showy Second Empire style."

⁷ Ibid, 233. "With the death of Henry Hobson Richardson in 1886 and John Wellborn Root in 1891, the Romanesque style lost its two leading proponents."



374 Pacific Street
source: student photograph



140 Pacific Street
source: student photograph

Queen Anne

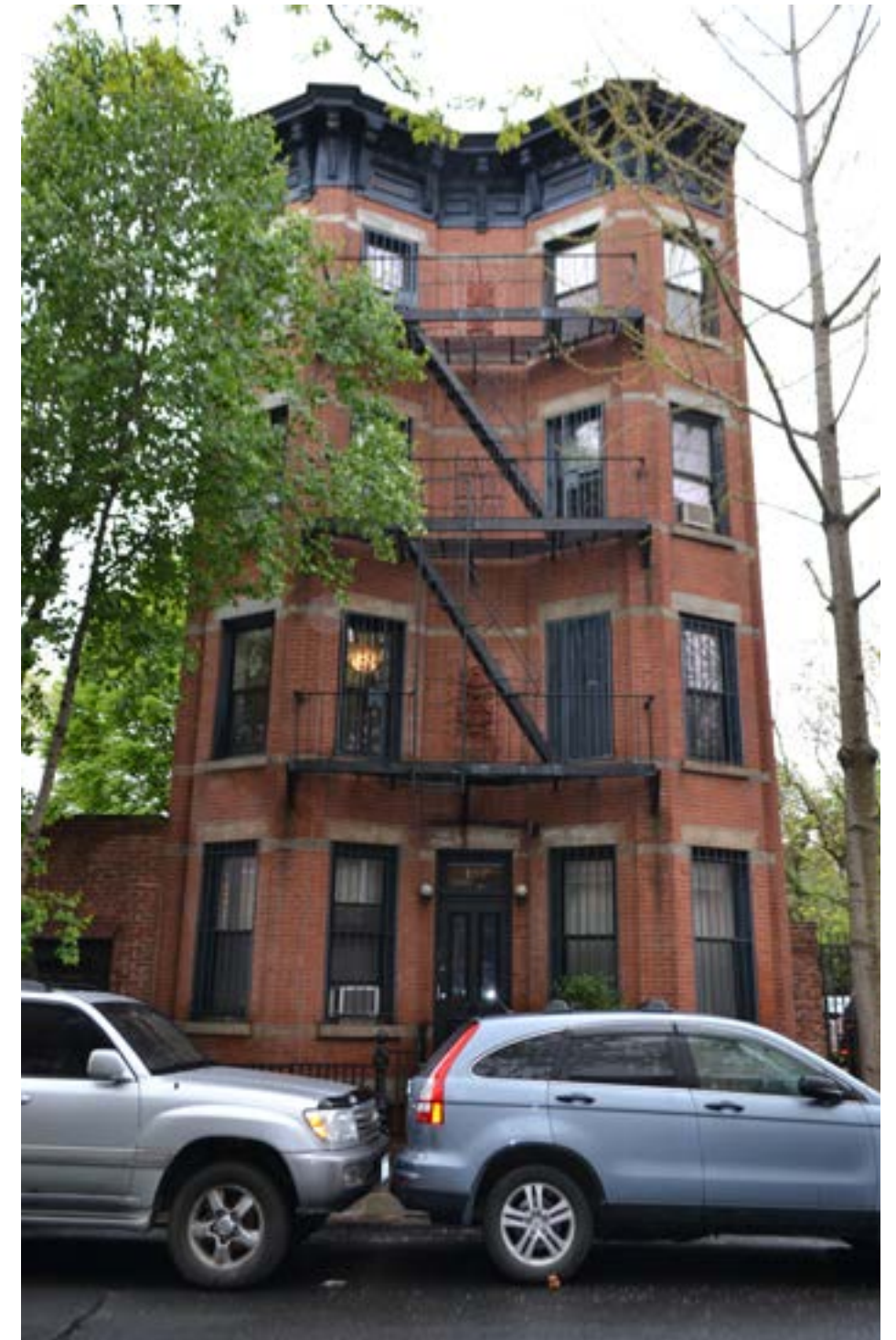
By the 1880s, the Queen Anne style became fashionable, specifically in apartment and tenement construction within the study area. The most recognizable Queen Anne feature breaks from the previously flat rowhouse rooflines to introduce "A-form" gables and small dormer windows to contribute a picturesque and varied quality to the streetscape.¹

Projecting full-height bay sections at each side of the front façade at 164 Bond Street distinguish the four-story apartment building, built in the 1880s. Terra-cotta floral panels, typical of the Queen Anne style, are set into the center facade. The roof cornice carried on long, angular brackets over a very deep paneled frieze, is also typical of the transitional Neo-Grec style.



173 Pacific Street
source: student photograph

¹ Ibid, 231.



164 Bond Street
source: student photograph

Romanesque and Renaissance Revival

By the 1890s, Romanesque and Renaissance Revival became a popular style throughout numerous building typologies, not just residential architecture. The picturesque Queen Anne style employed similar varied textures and colors to create visual contrast, but the Romanesque sought to evoke a reactionary architecture of solidity and "pastness."¹ The return of the rounded arch combined with applied ornamental detail was favored by prominent architects such as Henry Hobson Richardson and John Wellborn Root. The style quickly became replaced by the more classical Renaissance Revival style.

One of the oldest examples of the Romanesque style is a facade addition to an 1830s carriage house at 173 Pacific Street. Applied to the facade in the 1870s, the alteration updated the building to the more favorable architectural style of the time. An institutional example of Romanesque Revival can be found at 415 Atlantic Avenue, currently the House of the Lord Church. The church was originally the Swedish Pilgrims' Evangelical Church, built in 1903.



415 Atlantic Avenue
source: student photograph

¹ Ibid, 233. "With the death of Henry Hobson Richardson in 1886 and John Wellborn Root in 1891, the Romanesque style lost its two leading proponents."

Modernism

The 20th century brought a diverse collection of Art Deco, Modernist, and Post-Modern architectural styles to the study area. The New York Times Printing Plant, located at 59 Third Avenue, was built in 1930 and designed by well-known industrial architect Albert Kahn. Built as the company's sixth newspaper printing plant, the Modern Classical style created the sense of a monument at the edge of the Boerum Hill neighborhood.¹ Another impressive Art Deco building is located at 314 Atlantic Avenue. A former National Cash Register office designed from 1930-47, the mullion-patterned glass facade is flanked with articulated pilasters and terra-cotta medallions.²

Another commercial building that now houses Trader Joe's, formerly the South Brooklyn Savings Institution, was built in 1922 and was designed by McKenzie, Voorhees & Gmelin in the Florentine Renaissance style. Located at 130 Court Street at Atlantic Avenue, it was added to in 1936 by Charles A. Holmes. The cornice features one hundred eagles to commemorate the site where General George Washington watched his troops retreat from the Battle of Long Island.



Trader Joe's on Atlantic Avenue
Source: student photograph



59 Third Avenue
Source: student photograph



312-314 Atlantic Avenue
Source: student photograph

¹ Marisa Kefalidis, Studio I project, Historic Preservation, Columbia University

² <http://6tocelebrate.org/site/314-atlantic-avenue/>; Ariane Prache, Studio I, Historic Preservation, Columbia University

Contemporary

Renewed development interest in the area with the recent construction of the Barclays Center just east of Boerum Hill and soaring land values in South Brooklyn have led to a wave of new construction, exemplified particularly by the large glass residential towers to the north of the study area. Though there have been three new construction interventions within the historic districts since the 2000s, the increased demolitions, specifically along unprotected areas of Atlantic Avenue, have spurred 66 new construction projects since the 2000s.



Map of New Construction
Source: student-generated GIS map

21st Century: Contemporary

Two contemporary projects within the Cobble Hill Historic District are 110-128 Congress Avenue and 194 Atlantic Avenue. The first project was completed in 2012 and designed by Morris Adjmi. (Image 29: 110-128 Congress Avenue) Four pre-Civil War townhouses were renovated to be separated into single-family residences (previously a church rectory). The adjoining site, a 1970s building, was demolished and five new row houses were constructed in its place. The designs were approved by the Landmarks Preservation Commission for their reference to the materials, aesthetics, and scale of the pre-Civil War neighborhood context.¹ The project at 194 Atlantic Avenue, currently a Barney's Co-Op, was completed in 2010.² The former site was demolished in order to construct the contemporary intervention along Atlantic Avenue. Though the project respects the prominence of brick, the large glass windows are less successful within the Cobble Hill Historic District, specifically when compared to the former Renaissance Revival Brooklyn Savings Bank to the east. (Image 30: 194 Atlantic Avenue)



110-128 Congress Avenue
Source: student photograph



194 Atlantic Avenue
Source: student photograph

¹ <http://ny.curbed.com/2012/10/16/10317234/morris-adjmi-cobble-hill-houses-approved-by-landmarks>

² <http://nypost.com/2010/10/14/barneys-sails-into-brooklyn/>

ARCHITECTURAL STYLE TIMELINE



446 State Street, 1842



214-238 State Street, 1860

1830's

Greek Revival



306 Dean Street, 1857

1850's

Gothic Revival



275 Degraw Street, 1850



167 State Street, 1848

1840's

Italianate



132-134 Dean Street, 1853



409 State Street, 1888



213 Bergen Street

1870's

French Second Empire and Neo-Grec



333-334 Clinton Street, 1870



71 Bond Street, 1878



333-337 State Street, 1891



371-375 State Street, 1886

1880's
Queen Anne



312 Atlantic Avenue, 1920s



Gowanus Houses, 1949



503 Atlantic Avenue, 1920s

20th Century
Art Deco, Modernist, Post-Modern

1890's

Renaissance Revival and Romanesque Revival



350 Henry Street, 1897



413 Atlantic Avenue, 1893



222 & 224 Pacific Street, 1895



306 Dean Street, 1887

Social History and Neighborhood Development

Germans

Beginning in the 1840s large numbers of German immigrants entered the United States. In the 1850s alone, 800,000 Germans passed through New York. By 1855 New York had the third largest German population of any city in the world, outranked only by Berlin and Vienna.¹ The earliest Germans in Brooklyn can be traced back before the War for Independence, and this group started to contribute to the development of New York City before the change of government relegated the name "New Amsterdam". Many people believe that the first Germans settled in New York as early as the Dutch did. However, this claim has not yet been proven true, except for a line written in the Brooklyn Daily Eagle in January 1910: "Peter Minit was not the only German in the service of the Dutch West India Company when it began the exploitation of the lands about the estuary of the Hudson River."²

In Brooklyn, the Germans were among a predominant group of European newcomers. Germans fleeing the disruption of a failed revolution poured into the city around the middle of the 19th century.³ "In 1855, nearly half of Brooklyn's 205,000 residents were foreign-born; about half were Irish, with the rest evenly divided between Germans and Britons."⁴ Also, in late 20th century, second generation German-Americans relocated themselves to Brooklyn. The German community was especially strong in the eastern part of Brooklyn, in Williamsburg, Bushwick, and Greenpoint, and some of them settled in Redhook.

Germans and Industry

German laborers working in the shipping industry commonly resided in Cobble Hill, where there was a high concentration of German immigrants. The Germans laborers brought with them religious traditions and architecture. The best examples are churches, particularly the Lutheran and Reformed. In Brooklyn, German churches connected with every religious denomination. Of the many denominations, the Lutherans were the strongest, though the Reformed Church, which came in with the Dutch, have a prior establishment.

The oldest German Evangelical church was just out of the study area on Schermerhorn Street, near Court Street, and it does not represent the first efforts to establish a Lutheran church in Brooklyn. The first congregation met in the old courtroom, on the corner of Cranberry and Fulton streets as early as 1841. The church was built in 1845 and then enlarged in 1865. In 1888 the congregation had outgrown the old structure and new edifice was built as replacement. Despite immense importance to the congregation, the building is now demolished.



Trinity Lutheran German Church

Source: Brooklyn Daily Eagle

¹ Burrows, Edwin G, Gotham : a history of New York City to 1898. (New York : Oxford University Press, 1999)

² Brooklyn Daily Eagle, 30 Jan 1910, Brooklyn Historic Society

³ "History of Brooklyn." Thirteen: Media with Impact. 2016. Accessed April 25, 2016. <http://www.thirteen.org/brooklyn/history/history3.html>

⁴ ibid

The Trinity German Lutheran Church is still standing, a brick church in the Gothic Revival style at 249 Degraw Street. Designed by Theobald Engelhardt, the Trinity German Lutheran church became the South Brooklyn Seventh Day Adventist Church when Cobble Hill Historic District was established. "The gabled facade facing the street is flanked by simple buttresses that terminate at the corners in pointed arch motifs. A handsome melded ogee arch crowns the central doorway, and the long windows above have corniced pointed arches."¹ This structure was built in 1905 but the congregation pre-date the Church and is established in 1887 in the former Middle Reformed Dutch Church on the corner of Kane Street and Tompkins place, which is Kane Street a synagogue today. By the designation report of the Cobble Hill Historic District, this church was "the permanent memorial of the German immigrants of 1848."²

German-American Neighborhood

Although most of Germans who came to New York settled in their own neighborhood, hundreds of thousands of Germans came in the early days and mixed together with the English, Irish, Scottish, Welsh, Dutch, Scandinavians, and French, as well as smaller ethnic groups in the community.

Therefore, institutions were extremely significant to maintain their own culture and identity. There were not only churches, the German community also established parochial schools, in which, bases were laid for a sound religious education. In addition to the usual studies, the subject taught are, as a rule, religion and German.³ In 1881 there were fourteen flourishing schools in the neighborhood of which, for descriptive purposes. Still, the first generation Germans found that their American-born children persist in going to the public schools and resist still more in talking English among themselves.⁴

Of particular interest is an old German school in our study area: The Long Island College Hospital which was founded in 1856 as Brooklyn German General Dispensary to provide medical services to the many German residents of Brooklyn's 6th Ward.⁵ The dispensary was originally located on 132 Court Street and moved to 145 Court Street in 1857. It renamed the St. John's Hospital on November 6, 1857, and then renamed Long Island College Hospital on February 4, 1858. It was officially incorporated March 6, 1858, and moved to the Perry Mansion on Henry Street between Amity and Pacific Streets May 1, 1858. The Perry mansion was part of Ralph Patchen's farm. The lots on which the Long island became vested in Joseph A. Perry. He built upon a portion of this his residence, which subsequently became the Long Island College Hospital and of which but a portion, the central part, now remains.⁶

1 Landmarks Preservation Commission. Cobble Hill Historic District Designation Report. New York City: Landmarks Preservation Commission, 1969

2 ibid

3 ibid

4 ibid

5 "The Founding of America's First College Hospital." Down State. <http://www.downstate.edu/brooklynhistoryofmedicine/pdf/medschool/chap1.pdf>

6 Raymond, Joseph Howard, History of Long Island College Hospital and its Graduates, The association of the Alumni, 1899, p 17

Irish

While Irish immigration to the United States was significant in the colonial era, there was a large increase in immigrant numbers during the 19th century. Prior to the 19th century, Irish immigrants were middle and upper class individuals. During the 19th century, this demographic transitioned to extremely poor and desperate immigrants. This influx of Irish immigrants was driven at once by the prospect of opportunity in the United States, and the terrible living conditions of Ireland in this period; the Great Famine of 1845-52 taking place in Ireland, causing massive starvation and suffering.

Irish Immigration peaked in the period from 1841-60, with nearly 800,000 immigrants arriving in the United States between 1841-50, and an additional 900,000 arriving between 1851-60. The population of New York City in 1880 was said to be 1/3 Irish immigrants and their American born children.¹ The Brooklyn Eagle was recording the number of immigrants arriving, their destinations, employment percentages, and occupations across the 19th century.²

The Irish and Industry

The 19th century was a period of significant expansion and construction technology in the Northeast corridor from Boston to Philadelphia. The completion of the Erie Canal in 1825, which was built by a largely Irish workforce, spurred considerable industrial and city expansion in Manhattan and Brooklyn. With a constant stream of new labor-based jobs, including large scale infrastructure projects like the construction of the Brooklyn Bridge (increasing connectivity between the boroughs), and the Croton Dam and aqueduct (which gave New York City clean water), laborers were needed in large numbers. As Irish immigrants poured into the United States, Irish communities were established in these Northeast urban areas, specializing in the construction industries.

Brooklyn's significant city growth in the 19th century was driven by the immigrant population. While the area of Vinegar Hill is specifically associated with early 19th century Irish immigration, even gaining the nickname 'Irishtown', there was a significant presence in many neighborhoods in Brooklyn, including Boerum Hill and Cobble Hill.³ The first large influx of immigrants to Brooklyn coincides with the large increase of specifically Irish individuals to the United States at large, between 1840-45. By 1855 the population of Brooklyn was 205,000, with roughly half foreign born. Of the foreign born, 50% were Irish.⁴

Work

Early Irish immigrants were primarily involved in the building and construction industries. While many of these workers were laborers, working construction, house painting, etc., some reached far higher levels of success in the industry. Notable Irish individuals linked to the Boerum Hill and Cobble Hill area were architects and builders. Perhaps the most well known of these Irish individuals is Patrick Charles Keely, one of the most prolific Irish American architects of the late 19th century.

¹ Shepard, Richard F. "Sights and Sounds of Irish New York; Tracing a Grand Heritage." The New York Times. March 16, 1984.

² "Irish Immigrants," Brooklyn Daily Eagle. February 15, 1900, 4.

³ Vinegar Hill Designation Report

⁴ Scherer, Jeff. "Brooklyn's History of Immigrants." www.brownstoner.com



Christ of the Redeemer Church, circa 1917
Source: Digital Culture of Metropolitan New York.



Christ of the Redeemer Church, 2015
Source: student photograph

Keely immigrated to the United States in 1841 and settled in Brooklyn.¹ Beginning in the United States as a carpenter, Keely later rose to great architectural fame (it is believed he trained under his father in Ireland), and is credited with the construction of over 600 churches- the majority of which are Catholic- and many hundred additional institutional Roman Catholic facilities. He is said to have designed 16 Catholic cathedrals alone. Most of his work is Gothic in style.² Between 1865-66 one of Keely's churches was erected in the area. This parish, Church of the Redeemer now Christ of the Redeemer, was located at the Northwest corner of 4th Avenue and Pacific Streets. (Image: Redeemer as seen in 1917)³, Redeemer as seen today).

Local Culture and Tradition

As the vast majority of Irish immigrants were Catholic, the locations and quantities of Catholic churches in the Boerum Hill and Cobble Hill area are a strong indicator of the Irish community's presence. The second Catholic church erected in the borough of Brooklyn is found within the boundaries of the study area. Built in 1838, and still a practicing parish, Saint Paul's is located at 234 Congress Street at the intersection of Congress and Court Streets and demonstrates both the early and constant presence of the Irish community in Cobble Hill.⁴ (Image: St. Paul's as seen today)

Churches were not only religious centers for their communities but cultural communities of the 19th century. A March 1842 article in the Brooklyn Daily Eagle reveals a lot about local Irish culture and religious tradition. The article is a lengthy write up about St. Paul's temperance celebrations coinciding with Ireland's patron saint's day on March 17th. While there was to be a grand mass, emphasis is also placed on the choir- the specific choir members are listed and celebrated, as well as a sense of pride in the visiting reverend from Philadelphia. This visit also highlights the connectivity of the Irish community along the East Coast, and not only within Brooklyn or the New York area.⁵ There are also a series of articles from Irish support groups like the Irish Ladies Industrial Relief that instills a sense of place and community for the Irish in America. And, that the coverage of the Irish political turmoil in Ireland is significant, citing Dublin papers as their source, speaks to the audience of the Brooklyn Daily Eagle in the 1840s and 1850s, when there is a known considerable Irish immigrant community.⁶

Irish dancing is another important element of Irish tradition. Scottish and Irish dance competitions and lessons received significant coverage in the Brooklyn Daily Eagle at the early 20th century. At 62 Flatbush Avenue, just outside the study area, there is known to have been a Philo-Celtic Society holding free Irish dance classes as late as 1904. The advertisement says that this weekly Sunday night event drew lots of Irish men and women.⁷ In 1911, the Irish Step Dancing Society of Brooklyn, led by master dancer Edward T. Kelley, held its first class on 200 Joralemon Street.⁸

1 Kervick, Francis William Wynn. Patrick Charles Keely, Architect. Indiana Private Print: South Bend, 1953.

2 GOETTELMAN, P. (2003). Keely, Patrick Charles. In New Catholic Encyclopedia (2nd ed., Vol. 8, p. 136). Detroit: Gale. Retrieved from <http://go.galegroup.com.ezproxy.cul.columbia.edu/ps/i.do?id=GALE%7CCX3407706218&sid=s>

3 "Brooklyn: Church of the Redeemer., circa 1917" Digital Culture of Metropolitan New York. Accessed April 22, 2016. <http://dcmny.org/islandora/object/photosnycbeyond%3A16236>

4 Bay Ridge Church Brochure; Sleeper, James. "St. Paul's Holds Re-dedication Mass After Parishioners Rally To Save Church's 140 Year Heritage." The Phoenix, December 15, 1977.

5 "Temperance Celebration," Brooklyn Daily Eagle. March 15 1842.

6 "Ireland," Brooklyn Daily Eagle. January 7 1848.

7 "Philo-Celtic Society," Brooklyn Daily Eagle. April 9 1904.

8 "Irish Step Dancing" Brooklyn Daily Eagle. March 24 1911.



St. Paul's Church
Source: student photograph

Swedish

An influx of Swedish immigrants arrived in Brooklyn in the late 1800's as part of a greater trend of Swedish emigration to America, the peak of which took place from 1870-1900. In 1891, an estimated 20,000 residents of the "Swedish Colony" of the Cobble Hill and Boerum Hill area were Swedish immigrants who settled in clusters primarily around Atlantic Avenue. The street's commercial character and waterfront accessibility provided an ideal environment for the predominant occupations of skilled craftsmen and ship carpenters, earning the street its the nickname, "Swedish Broadway."¹

The Swedish immigrants were largely affiliated with Lutheran denominations, and some of their greatest contributions to the built environment of Brooklyn were the many churches they constructed in the area during the late 1800's. Several notable examples remain in and around the Cobble Hill/ Boerum Hill area, including:

1. The former Bethlehem Lutheran Church at 490 Pacific Street, between Third Avenue and Pacific Street, is one such example. The congregation originally organized by Rev. P.G. Sward in 1874, initially conducted its services in various locations, including the German Lutheran church on Schermerhorn Street. In 1882 the congregation purchased a small building from the Second Presbyterian Church, and replaced it with the current structure completed in 1895. The church played a significant role in the community as a hosting space for societies including: The Ladies Sewing Society, the Men's Missionary Society, the Lutheran League, the Young Ladies Society and the Aid Society.²

2. The Immanuel Swedish Methodist Episcopal Church at 424 Dean Street, the corner of Dean and Fifth Avenue, was another Swedish construction. This congregation formed in 1845 under the Rev. A. J. Lofgren. Prior to building the church at 434 Dean Street, dedicated November 20, 1871, the congregation held services in a ship's hull. As of 1908, the congregation of 630 members was small by comparison with the 1,600 members attending the Bethlehem Lutheran Church at 490 Pacific Street, but the Immanuel Swedish Methodist Episcopal Church congregation also contributed to the Brooklyn community by providing support for both the Immanuel and Flatbush missions.³

3. The Swedish Pilgrim Church located on 413-415 Atlantic Avenue, is another example of a Swedish construction. The church was organized April 26, 1883 under the Rev. C. G. Lundkvist, and notably assisted with a home for Scandinavian girls at 149 South Portland Avenue, known as 'Fridhem.'⁴

In addition to 'Fridhem', the Swedes also contributed several other philanthropic institutions to Brooklyn, including: (1) the Swedish Hospital, located at Rogers Avenue and Sterling Place, that was incorporated July 21, 1896 and saw its first patients starting in October of 1906, and (2) the Kallman Scandinavian Orphanage on Eighteenth Avenue, established by Swedish immigrant, Gustaf Kallman.⁵



413-417 Atlantic Avenue
Swedish Pilgrim Church (1890)
Brooklyn Historical Society

Swedish Pilgrim Church
Source: Brooklyn Historical Society

¹ "Atlantic Avenue: the Swedish 'Broadway.'" Ephemeral New York. Feb. 22, 2010. Accessed April 20, 2016. <https://ephemeralnewyork.wordpress.com/tag/scandinavians-in-brooklyn/>

² "Swedes of Brooklyn; Their Influence and Activities". Brooklyn Daily Eagle. Oct. 11, 1908. p. 3

³ ibid

⁴ ibid

⁵ "Swedes of Brooklyn; Their Influence and Activities". Brooklyn Daily Eagle. Oct. 11, 1908. p. 3

The Swedish immigrant population of Cobble Hill/Boerum Hill was a vibrant community with strong interconnected bonds. They assimilated quickly into American society and many of them spoke English, yet they also “wish[ed] to read of the doings of their own people [in Brooklyn] and of the progress of events in the home land, in their own language. To supply this need, there are scores of Swedish magazines and daily and weekly newspapers throughout the land.”¹ The Svenska Amerikanska Preson (Swedish American Press) located at 563 Atlantic Avenue, the intersection of Atlantic Avenue and Fourth Street, supplied the Swedish population with one such newspaper.²

The Swedes also established clubs and cultural institutions in Brooklyn such as the Swedish Engineers Club, and the Swedish Dramatic Society, ‘Svenska Teater,’ that met at 180 Atlantic Avenue and performed “Swedish plays of permanent value.”³ There was also a famous banquet Hall, ‘Turn Verein,’ located at 351 Atlantic Avenue (demolished).⁴

Furthermore, there were also a number of prominent Swedish immigrants who resided in and around the Cobble Hill/Boerum Hill area. G. Hilmar Lundbeck of Nielson & Lundbeck was a successful businessman from South Brooklyn. Architect Axel S. Hedman lived in Flatbush. Dr. Lundbeck was head of the Swedish Hospital medical staff and lived on Bergen Street. Albin Gustafson, president of the Swedish Engineers Club was also a resident of Flatbush.⁵

While Swedish Immigrants contributed much to the Cobble Hill/Boerum Hill area, their presence in the area was relatively short. As the Swedish established themselves in America and became successful, they moved on to settle in other more affluent areas of Brooklyn during the 20th century. Eighth Avenue in Bay Ridge soon became the new enclave for Scandinavian immigrants to Brooklyn.⁶



Brooklyn Daily Eagle October 11, 1908

Newspaper Article, 1908
source: Brooklyn Daily Eagle

1 ibid
 2 <https://ephemeralnewyork.wordpress.com/tag/scandinavians-in-brooklyn/>
 3 “Swedes of Brooklyn; Their Influence and Activities”. Brooklyn Daily Eagle. Oct. 11, 1908. p. 5
 4 <https://ephemeralnewyork.wordpress.com/tag/scandinavians-in-brooklyn/>
 5 “Swedes of Brooklyn; Their Influence and Activities”. Brooklyn Daily Eagle. Oct. 11, 1908. p. 3
 6 <https://ephemeralnewyork.wordpress.com/tag/scandinavians-in-brooklyn/>

Syrians

Immigration

The early history of Syrians in South Brooklyn began with a growing Arabic community that developed around Atlantic Avenue beginning in the mid 1890's. Some new arrivals in America from Syria sought religious freedom while others sought to avoid enlistment in ongoing wars, however the biggest motivator was economic opportunity and the pursuit of the American dream. Many Syrians intended to briefly stay in America until they could save enough money to return home, and by the 1920's some did return home. Those that chose to stay in America flourished and began to integrate slowly within these newfound societies.

Overcrowded tenements in Lower Manhattan (often referred to as "Little Syria") brought these immigrants to South Brooklyn, along with many other minority groups. Easy access to recently developed ferry lines allowed them to own prosperous businesses along Atlantic Avenue. New waves of immigrants, mainly from Syria and Lebanon continued to develop the study area into a burgeoning community¹

Emigration to New York began continued throughout the early 20th century, and reached its peak around 1912.² Though a religious and ethnically diverse group, the Syrians socialized and intermarried. Syrians consisted of four principal religions—Mohammedan, Roman Catholic, Greek Catholic and Judaism. A sizeable Syrian Jewish community originally consisted of two groups, Jews from Aleppo and Jews from Damascus.³ Greek Catholics call themselves Syrians. Roman Catholics prefer to be known as Lebanese, the Mohammedans as Arabs.⁴

Population Growth

From the first arrival of Syrians in the late 19th century, their Brooklyn Colony grew to 7,000 by 1906.⁵ A Brooklyn Daily Eagle article states that though a concentration of businesses occurred around Atlantic Avenue, their residences were "scattered over the Heights, Park Slope, or in Flatbush, wherever living is comfortable."⁶ By 1925, another Brooklyn Daily Eagle article defines how sizable the Syrian population of Brooklyn became, "Out of a total population of 1,000,000 Syrians, 500,000 are in the Western Hemisphere; 250,000 of these in the United States and 20,000 in Brooklyn."⁷

Though no official religious census was taken, it was estimated that "there are 10,000 Christians and 5,000 of the Jewish faith, with a sprinkling of other denominations. The greater portion of Brooklyn's Syrian population is located near South Ferry. From this section several families have moved to the Park Slope, the Gowanus section of South Brooklyn and Bay Ridge."⁸ By 1934, there were about 60,000 Syrians in Brooklyn, many of them growing to economic and social prominence.⁹



Prominent Brooklyn Syrians and Two Temples

Source: McLoughlin, Maurice E. "Syrian Settlers in Brooklyn Have Developed Many Talented Citizens in Various Fields. Brooklyn Daily Eagle. May 22, 1932.

1 "A Crossroads of Immigration." Brooklyn Waterfront History. 2016. Accessed April 15, 2016. <http://www.brooklynwaterfronthistory.org/story/a-crossroads-of-immigration/>

2 Hickok, Guy. "Around the World in Brooklyn." The Brooklyn Daily Eagle. January 27, 1935.

3 "Brooklyn's Syrian Jewish Community." January 3, 2013. Accessed April 20, 2016. <http://brooklynjewish.org/2013/01/brooklyns-syrian-jewish-community/>

4 "By the Way." The Brooklyn Daily Eagle. October 22, 1934.

5 "Bitter Syrian Feuds Caused by Church War." The Brooklyn Daily Eagle. February 4, 1906.

6 Hickok, Guy. "Around the World in Brooklyn." The Brooklyn Daily Eagle. January 27, 1935.

7 Piper, Jean. "Brooklyn Syrian Colony Numbers 20,000: Thrifty, Temperate, Many are Rich." The Brooklyn Daily Eagle. January 18, 1925.

8 McLoughlin, Maurice E. "Syrian Settlers in Brooklyn Have Developed Many Talented Citizens in Various Fields. Brooklyn Daily Eagle. May 22, 1932.

9 "By the Way." The Brooklyn Daily Eagle. October 22, 1934.

Different Sects and the Development of Religious Structures

Islam is the predominant religion of Syria, though most of the early emigrants from Greater Syria were Christian. In 1902, the first church for the Syrian population, the Syrian Orthodox Church was completed at 299 Pacific Street. The Brooklyn Daily Eagle reported, "Yesterday was a great day for the members of the Syrian Orthodox Church and marked the culmination of several years of hard struggle on their part to provide for themselves a fitting place of worship where the full ritual of the Greek church could be carried out."¹ The dedication of the church marked a permanence of the Syrian community with the South Brooklyn, and the emerging number of entrepreneurial Syrians to follow.

By 1912, a Catholic congregation was allowed to hold services at St. Paul's Catholic Church at 234 Congress Street, however the need to build their own church flourished.²

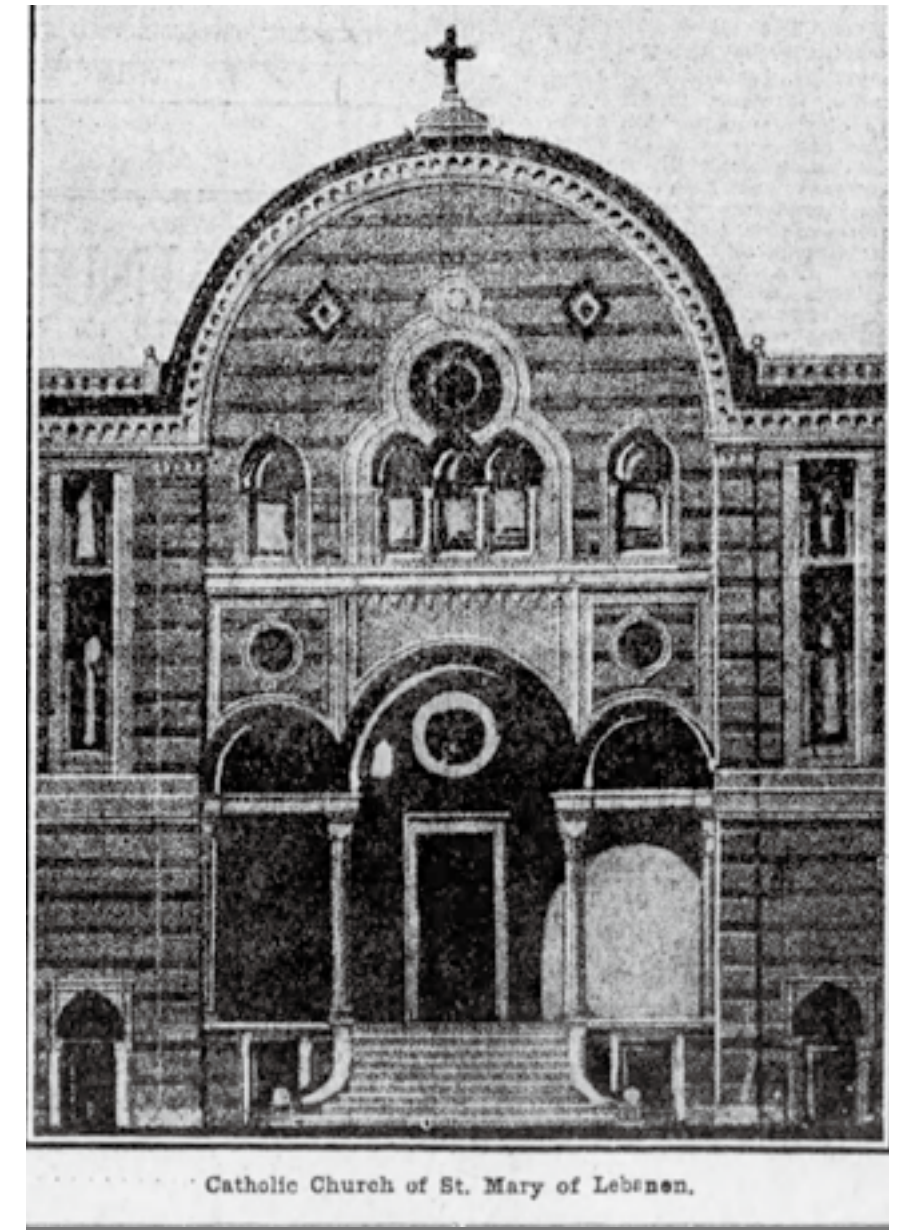
The largest proportion of Brooklyn Syrians belonged to the Greek Orthodox faith, and by 1932 there were three distinct churches for these worshippers: a Greek Orthodox Church (formerly the Episcopalian Church of St. Peter) on State Street, one at Boerum Place and State Street, and the third at Clinton Street and Second Place.

The Maronites formed another large religious group with ties back to the Crusaders of the 11th Century. The Maronites were typically referred to as Lebanese, rather than Syrian and had a church, Our Lady of Lebanon, in the basement on Hicks Street, near Joralemon. This structure is no longer standing. As noted earlier, there are also Syrians of Jewish faith that had a synagogue in Bensonhurst on 67th Street, between 20th and 21st Avenues.

The Catholic Syrians of Brooklyn worshipped at the Virgin Mary Church at Clinton and Amity Streets. A small group of Protestants among the Brooklyn Syrians, congregated in a church at Pacific and Clinton Streets.³ For the most part, the different sects were peaceful, though a Brooklyn Daily Eagle article from 1934 cited an incident of clashes between Maronites and Greek Catholic Syrians.⁴

Atlantic Avenue

The Syrians were industrious and thrived as shop owners along Atlantic Avenue. They were steadfast in their cultural heritage, but easily assimilated to American life. A Brooklyn Daily Eagle article states, "The appearance of the streets around Atlantic, Pacific, Amity, Henry and Dean Streets varies little from any downtown American street, save for a strange sign here and there on the shop windows, or a foreign doctor's name displayed in his home."⁵ Many owned shops that sold a mix of Eastern and Western goods along Atlantic Avenue, and became prominent land owners due to the necessity of their commercial pursuits.



Catholic Church of St. Mary of Lebanon
source: "Brooklyn Syrians and Their Customs." The Brooklyn Daily Eagle. April 14, 1912.

¹ "Greeks Dedicated Their First Church in New York." The Brooklyn Daily Eagle. November 10, 1902. "No instrumental music is permitted in the church, all the singing and chanting being entirely unaccompanied and the language used in the service is generally Arabic."

² "Syrian Women on Stage Break Away from Custom." The Brooklyn Daily Eagle. April 1, 1912. "This play is for our church, you know. St. Paul's Catholic Church on Court Street allows us to hold our services there but we want to build a separate church. We already have the ground. It is on Pacific Street. When we get enough money we will build." Mme. Fahda Jabalie

³ McLoughlin, Maurice E. "Syrian Settlers in Brooklyn Have Developed Many Talented Citizens in Various Fields." Brooklyn Daily Eagle. May 22, 1932.

⁴ "Bitter Syrian Feuds Caused by Church War." The Brooklyn Daily Eagle. February 4, 1906.

⁵ Piper, Jean. "Brooklyn Syrian Colony Numbers 20,000: Thrifty, Temperate, Many are Rich." The Brooklyn Daily Eagle. January 18, 1925. "Atlantic Avenue, near Court Street, and following the slope down to the harbor, is the main street of these hidden replicas of Syria."

Bakeries and pastry shops, notably one at 199 Atlantic Avenue, was one of half a dozen bakeries along Atlantic Avenue. The prevalence of highly spiced food, dates and figs added ethnic products to many of the shops and restaurants along Atlantic Avenue owned and operated by Syrian families. By 1935, The Brooklyn Daily Eagle notes, "Brooklyn Syrians are no longer concentrated, if they ever were, about Atlantic Ave. and Clinton St. where their shop fronts still show a little local color."¹ (Fig. 3: Syrian Bakeries) Another influential institution was present at 181 Atlantic Avenue: the Syrian Daily Eagle, the Greek Orthodox daily newspaper.

Professions

At first the Syrians in Brooklyn, as with other recent immigrant groups, were limited in their occupations and upward mobility. When they first arrived to America, many were peddlers who sold relics, rosaries and souvenirs from the Holy Land. Their occupation as peddlers allowed Syrians to assimilate quickly in order to deal with new American conversation, customs, and mannerism, and they rapidly progressed in commercial pursuits. Within one generation, many continued to sell goods. Laces and linen goods shifted to be sold in permanent store locations, specifically along Atlantic Avenue, rather than peddled door to door²

By the 1930s, after 40 years in America, Syrians spread throughout North and South America and became merchants, manufacturers, and professionals. They adapted quickly to any environment and many that settled in Brooklyn became doctors, lawyers, writers, artists, silk, shoe and clothing manufacturers, importers, exporters and educators.³

Naturally entrepreneurial and industrious, Syrians preferred to own their businesses. A 1912 Brooklyn Daily Eagle article portrays Syrians with a wide range of business proprietorship ranging from "fine rug and carpet businesses in their hands; we buy our cigarettes off them; they sell all the fine and major colored stuffs of the East—her silks and gauzes, her lamps and blades and arabesques, her sweets and liquors."⁴

Culture and Traditions

Though many articles boast of the assimilation and well-natured tendencies of the Syrians within the Brooklyn community, they also continued their rich cultural heritage. Music was a big part of their tradition. A 1925 Brooklyn Daily Eagle article explains, "At 235 Atlantic Avenue, not far from the coffee houses, Tewfic Barham conducts, three days a week, the Arab Music Club founded two years ago to preserve in Brooklyn the plaintive melodies that have echoed through the Arab world for centuries."⁵ The article also noted that they frequently had performances at the nearby Brooklyn Academy of Music that they rented for dance and music recitals.

Another prominent cultural aspect of Syrian life was their love of literature and strong academic background. The Brooklyn Syrians established their own publications with the "The Syrian Daily Eagle" in 1914 (located at 181 Atlantic Avenue) and "Al-Bayan", the only Muslim newspaper being published in America at the time, in 1923 at 391 Fulton Street in Manhattan.⁶

¹ Hickok, Guy. "Around the World in Brooklyn." The Brooklyn Daily Eagle. January 27, 1935. "on Atlantic Avenue a half dozen Syrian bakeries never close, for of all things that a Syrian must have it is his own bread."

² McLoughlin, Maurice E. "Syrian Settlers in Brooklyn Have Developed Many Talented Citizens in Various Fields. Brooklyn Daily Eagle. May 22, 1932.

³ Hickok, Guy. "Around the World in Brooklyn." The Brooklyn Daily Eagle. January 27, 1935.

⁴ "Brooklyn Syrians and Their Customs." The Brooklyn Daily Eagle. April 14, 1912.

⁵ Hickok, Guy. "Around the World in Brooklyn." The Brooklyn Daily Eagle. January 27, 1935. "Now and then Syrians rent the Academy of Music or a ballroom of one of the Heights hotels for a program of Arab music or drama, and when they do they fill the halls with smartly dressed listeners."

⁶ McLoughlin, Maurice E. "Syrian Settlers in Brooklyn Have Developed Many Talented Citizens in Various Fields. Brooklyn Daily Eagle. May 22, 1932.



SOOOO SWEET!—Turkish coffee made cup by cup in a brass pot is being poured by charming Lila Coury, granddaughter of the proprietor of Pyramids Restaurant, 185 Atlantic Ave., where the coffee is a sweet finale to Syrian-cooked meal.



FRESH FROM OVEN are these meat pies, a toothsome Syrian specialty of the Al-waton Bakery at 150 Atlantic Ave. Mrs. Alexander Al-waton, wife of the proprietor, shown here, has beauty shop upstairs, gives hand in bakery when needed.

Syrian bakeries advertised in the Brooklyn Daily Eagle
Source: "The French, Czechs, Scots and Syrians: Seasoned Brooklyn's Melting Pot." The Brooklyn Daily Eagle. April 11, 1948.

Puerto Ricans

The Puerto Rican community arrived later to the study area, and thus had less of an impact on the new construction of what are conventionally considered “historic” buildings. The Puerto Rican community did, however, contribute significantly to the neighborhood’s character. By 1909, passenger vessels run by the New York & Puerto Rico Steamship Company were arriving weekly, and they docked in Brooklyn until 1928. By the 1930s and 1940s, thriving Puerto Rican and Italian communities existed nearby in Cobble Hill and along Columbia Street. Brooklyn’s ports provided jobs and attracted immigrant populations. Many immigrant men worked on the waterfront as longshoremen and sailors.¹

The Puerto Rican community in New York City grew rapidly during the 1940s and 50s with approximately 31,000 new Puerto Rican migrant arrivals to New York each year from 1946 to 1950.² A significant Puerto Rican community developed in the study area around the waterfront and what is now known as Cobble Hill. Beginning in 1960, the Puerto Rican community made up 34% of the study area population, and remains a major component of the area’s population today.³ As was the case with other waves of immigrant cultures, the Puerto Rican community contributed to the integration of cultures already present in the study area. For example, the Puerto Rican Church of Our Lady of Pilar merged with St. Peter’s, and both congregations used the former St. Peter’s Catholic church at 117 Warren Street. According to personal accounts, the Irish Catholic services were held upstairs at St. Peter’s and the Puerto Rican services were held in the cellar.⁴ The Puerto Rican community was also politically active in Brooklyn, and by the 1960s and 1970s had established several organizations that encouraged voters and increased the representation of the Puerto Rican community in local government.⁵

1 Brooklyn Waterfront History. “A Working Waterfront.” Web. <<http://www.brooklynwaterfronthistory.org/story/a-working-waterfront/>>

2 Korrol, Virginia Sánchez. *From Colonia to Community: The History of Puerto Ricans in New York City*. Berkeley: U of California, 1994, 215.

3 Census data with maps for small areas of New York City, 1910-1960 [microfilm]. Ithaca, N.Y. : Photo Services of Cornell University Libraries; Woodbridge, Conn. Distributed by Research Publications, Inc., 1981. Also see SocialExplorer.com

4 Luis Hernandez, Oral history interview (1976). [Puerto Rican Oral History Project] Oral History Collection, 001.052; Brooklyn Historical Society

5 Korrol, Virginia Sánchez. *From Colonia to Community: The History of Puerto Ricans in New York City*. Berkeley: U of California, 1994, 189



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Changes in the Built and Social Fabric

Sense of Community

Seen today, and based on our online survey, the legacy of the Brownstoners has translated into a community that strongly values preservation. Between the community groups and some passionate individuals, maintaining the historic architecture and low-scale homogenous nature of the area is extremely important and collaborative work. A strong and deep sense of community unites these stakeholders in their efforts to oppose large-scale development.

From the online survey results, we found that in addition to historic architecture, the three most important community features are the sense of community, accessibility of location, and cultural diversity. The protection of these values will be discussed later on in our recommendations.

To take another approach at looking at the current community we wanted to understand who has a strong voice, power and stake in the neighborhoods. We therefore identified some of the key stakeholders and divided them between community groups, government, commercial, institutional and individuals.

There is a very active community group presence in the neighborhoods. This includes groups such as the Atlantic Avenue BID, Boerum Hill Association, and Cobble Hill Association. Community Groups 2 and 6 also help bridge the gap between community and government.



233 Court Street
Source: student photograph



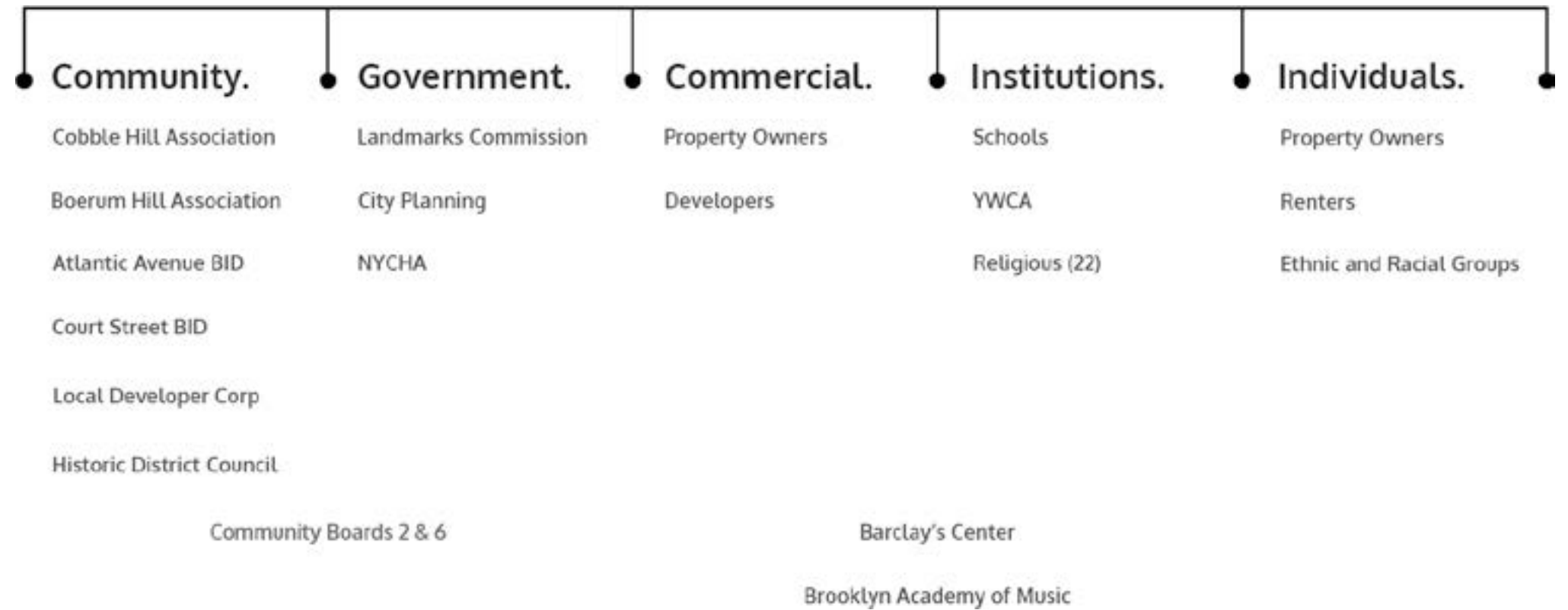
State Street
Source: student photograph

Previous page: 30-38 Bergen Street
Source: student photograph

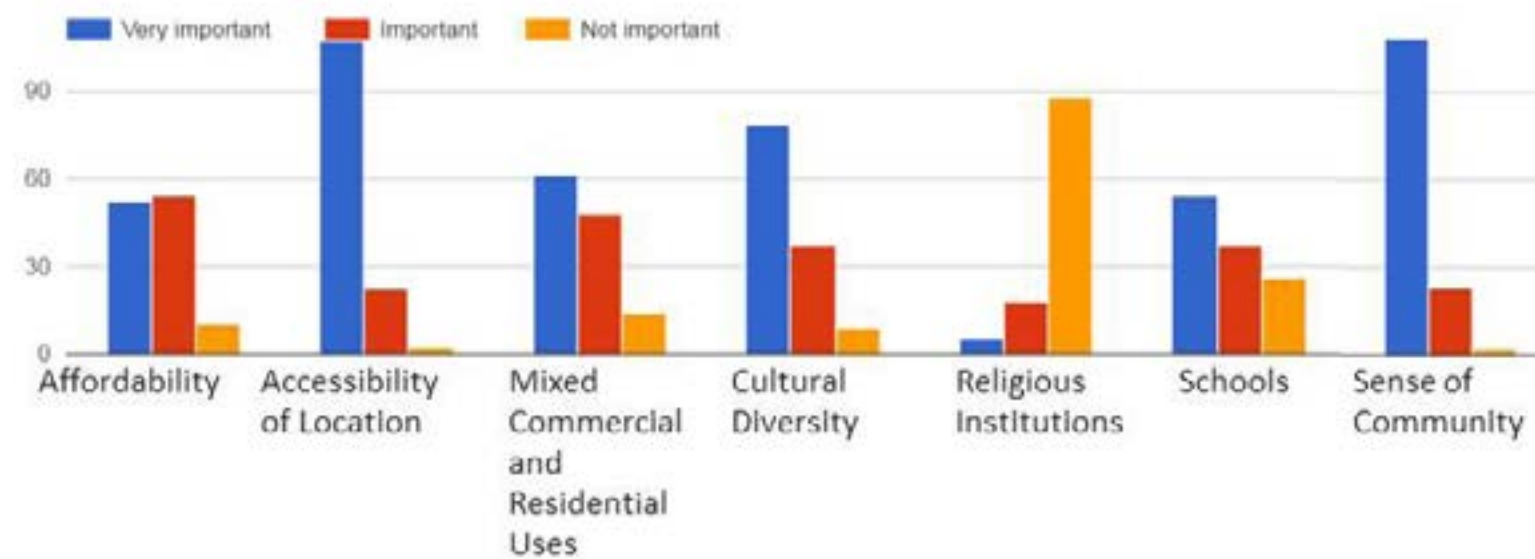
In terms of governmental groups, Landmarks Preservation Commission plays an active role in the community because of the presence of historic districts as well as individual landmarks. With the new development happening on the edges of the study area, City Planning is also an important governmental group that has a strong stake in the community. Another group includes NYCHA, which deals with affordable and low-income housing, such as the public housing projects of Gowanus and Wyckoff housing. For commercial stakeholders, there are business owners and renters as well as developers. Institutions include schools, religious organizations and the YWCA. There are other cultural institutions, such as Barclays and BAM that fall somewhere between the developer and institutions. Finally, individuals in the neighborhoods are important stakeholders. They include homeowners, home renters, and different ethnic groups.

Our online survey indicates that the study area community strongly values preservation. Between community groups and passionate individuals, maintaining the historic architecture and low-scale, homogenous fabric of the area has emerged as a priority.

From the online survey results, we found that in addition to protecting the historic architecture of the study area, the three most important community features are the sense of community, accessibility of location, and cultural diversity.



Community Stakeholders
Source: student created infographic



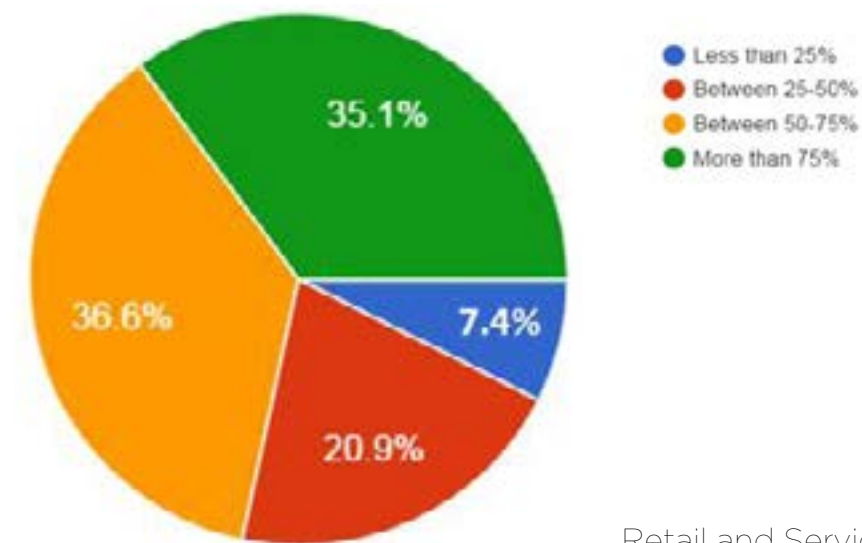
Important Community Features
Source: student made infographic

We also tried to determine what type of values these stakeholders have. To understand their values, we spoke to different stakeholders in interviews, sent a community survey, looked at their websites, and read newspaper articles. While not every stakeholder in each category has the same values, for this exercise we pulled out some of the key values shared by most of them.

We looked at economic, social, educational, aesthetics, and historical values. Most groups value the increase in property values and economic growth, as well as transportation and maintaining an active street life. Some value the low-scale, historic architecture more than others, although most groups find the neighborhood's aesthetics important.

In our online survey, we asked respondents to estimate the percentage of retail and service needs that they purchase in the neighborhood. We found that nearly 72% of those that responded to the survey purchased more than 50% within the neighborhoods. This is a good sign that the stores and services offered in the neighborhood are still attracting and satisfying the community, and might also suggest the potential for increased small business activity in the study area.
source: student created infographic

Community.	Government.	Commercial.	Institutions.	Individuals.
Increasing Property Values	Increasing Property Values	Increasing Property Values	Increasing Property Values	Increasing Property Values
Economic Growth	Economic Growth	Economic Growth	Economic Growth	Economic Growth
Active Street Life	Tourism	Tourism	Equality/Diversity	Affordability
Social Cohesion	Social Welfare	Social Cohesion	Increase in Space	Social Cohesion
Historic Architecture	Housing Options	Aesthetic Value	Transportation/ Parking	Active Street Life
Low-Scale Streetscapes	Foster Civic Pride	Active Street life		High Rated Schools
Cohesive Aesthetic Value	Transportation/ Parking	Transportation/ Parking		Transportation/ Parking
Transportation/ Parking				Historic Architecture/ Low-Scale Streets



Retail and Service needs met locally
source: student made infographic

Residential Character

Multi-dwellings kept evolving into the 20th century. The Tenement Law of 1901 focused on quality housing specifically through air and light regulations. This incentivised the development of large-scale multi-dwellings on combined lots as did the onset of the Great Depression and the aftermath of World War I. Expensive housing prices in Manhattan and the convenience of New York's subway system drove people to live in the outer boroughs, like Brooklyn. "In the early 1900s through the 1930s, transportation, jobs and industry flourished in the borough."¹ The opening of the IRT Subway extension also introduced a new building type to the neighborhood: the six-story elevator apartment house that spanned multiple lots and provided modern amenities for its residents.² By 1920, middle-class expectations created a dichotomy of perception between luxury "apartment" meaning moderate in size, with modern baths and kitchens, and with better light and ventilation than the minimum established by the New Law and the austere term, "tenement."

410 State Street, built by a Brooklyn architect Maxwell A. Cantor in 1929, is an example of this type of apartment. Located on the south side of street, this 6-story brick apartment house occupies a 75x90 foot lot. The structure's façade is characterized by an innovative brick pattern formed by the contrast between white stucco and red clinkers. The footprint is an "H" shaped plan with two courtyards scooped from its bulk to supply enough light and ventilation for its residents. In the plan, the central space was left open to encourage public circulation and easy access to each apartment. (image of plan) Although the attention to public and entertaining spaces left the private areas of these apartments cramped and underserved, newspaper advertisements marketed these apartments as luxury homes "ideal for business couples or small families with modern infrastructures including refrigerators."

In 1933, President Franklin D. Roosevelt committed to leading the nation out of the Depression by promoting jobs for low-rent housing construction and slum clearance as forms of unemployment relief.³ Under the direction of Mayor La Guardia, the late 1930s and early 1940s were a time of urban renewal, with the intention of cleaning up the slums and providing low income families and returning veterans and with affordable housing. The city created the NYCHA in 1934 for the purpose of overseeing slum clearance as well as the construction and management of future housing projects.⁴

From these initiatives sprang the Gowanus Houses and Wyckoff Gardens in the Boerum Hill area. Located between Wyckoff, Douglass, Bond and Hoyt Streets and completed June 24, 1949, the Gowanus Houses consist of 14 buildings on a 12.57 acre complex. An outspoken advocate for slum clearance and public housing, William T. McCarthy designed the Gowanus Houses with Rosario Candela, and Ely J. Kahn. McCarthy was a member of the American Institute of Architects, and the Slum Clearance Committee, but was most well known for his low rise apartment buildings and homes with driveways located along Prospect Park.⁵



410 State Street photograph
source: student photograph



410 State Street Plan
Source: Department of Buildings

¹ "The history of immigrants in Brooklyn", Modified Feb 20, 2015, <http://explorebk.com/2015/02/20/history-immigrants-brooklyn/>.

² Landmarks Preservation Commission. Crown Height Historic District Designation Report. New York City: Landmarks Preservation Commission, 2011

³ Housing in New York: a chronology, Citizen Housing and Planning Council, 1965, P 10-11

⁴ ibid

⁵ "M'Carthy Tells Need of Housing," The New York Times, Jan 30,1934

As the luxury elevator apartment emerged in twentieth century Brooklyn, the already established rowhouse typology underwent a dramatic shift in occupancy as well as the formerly single family residences were subdivided to accommodate for the growth of the area. According to the census research of study blocks, row houses were commonly subdivided to accommodate multiple families. In 1919, the Tenement House Act was revised and officially permitted the conversion of large single-family houses such as brownstones into apartments for less affluent occupants. This legislative event serves as evidence for the popularity of subdividing row houses. According to the 1910 census, the rowhouses on the south side of Bergen Street, between Bond Street and Nevins Street, were already divided before the 1919 Tenement House Act. Most apartments in rowhouses contained more than three families by the 1930s.

In order to preserve and rehabilitate these cramped rowhouses, architects converted the utilitarian backyards into rear-gardens. This idea was first brought to New York during 1920-1930s by Frederick Sterner.¹ Two examples of this trend remain in our study area. One is Atlantic Garden at 525-535 Atlantic Ave. Brownstoner, Frederick W. Hilles Jr. rehabilitated these six houses joined by a communal garden in 1977. (image of building). Each of the six residential units opens on to the garden designed as a private entertainment space for the residents of Atlantic Gardens. Another example of a shared outdoor space is on 360 and 362 Pacific Street. One a Greek Revival house, the other a 1995 construction owned by architect and landscape architect duo, John and Cynthia Gillis, age(<http://architetto.com/project/pacific-house/>) the two are linked by a 55x100 foot garden that features shrubs, trees, perennial plants, and a 4-foot-high hill in the center.²



Gowanus Houses
Source: student photograph



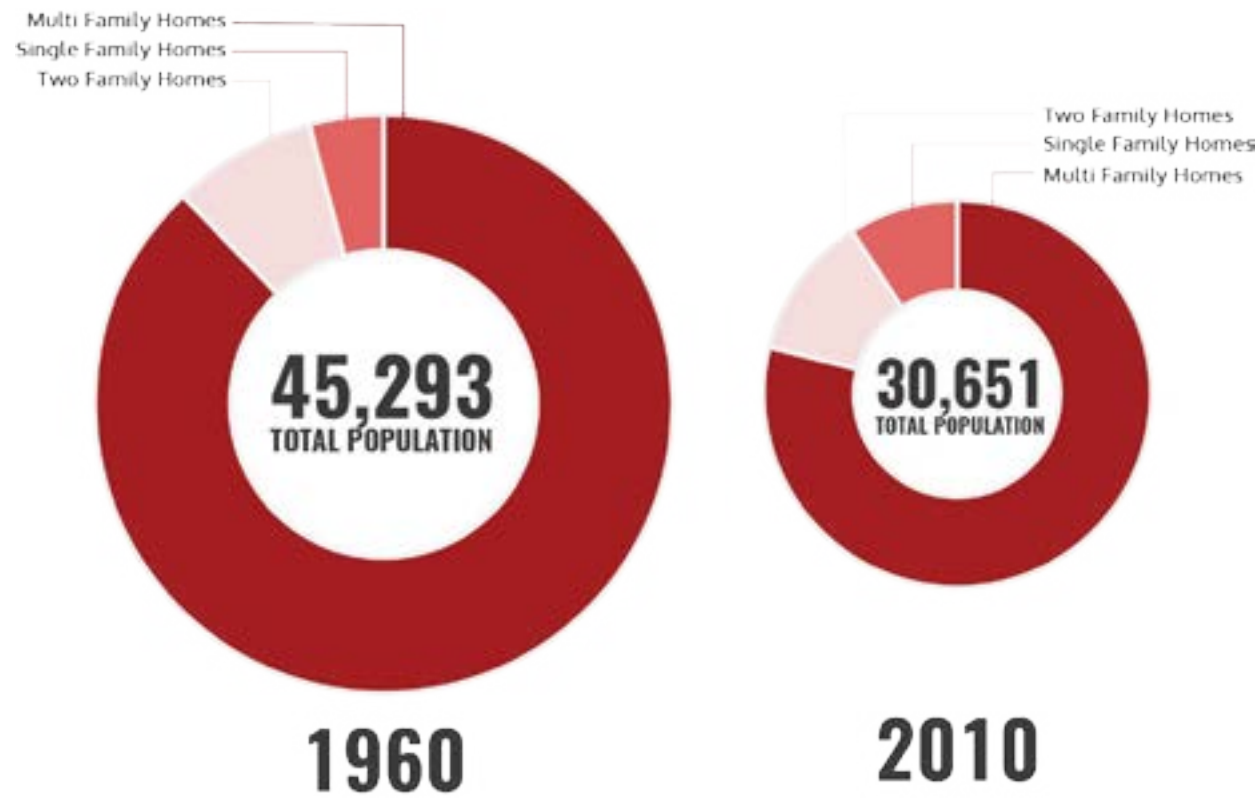
525-585 Atlantic Avenue
source: student photograph

¹ Andrew, Dolkart, *The Row House Reborn: Architecture and Neighborhoods in New York City, 1908-1929* (Baltimore: Johns Hopkins University Press, 2009), 78.

² "Growing in the Boerum Hill Historic District;Brooklyn Gets a House and Garden", Modified by Dec 17, 1995. <http://www.nytimes.com/1995/12/17/realestate/postings-growing-boerum-hill-historic-district-brooklyn-gets-house-garden.html>

Population Density

From 1940 to 1950, the population of Brooklyn increased significantly, including a massive jump in the study area population. Since districting in 1968, the population decreased by more than 1/3, and the number of single family housing units has risen from 4 to 8 percent of the total building stock. This is consistent with the data that indicate an overall drop in population density since 1960.



	TOTAL BROOKLYN POPULATION	BOERUM HILL & COBBLE HILL NEIGHBORHOODS	PERCENT OF TOTAL POPULATION
1910	1,634,351	31,001	1.90%
1920	2,018,356	28,769	1.43%
1930	2,560,401	-----	----
1940	2,698,285	34,150	1.27%
1950	2,738,175	53,584	1.96%
1960	2,627,319	45,293	1.72%
1970	2,602,012	36,321	1.40%
1980	2,230,936	30,455	1.37%
1990	2,300,664	28,587	1.24%
2000	2,465,326	29,203	1.18%
2010	2,466,782	30,651	1.24%








Population Density

Source: student created infographic

This map shows the density of Boerum Hill and Cobble Hill as of 2015. In the Cobble Hill Historic District alone, the majority of the residences are 2 or 3-6 units. In the Boerum Hill Historic District the majority of the buildings are 2 units. Overall, the area is an eclectic mixture of residential buildings with an array of units, but with 2-6 units making up the majority.



2015: Number of Units Per Property

-  studyarea_boundary
-  hist_dist
-  0 Units
-  1 Unit
-  2 Units
-  3-6 Units
-  7+ Units

Commercial and Industrial Character

While initially characterized as a town or a village, Brooklyn was first referred to as a city beginning in 1834. At this time, the formerly rural character of Brooklyn began to change. Farmland was gradually replaced by warehouses and factories. As this newly formed industry grew, infrastructure developed around it with the establishment of the LIRR. The rail line was intended as a shipping route with the ultimate goal of connecting New York to Boston and facilitating the easy transport of goods.¹

Brooklyn's waterfront south of Atlantic Avenue also began to develop as an important industrial area at this time. The ports not only allowed for commuting between Brooklyn and Manhattan and served as an arrival point for various immigrant groups, but they also represented important commercial shipping routes. By 1900, ferry docks, warehouses, factories, and pier sheds lined the Brooklyn waterfront. The New York Dock Company, which controlled much of the area after 1901, built many new buildings and warehouses to house the massive amounts of cargo and commercial goods that were arriving from all across the world.

The 1904 land use maps for Cobble Hill and Boerum Hill show not only that the amount of industry in the area had increased significantly since the late 1800s, but also that a greater diversity of industries was present. There were seventeen locations related to the wagon and carriage industry, fourteen locations related to metalworking, eleven carpenters, one candy factory, one underwear factory, and one brewing company. According to the maps, industry tended to be located in proximity to major lines of transportation, namely along Atlantic Avenue, Court Street, and Smith Street.

After the 1916 zoning law called for the separation of uses, industry began to move towards the outer perimeters of what would eventually become the Cobble Hill and Boerum Hill Historic Districts. The 1929 map reveals not only this movement of industry, but also the decline of the carriage industry, corresponding to the rise of the automobile and automotive industry. By the time of the Cobble Hill designation in 1968, all of the industry had moved outside the borders of the districts. Today, essentially all of the industry is completely gone from the area.

¹ <http://www.lirrhistor.com/lirrhistor.html>

Commercial Land Use Map

Source: student-created infographic



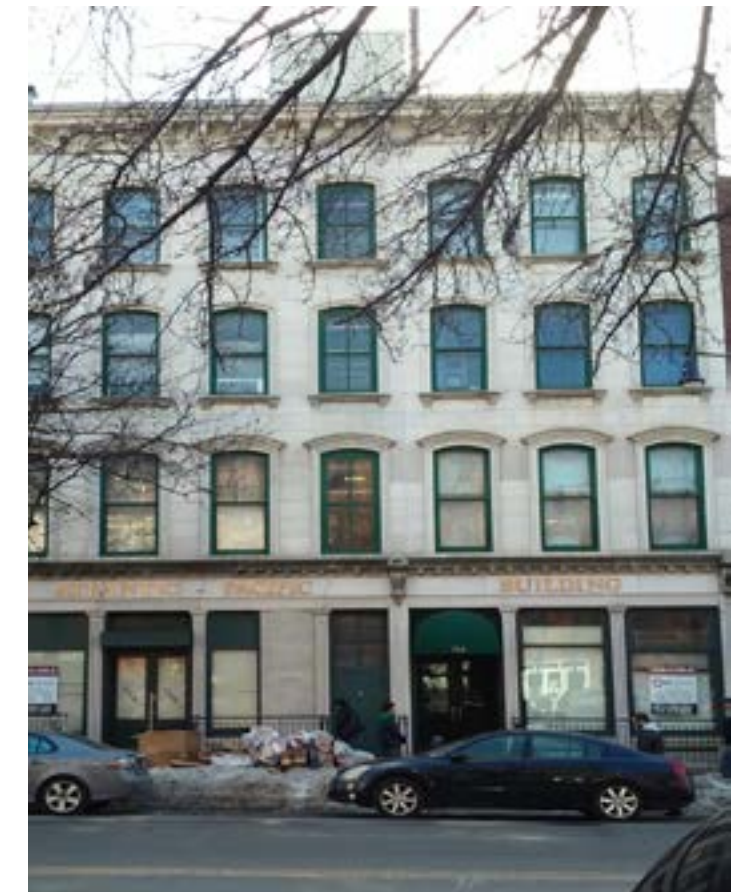
Atlantic Avenue features a unique commercial atmosphere with locally owned businesses and historic storefronts which often find themselves on the ground floor of rowhouses or apartment buildings. Typical storefronts were built with large bays of glass to display the wide assortment of merchandise available to pedestrians passing by.¹ The storefronts are not only significant for their architectural style and details but also for the commercial history of the neighborhoods that they represent. In addition, their presence added activities to the street, giving block frontages more transparency and contributing to a pedestrian-friendly environment.

The history of Atlantic Avenue can be traced back to the 1700s, when it was a private road terminating at Ralph Patchen's farm on the East River.² This country lane then became District Street and was the southernmost boundary of the Village of Brooklyn, incorporated in 1816.³ According to the 1846 Ludlum map, District Street was substituted by Atlantic Street, and the name "Atlantic Avenue" was not adopted until the 1870s. The 1869 Dripps map is the earliest atlas that used Atlantic Avenue by its current name.^{4 5}

The story of this commercial street starts with the port. The western end of Atlantic Avenue met with a line of waterfront storehouses, which served the traffic coming downriver from the Erie Canal. Shipping activities along the waterfront spurred business development on Atlantic Avenue. From 1836, a new ferry service was introduced and passengers would commute to Whitehall Street in Manhattan. This regular service between Brooklyn and Manhattan supported a thriving commercial port and also brought business to Atlantic Avenue, from the corridor to the port. For the brief period from 1844 to 1859, the Long Island Rail Road sent passengers under the avenue through a tunnel — which is still remnant.⁶ With geography as an advantage, Atlantic Avenue developed a commercial atmosphere in 19th century. At the end of the century, the artery was defined by fashionable shopping along with waterfront commerce and manufacturing firms.



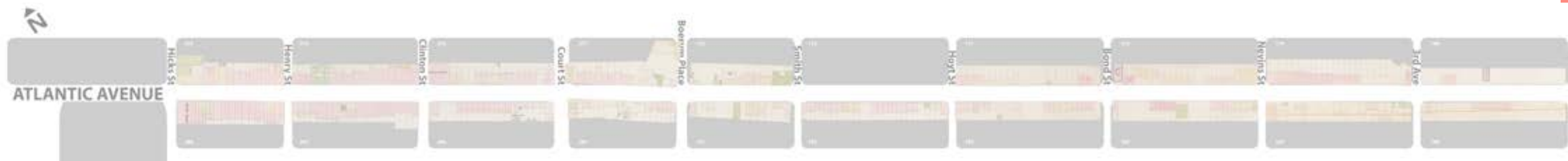
124-128 Atlantic Avenue, c. 1922
Source: Eugene Armbruster, courtesy of the Brooklyn Historical Society



124-128 Atlantic Avenue, 2016
Source: student photograph

One of the most iconic shops was the dry goods store Journeay and Burnham's (built 1851) which had its home on this block from 124-128 Atlantic Avenue.⁷ This four-story dry-goods shop, on this site since 1851, was celebrated as "headquarters in Brooklyn for bargains and low prices."⁸ The shop left the Atlantic Avenue location in 1898, but the Italianate commercial building it once occupied still stands today (as a dentist's office). This building cuts through the block, and its rear façade can be seen on the North Side of Pacific Street.⁹

¹ Atlantic Avenue Local Development Corporation Website, History. <http://atlanticave.org/about-us/history/>
² Atlantic Avenue BID Website, "Why Atlantic Ave." 2015. Accessed 2016. <http://www.atlanticavebid.org/setting-up-shop/why-atlantic-ave/>
³ Ibid
⁴ Ludlum, Silas; Britt, Richard, Map of the Third Ward of the City of Brooklyn, Brooklyn, 1846.
⁵ Dripps, Matthew, Map of Kings County, N.Y. J. & B. McLellan, 1869.
⁶ "Atlantic Avenue, Brooklyn" <http://forgotten-ny.com/2007/05/atlantic-avenue-brooklyn/>
⁷ "124-128 Atlantic Avenue" Six to Celebrate. <http://6tocelebrate.org/site/124-128-atlantic-avenue/>
⁸ Brooklyn Historic Atlantic Avenue Walking Tour, Atlantic Avenue Betterment Association
⁹ "Cobble Hill Historic Designation Report" Landmarks Preservation Commission (1969). p. 62



Atlantic Avenue in 1855
source: 1855 Perris map

According to the 1855 Perris maps, Atlantic Avenue was largely built by that time and storefronts covered blocks west of Clinton Street (Maps of 1855 and 1855 storefronts).¹ Atlantic Market stood at the corner of Hicks Street and Atlantic Avenue, where SUNY Downstate Medical Center is located today. In the second half of the 1850s, new development continued to move towards the east, as well as storefronts. In the 1860 Perris map, block frontages were mostly completed and storefronts were more noticeable, since they started to be evenly spread along the Avenue.² Atlantic Avenue first rose to prominence during the civil war. Shipping activity along the Brooklyn waterfront became an important part of the lifeline that supported troops far to the south with war supplies. As a result, Atlantic Avenue soon emerged as the center of shipping-related commerce, making business highly profitable for its numerous merchants.³ "By the late 19th century, Boerum Hill in general and Atlantic Avenue in particular enjoyed an era of prosperity unequalled in its history. By this time, a great influx of Scandinavian families had arrived--Atlantic Avenue was known as Swedish Broadway--they opened many of the handsome stores whose remnants still remain." According to 1886 Sanborn maps, when the block fronts were all finished, storefronts covered every building on Atlantic Avenue, not including business firms and institutions.

With dynamic business activities, Atlantic Avenue was constantly evolving with regards to its fabric and the content of stores. In the 1930s and 1940s, an influx of Middle Eastern immigrants came as a result of the construction of the Brooklyn Battery Tunnel on Manhattan's Lower West Side, which had been home to a sizeable Middle Eastern community.⁴ This group of newcomers took over the storefronts from old generation businesses and established their own shops between Clinton and Court Streets. Their restaurants and stores offer specialty foods from the Middle East as well as Mid-Eastern music, books, clothing, and other assorted items.⁵ These businesses flourished on Atlantic Avenue until they declined in the 1950s when New York City began the construction of the Brooklyn-Queens Expressway. However, in the 1960s, antiques shops began to cluster there, as well as on adjoining blocks, spurring an economic revitalization. In 1972, a special zoning district was established in the Atlantic Avenue between Court Street and Flatbush Avenue with regulations specifically designed to protect the avenue's scale and character, including original architectural features such as its Victorian-era storefronts. The guidelines tried to ensure that new development would match the existing low-scale fabric and that ground floors would be used for commercial activity. In addition, specific materials and colors were provided as well as certain percentages of glazing in order to maintain consistency throughout the street.

In the 1990s, the Atlantic Avenue Association Local Development Corporation published *A Guide to Atlantic Avenue Zoning Regulations*. The guidebook offered additional recommendations to advance the conservation effort and provided a guideline to identify and preserve historic storefronts. In 2004, when the City created the Special Downtown Brooklyn District, Atlantic Avenue's regulations were retained as the Atlantic Avenue Subdistrict.



103 Atlantic Avenue
Source: student photograph

In 1896, Irish immigrants Jere J. Cronin and his brother founded this funeral parlor, one of few businesses remaining from the 1800s. Mr. Cronin opened in number 103 and then moved to 115.⁶

¹ Perris, William, *Maps of the City of Brooklyn*, Brooklyn, 1855

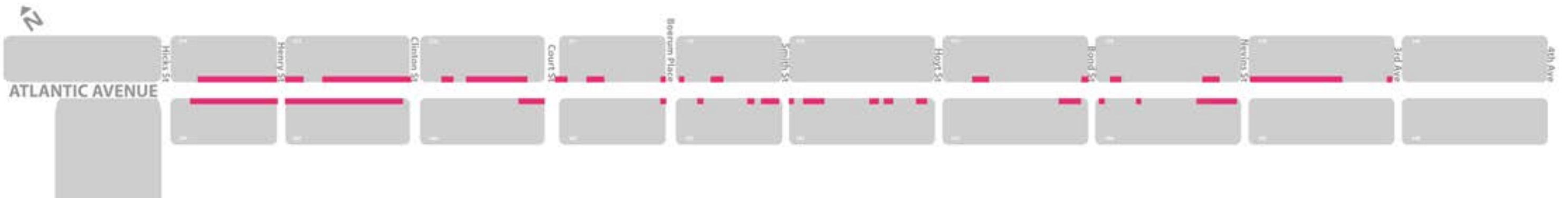
² Perris, William, *Maps of the City of Brooklyn*, Brooklyn, 1860

³ *A Guide to Atlantic Avenue Zoning Regulations*, Atlantic Avenue Association Local Development Corporation, 199

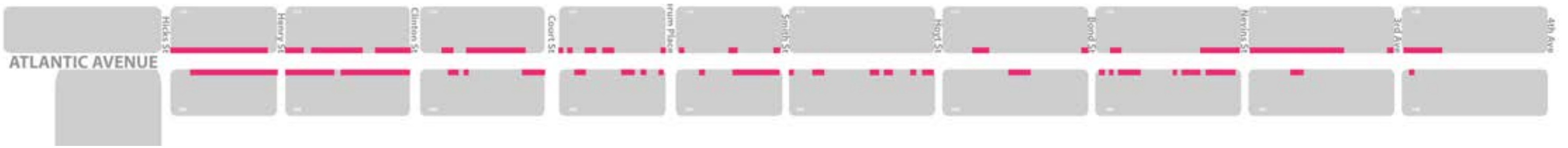
⁴ "Atlantic Avenue, Brooklyn" <http://6tocelebrate.org/site/middle-eastern-businesses/>

⁵ Atlantic Avenue BID Website, *Why Atlantic Ave* <http://www.atlanticavebid.org/setting-up-shop/why-atlantic-ave/>

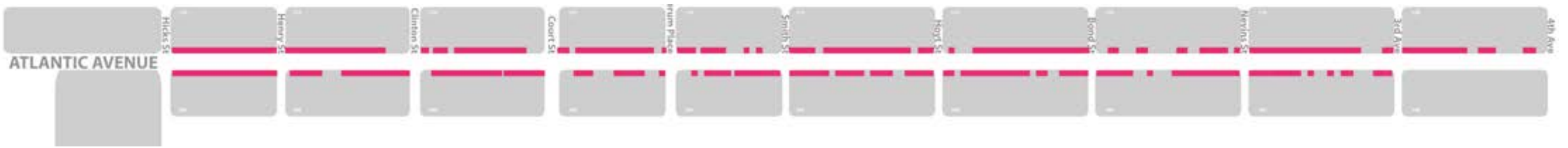
⁶ Brooklyn Historic Atlantic Avenue Walking Tour. Atlantic Avenue Betterment Association.



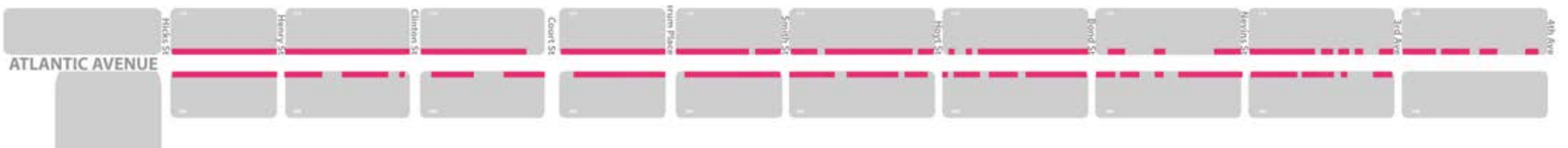
1855 Storefronts map



1860 Storefronts



1886 Storefronts



1904 Storefronts

The above infographics track the gradually increasing number of storefronts on Atlantic Avenue from the mid 19th century to the early twentieth century.
Source: student-created infographics



110 Atlantic Avenue
Source: student photograph

Before 1900, Scranton & Co. sold “groceries, wines, liquors etc.” at 110; in 1884 annual sales were recorded at \$150,000. Saturday evenings, men from Brooklyn Heights “would repair for dinner to one of the numerous chop houses [on Atlantic Avenue], and there indulge in the real old English fare which was then prevalent.” — James M. Callender, 1927 7. Today the Avenue is still a popular “watering hole,” but the “fare” is greatly diversified — now featuring cuisine from all over the world.



180 Atlantic Avenue
Source: student photograph

This four-story commercial building has a cast-iron façade, an unusual feature for Atlantic Avenue. The wrought-iron railings at the window openings are separated by smooth pilasters rising up the three stories above the ground level. It is capped by a Neo-Grec bracketed cornice. Aside from the storefront, which was replaced, the façade retains its original materials and configuration.²



164-168 Atlantic Avenue
Source: student photograph

These mercantile buildings display the importance of architecture as a means of representing and advertising businesses in the 19th century. The quality of the materials and attention to details, such as stone quoins and bracketed roof cornices, is exceptional. They were designed in a simplified Italianate style and the center of 166-168 Atlantic Avenue has a prominent central gable. As evidenced by the painted sign, the buildings were home to a shop selling shipbuilders’ goods. In the mid-19th century, Atlantic Avenue was host to a number of nautical goods manufacturers and dealers. These buildings were restored and converted to residential units in 2006, and the painted sign got a fresh coat of paint. Note the ornate parapet on 177 Atlantic Avenue, a commercial building directly across the street.³

¹ Brooklyn Historic Atlantic Avenue Walking Tour. Atlantic Avenue Betterment Association.

² Perris, William, Maps of the City of Brooklyn, Brooklyn, 1855

³ “Atlantni Avenue, Brooklyn.” Historic Districts Council. Accessed April 15, 2016. <http://6tocelebrate.org/site/164-atlantic-avenue-166-168-atlantic-avenue/>

Today, Atlantic Avenue retains its commercial character. However, the historic fabric may not be intact. After speaking with the community and through our own surveys, we have found that these Special Purpose District guidelines are not entirely effective. From the community, we heard issues of owners and new developers not following these guidelines and that the rules are not often enforced. We also found that these guidelines are potentially driving owners to historicize the storefronts, meaning they make the storefronts look 19th century without any original fabric or documentation telling them what it had looked like.

As part of the study we investigated and identified significant storefronts on Atlantic Avenue by combining archival research and in-field documentations. First, we identified building dates and development patterns through historical maps and land conveyances. By visiting study blocks, we looked carefully for historic details and materials. The next step was to research historic photos (if any) and compare them with our own graphic documentation. With all the findings integrated, we were able to identify significant storefronts. The storefronts can be considered significant by being in either of the two categories: historic, which means that they retain all historic design or fabric; historicized, which means the storefronts might have partial restorations and recreations but are still significant because they retained some or all of their historic character. Of the 263 storefronts surveyed on Atlantic Avenue, 105 were considered to be significant storefronts, but just 42 of these were historic, while the rest (63 total) were historicized in some way (see the map on the next page).

Despite these alterations, the storefronts that exist today are still significant because of their historic details and designs, their locally owned businesses, their contribution to the streetscape and the collective memory remaining they invoke.



407 Atlantic Avenue - historic storefront
Source: student photos



477 Atlantic Avenue - "historicized" storefront
Source: student photos

Historic Storefront Map

Historic storefronts are not only important on Atlantic Avenue, but also on Court Street, Smith Street, as well as some corner stores throughout the study area. This map shows the location of historic or historicized storefronts in the neighborhoods. Historic storefronts contribute much to the overall character of the neighborhood, and it is troubling to see how limited this typology actually is in the study area.

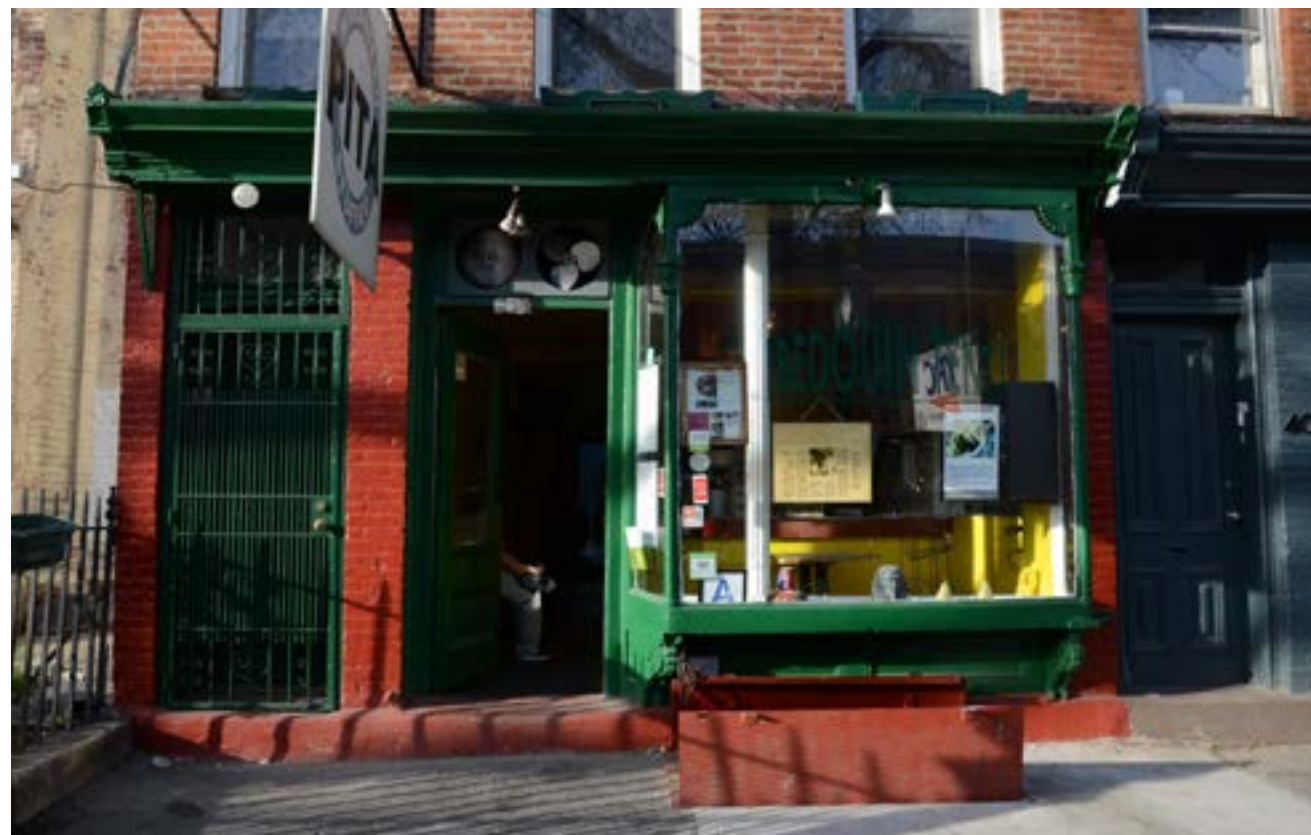




Above and right: 394-402 Atlantic Avenue; bottom right: 394 Atlantic Avenue
Source: student photos

From 394 - 402 Atlantic there is a string of 5 rowhouses, with the block's longest stretch of historic and restored storefronts. These storefronts contain historic elements, but have been recently restored and painted. Much of the paneling and ornament lacks the detail expected in an original work, but careful attention to detail and thought has been given to them. 394 is a good example of this, where the paneling on the doors and below the storefront is not the workmanship of a historic storefront.





Above: 405 Atlantic Avenue; Upper right: 407 Atlantic Avenue;
 Bottom right: 409 Atlantic Avenue
 Source: student photographs

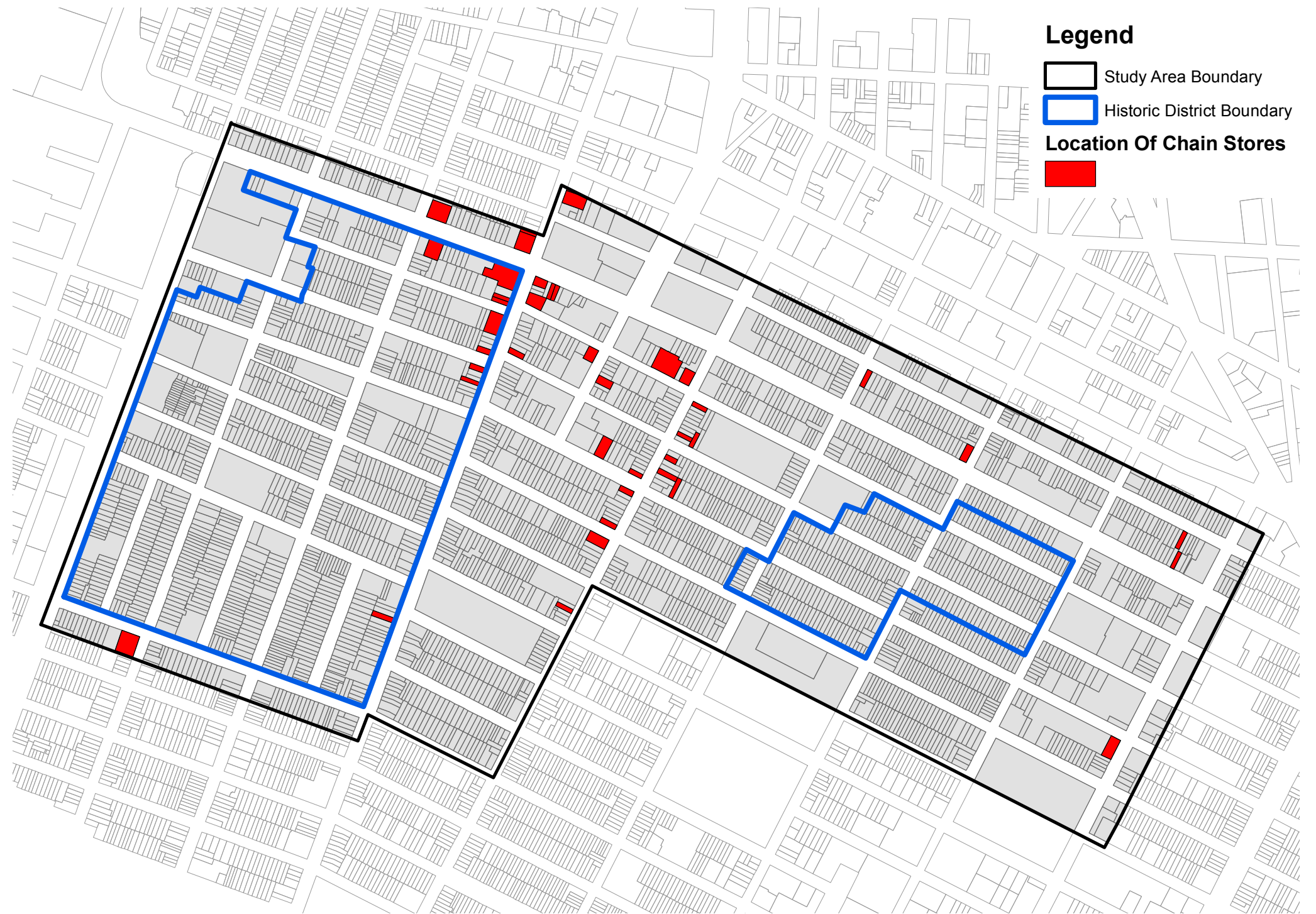
According to maps, three storefronts on 405-409 Atlantic Avenue presented as early as 1855. By 1930 and 1970's photos, they stayed almost the same: the heights, form, show windows and door placements are all similar to their 1930s appearance. The show windows are on the east facade, followed by the doors of the shops and the gates to the upper residences. Today, these storefronts are protected by new paint and are in good conditions, except that the cornices are slightly deformed. Show window and cornices of 405 Atlantic were made out of cast iron. They all have thin piers, but only 405 and 407 Atlantic Avenue have scallops brackets on top of the piers. In addition, the cornices of 405 and 407 are very simple and geometric and yet 409 has a storefront which exhibits neo-grec features, indicating it has undergone possible renovation.



Chain Stores

Along with the issue of losing historic storefronts, the community is worried about the increase of chain stores coming into the area. Chain stores come in and want to put their specific branding on the storefronts, which affects the look of the streets and leads to the potential loss of more historic storefronts. In addition, chain stores are affecting the neighborhood financially. Residents are concerned that the chain stores, which have a large financial backing and long-term business plans, are driving out small businesses. Rents are now higher for commercial space because of these chain stores, and small businesses often cannot afford to pay it. In addition, many residents believe that the small business owners and renters are typically more engaged in the community than chain stores, which often have owners or workers that do not live in the area.

This map indicates the location of chain stores in the study area: the majority are on the corner of Atlantic Avenue and Court Street, where two major commercial roads meet.



Design break: 128 Smith Street

This design site is the location of a one-story commercial building, outside of any of the historic districts, allowing the designers more freedom in the creation of new buildings.

The first of these designs, choosing to remove the original building, seeks to design a mix of commercial and market-rate residential, while staying sensitive to the surrounding fabric.

The second of these designs seeks to explore the dynamic position of the site, both spatially and temporally, in the neighborhood.

See pages 153 - 172 for the full project descriptions.



Elevation by Elizabeth Canon



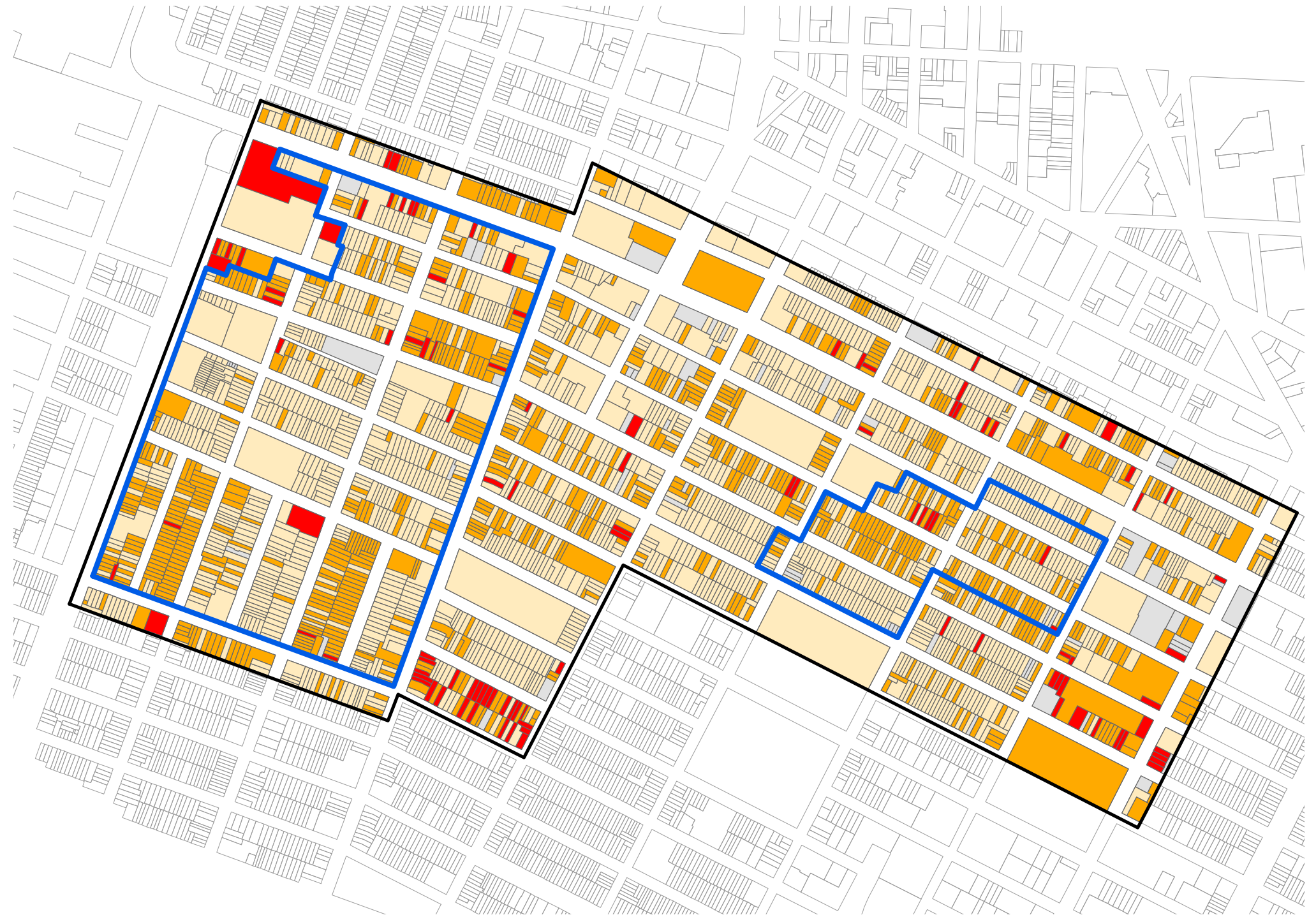
Rendering by Valentina Angelucci

Materials, Condition, and Integrity

Average Condition of Buildings

When looking at present building conditions, our data confirmed that the conditions of buildings in the study area have remained good over time. However, some blocks in the study area stood out due to certain variations in building condition in adjacent or opposite blocks. This led us to select some of these blocks as case studies for detailed research to be carried out in the second phase (described in the methodology section). The dataset generated by the detailed survey was then used to carry out some analysis in order to extract meaningful information about changes in building conditions over time.

As stated in the methodology section, we qualified building conditions with the terms Good, Fair and Poor, respectively using a scale of 3, 2 and 1. The surveyor rated separate material categories such as primary facade material, secondary facade material (if present) and architectural features such as cornice, stoop, historic ironwork, historic storefront, and sculptural ornament. To calculate the value of average condition of a building for a particular year meant to find the average of all the condition values available for the building in that year (exemplified in the Figures #-3 below).



23 Tompkins Place



1930's / 1940's Photograph
Source: nyc 1930-1940s tax photographs

Average Condition = 3.0



1980's Photograph
Source: nyc 1980's tax photographs

Average Condition = 2.3



2016 Photograph
Source: student photograph

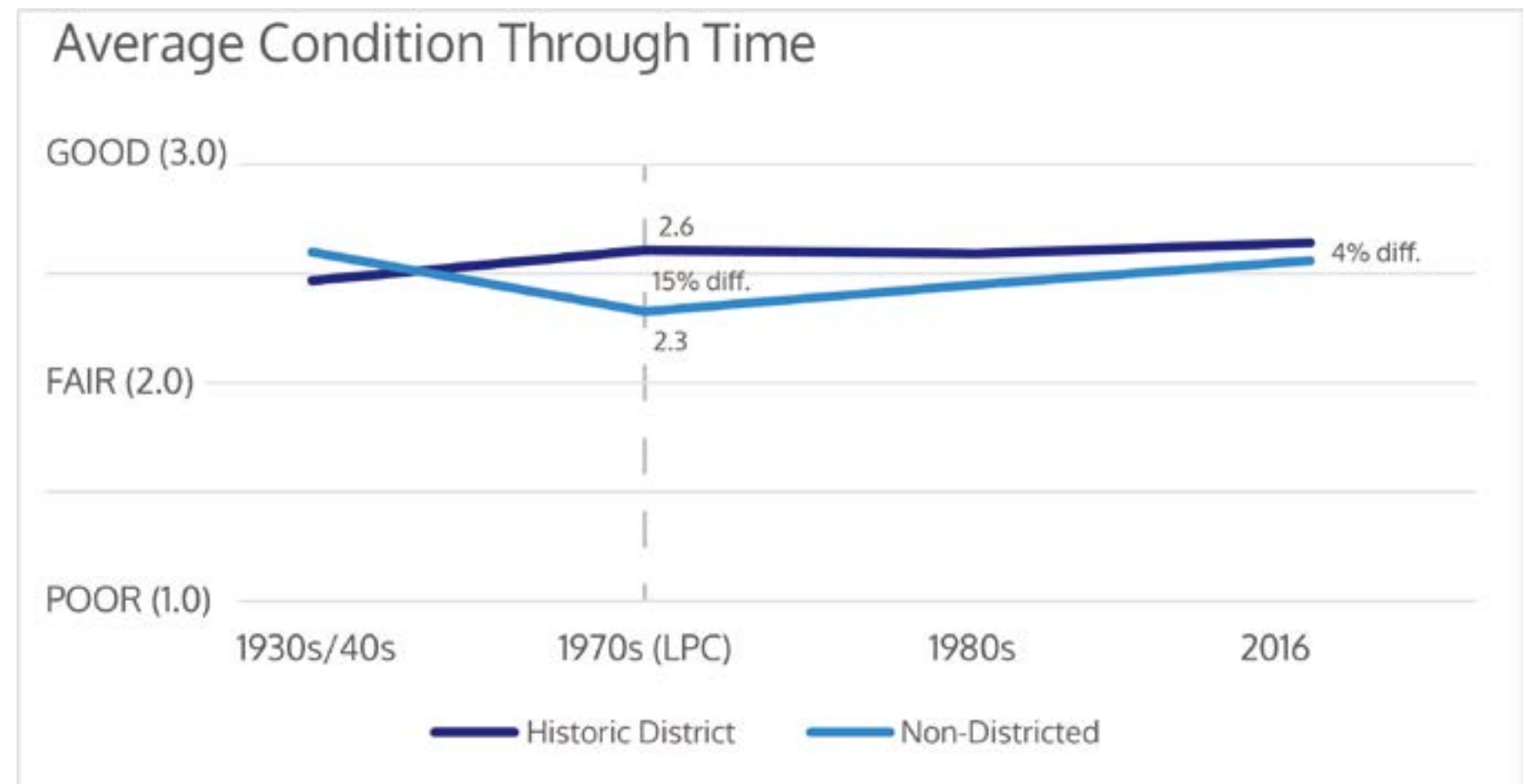
Average Condition = 3.0

The average condition values for the properties were plotted and the graph suggests that buildings within the historic district have remained in slightly better condition than those outside of the district. Both inside and outside of the historic district, the average condition of buildings is relatively constant between 2.3 and 2.6 on our scale from 1 to 3. This suggests that home and business owners have cared for and invested in these buildings over the last seventy-five years. However, if we look closer at the differences, it is interesting that the largest gap in conditions can be found at the time of districting. In the 1970s, buildings inside of the historic district were rated to be in 15% better condition than those outside of the district. The small gap between average conditions inside and outside of the historic districts has, however, narrowed since designation in the 1970s. The average condition of these buildings is steadily on the rise, and now there is only a 4% difference in condition of buildings inside and outside of the historic district. Conditions in Cobble Hill and Boerum Hill were practically identical through time.

We have to emphasize that these evaluations cannot be considered absolutely conclusive due to the discrepancies in data collection and the fact that the second phase of analysis only included eighteen out of the total eighty-four blocks in the study area.

Since one of the aims for the studio was to track changes that had happened over the years in our study area, we planned to track how building conditions had changed since the 1930s. In order to be able to map the changes, average condition values for each of the properties in the study area were calculated for the years for which tax photographs were available and usable. However, in the final calculation of the 'change in condition index', the mean condition values for the 1980s were discarded because the number of photographs available were drastically lower than those in the 1930s and 2016 and therefore could not be used to produce comprehensive results.

The following formula was used to calculate the change in condition index:
 Condition Change = (average condition value in 2016) - (average condition value in 1930s)



Graph showing Average condition of buildings inside and outside historic districts
 Source: student created infographic

Design break: 188 Pacific Street

This site required an addition to former public school No. 78 (today condominium residences) in the lot alongside, while providing alternate means of parking for the condominium. The site also lies within the Cobble Hill historic district, requiring it to comply with the Landmarks Preservation Commission regulations.

In the first design, a modern apartment building was designed using glass and concrete, using large windows and sliding doors to break the building envelope and enhance interaction with the historic viewscales.

The second design was designed to incorporate the surviving row house typology next door and create a design that was consistent with the scale of the school.

See pages 173-189 for complete design pages.



Study model by Katrina Virbitsky



Rendering by Andrea Sforza

Average Condition Change in the Case Study Blocks

We were able to generate both negative and positive values for most of the properties in the case study blocks. The positive values suggest that the condition of a property has improved from the 1930s and is relatively better at present. Likewise, the negative values indicate that a property has undergone a decline in its overall condition from the 1930s. These values were mapped and it was evident from the map that condition of buildings have mostly seen improvements over the last eighty-five years, regardless of their locations inside or outside of historic districts. According to the map, red and orange colors indicate where the condition of the building has gotten worse over time. Blue indicates improving condition. The patchwork of colors on this map suggest that improvements or declines in condition really depend on individual owners and less-so on location.



148 Court Street

Here are typical examples that illustrate our study. This building is located in the northern section of Cobble Hill along Court Street. Although the building has changed, signs replaced, features painted, it has been well-maintained and cared for over time. Hence, the index of change here is zero.



1930's/1940's Photograph

Source: New York City 1930's / 1940's tax photographs, courtesy of the Municipal Archives, New York



1980's Photograph

Source: New York City 1980's tax photograph, courtesy of the Municipal Archives, New York.



2016 Photograph

Source: student photograph

23 Tompkins Place

This is another example at the southern end of Cobble Hill at 276 Court Street. Here, conditions have improved over time. This building, with its recently painted cornice and updated storefront is in better condition today than in the past.



1930's/1940's Photograph

Source: New York City 1930's / 1940's tax photographs, courtesy of the Municipal Archives, New York.



1980's Photograph

Source: New York City 1980s tax photographs, courtesy of the Municipal Archives, New York.



2016 Photograph

Source: student photograph

278 Court Street

In contrast, the condition next door at 278 Court Street has worsened over time. The building today shows a deteriorating facade with brick in poor condition.

Overall, the condition analysis of our study area (as well as the case study blocks) suggests that change in building condition is primarily specific to the building or lot, as opposed to a block or district. Conditions in Cobble Hill and Boerum Hill have practically been identical through time.



Fig. 1. (Left) 1930's/1940's Photograph
source: nyc 1930's / 1940's tax photograph



Fig. 1. (Right) 1980's Photograph
source: 1980's tax photograph



Fig. 1. 2016 Photograph
source: that focused on defining facade material use, d.

Integrity

While realizing that a structure's historic integrity is a complicated and nuanced characteristic to define, this study sought to place a valued assessment on the loss or gain of integrity for each building within the case study blocks in an attempt to extract a quantified expression of change over time. Through a process similar to the assessment of material conditions, the integrity analysis relied on specific questions in the Historic Photograph Survey to quantify this change by assessing the presence of original features and adherence to style of construction. These questions included a three (3) point scale of good, fair, and poor as a response to:

Rate the building's stylistic integrity

Rate the building's material integrity

Based on the averages of responses to this point system, this study found that, similar to conditions ratings, the integrity of structures in this study area remained consistently high for the period between the 1930s to the present, suggesting that minimal exterior alterations occurred through the area. However, the study also demonstrates that the integrity performance of structures

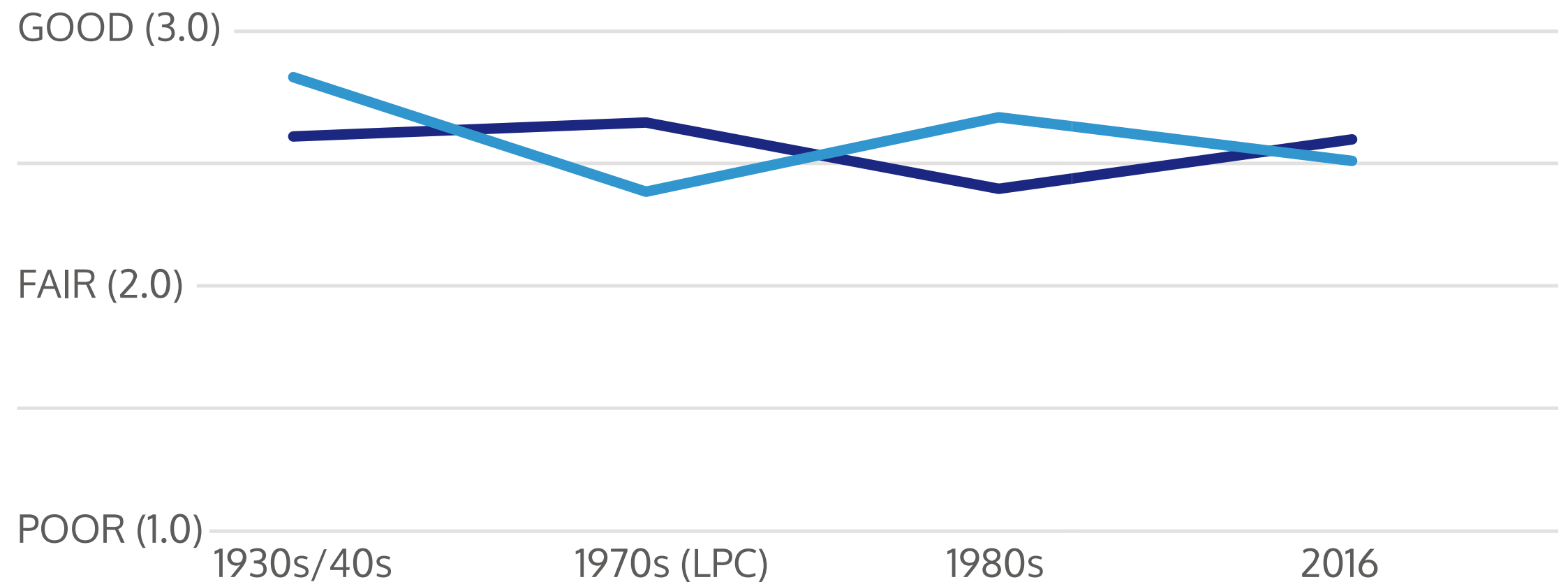


Fig. 1. Average Integrity of All Typologies
source: student created infographic

A graphic representation of the same data, but excluding the integrity averages for rowhouses from the analysis, yields a different expression of integrity through time. Illustrated in the graph below are the average integrity values for buildings with commercial, mixed use, institutional, and industrial typologies. From this graph, the study determined that the integrity ratings of non-residential typologies were much higher for buildings outside of the historic district. Commercial, industrial, and institutional buildings within the historic district have lower integrity values through time, including a slightly lower value today, suggesting that commercial, industrial, and institutional buildings inside the district have changed more than those outside the district. By extension of this finding, this graph suggests that the historic district did not prevent significant alterations and façade changes to buildings of non-rowhouse typologies.

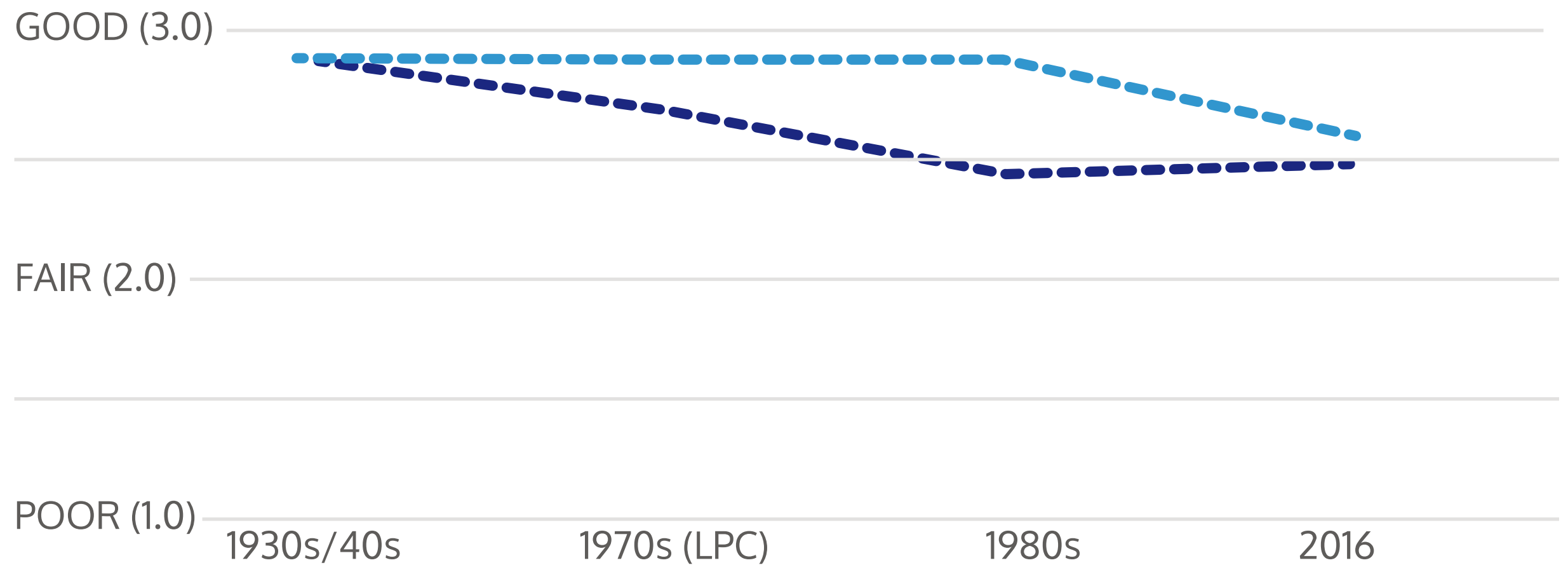


Fig. 1. Average Integrity through time of Non-Rowhouse Typologies
 source: student created infographic

Integrity Index of Change

Mapping the studio's collected data demonstrates that, as with the conditions assessment, no strong patterns or correlative factors emerge spatially. Thus, integrity is lost or gained on an individual building basis suggesting changes to the exterior are contingent upon the building's owner and not necessarily upon external factors.

Although the integrity values in this neighborhood remain high and do not present any particular geographic orientation, the Historic Photograph Survey illustrated three specific trends that affected the qualifications for integrity values.



Although the integrity values in this neighborhood remain high and do not present any particular geographic orientation, the Historic Photograph Survey illustrated three specific trends that affected the qualifications for integrity values.

The first of these trends was the removal and return of features, namely stoops and cornices. In the example below, this rowhouse in Cobble Hill lost its stoop and cornice between the 1940s and the 1980s and the windows at the first floor were partially filled. By 2016, the building regained its stoop and cornice, and full height windows replaced the smaller ones.

The trend of buildings regaining features removed in previous decades occurred more frequently in historic districts than outside the districted area. On this block and the adjacent block in Cobble Hill, a total of eight regained their cornices that had previously been marked missing.

54 Tompkins St.



1930's/1940's Photograph

Source: New York City 1930's / 1940's tax photographs, courtesy of the Municipal Archives, New York.



1980's Photograph

Source: New York City 1980s tax photographs, courtesy of the Municipal Archives, New York.



2016 Photograph

Source: student photograph

231 Bergen Street

Only one example of this trend exists in the case study blocks that fall outside of the historic districts. This building is on Bergen Street just outside of the Boerum Hill historic district. It maintained its stoop and cornice into the 1940s. However, by the time of districting, both of these features were removed. The cornice is still missing as of 2016, but the entry was restored and the stoop replaced by a modern variation



1930's/1940's Photograph
Source: New York City 1930's / 1940's tax photographs, courtesy of the Municipal Archives, New York.



1980's Photograph
Source: New York City 1980s tax photographs, courtesy of the Municipal Archives, New York.



2016 Photograph
Source: student photograph

325 Clinton Street

This analysis also found a common theme of change is facade material, discussed previously in the Materials section of this report. These façade alterations were among the most common influences for the change in average integrity score. Brownstone buildings were particularly susceptible to this trend as is illustrated below by 325 Clinton Street in Cobble Hill. The building maintained its brownstone facade into the 1940s but today the loss of brownstone either reveals or was replaced by a brick facade. With the brownstone, the building also lost its carved lintels and cornice.



1930's/1940's Photograph

Source: New York City 1930's / 1940's tax photographs, courtesy of the Municipal Archives, New York.



1980's Photograph

Source: New York City 1980s tax photographs, courtesy of the Municipal Archives, New York.



2016 Photograph

Source: student photograph

An example of the same trend, but outside of an historic district, this building yielded its brownstone facade to a stuccoed exterior. This is an incredibly common change in the neighborhood. Many buildings, including entire stretches of rowhouses that have gained stucco between the 1940s and today. (see materials map)

120-122 Bergen Street

A final trend recognized through the Historic Photograph Survey was the current preference for bare-brick facades. During the period of the 1980s, a larger number of buildings featured applied textures -- including paint, stucco, or other added ornament that has today, been largely removed in lieu of exposed brick. This occurred both inside and outside of the historic districts.



1930's/1940's Photograph
Source: New York City 1930's / 1940's tax photographs, courtesy of the Municipal Archives, New York.



2016 Photograph
Source: student photograph

18 Douglass Street

18 Douglass Street is an example of a rowhouse outside of the historic district that featured a painted facade in the 1940s that was removed in favor of unadorned red brick.



1930's/1940's Photograph

Source: New York City 1930's / 1940's tax photographs, courtesy of the Municipal Archives, New York.



2016 Photograph

Source: student photograph

257 DeGraw Street

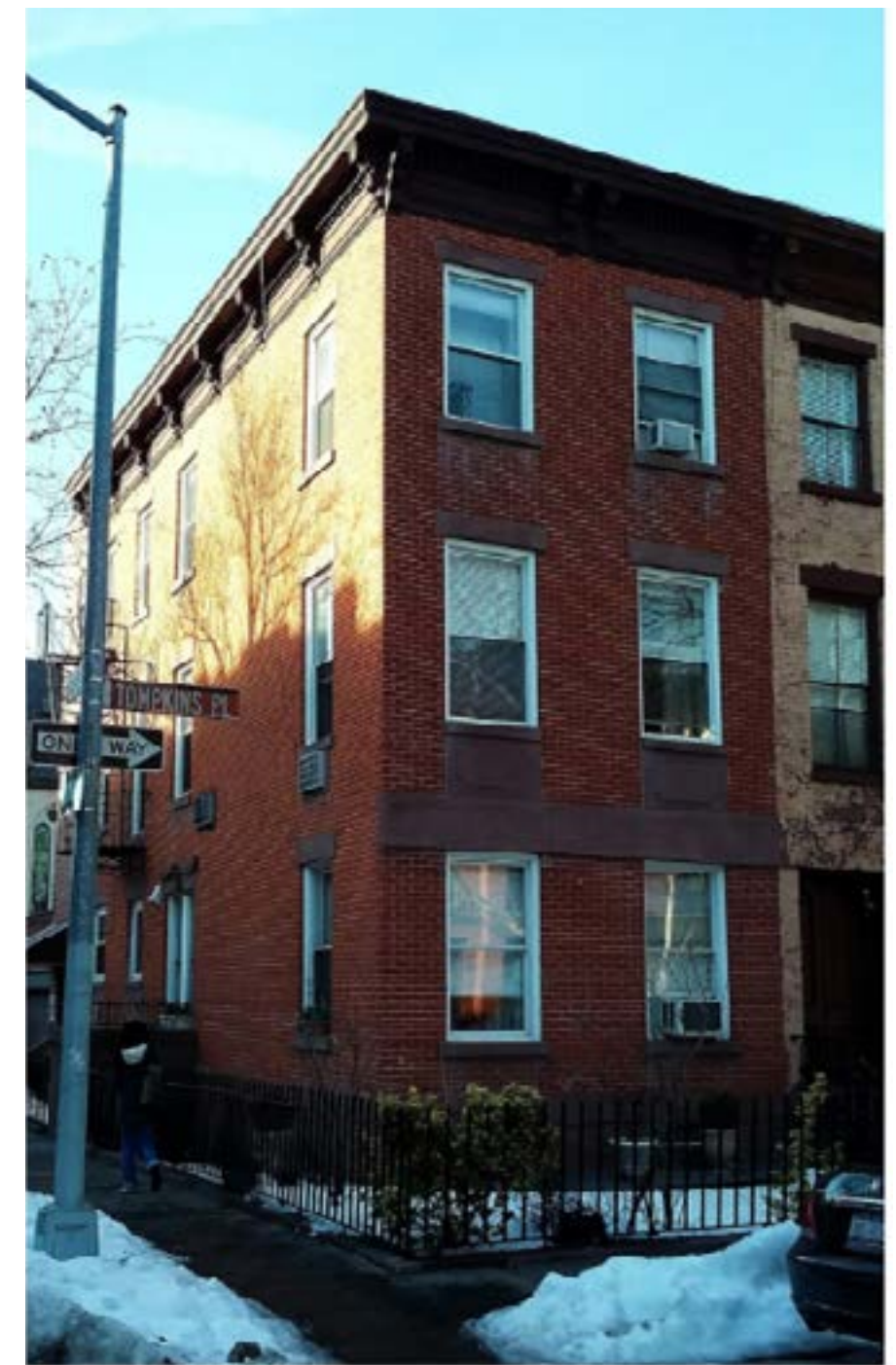
257 DeGraw illustrates this same trend but falls within the historic district of Cobble Hill. Its facade was painted white between the 1940s and the 1980s. Today, the paint has been removed.



1930's/1940's Photograph
Source: New York City 1930's / 1940's tax photographs, courtesy of the Municipal Archives, New York.



1980's Photograph
Source: New York City 1980s tax photographs, courtesy of the Municipal Archives, New York.

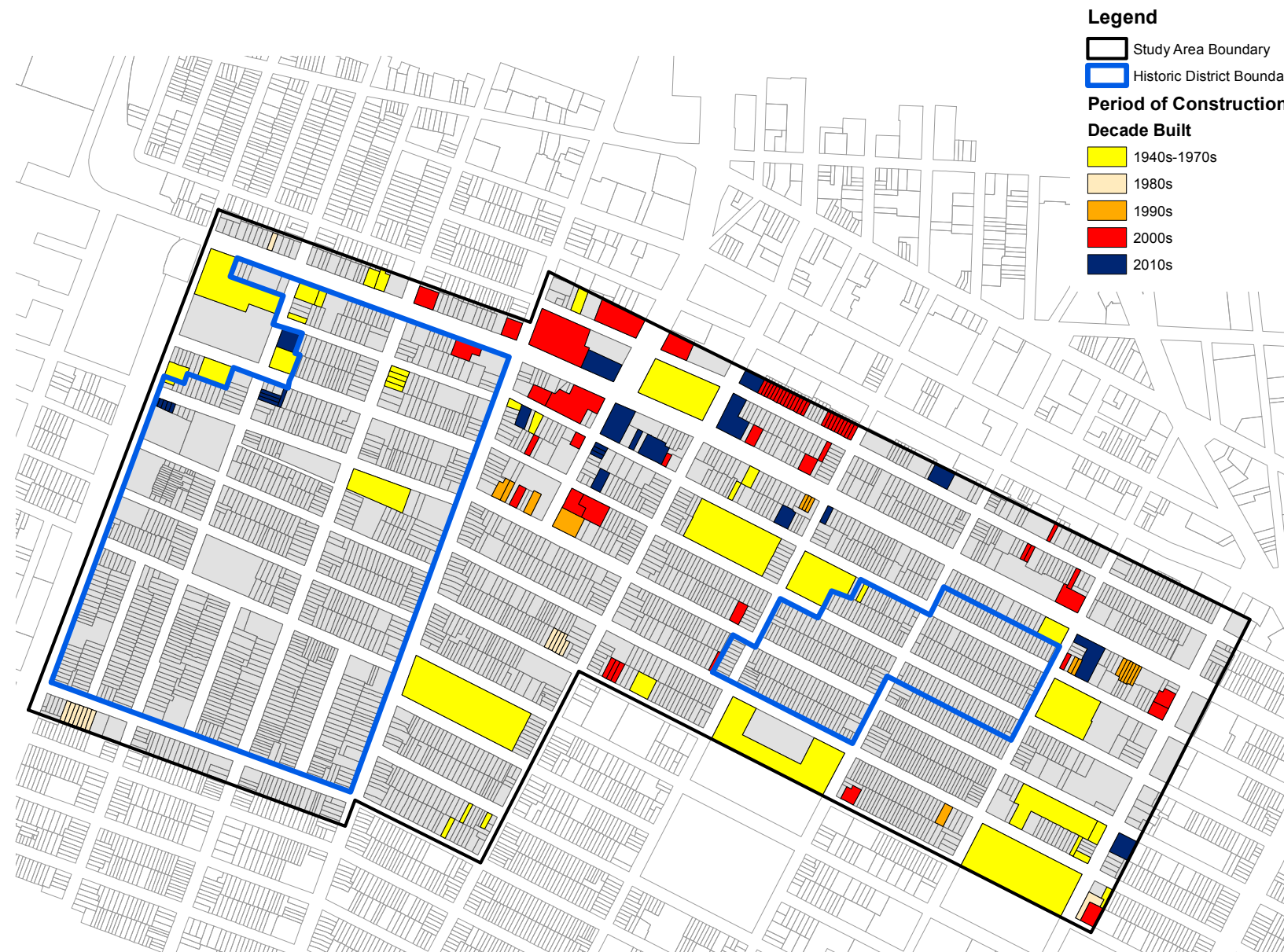


2016 Photograph
Source: student photograph

Urban Form

Looking at development as a whole, there have been some significant later developments in the area that affected the low-scale and historic character of the neighborhoods. Large developments in the 1940s-70s may correlate to the designation of the historic districts in both neighborhoods. Looking at the map, you can see many of the new developments are large, almost block-wide and surround the historic district boundaries. Aside from an earlier 1940s apartment block development in the Cobble Hill historic district, both districts have done a good job of halting new development within their boundaries.

Later developments reach a high concentration around Atlantic Avenue and State Street. These areas are closer to the Downtown Brooklyn large commercial area, which seems to be encroaching on the north side of our study area. Aside from the Atlantic Avenue Special Purpose District, these streets are not protected.



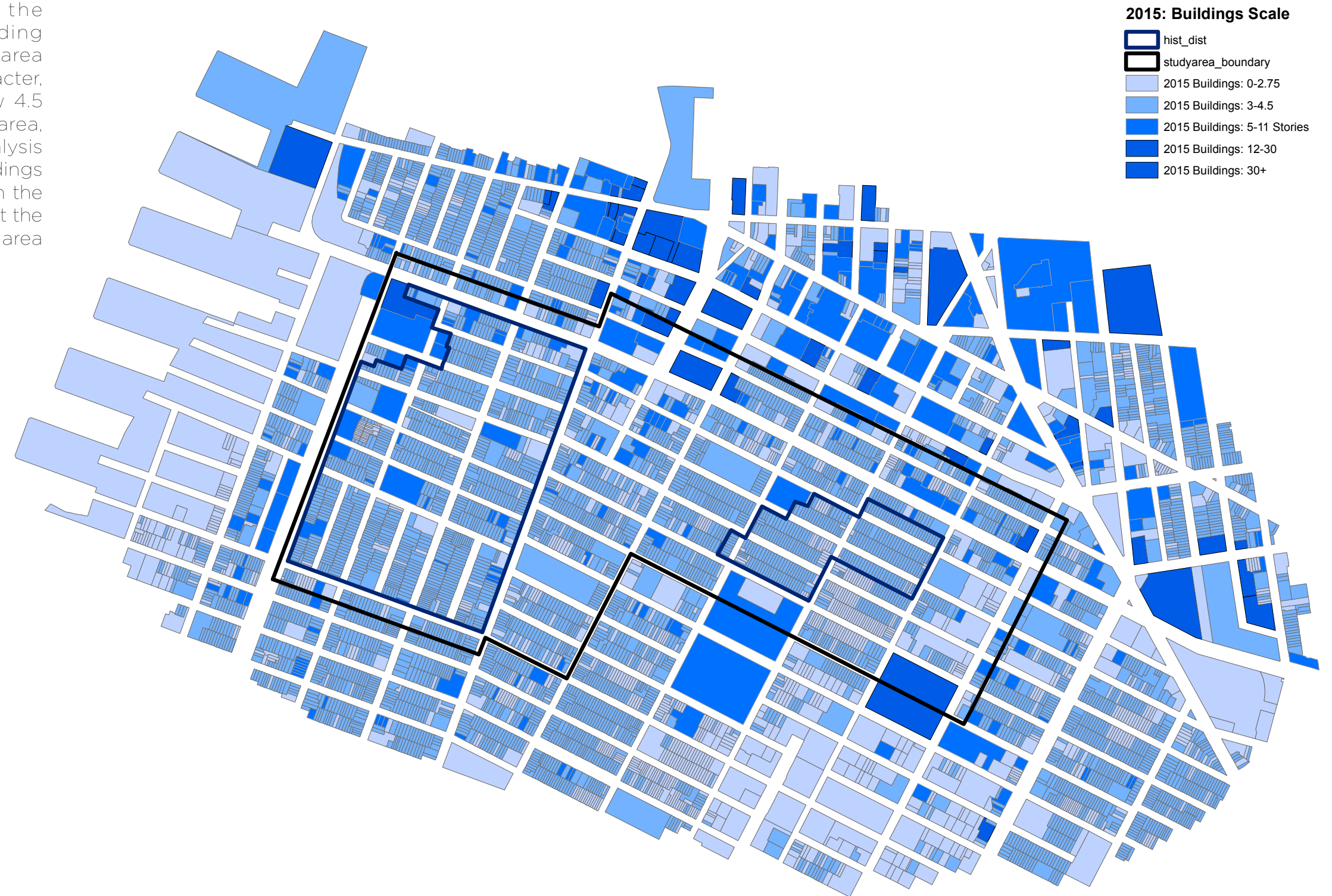
New Development Map
Source: student-created infographic



Corner of Atlantic Ave and Court Street
Source: student photo

Building Scale 2015

This map shows the overall scale of the neighborhoods and the areas surrounding them. The map indicates that the study area has maintained its historic, low-scale character, with the majority of the buildings below 4.5 stories. However, just north of the study area, taller structures have emerged. In our analysis of building height we focused on the buildings that have had the most noticeable effect on the character of the area, and we chose to look at the development of 12+ story buildings in the area from 1999 to 2015.

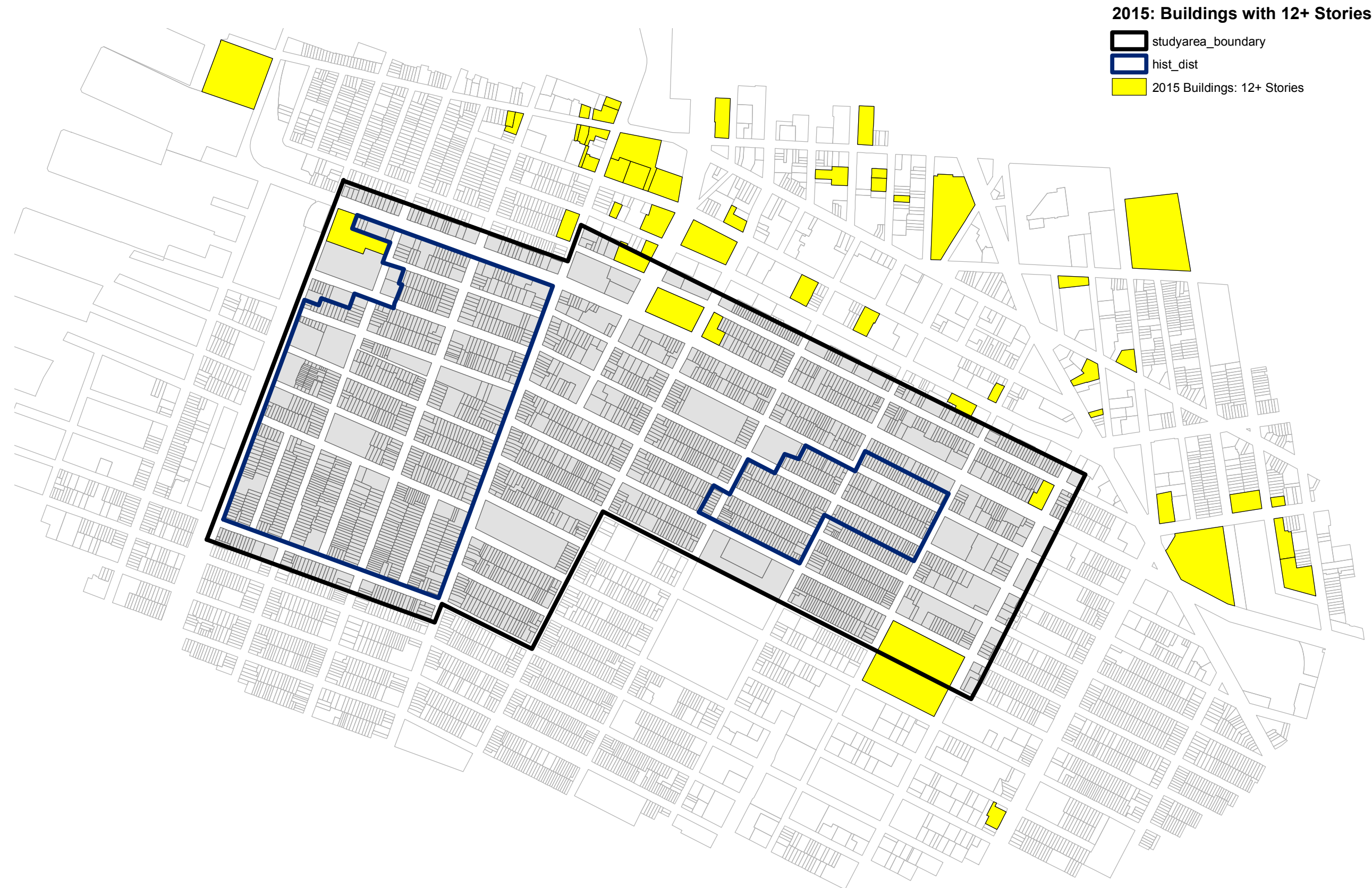


Building with 12+ Stories in 1999

In 1999, the majority of the buildings in the study area were built prior to 1980. Institutional buildings or public housing have a significant presence, such as the Brooklyn House of Detention, built in the 1940s-50s and the University Hospital of Brooklyn at Long Island College Hospital (1970s). A clustering of 12+ story buildings has occurred north of the study area in Downtown Brooklyn, but looking at the 2015 map, more of this large scale development is apparent along Schermerhorn just outside of the study area, and two more developments pop up along Atlantic Avenue and Boerum Place. From this map, we can see that development of large scale infrastructure is encroaching, but not necessarily penetrating the study area.



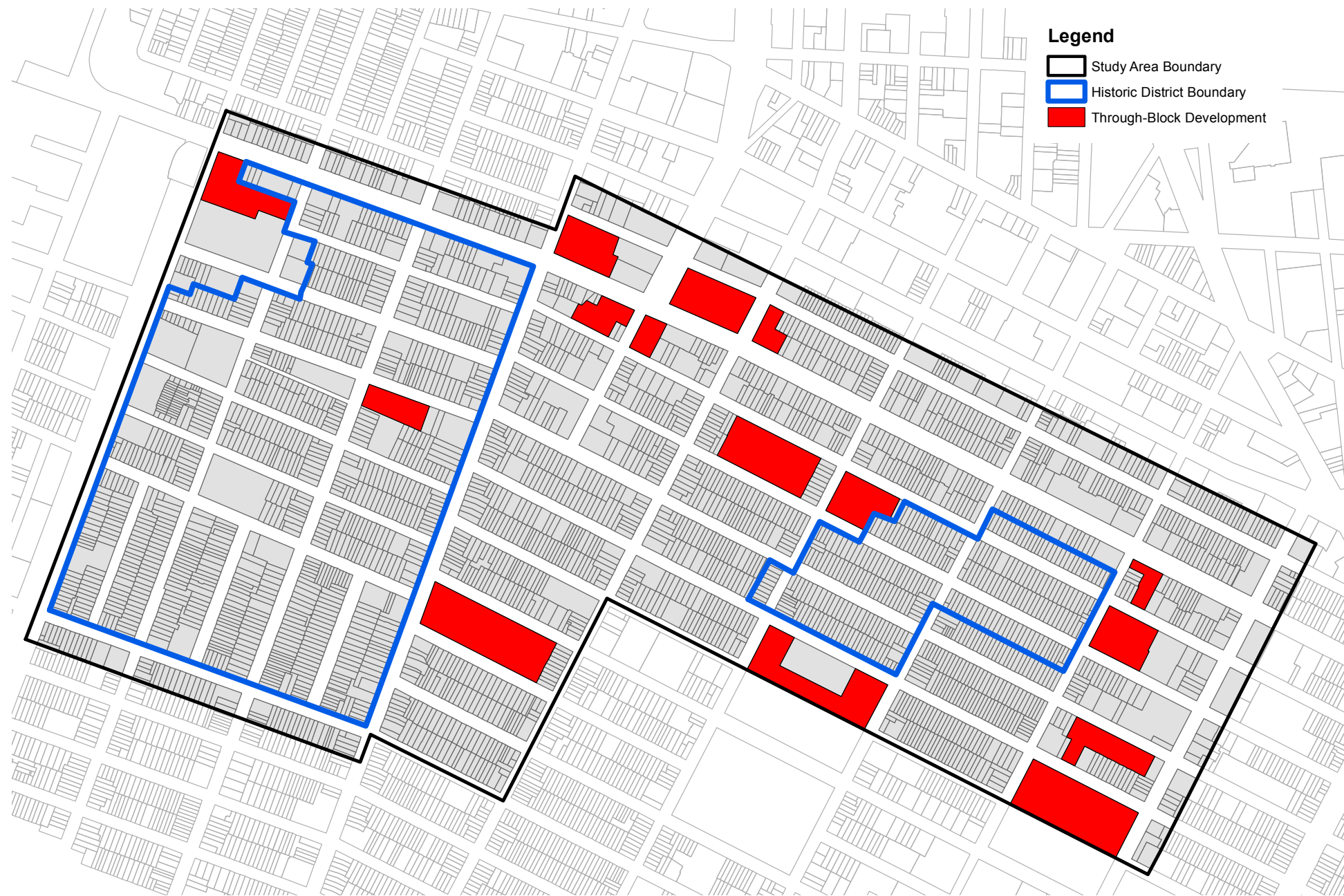
Buildings with 12+ Stories in 2015



Through-Block Development

In addition to heights being affected, the widths of buildings in the neighborhood have changed. Starting in the mid-20th century, through-block developments could be found throughout the study area.

This map highlights all the through-block development in the study area. The impact of these developments on the neighborhood and community is significant. Most of these developments are government instituted, such as the Gowanus and Wyckoff Housing projects in the southern end of the study area, the jail and Long Island College Hospital on Atlantic Avenue, as well as a couple of block-wide public schools. Privately owned through-block developments include the apartment complex on the corner of Atlantic and Court Street and the apartment complex on Congress and Clinton.



Through-block development map
Source: student-created GIS map



Public School
source: student photo

Streetscapes

Photo Comparisons:

The study of streetscapes is a crucial part of conservation work. Streetscapes can provide a wealth of information about the characteristic features of a neighborhood beyond what can be gleaned at the level of individual buildings. As part of this Studio, a streetscape analysis was performed by comparing historic streetscape photographs with current streetscape photos to observe change in conditions over time.

Historic and current photographs of each streetscape were placed side-by-side for comparison. The square border of the historic image was then overlaid onto the present image, visually aligning the two photographs and making any differences they display all the more apparent. Changes observed in the photo comparison included primary material changes, commercial space allocation changes, and an increased number of trees in the neighborhood.

Streetscape Photo Collections:

The historic streetscape photos used in the study were taken mainly from the Brooklyn Historical Society Morrell collection (online) and the Landmarks Preservation Commission Greenbooks designation photos for Boerum Hill and Cobble Hill.¹ The BHS Collection comprises more than 2,600 photographs of buildings and street scenes in Brooklyn dating from the 1950s through the 1970s. The collection was donated by John D. Morrell, former Assistant Librarian for the Long Island Historical Society (Brooklyn Historical Society).² Seventy-five images from the collection were selected for use in the study. Photographs were specifically chosen which depicted only the most relevant character-defining features of a particular area. For instance, photographs of historic storefronts were chosen to represent commercial Atlantic Avenue, while photos that captured trees, sidewalks, and architectural styles were selected for areas with a more residential character like that of Boerum Hill.



Streetscape

Source: John D. Morrell Collection



Streetscape

Source: John D. Morrell Collection

¹ Brooklyn Historic Society, <http://brooklynhistory.pastperfect-online.com/35872cgi/mweb.exe?request=continue>, accessed by March 31, 2016.

² Brooklyn Historical Society, Brooklyn Online Resource: John D. Morrell Photograph Collection at BHS, <http://whereyoucamefrom.blogspot.com/2011/06/brooklyn-online-resource-john-d-morrell.html>, <http://www.brooklynhistory.org/blog/tag/john-d-morrell/>, accessed by March 31, 2016.

Streetscape Photo Locations

The pictured map illustrates the locations of streetscape photos. The majority of the photographs depict areas within the Boerum Hill and Cobble Hill historic districts, especially along the main commercial avenues of Atlantic Avenue and Court Street. However, some of the photos also show the area between the two established historic districts. Photos of areas along the Atlantic Avenue Special Purpose District are also represented, as are photographs of the undesignated southeast corner of the study area along Wyckoff and Bergen Street where a district extension has been proposed. Fifty percent of the selected historic streetscape photos were taken from intersections and provide the most expansive neighborhood view. These photographs are complemented by some mid-block shots.

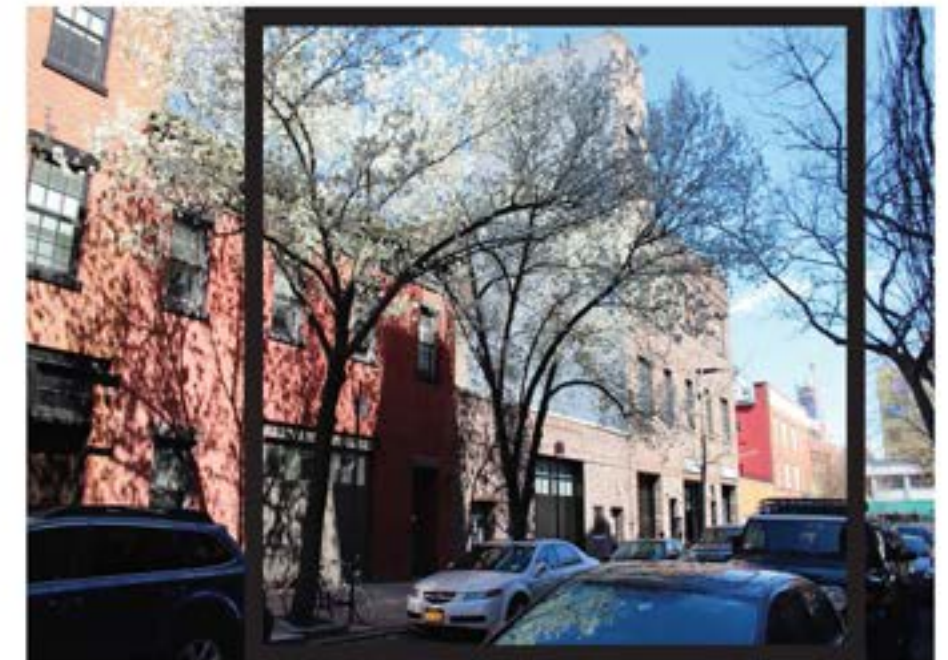


Trees

The most conspicuous change seen through the photo comparisons is the increased number of trees in the neighborhood today as compared with the historic photographs. According to a New York Times' report on a public hearing of the Atlantic Avenue zoning plan, "a campaign called TAG, for Turn Atlantic Green, resulted in the planting of 100 shade trees under the Parks Department's street tree matching program."¹ During the 1960s, much of Cobble Hill was known as a "transitional neighborhood", and had been converted into cramped housing for Irish, Italian and Syrian immigrants.² Driven by a "well of civic pride", the residents of Cobble Hill fought for public green spaces and began planting trees as a way to improve their neighborhood.³ Based on the interviews with current community members, these trees have become a beloved part of the streetscape for residents. However, they also cause some problems and sometimes require maintenance work. Dead or rotten trees need to be replaced. Branches may fall off and injure pedestrians, and growing tree roots may damage the pavement on the sidewalk.



Henry Street & Kane Street: no trees at 1970s VS trees on sidewalk 2016
source: John D. Morrell Collection and student photo



183 Pacific Street
source: John D. Morrell Collection and student photo

¹ "Atlantic Ave. Zoning Plan, Backed at Public Hearing," New York Times, June 16, 1974, 94.








² Kareem, Fahim, "A Sapling Grows Into a Giant; The Streets Around It Change, Too", New York Times, <http://www.nytimes.com/2008/06/20/nyregion/20journal.html>, accessed April 28, 2016.

³ Ibid.

Contextualizing new construction in the streetscape:

Most of the new construction has occurred largely outside the borders of the historic districts. The newly erected buildings may be roughly categorized into the following three categories:

Legend

-  Study Area Boundary
-  Historic District Boundary
- Period of Construction**
- Decade Built**
-  1940s-1970s
-  1980s
-  1990s
-  2000s
-  2010s



345-353 Pacific Street
Source: student photo



325 Pacific Street
Source: student photo

Buildings which are complementary to their surrounding in both their material and design choices. In general, these buildings are consistent with the historic building layout. Their elevations follows a similar sequence of setbacks and contain stoops and recessed entrances. When compared to existing historic buildings, these new designs tend to simplify the facade elements, using rectilinear shapes for windows and doors and are also less ornamented. Additionally, the rhythm of fenestration for these buildings tends to be drawn from their surroundings. Popular material choices are wood clapboard, vinyl, brick tile, and stone veneer. All are intended to imitate the material texture of old buildings.



Barney's - 194 Atlantic Avenue
Source: student photo

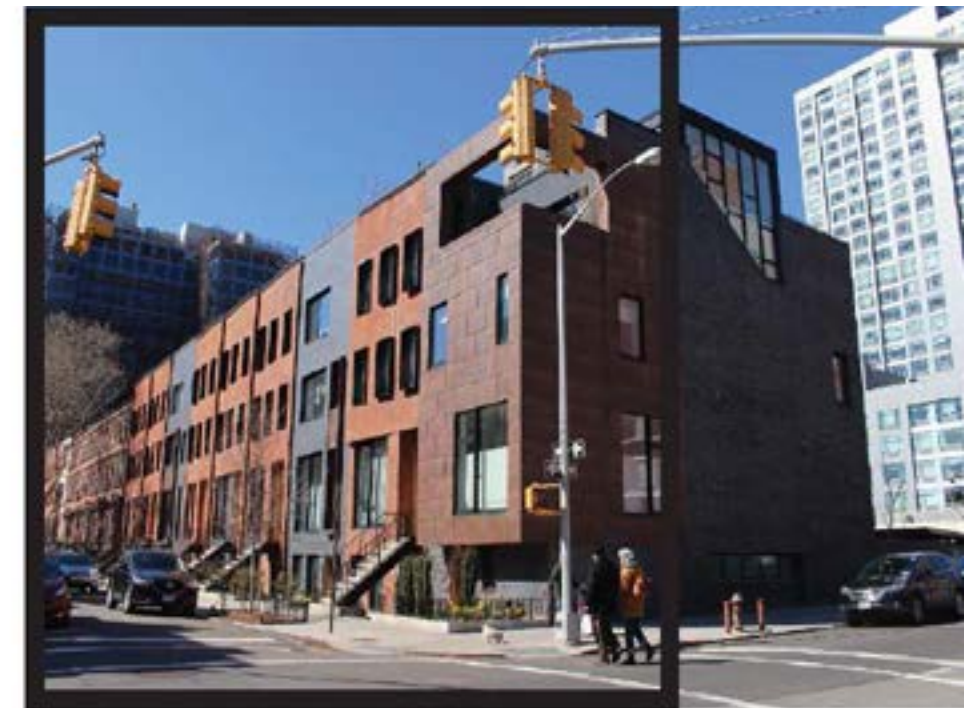


62 Bond Street
Source: student photo

Buildings which utilize complementary materials, but whose designs stand out from their surroundings. This category of buildings might employ large asymmetrical glass openings to emphasize geometry and deconstruction of contemporary architectural design, rather than historic forms. The rusted red metal panels used in the pictured buildings resemble the color of red brick and therefore blend in well with the neighborhood.



301-309 State Street
Source: John D. Morrell Collection and student photo



Buildings with both distinctive materials and distinctive designs. Some new construction place less emphasis on urban context, opting instead for bold, attention-grabbing designs which employ unusual materials for a dramatic effect.



335 Warren Street
Source: student photo



Fig. 16.
Source: student photo

Parking

Increased car ownership has led to parking difficulties within our study area. Historic photos of the 1950s through 1970s show significantly less parked cars on the streets compared with today's streetscapes depicting many rows of tightly packed cars.



Left: Streetscape photos from 1950 - 1970; Right: present-day photo
Source: John D. Morrell Collection and student photo



Left: Streetscape photos from 1950 -1970; Right: present-day photo
source: John D. Morrell Collection and student photo

In a study conducted by the Streetsblog in late 2010, it was stated that the "share of New Yorkers who own cars rose while the share of those who commuted by car fell," meaning that roadway congestion or the cost of gas was preventing people from using their cars on the road.¹ However, the research district that comprised our study area actually increased in car ownership by 0.7% from 2000 to 2009 as compared to the city as a whole.²

Another research initiative conducted by New York City's Economic Development Corporation in 2012 stated that in the area of Downtown Brooklyn, which includes our study area, concluded that 25.01%-40% of households in that region owned a car. Research conducted by the Streetsblog group in 2010 mentioned that around 39% of residents in the area owned vehicles.

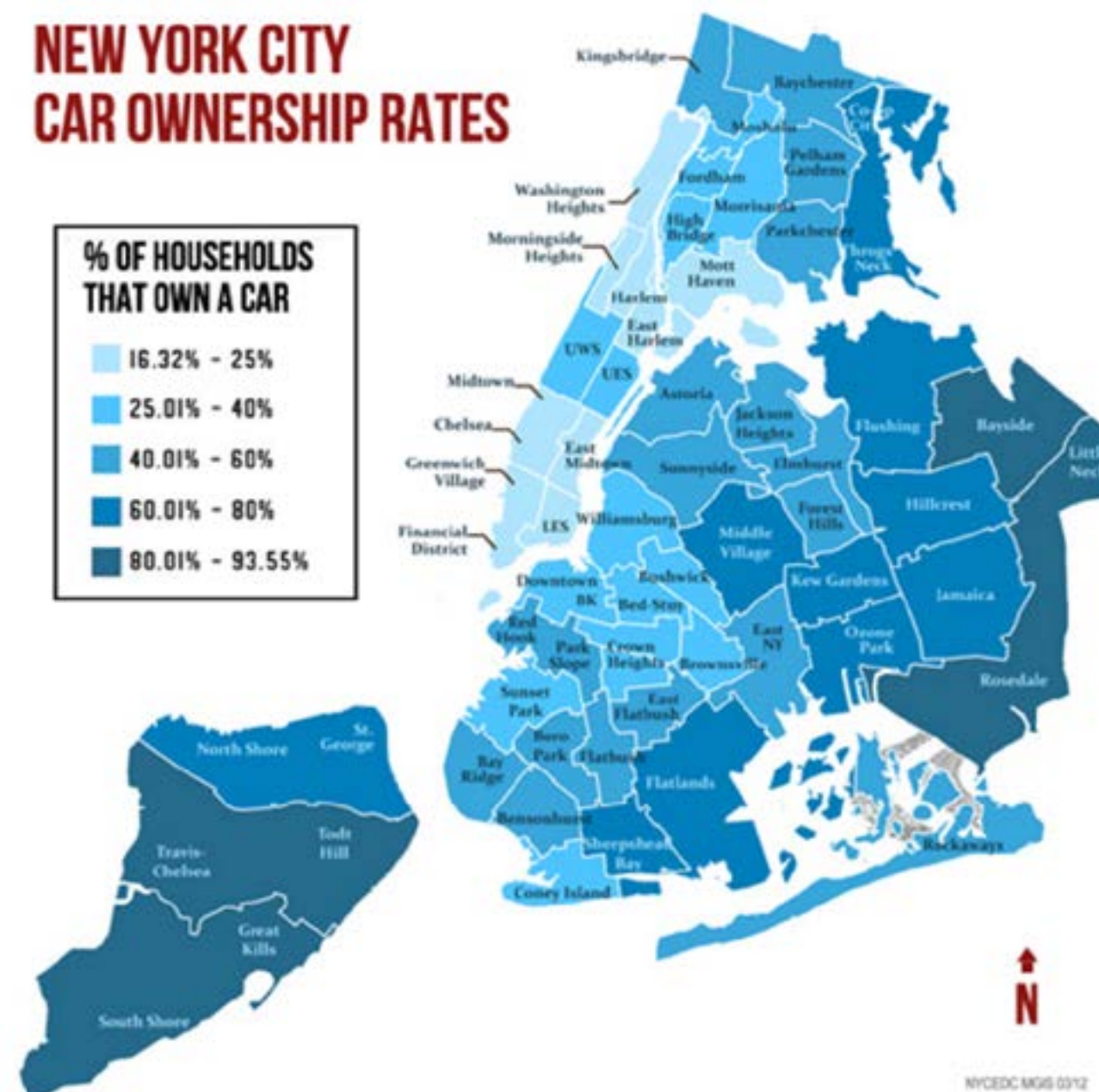
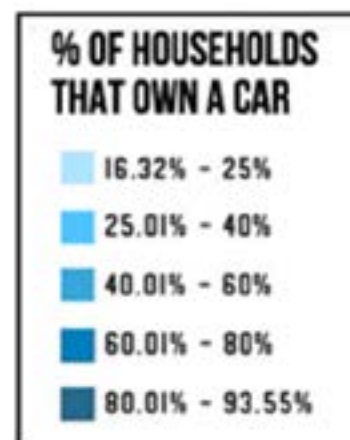
The households in our study area were similar to the neighborhoods of the Upper West Side and the Upper East Side in Manhattan in terms of car ownership, as well as to the southern areas of the Bronx, such as High Bridge and Fordham. In reference to Brooklyn itself, most of the neighborhoods just north or northeast of Downtown Brooklyn (Boerum Hill and Cobble Hill included) and to the south of the area mirrored our study area in terms of car ownership, including Williamsburg, Bushwick, Crown Heights and Coney Island.

39%
CAR OWNERSHIP
in Downtown Brooklyn*

*Includes Boerum Hill & Cobble

44%
CAR OWNERSHIP
in Brooklyn

NEW YORK CITY CAR OWNERSHIP RATES



New York City Car Ownership Rates

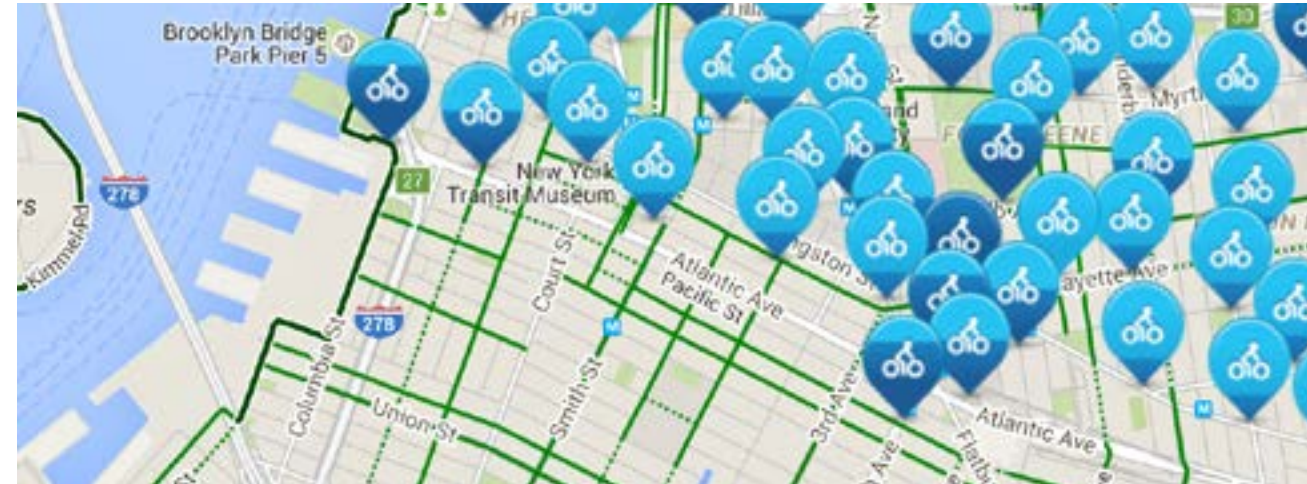
Source: <http://www.nycedc.com/blog-entry/new-yorkers-and-cars>

¹ Kazis, N. (2011, April 6). New York's Car Ownership Rate Is on The Rise. Retrieved April 05, 2016, from <http://www.streetsblog.org/2011/04/06/new-yorks-car-ownership-rate-is-on-the-rise/>

² Ibid.

Transportation

Transportation in the study area has changed drastically through the years, but has also made the area one of the most well-connected regions in the city. The study area contains eleven dedicated bike routes, as well as a handful of bicycle-friendly roads. On the northern edge of the study area, nine Citi-Bike stations allow residents and visitors access to the roads without having to travel by subway, bus, or car. Thirteen subway lines and fifteen bus routes make stops within the study area.¹



¹ Kaplan, T. (2012, November 25). City Takes Up Zoning Changes to Erase Downtown Brooklyn's Glut of Parking Spots. Retrieved April 06, 2016, from <http://www.nytimes.com/2012/11/26/nyregion/seeking-to-rein-in-excess-parking-in-downtown-brooklyn.html>

Diversity

The ethnic history of the study area sheds light on the origins and development of what the studios has identified as one of the important character-defining features of we have identified as one of the most important character-defining features of the neighborhood's architectural fabric today: a diversity of residents. Beginning in the middle of the nineteenth century, the study of the area was defined by its high degree of racial and ethnic diversity. Several groundbreaking policies enacted during Seth Low's second term as Mayor of Brooklyn illustrate the pressing issue of race and ethnicity in the study area even at that time. For example in 1881, Low conditionally allowed the German beer gardens and other "saloons" to remain open during the Sabbath, despite strict prohibitions on other activities.¹ The conciliatory move by Low demonstrates the ways in which the multicultural society of Brooklyn at the same time was able to exert a powerful influence on politics. Mayor Low also passed radical education reforms that desegregated schools and provided textbooks to all students for free.² Again, these policies highlight the fact that the borough as a whole had a significant degree of racial and ethnic diversity at the time. Ultimately however, Seth Low was considered an unpopular mayor overall, especially after raising property taxes in 1883.³ By 1890, the population density on developed land in Brooklyn was 53.16 persons to the acre, with 82,282 dwellings in the city housing an average occupancy of 9.8 persons.⁴ As we have observed, the population density of the study area was initially low, but dramatically increased by the turn of the century as a significant number of immigrants settled in the United States. By 1855, 35.1% of Brooklyn residents reported New York as place of birth, a significant drop from the 51.9% just ten years earlier in 1845.⁵

During the late nineteenth, early twentieth century, the study area was beset by epidemics including yellow fever and cholera beset and decimated the study area population, a loss soon filled by an influx of immigrants from Ireland, Italy, and Germany.⁶ An especially diverse immigrant and migrant population resided in the study area in the twentieth century and made an important impact on the built environment. The different groups included Germans, Irish, Italians, Syrians, and especially beginning in the 1950s, Puerto Ricans and African Americans. During this period of the mid-twentieth century, the City of New York cleared six blocks in the area below what is now Boerum Hill and replaced the leveled area with affordable public housing projects. These projects included the 1948 Gowanus Houses, and later the 1966, Wyckoff Gardens.⁷

The significance of the study area is drawn in part from its diverse groups of residents and the influence they had on the architectural fabric of the area. The study area is significant for its reflection of rapidly changing community values within a built environment that in some places has changed very little, especially in terms of scale, materials, and typology. Given the pressures of a growing population and the associated need for housing development, as well as a widening disparity of wealth and income across the country, this small area of Brooklyn presents an important opportunity to look at how the preservation of buildings can and cannot meet the needs of a transitioning community. The study area's consistency in scale has partially contributed to an inconsistency in the different groups of people who "had to" live here, "chose to" live here, or are "able to afford to" live here (i.e. immigrants, then first waves of "brownstoners," and then high-income residents of today).

With all of this to consider, the study area presents an opportunity to develop strategies for including historically diverse residents and their different needs within a community that architecturally is restricted--considered underbuilt but also in some areas, legally regulated--in its ability to respond to change.

¹ Gerald Kurland, *Seth Low: the Reformer in an Urban and Industrial Age*. (1971), 149

² *Ibid.*, 42-3

³ *Ibid.*, 41

⁴ *Vital Statistics of New York City and Brooklyn (1890)*, 165

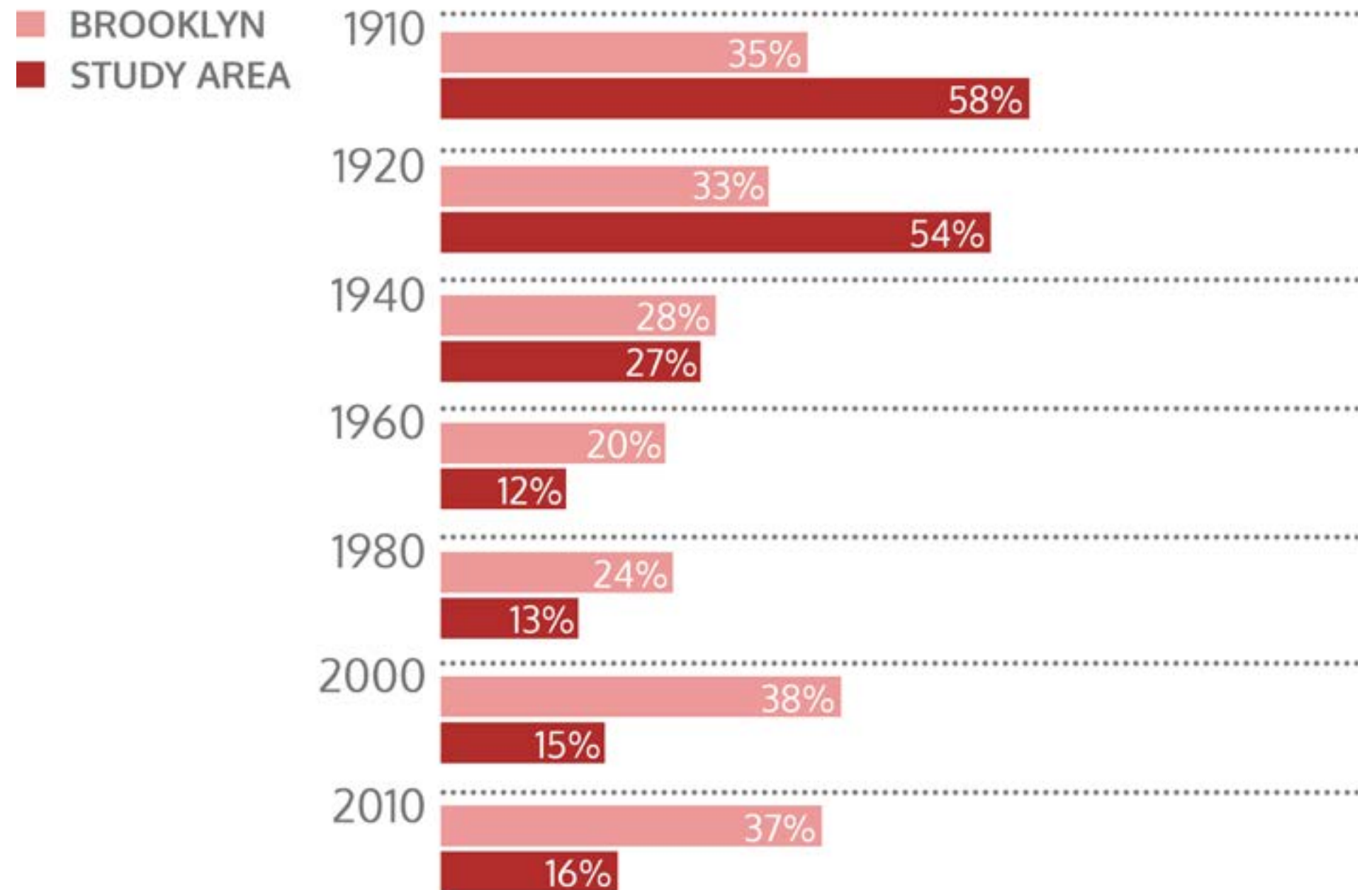
⁵ Jacob Judd, *The history of Brooklyn: 1834-1855*. (diss. 1959), 21

⁶ *Boerum Hill Historic District Extension Proposal*, 9

⁷ *Boerum Hill Historic District Extension Proposal*, 11

Foreign - Born Population

Our statistical analysis revealed important trends in the study area's population, in terms of country of origin and ethnicity. From 1910-2010 the foreign born composition of the total study area population dropped significantly, from 58% in 1910 to 16% in 2010; yet these numbers did not decrease nearly as significantly across the population of Brooklyn as a whole. The overall population of the study area remained relatively stable during that time, indicating a significant change in the culture of the study area. In other words, the study area has become significantly less diverse, in terms of country of birth, over the past century. The population of Brooklyn as a whole increased by about 50% from 1910-2010. While not surprising given a decline in immigration rates during the 20th century and the establishment of subsequent generations of native-born residents of foreign parentage, this trend suggests that significant change occurred in the study area's population.



Student-created infographic
Sources: Social Explorer and US Federal Census tract tables

This studio looked closely at the ethnic composition of the study area by country of birth, and identified several significant ethnic groups based on country of birth, including England, Ireland, Italy, Germany, Sweden, Greater Syria, USA-Puerto Rican, and African American. In order to further examine the impact of all of these different groups on the built environment of the study area, we selected representative buildings from each group to examine closely in terms of use, aesthetics, and alteration over time.

Overview of selected trends in the ethnic diversity of the study area:

Swedish population peaks at around 3% in 1910-1920, but despite this seemingly low number we have found the Swedish community to have had a significant impact on the architectural fabric of the study area.

Irish and Italians were the largest foreign-born groups in 1910 (10% and 8% of study area population respectively). Both are around 8% in 1920, but there was also a 4% "Syrian" foreign-born population in the study area, which represents the peak population of the Syrian community in this area.

By 1950, most foreign-born ethnic groups each make up less than 1% of the study area population, with the exception of Italian (5%)

1960: Italy at 10%, Puerto Rico at 34%

The Black population through 1960 was never more than 5% of the total study area population. But by 1970, the Black population is 24%: all foreign-born ethnic groups that we have been looking at were each below 1% in 1970, except Italians: 2%

For 1980 forward, we looked at data for native born, foreign parentage (defined also as "ancestry") to start to look at subsequent generations of immigrant communities and ethnic minorities.

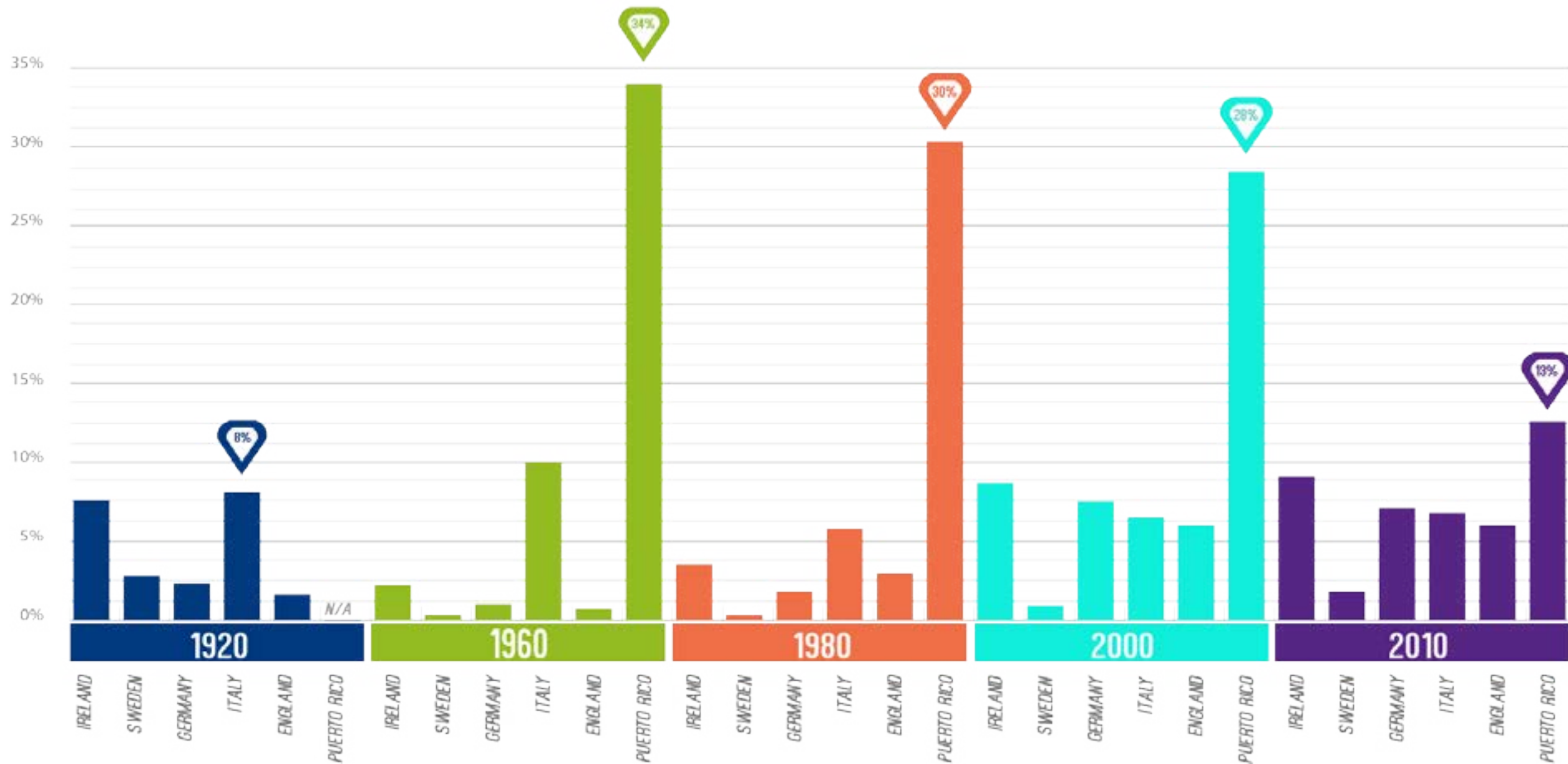
1980: native-born, foreign parentage: Ireland 4%, Italy 6%, Puerto Rico 30%, Black 22%

1990: Black population 29%

2000: Ireland 9%, Germany 8%, Italy 8%, England 6%, Puerto Rico 28%, Black 22%

2010: Numbers are about the same, except Puerto Rican population drops to around 12% of the study area population. A return to around 2% Swedish ancestry.

Ethnicity distribution by country of birth (pre-1980) and by ancestry (1980 and later)



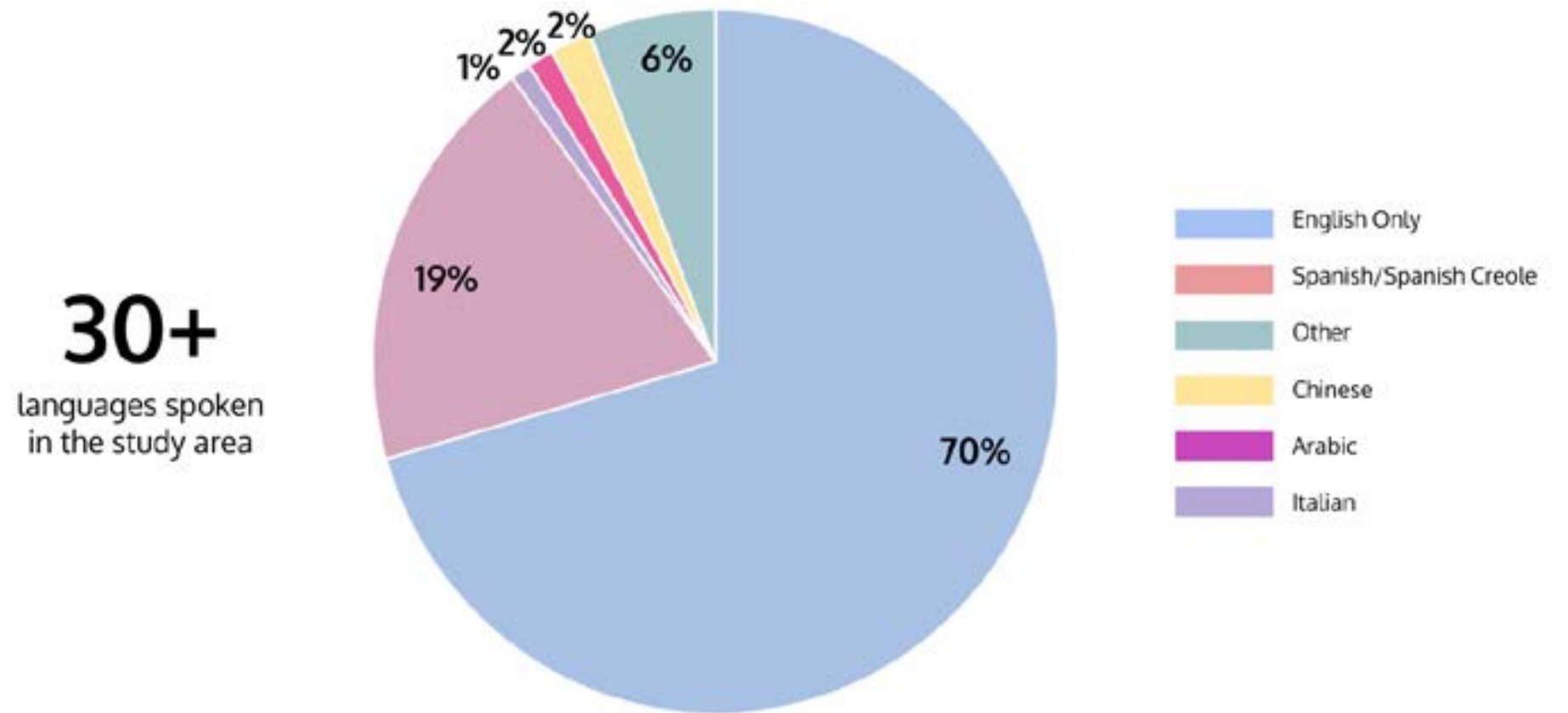
Student-created infographic representing the largest ethnic groups in the study area
 Source: U.S. Federal Census data and SocialExplorer

Languages Spoken at Home

This study also reviewed languages spoken at home in the study area, using the U.S. Federal Census tracts, as another indicator of diversity in the study area. The graphic below indicates that 70% of the study area speaks only English at home, and 19% speaks Spanish or Spanish Creole. The non-English categories do not necessarily represent individuals who don't speak English as a second language. The remaining 11% of the study area population speaks either Italian, Chinese, Arabic, or "other" languages. These were selected just to give a sense of some of the languages spoken, but really this "other" category includes over 30 different languages with origins all over the world, that are all spoken in the study area.

Challenges

Our studio has addressed the challenges of describing and analyzing the ethnic history and diversity of the study area, and our data collection and analysis is ultimately limited by inconsistencies in how data was compiled historically. The changing and therefore incompatible geographic boundaries of the sanitary districts, census enumeration districts, and census tracts, combined with changes to the data collection categories themselves, have made it difficult to normalize our data over a geographic area that aligns as close as possible with our study area while also being consistent from year to year. Some data, such as the 1930s census tract tables, seem to be incomplete or missing entirely. We have selected geographic boundaries that match each other as closely as possible over time, and we have narrowed our analysis to include to the extent possible only the data categories which we can expect to correspond closely enough with each other over time to yield meaningful results.

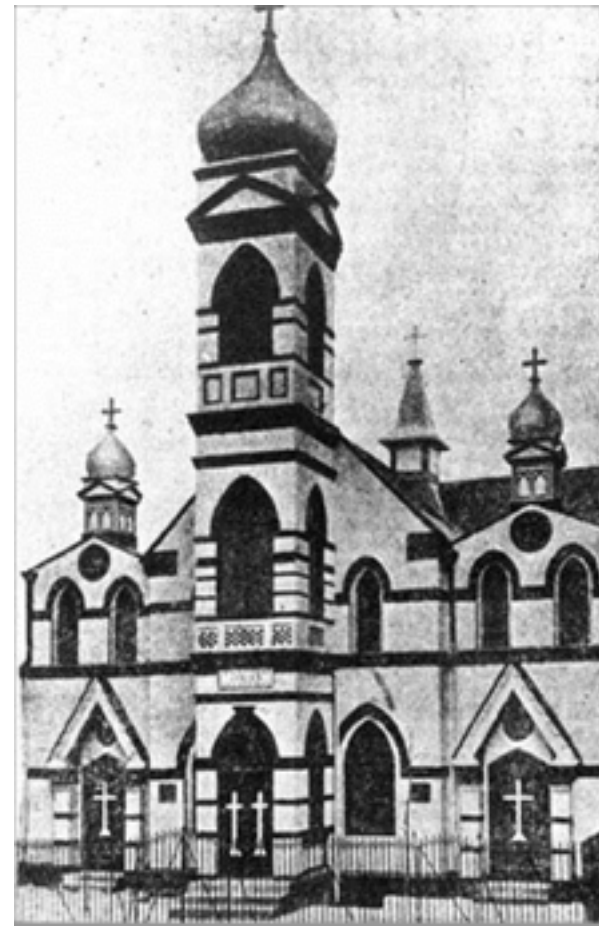


Student-created infographic
Sources: U.S. Federal Census data and SocialExplorer

The First Spanish Baptist Church on Pacific Street stands as a powerful example of religious diversity in the study area. Studying its turnover in congregations over the years reveals how this single building was used by a wide range of religious groups that reflect the historic diversity of the study area's residents. Before it became the First Spanish Baptist church, it was used at different times by the Swedish and Syrian communities as well.

The study area also contains examples of separate buildings which, considered together in such a small area, also indicate religious diversity. Here you can see a synagogue (built 1855) a Buddhist temple (also originally built 1855, altered in 1923), and an Orthodox Christian Church that has been occupied since 1920.

Period	Owner
1886-1875	The First Presbyterian Church of Brooklyn (Old School)
1875-1882	Clinton Street Presbyterian Church
1882-1902	Swedish Evangelical Lutheran Bethlehem Church of Brooklyn
1902-1920	Raphael Hawaweeny Syrian Orthodox Mission of North America
1921-1947	John Wesley Methodist Church of Brooklyn
Since 1947	The First Spanish Baptist Church



First Presbyterian Church
Source: Municipal Archives, New York



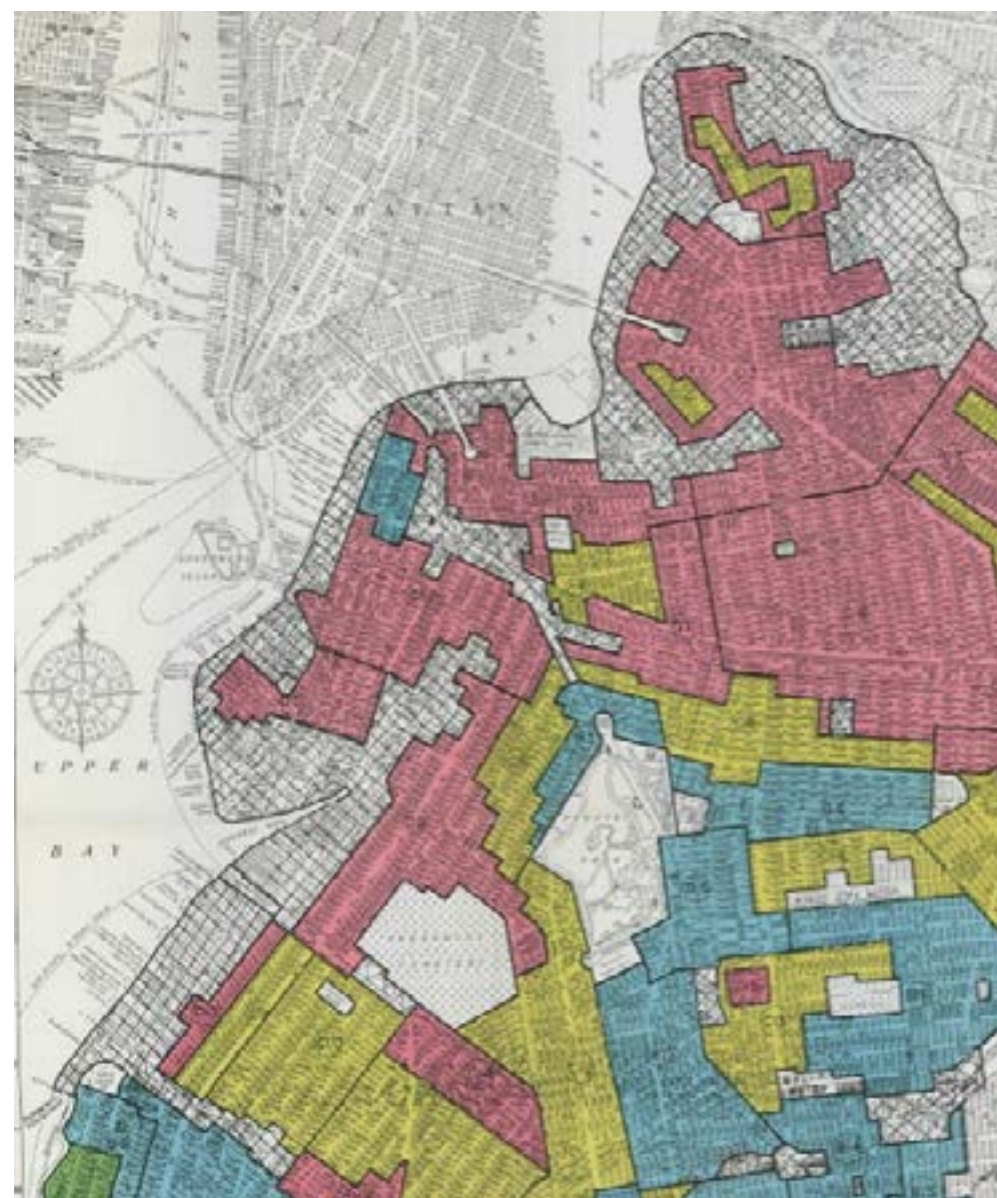
First Presbyterian Church - 2016
Source: student photo

Affordability

Redlining

The Federal Housing Administration was established in 1934 to fight against the loss of homeownership due to the Great Depression. The FHA worked with the insurance and banking industries to provide federally insured, long-term, low-interest loans to potential homebuyers. To ensure the security of their investment, the FHA created the Home Owners' Loan Corporation (HOLC) to set up guidelines. The primary accomplishment of the HOLC was the creation of "residential security maps" in 1935.¹ These maps indicate areas that were most likely to receive loans from the HOLC (green zones), to areas that are least likely to receive ones (red zones). The "red lined" areas were usually older districts in the city center, with a substantial presence of minority and immigrant populations. Our study area, including Boerum Hill and Cobble Hill, was coded as a red zone in the 1938 map.

Redlining led to low property value and low rental value. In the 1940s, families living in Boerum Hill and Cobble Hill were paying a moderate monthly rental of \$30 to \$49 (equivalent to \$492 - \$803 in 2012). During the same period, houses in Brooklyn Heights (color-coded blue), were worth \$50 to \$99. In comparison, a prime-location apartment near Central Park was worth more than \$150² (equivalent to \$2,458 in 2012, or 5 times the price of an apartment in Boerum or Cobble Hill). The devastating effect of redlining on property values continued for about three decades.



Map of Brooklyn

Source: Brooklyn Community Map 1938, NARA II RG 195 Entry 39 Folder "Brooklyn (Kings Co.," Box 58, National Archives. <http://www.urbanoasis.org/projects/holc-fha/digital-holc-maps/>



Rent Levels Across NYC in 1940

Source: Rent Level across NYC based on 1940 Census, Center for Urban Research at CUNY Graduate Center, <http://www.1940snewyork.com/>

¹ Spellman, Suzanne (2016), "From Redlining to Predatory Lending: A Secret Economic History of

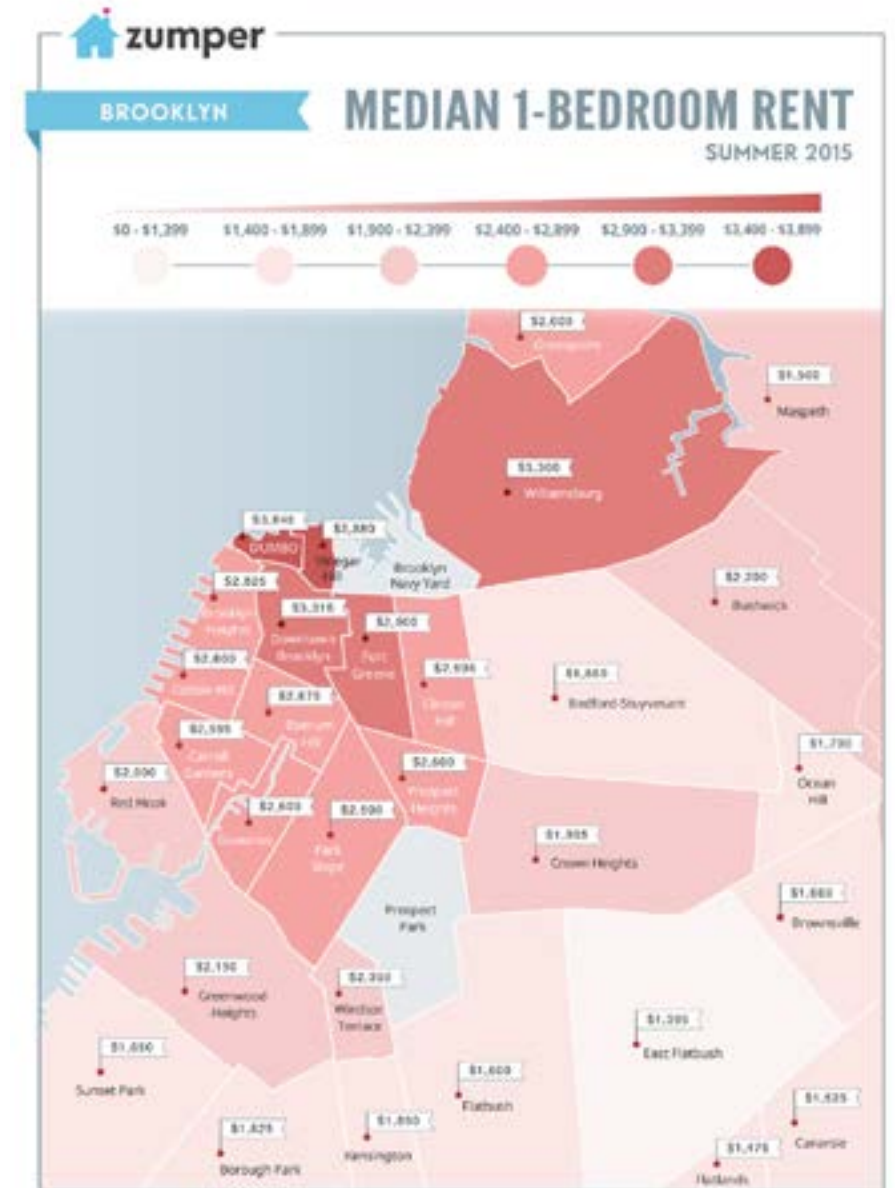
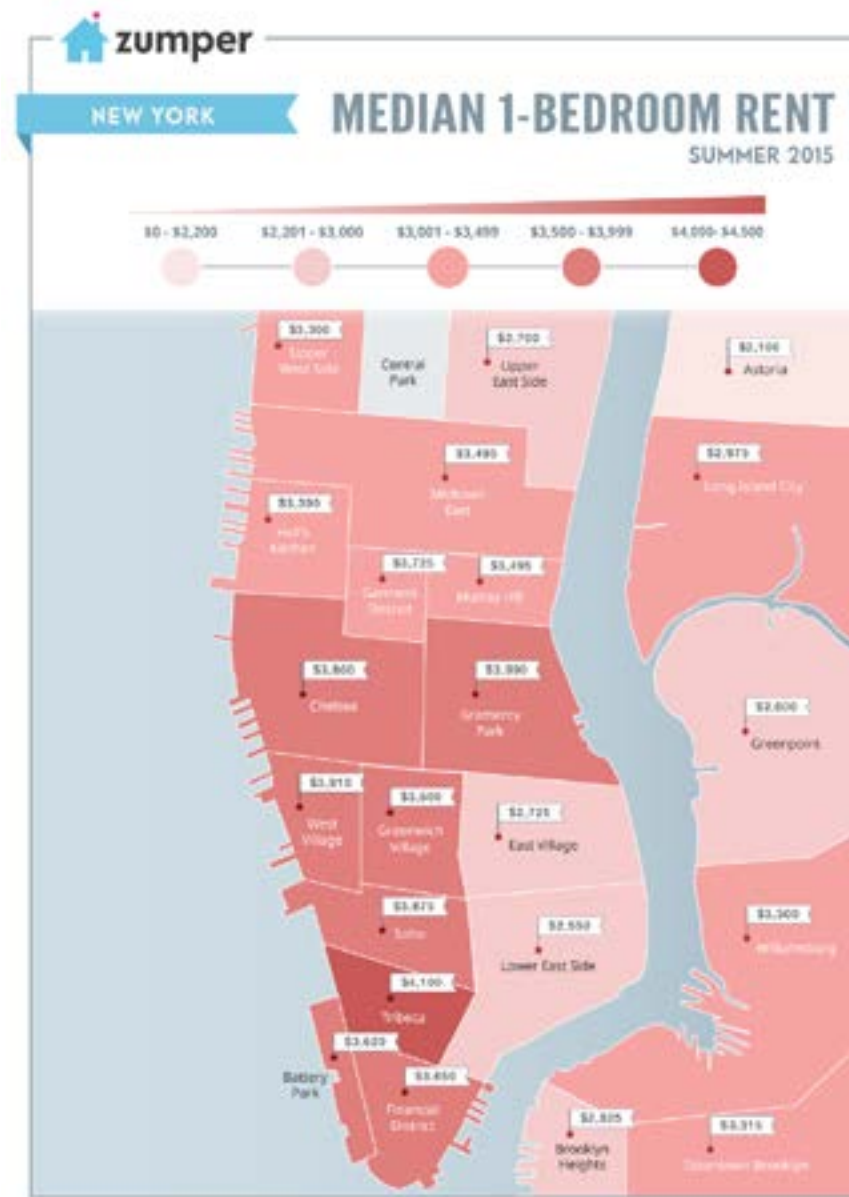
Brooklyn," *Brownstoner*, March 30, 2016.

² Rent Level across NYC based on 1940 Census, Center for Urban Research at CUNY Graduate Center.

<http://www.1940snewyork.com/>

In the 1970s, redlining was gradually abandoned. Instead, the accessibility and the architectural heritage of Boerum Hill and Cobble Hill attracted an early group of 'Brownstoners'. In order to revitalize the disinvested and neglected area, some active residents sought to designate their community as historic districts with the hope of maintaining the historic character of the place while enhancing the property (and rental) values. Subsequently, the Cobble Hill Historic District and the Boerum Hill Historic Districts were listed on the New York City Landmark, and the National Register of Historic Places in 1976 and 1983.

Forty years later, the area is one of the most desirable and expensive locations in the city of New York. Consequently, the difference in rental value between Boerum-Cobble Hill and that of Downtown Brooklyn or Manhattan has been largely reduced. The average rent of a one bedroom located at the utmost prime location in Manhattan is only 1.5 times the rent of an apartment in Boerum-Cobble Hill. Meanwhile, the booming real estate market in Boerum-Cobble Hill has caused many former lodging houses, or multi-family, to be converted into million-dollar-single-family homes. As a consequence, there is a fear that the influx of higher-income households will increase property tax, and that high rental rate will price out some residents that were once attracted to the area for its cheap housing prices.



Median 1-bedroom rent across NYC as of Summer 2015

source: O'Brien, Devin, "The Cheapest and Most Expensive Neighborhoods to Rent in NYC this spring," Zumper, May 20, 2015.

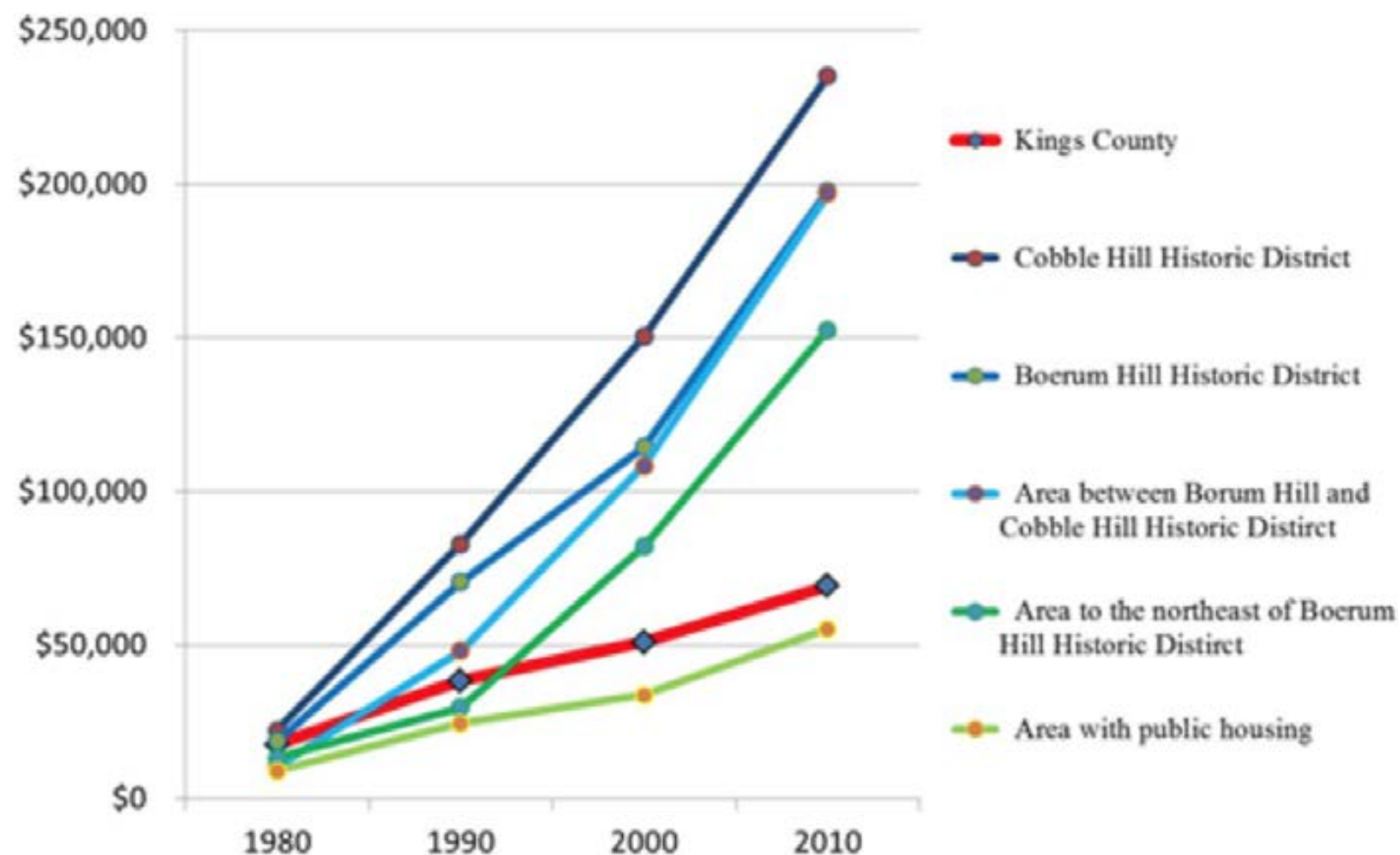
Income

The chart to the right shows annual median household income levels for different sections of the study area and for Kings County as a whole.

Since 1980, the Boerum Hill and Cobble Hill Historic Districts have maintained the highest income levels within the study area, which are both higher than for Kings County as a whole. In contrast, areas to the east and southeast of the Boerum Hill Historic District have the lowest income level and remained lower than the level of Kings County. These areas contain public housing projects, such as Gowanus Houses and Wyckoff Gardens.

Since 1990, the income levels of the area between the Boerum Hill and Cobble Hill historic districts and the area to the northeast of Boerum Hill Historic District have seen a significant increase in income.

However, even if the study area has a relatively high income level in the Brooklyn, the affordability is still a problem here.



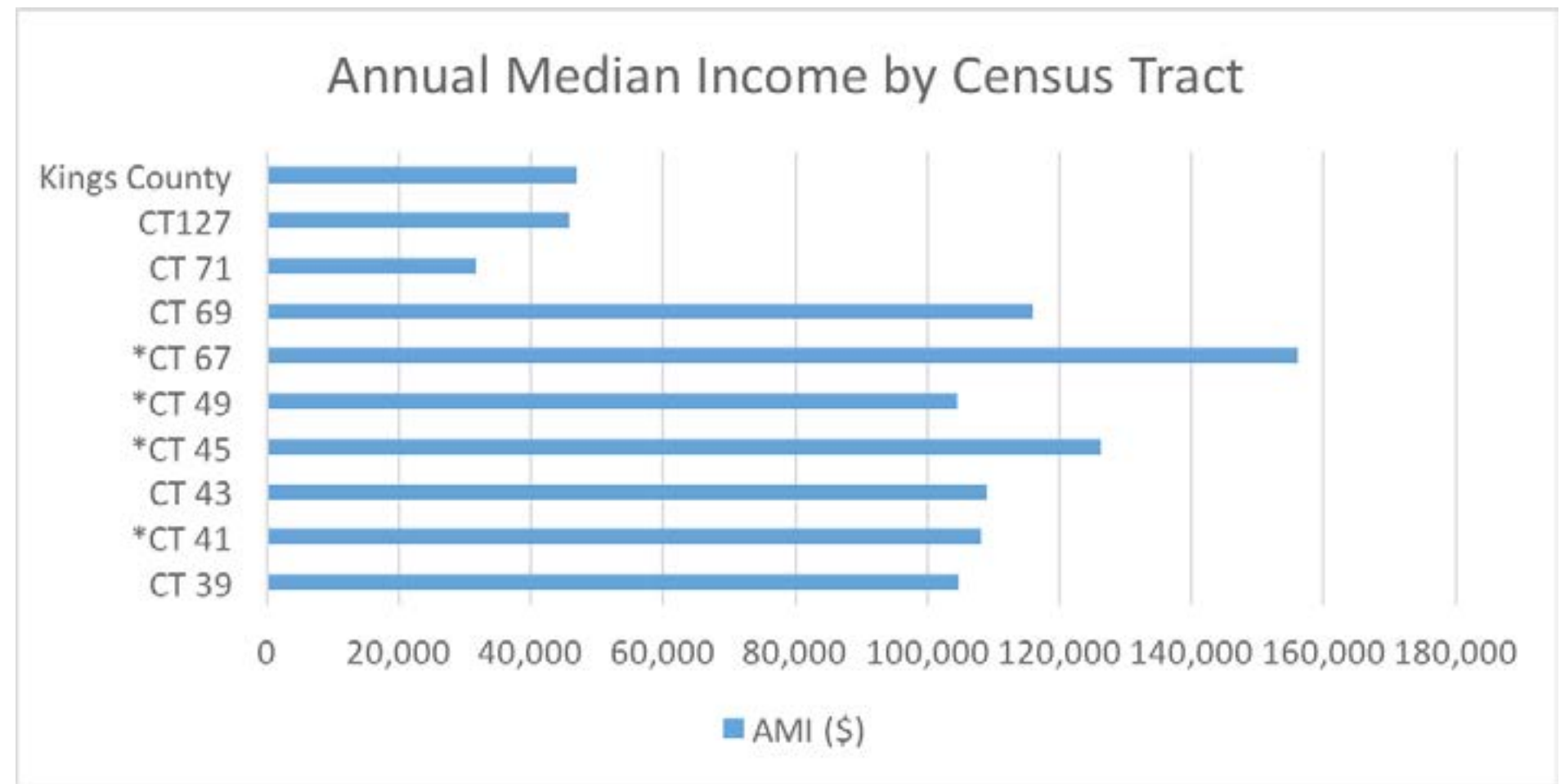
Annual Median Household Income Levels

Source: Social Explorer, median household income, census tract 39, 41, 43, 45, 49, 67, 69, 71, 127, 1980-2010, <http://www.socialexplorer.com/>. Accessed April 5, 2016.

The socio-economic status of the study area is mapped on the area's annual median income (AMI). The AMI data is based on census tracts. Within the study area, 71 and 127 (Wycoff Public Housing) are the only two census tracts with an AMI lower than the Kings County average. The majority of the other census tracts have an AMI that is double the level of Kings County, and triple that of 67 (part of Cobble Hill Historic District). The highest AMI, at \$156,118 (three times that of the Kings County AMI) can be found in Census Tract 67, which corresponds to the southern part of the Cobble Hill Historic District.

However, the AMI alone is not capable of measuring the degree of social inclusiveness or exclusiveness of a certain area. The Center of Neighborhood Technology introduced the Housing and Transportation (H+T) Affordability Index map by block groups. Taking transportation (a household's second-largest expenditure) into consideration, this map marks geographical units with combined housing and transportation costs as a percentage of median household income.

Overall, as shown on the map, the combined H+T cost has a median of 47% of household income in the study area, in which 6% goes into transportation and 41% goes into housing. Perhaps due to the area's proximity to Manhattan and easy access to public transportation, the typical household's average transportation cost as a percentage of the income is less than half of the 15% benchmark suggested by The Department of Housing and Urban Development (HUD). However, it seems that the money saved from transportation costs is not enough to relieve the burden of the local residents. The high housing costs largely skew the combined data. As the map below illustrates, only 40% of the 25 block groups in the study area are considered affordable or have combined cost below 45% as defined by HUD. The combined H+T cost in Boerum-Cobble Hill is much higher than that of the Kings County's typical 37%, and New York City's typical 39%.



Affordable Housing Units

In the study area, there are 189 structures providing about 3,500 affordable housing units. The two properties developed with Low-Income Housing Tax Credits (LIHTC), the YWCA and the Muhlenberg Residence are midway houses providing 480 housing units while the two public housing projects provide 404 income-restricted units.¹ The majority of affordable housing units are rent regulated buildings that provide the remainder of the 2,600 units. Among them, 39.7% percent are located inside the two historic districts, with 69 buildings in Cobble Hill, and 9 buildings in Boerum Hill. Despite the seemingly widespread rent regulated buildings, the majority of them are small-scale rowhouses providing 1 to 6 affordable units, the overall number of which is far from sufficient. Comparing the affordability index map with the affordable housing units map, it is obvious that the high living cost of Boerum Hill Historic District coincides with the observation that there are very few affordable housing units (6 structures) currently available within the 7-partial-blocks.

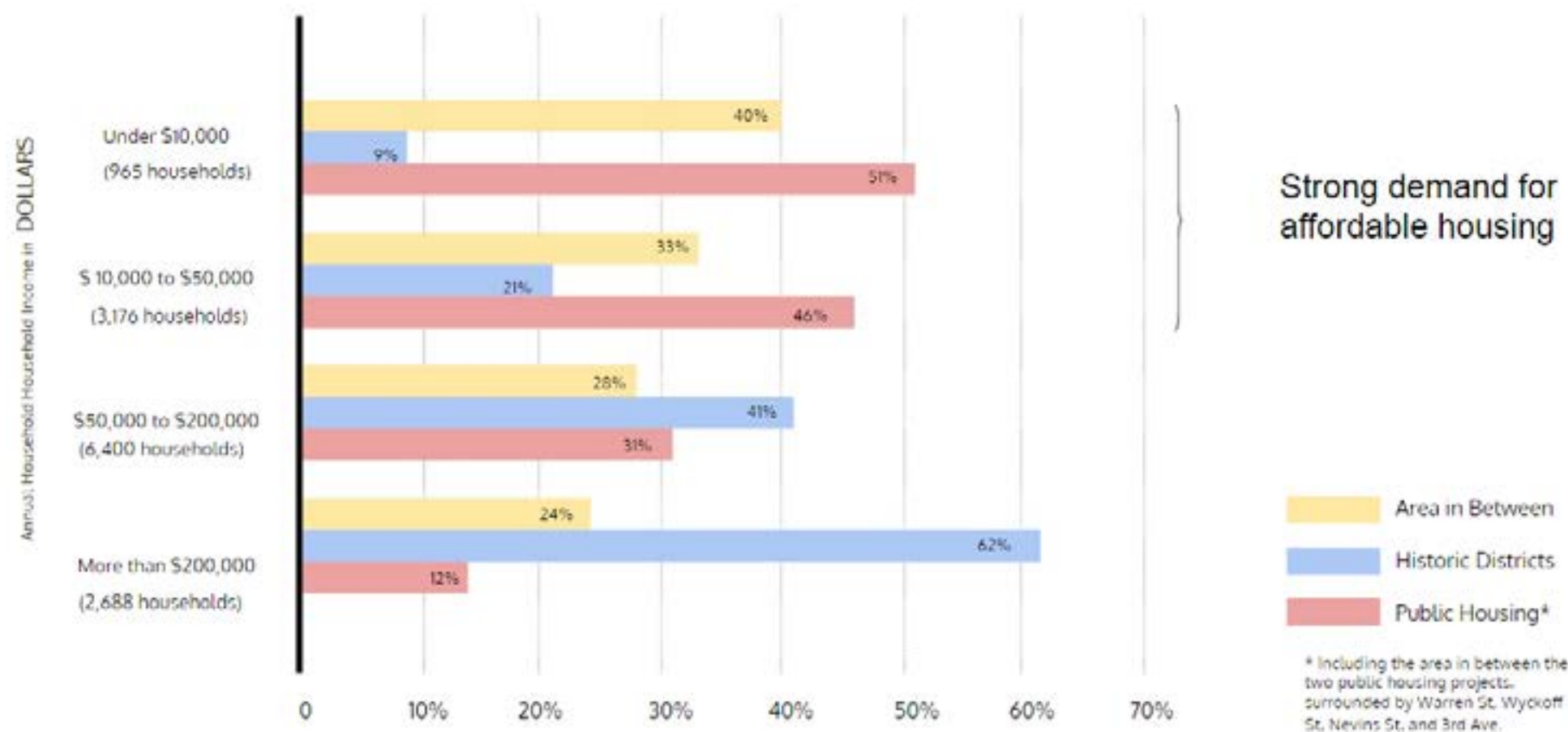
Meanwhile, a high concentration of rent regulated units between Baltic Street and Kane Street seem to contribute to a higher affordability (38% and 44%) in the central part of the Cobble Hill Historic District. This would indicated that the variation of the affordability index throughout the entire study area has a strong correlation with the supply and distribution of affordable housing units.



¹ Since 2014, the Muhlenberg Corporation gained the full ownership of the low-income supported housing facility associated the Lutheran Social Service. If the corporation sells 510 Atlantic Avenue for conversion to luxury apartments, the Boerum-Cobble Hill area would suffer from more severe social exclusiveness.) Bleeker, Rachael (program director at Lutheran Social Service of New York) Personal Interview. 6 November 2015.

To better understand the demand for affordable housing, a chart showing the distribution of different income groups within the study area was created. As shown, people living in the two public housing areas (Gowanus and Wyckoff) only add up to half of the total population of households making less than \$50,000, the annual median income of Kings County. Without rent-regulated units, the other half of those lower-income households would be severely burdened by the high market-rate rental units in Boerum Hill and Cobble Hill. Hence, despite the high concentration of middle and upper-middle class households in the historic district and the area in between, there is still a strong need for affordable housing units in those neighborhoods. Hence, calling for political intervention to preserve and increase the number of affordable housing units is necessary to ensure the quality of life for those making less than \$50,000.

In conclusion, while the affordability index varies among all the nine census tracts of the study area, Boerum-Cobble Hill in general is less affordable for those making a median income of the census tract they live in. The status of historic districts may increase the rent/property value of the area while creating spillover effect in nearby neighborhoods. However, it is the supply and distribution of the affordable housing units rather than the designation of historic district that has more influential impact on the affordability of each census tract. Additionally, even though the study area has a high concentration of higher-income households, it is not socially exclusive, and there is socio-economic diversity. Since there is a shortage of affordable housings units overall, especially in the Boerum Hill Historic District, in order to retain the long-time residents and to prevent the potential aggravation of social exclusiveness, the planning and housing departments of the city should encourage more traditional and creative ways of introducing affordable housing units into the Boerum-Cobble Hill area.



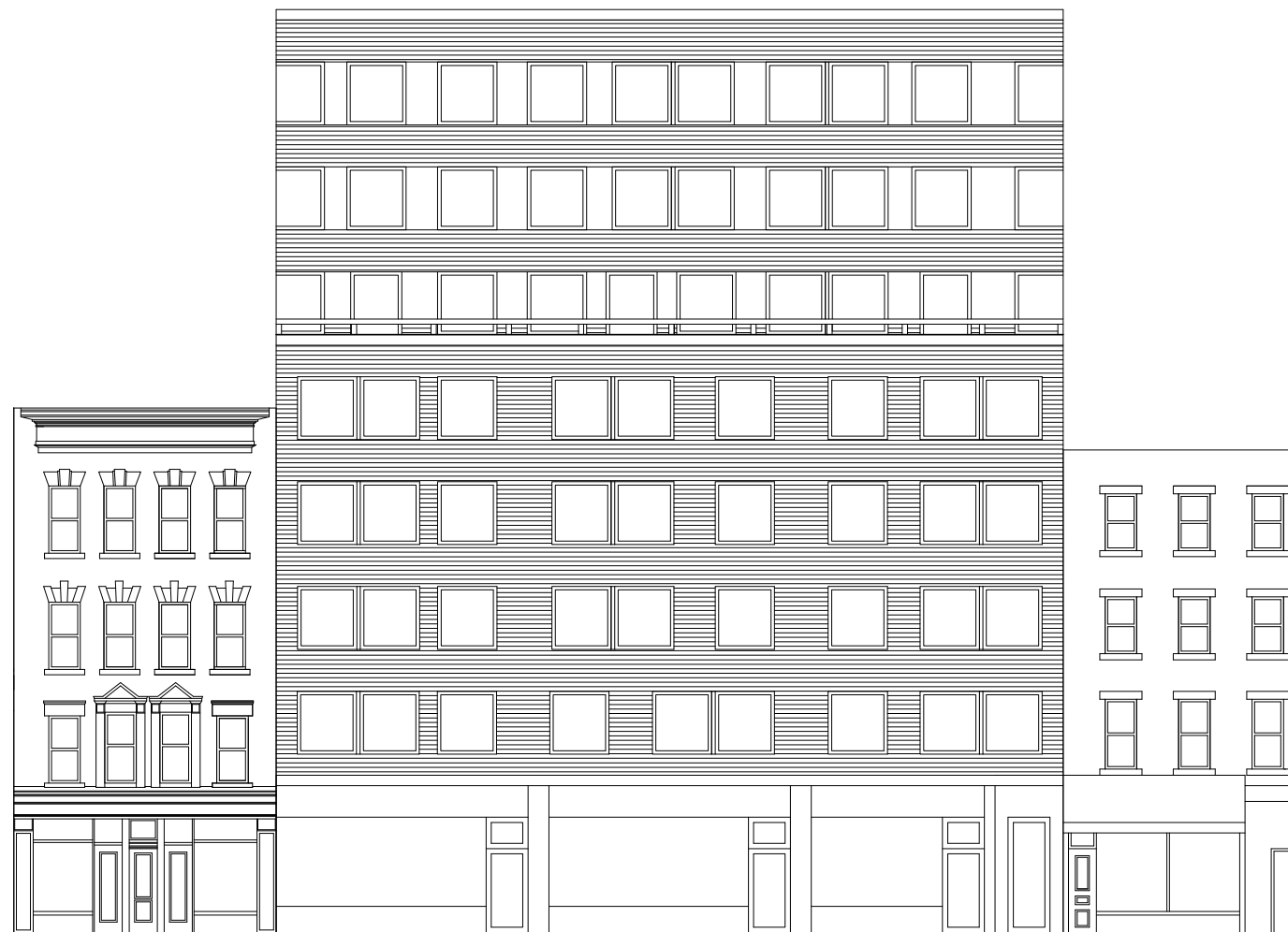
Design break: 357-359 Atlantic Avenue

This site is located on a through lot between Atlantic Avenue and State Street, falls within the Atlantic Avenue Special Zoning District on one half of the lot, making it a challenge to design two different facades with very different requirements.

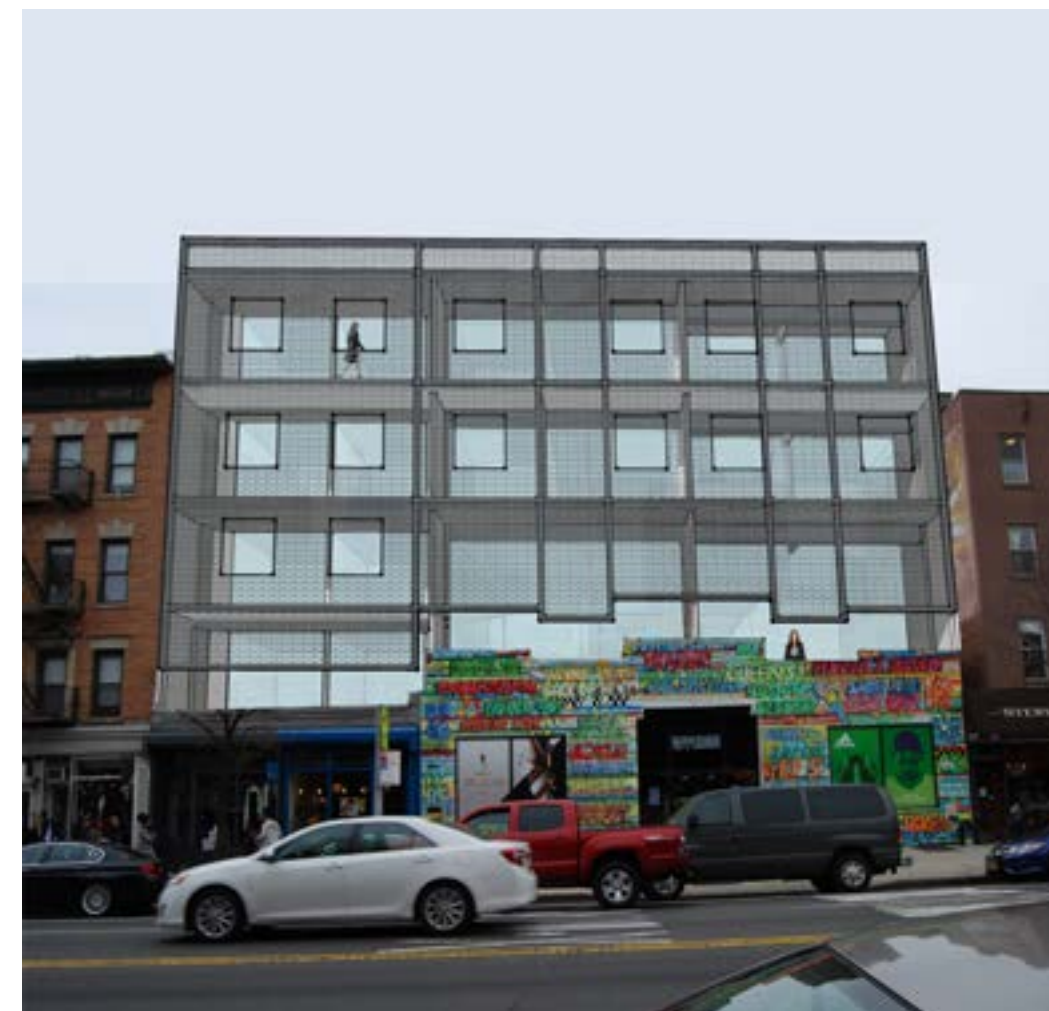
The first design grappled with issues of affordability in the neighborhood, using Zoning for Quality and Affordability guidelines, while also dealing with the increased height limits permitted in a historically low-scale neighborhood.

The second of these projects dealt with the concept of authenticity and integrity on Atlantic Avenue in reusing the existing one-story buildings and adding new program above them.

See pages 190-210 for complete design projects.



Atlantic Avenue elevation by Ariane Prache



Atlantic Avenue rendering by Mayssa Jallad



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THANK YOU
TO ALL OUR
LOYAL CUSTOMERS
FOR MAKING
US A PART OF
THEIR LIVES



FINDINGS SUMMARY

NO
PARKING
AT ANY
CONVENIENCE

Strengths, Weaknesses, Opportunities and Challenges

This study found that overall, less new development occurred within the historic districts and that majority of the entire study area has maintained its historically low scale character with high integrity over time. The community in the study area is active in supporting preservation, and is concerned with perpetuating the existence of the historic storefront typology. However, their efforts to keep these character defining features evident in the area sometimes come at the cost of creating "historicized" storefronts that are loosely based on evidence of original fabric. This lack of protection is due to the superficial nature and unenforced guidelines dictating the special purpose district along Atlantic Avenue.

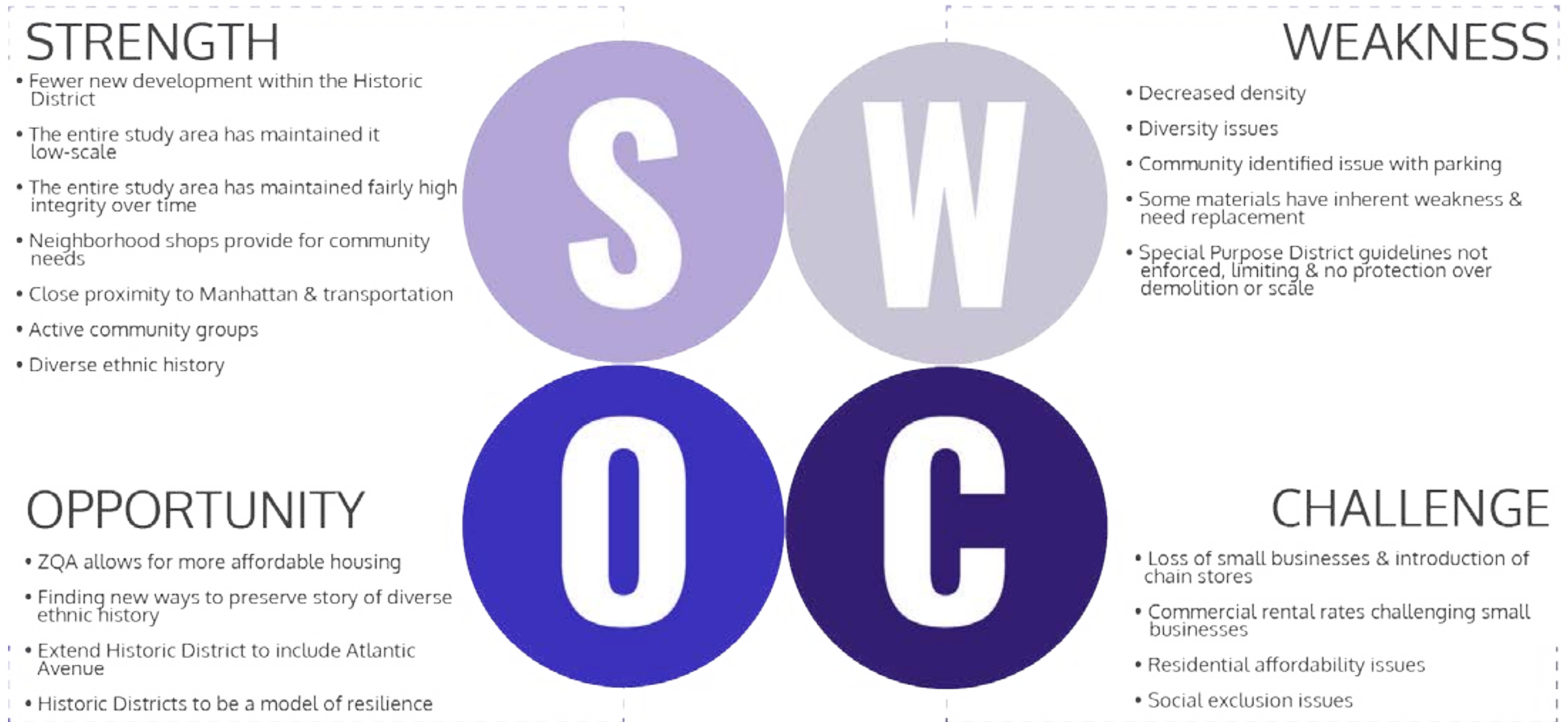
While the study area has a great history of foreign-born and diverse ethnic groups that helped shape the area into what it is today, our data indicates that there is both a decrease in the overall ethnic diversity of residents as well as a decrease in the density of said residents, as is evident in recent trends of row houses conversion from multifamily to single-family homes. Affordability in this area remains an issue, and is underscored by this conversion of homes, as well as the difficulty of local businesses in paying the rent for their storefronts along the commercial corridors and an increase in the number of chain stores.

These findings highlight the challenges and opportunities in the area. The challenges facing the study area include: how to deal with the rising commercial rents that make it difficult for small businesses to remain valuable and competitive, how to maintain the low scale building stock but increase population density, and how to recognize the various communities that helped to shape the area into what it is today. Opportunities for the study area rest with the strong sense of community that is heavily invested in preservation and in the local businesses, which is a strong source of support upon which to draw, the implementation of ZQA as an incentive to build more affordable housing, and recent strides by the Landmarks Commission in recognizing cultural heritage (such as in the case of Stonewall Inn) and important social histories.



233 Court Street
Source: student photograph

SWOC - Strength, Weaknesses, Opportunities and Challenges



Policy Recommendations

Our recommendations are broken in both broader, city-wide policy recommendations and specific, neighborhood-level recommendations. Our first recommendations concern the policy of the Landmarks Preservation Commission and the New York City Department of Planning.

Education-city level

We feel is opportunity for historic districts to stand as a model of resilience for the city. They should perform as the best neighborhoods and help protect the cultural values and livelihood of their residents. This might sound utopian, but one of the mandates of the NYC Landmarks Law is "to (b) safeguard the City's historic, aesthetic, and cultural heritage." Analysis found that within the study area, the expectations of the NYC Landmarks Law has not been utilized to its full extent, and buildings are being protected primarily for aesthetic reasons without acknowledgment of the cultural and social fabric that makes these places significant. Thus we recommend, broadly, that the LPC take steps to ensure that districts throughout the city are recognized for their cultural significance - and while it has already started to do so, such as is the case of Stonewall Inn, the LPC needs to continue to take steps in this direction.

We also suggest further education of the community and general public on the Landmarks Law in New York City. In general, the public still feels that a historic district imposes so many regulations upon homeowners that they can no longer make any changes to the fabric of their buildings. As we have shown in this study, through some examples of new buildings in historic districts, this is not the case. However, the Landmarks Commission needs to improve its education of the public regarding historic preservation in order to better promote preservation as an accessible option to all.



Corner of Dean and Smith Street
Source: student photo

Affordability-city level

Affordability is a major concern in today's political climate. Given the current direction of the deBlasio administration in promoting the Zoning for Quality and Affordability legislation and focusing on affordable housing, preservationists need to re-evaluate the ways in which the field engages with housing and affordability. One of the main goals of the New York City Landmarks Law is the increase and stabilization of property values. At the time this law was created, increasing property values was an important goal and incentive to convince New Yorkers to district, as well as a measure of success for districting. However, as property values across New York City increase, housing becomes more unaffordable, and as our community values change overall, this goal of the Landmarks Preservation Commission has become outdated. Historic districts around the country are increasingly criticized for their lack of income-diversity. While this study found that areas between and around the historic districts in the study area are unaffordable, the most unaffordable blocks within the study area fall within the historic districts.

ZQA addresses this to some extent, but the stigma and controversy that historic districts increase property values and squeeze out income diversity is still an issue. To address this issue, the New York City Landmarks Commission needs to consider its relevance in contemporary society. If the intention of the historic district is to create more protect buildings as well as diversity and inclusion, we need to think about additional parameters for landmarking in a new era. The Landmarks Law should be reviewed and should be updated to become more responsive to contemporary societal needs.



Gowanus Houses
source: Student Photo

Density-city level

Our data has shown a definite decrease in density as rowhouses are converted to single family units. At the same time, the world and city's populations continue to rise. Landmarks and Historic Districts are under scrutiny as so many of these buildings, including those in our study area, are low-scale structures. If Historic Districts are to become a model of resilience, they need to allow for higher density in the existing buildings; the alternative being demolition in order to build higher density towers.

We therefore recommend further research into the decrease of density over time, and the subsequent use of this research to keep population density high by disincentivising the loss of units and conversion of multi-unit dwellings into single units with an increased property tax. This may be a policy that requires a partnership between New York City Landmarks and the Department of City Planning if kept only within the Historic Districts. However, this is also an issue outside of Historic Districts as well as. We therefore also suggest that City Planning consider limiting the conversion of multi-family buildings to single-family units.



Rowhouses
source: Student photo

Parking-city level

Based upon our research, we recommend an alleviation of parking requirements inside historic districts. This study found subterranean parking poses a serious threat to the structural integrity of many landmarked buildings. Our study area in particular has remained largely car-dependent and the community complains about lack of parking. However, the Cobble Hill and Boerum Hill Historic Districts, as well as most other historic districts in New York City, are easily connected by public transportation. Therefore, we suggest the removal of these parking requirements in Historic Districts in order to preserve the historic structures and to promote the use of public transportation.



State Street
source: Student Photo

New historic district-neighborhood

We propose a new historic district on Atlantic Avenue from Third Avenue to Hoyt Street due to a dwindling number of original historic storefronts. We found that the special purpose district guidelines on Atlantic Avenue have not effectively protected these storefronts, do not protect from demolition, and make only superficial requirements mandatory, rather than protect the commercial typology in general. As we have done in-depth research on Atlantic Avenue we feel it is in the neighborhood's best interest that this section (not covered by the Cobble Hill or Brooklyn Heights Historic Districts) should have a greater level of protection than it has had in the past in order to preserve the importance of these mixed-use, historic storefront typologies. While we do recognize other stakeholder interests in expanding the historic districts in general - specifically the Boerum Hill Historic District, our research indicates that these row houses are in good condition, display high levels of integrity, and are not in immediate danger of demolition, and are therefore not in our primary recommendations for the area.

With the creation of this district, we also recommend that the Atlantic Avenue Special Purpose Subdistrict regulations either be revised or removed altogether as they are not adequately serving the needs of the community or the built fabric.



Proposed Historic District
Source: student-created infographic

■ Proposed Historic District

Small business easements-neighborhood level

In reference to community concerns for the loss of small business in the area, we propose an easement program to encourage independently-owned small business development on Atlantic Avenue.

Contingent upon the proposed Atlantic Avenue historic district designation, we propose to introduce a facade easement program that will reward business owners who preserve their small-scale storefronts in plan and facade with charitable tax deductions. The Internal Revenue Service (IRS) stated in 2004 that in order for buildings to be eligible for the easement associated charitable tax deduction, the building should either be individually listed on the National Register of Historic Places, or be certified contributing structure to an historic district.¹

The amount of the deductible tax varies as it is determined during the appraisal of each individual building, but it generally ranges from 10% to 15% of the property's fair market value.² With the reduced cost to the landlord, we hope the owners would subsequently lower the rental rate to help preserve the small businesses (mom and pop shops) along Atlantic Avenue, Court Street, and Smith Street. Meanwhile, as the easement receiver (The New York Landmarks Conservancy or the NYC Department of Environmental Protection) can exercise its legal right to enforce the easement in the case that the building owner(s) fail to maintain the condition in compliance. In short, it ensures that the storefronts' current and future owners to take good care of the architectural heritage in the years to come.

1. Internal Revenue Bulletin: 2004-28. IRS. July 12, 2004. https://www.irs.gov/irb/2004-28_IRB/ar09.html
2. New York Easement Law



87 Atlantic Avenue
Source: Student Photo



410 Atlantic Avenue
Source: Student Photo

Cultural overlay district-neighborhood

The second priority is the protection of sites of cultural heritage along Atlantic Avenue. For sites of Syrian cultural heritage, we propose an overlay district. For example, Sahadi's Importing at 187 Atlantic Avenue was established as early as the 1890s in Manhattan, and has been in business in Brooklyn since 1948. While not the original occupants of the building, three generations have worked at Sahadi's, and have had a significant presence in the community. This building is protected by the Brooklyn Heights Historic District for its architectural significance only.

As another example, Tripoli Restaurant served as a Lebanese restaurant and a site of cultural heritage for the greater Syrian community for nearly 50 years until it was replaced by a coffee shop. While these sites are protected for their aesthetic value to the neighborhood, they are not currently protected as sites of cultural heritage. Thus, we recommend that the Landmarks Commission designate a cultural overlay district over the western part of Atlantic Avenue (from Court Street to Hicks Street).



Tripoli Restaurant
source: Student Photo



Sahadi's
Source: Student Photo

Commemorative plaques-neighborhood level

For the historic port buildings along Atlantic Avenue, especially the Marine Life Savings Building at 122 Atlantic Avenue(122 Atlantic Avenue,1922), which is also included in the Brooklyn Heights historic district, we propose partnering with Place Matters (122 Atlantic Avenue,Now), an organization that has created a census of historic sites in New York City and created plaques to commemorate these buildings, to bring attention to the stories behind the architecture, and to help identify, promote, and protect such places in New York City.



Atlantic Avenue
source: Student Photo



122 Atlantic Avenue,Now
source: Brooklyn Historical Society



122 Atlantic Avenue,1922
source: Brooklyn Historical Society



Plaques
source: Brooklyn Historical Society

Installations

To draw upon the strong community already in place, we recommend several installations that respond to the lack of cultural commemoration in the study area. The installations call attention to aspects of the study area's cultural heritage that might not be reflected in the architectural fabric, yet are essential to an understanding of these neighborhoods' pasts

Facade Rewind

This installation calls attention to an arbitrary historic district boundary line, looking at the southern edge of Cobble Hill Historic District at a particular spot on DeGraw Street in the study area. One side of the street is inside the district (block 324), one side is outside (block 332). The installation uses simple cloth screens and projectors to superimpose the facades from 1930s tax photos onto the current buildings. The projection reveals a high level of continuity on both sides of DeGraw Street, leading us to ask where the historic district boundaries should really be drawn, and to question the arbitrary lines of the original historic district. In the 1930s these buildings had the same level of historic integrity, and arguably still do even today, despite their random inclusion/exclusion from the historic district.



Block 324
source: Google Street view



Block 332
source: Google Street view



Block 324 (Projected with 332 facades)



Block 332 (Projected with 324 facades)

Stable

Through the technology of scratch and sniff wallpaper, visitors are invited to consider the presence of a through-block brewery stable that once stood on this site on Dean Street between Third Avenue and Nevins Street, currently a park. In the early 1900s the stable served the Long Island Brewery located just a block away at the corner of Dean Street and Third Avenue.

The photograph inside the "stall" is from a Brooklyn Daily Eagle profile in 1900 of a carriage house in Park Slope, at a time when horses were central to transportation. The smells here include horses, hay and stable equipment, and serve as a provocative reminder of the site's ephemeral sensory past: very different from its present, but still valuable to us



Original site of brewery stable - Dean Street between Third Avenue and Nevins Street
Source: student photograph and The Brooklyn Daily Eagle (photograph inside "stall")

Flavor Paper

Located at 216 Pacific Street in the study area, Flavor Paper describes itself as a "futuristic production facility & showroom for custom, hand-screened wallpaper." Despite its modern appearance, Flavor Paper's products could be utilized in this historic preservation installation. Although scratch and sniff is not a traditional preservation technology, the participation of local stakeholders is essential to the success of these installations.

Bakery

Here the scratch and sniff wallpaper reveals the Syrian bakery that used to occupy this storefront at 199 Atlantic Avenue. Installed in the store windows, the image on the right is of a young woman pouring aromatic Turkish coffee; in the next window a woman holds out a tray of Syrian "meat pies." The images are printed with the smell of strong coffee and pastry.

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Original site of Syrian Bakery - 199 Atlantic Avenue
Source: student photograph and The Brooklyn Daily Eagle
(photograph inside "stall")



Materials & Documentation Recommendations

The physical fabric of these buildings has been well maintained and relatively unchanged over time. In many cases, change depended on the desires of individual property owners, but landmark designation or community projects could help to educate owners about the history of the neighborhood, the ways in which it has changed, and the ways in which its building materials continue to age. Education might sway future policy decisions and neighborhood goals towards protecting the existing fabric of these buildings. We recommend documentation projects, inclusion of non-rowhouse typologies in designation efforts, recognition and maintenance of trees, and specific mitigation measures for deteriorating brownstone and wood. Finally, we have identified areas for future study.

Documentation Measures

In order to better understand changes in building condition and integrity through time, we relied primarily on historic photographs. Some photographs were captured by local archivists, some by the LPC during designation of historic districts, and a major portion of the photographs were originally captured by the City for tax collection purposes. However, this approach was limited. Since the photos collected by the City were for tax purposes, not much attention was given to the photo quality. High quality photographs are essential for determining a building's physical condition. Though the tax photos from the 1980s were of much better quality, they are limited in number. Furthermore, the LPC photographed buildings exclusively within the historic districts and not throughout our study area as a whole.

This studio recognizes 2016 as a moment of rapid change in the neighborhood. As such, we recommend documenting conditions and features within the study area now, so that future studies will be able to adequately assess the effects of present-day changes on the future condition and character of the neighborhood. Specifically, we think it is important to document vulnerable materials and sites such as existing brownstone or wood (map for Vulnerable Materials) and sites flagged for development (map of Soft Sites).

We recommend that documentation tasks be undertaken as a collaborative effort between local interest groups and the Landmarks Preservation Commission. Local interest groups, such as the Boerum and Cobble Hill Associations, are interested in mobilizing community members to take action to protect the existing buildings. These groups would also likely be successful in leveraging the local community to invest time and funds in documentation projects. Software such as tablet surveying applications, photo-annotating software, or 3-dimensional photo scanning programs are available for free on open source platforms or for a relatively low cost. If community groups are interested in completing these documentation projects, local preservationists or students of preservation could train community researchers. After a few community members know how to use annotating or photo-scanning software, they can pass on the knowledge to other homeowners, institutions, or business owners. In turn, these projects could be archived so that future researchers will have accurate snapshots of the neighborhood.

Tablet applications, such as PhotoSuite's image annotation app would allow for more detailed surveying of buildings within the study area. The application allows text and sketch layers to be added on to survey photographs: surveyors can note facade materials, locations of material replacement or deterioration, or clarification of images. Survey information collected directly onto tablets does not need to be scanned or digitized before being shared, archived, or analyzed. The groups doing the documentation can, however, prepare the data to be archived, which can later be added to a database.



Fig. Map for Vulnerable Materials



Fig. Map of Soft Sites

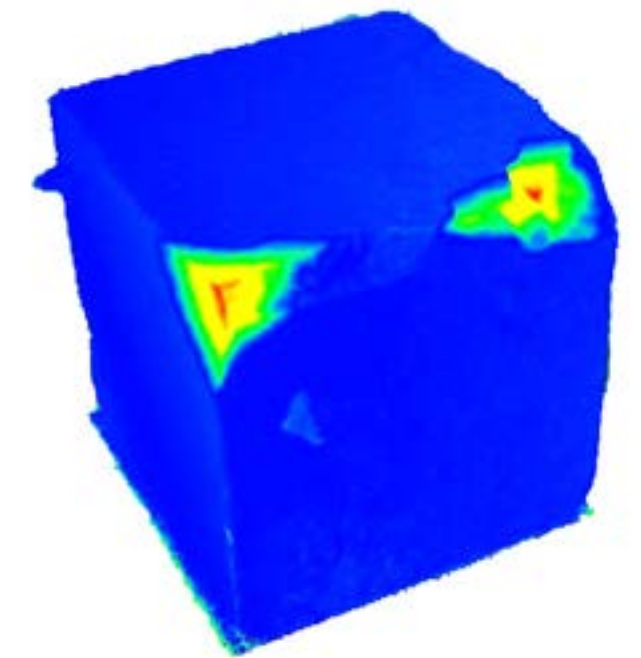
Drone photography is another method of digitally documenting the neighborhood. Already used in real estate marketing, drone photography allows for the collection of accurate and high-quality images and video from a variety of vantage points. Drone photographs and video can easily document buildings from eye-level and above, allowing for documentation at various scales including streetscapes, individual buildings, and even features placed high on facades. However, drone photography is in the progress of becoming highly regulated. The FAA (Federal Aviation Administration) has proposed a set of drone laws, and recreational drones are required to register with the FAA.

Finally, vulnerable features in the neighborhood can be documented using photogrammetry software such as Agisoft PhotoScan. This software uses photographs to construct dense, three-dimensional point clouds that represent objects within a hundredth of a centimeter. These point clouds can be archived as accurate representations of features. Or, the point clouds can be used in conjunction with other platforms such as SketchFab and AutoCAD, allowing the data to be shared or used in the creation of detailed 3D models or visualizations. We recommend that features are documented with Agisoft PhotoScan at regular intervals (such as every five years). Multiple point clouds can be compared using other software platforms such as CloudCompare, which can compute the differences between two point clouds and create a heat map that showing which areas have deteriorated the most. This would allow researchers to accurately quantify and record deterioration, as well as visualize deterioration in a compelling way. As a test for this technique, we simulated these documentation cycles in a laboratory setting. A sample of brownstone with an existing patch repair was documented using photogrammetry, then "deteriorated" and documented again. We simulated deterioration by chipping at the stone. The point clouds were then compared, and we produced a graphic which showed areas where change had occurred. If repeated over time in the field, it would be possible to visually represent the areas of brownstone features or facades that are disappearing the fastest.

Condition Before



Condition After



Change

Recognition and Maintenance of Trees

Taking into account the aesthetic value that trees add to the streetscape as illustrated by the tax photo comparisons, as well as recent studies that cite “reduced energy use, improved water quality, optimized property values and commercial benefits, and increased human health and well-being,” this studio recommends expanded attention to the maintenance and preservation of trees.¹

Drawing upon the success of the volunteer-run Cobble Hill Tree Fund charitable trust “responsible for planting more than 200 trees and raising funds for planting and maintenance,” the studio recommends that Boerum Hill establish and implement a similar organization intended to involve and educate the community residents in the importance of tree maintenance to the character of the area.² However, relying upon historic districts to preserve the treescape does not acknowledge the importance of trees in areas outside the historic districts. Therefore, we further recommend that city entities responsible for urban forestry (such as NYC Parks) implement volunteer programs outside the historic district boundaries and partner with volunteer organizations like the Cobble Hill Tree Fund.

The study also recognizes the challenges involved with sustaining these urban ecological resources. Trees are susceptible to urban environmental stressors such as traffic, insects and domestic animals, and air quality. With the interest of mitigating these threats, we recommend installing tree guards to protect the root systems of the trees. Tree guards are currently inconsistent in the study area, which is especially problematic for trees on streets with high levels of pedestrian traffic. A precedent for this suggested campaign was launched in 2011 by the Myrtle Avenue BID with grant funding. Existing designation reports provide no provision for the maintenance of trees, as the majority of them were planted after designation. Because of this, the trees currently in the historic districts are susceptible to reaching maturation and life capacity within a relatively narrow timespan. We recommend the development of a maintenance and replacement schedule for trees within the historic districts, which should include an assessment of vitality and life expectancy for the current treescape.

This correlates to another recommendation aimed at mitigating the negative effects of urban ecology on trees. More in-depth research into species characteristics and how to best cultivate the existing and future treescapes should be undertaken. The vast majority of the trees in this study area are of the species commonly known as the London Plane Tree, which is included on the NYC Parks list of Asian Longhorned Beetle Quarantine Species. Trees of this species may need to be replaced in the future.

1. USDA/Forestry Service Report
2. Cobble Hill Tree Fund website

Preserving Remaining Brownstones and Wood Frame Buildings

“True” brownstone buildings once made up a significant part of the study area’s building stock. Even today, we have observed a tendency to restore building facades to look like brownstones, albeit in stucco. And as seen from our data, most of the remaining brownstones are in an extremely dilapidated condition. It may be helpful to note that the brownstone on institutional buildings has fared much better than the brownstone on rowhouses; this could be due to the fact that on institutional buildings, brownstone was used as masonry blocks while on rowhouses and elsewhere, brownstone was applied as an exterior veneer. Ornamental lintels still exist on many rowhouses, even though the facades have been replaced by stucco. Brownstone is vulnerable to weathering from natural causes (mainly moisture in the form of rainwater and freeze/thaw cycles), and its durability is also comparatively lower than other stones (like granite or marble) owing to the nature of its formation. However, measures can be taken to slow the rate of deterioration, and we recommend that brownstone building owners follow the rules set by the New York Landmarks Conservancy in “The Brownstone Guide: Maintenance & Repair Facts for Historic Property Owners.”

Wood seems to have fared better than brownstone in the study area, as a larger number of wood buildings are present today. Wood is quite significant in the study area because of its prevalence in earlier times and due to the more recent tendency to replicate the appearance of wood with vinyl siding. Wood presents a fire hazard as well as numerous maintenance challenges, perhaps explaining why most of these buildings have disappeared from the study area. With this in mind we recommend that owners be made aware of the “Rowhouse Manual” published by the LPC, which details the importance of architectural details and materials (such as wood siding).

Further Study

We recommend more in depth research on the commercial corridors of Smith Street and Court Street. The west side of Court Street is protected by the Cobble Hill Historic District, but the east side has seen significant development and an increase in chain stores. Smith Street is entirely unprotected by any landmarking or districting tool. As we were limited in the amount of time available to complete this study, we were only able to perform in-depth investigations of Atlantic Avenue, and feel that, having identified historic storefronts as crucial to the character of the area, these two commercial corridors should be further investigated for possible designation. We also recommend increased emphasis on secondary typologies in the study area. As mentioned earlier in the historical development of the area, the original designation reports focus on the character and value of the rowhouses, leaving out other typologies. The conservation study shows that Cobble Hill contains a number of non-rowhouse typologies, especially institutional buildings. Also, the areas encompassed by the proposed expansion of the historic district include a mix of building typologies, including walk-up apartments, industrial, and institutional buildings. Finally, the analysis of case study blocks suggests that the existing historic districts have not been successful in limiting change in buildings that are not rowhouses. As such, we suggest that future studies and reports explain the history of these typologies, emphasize their role in the development of the neighborhood, and advocate for their preservation. This should, at minimum, be incorporated into contemporary discussions of the Boerum Hill expansion. Increased emphasis on a variety of typologies could provide an opportunity to preserve buildings that are under-represented in the existing districts, more common in the proposed sections, and an integral part of the area's history.

A similar study based upon tax photograph analysis can be carried out to look for evidence of changes in building typology, materials, condition, integrity over time. Based on the findings from a small number of case study blocks, (the drastic variation in average conditions of properties in blocks right outside of Boerum Hill district, the difference in condition between rowhouses and other typologies within Cobble Hill district, the tendency to revive historical building styles) further study encompassing the whole study area could support or disprove the trends discussed in the "material, conditions, and integrity" section.

Additionally, if this study is repeated with a wider area, or at a different time in the future, we have identified a few lucrative topics of investigation that were left out of this study. Researchers could investigate: the prominence of painted brick facades through time (as discussed in the integrity section), addition and removal of fire escapes as they relate to multi-family conversion of rowhouses, the integrity and condition of ironwork, or the changing character of storefronts and commercial districts through time. In regard to painted facades, researchers might be able to shed light on the integrity of existing materials if they track cases where buildings were painted. We suspect that paint may have been removed by sandblasting or other techniques that could compromise the quality of the base material. Additionally, it would be interesting to investigate the origins of this aesthetic and preference towards bare-brick, when a portion of the building stock has been painted over at least the past seventy-five years.



Smith Street
Source: student photograph

Conclusion

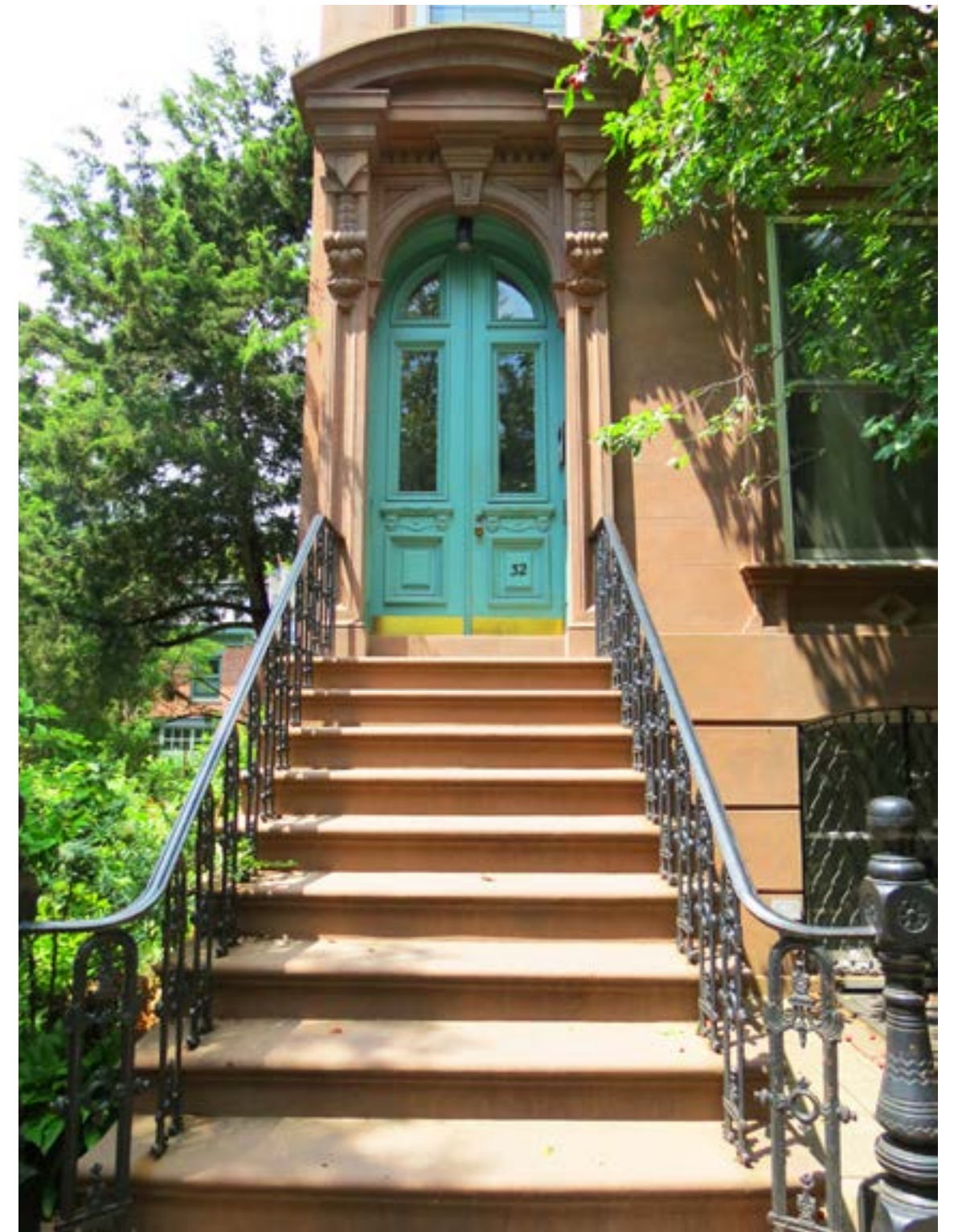
The study area has maintained an early 19th century, low-scale residential architecture both inside and outside the historic districts, one of the main goals of the original designation reports. However as this study has demonstrated, the area has also maintained robust, low-scale commercial street corridors along Court Street, Smith Street, and Atlantic Avenue, speaking to other typologies' resilience to change throughout the 20th century in the area. The continued presence of these typologies - particularly historic and historicized storefronts along Atlantic Avenue, Smith Street, and Court Street, are indicative of the community's investment and interest in these typologies. The material fabric and authenticity of these varied storefronts, the prevalence of mixed-use typology, and the community's hard work in keeping these types of typologies alive indicates that although not recognized by the historic district designations of either Cobble Hill or Boerum Hill, central to the identity of the neighborhood. Many of these historic storefronts are not within the district, which suggests that community engagement is a key area to tap into when attempting to maintain the historic aspect of neighborhoods.

The area is also defined by its cultural history, and we feel that previous landmarking has not sufficiently recognized this. The various patterns of immigration mentioned in the reports have impacted the architecture, typologies, and types of businesses that make up the area today, again leading to a unique neighborhood setting. While there are architectural features that bear evidence of these patterns, there is no formal recognition of them.

From a materials standpoint, it appears that designation of the historic districts has had a particularly positive effect on the material condition and integrity both inside and outside of the historic districts. Materials such as wood and brownstone have suffered - partly due to replacement over the course of the 20th century, and partly because of the more rapid deterioration of brownstone as compared to more durable materials such as brick. Though our recommendations urge that better care be taken of these dwindling materials, the replacement of brownstone with stucco does not negatively impact the significance of the area - rather it is an acceptance of the limited lifespan of materials in an urban environment and proof of an effort to maintain the character of the neighborhood - again, proof that the community is particularly involved and concerned with the aesthetics and character of the area. On average the architectural forms have been respected and maintained, though as observed, there are a fairly large number of historicized storefronts compared to original storefront fabric. Similarly to the materials comments made previously, this is more an indication of the community caring about the character of the neighborhood - which makes this study area so important. In reality, much of the maintenance is due to the designation of the historic district and the interest and activism of the community.

As has been noted however, the historic districts, though clearly helpful in some ways, are not actively working on affordability or other socioeconomic matters (such as the difficulties facing small business owners). While this has not been the mandate of historic districts, or preservation in general, it is of concern to the community that has made such an effort to maintain its character. In order to continue to build support for preservation, it is perhaps worthwhile to look into other concerns of communities and act upon them.

The purpose of the study was to investigate the long-term impacts of designation on historic districts. Our research bears out a number of positive outcomes from the designation of these historic districts, primarily among materials conditions and architectural form, but conclude that there are various other tools that can be used in order to promote preservation among the community and help historic districts give back to the communities that support them.



32 Strong Place
Source: student photograph

Following page: 107 - 109 Atlantic Avenue
Source: student photography



Dogwood Branches
\$5 per bunch

FLOWER HEIGHTS
A flower shop & nursery
107
109
31
2



Design Interventions

DESIGN INTERVENTION : 128 SMITH STREET

Elizabeth Canon & Valentina Flora Angelucci

DESIGN SITE OVERVIEW

1940 Property Card

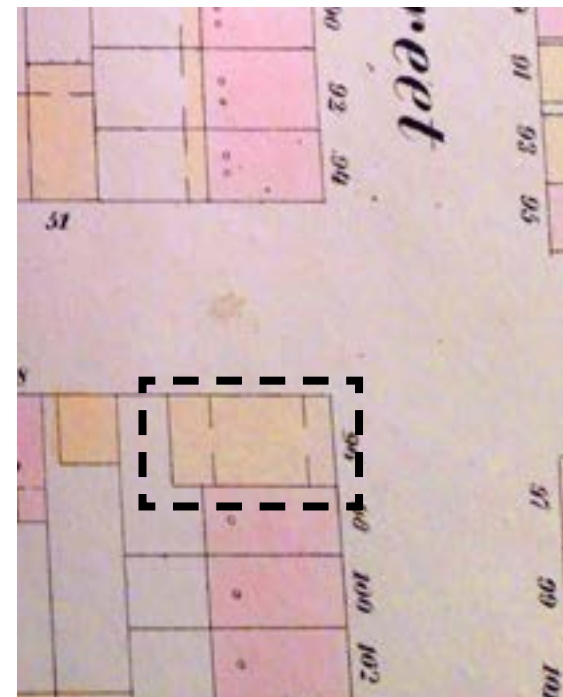


Building Address	128 Smith Street, Cobble Hill, Brooklyn
Lot Size	1410 Square Feet
Lot Dimensions	Smith Street - 23.5' Dean Street - 60'
Allowed or Maximum F.A.R	3 Residential F.A.R 3.0 Commercial F.A.R 2.0
Total Development Rights	3150 Ft ² of available development rights
Lot Coverage	Allowable for corner lot - 80% Designing with ZQA - 100%

1983 Tax Photo



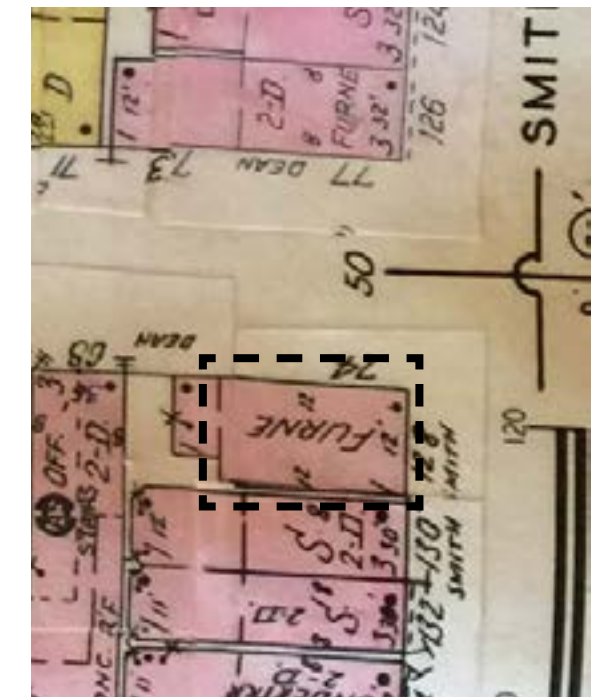
1855 Perris Map



1911 Hyde Map



1968 NYPL



The site is located at the corner of commercial Smith St and residential Dean St, one block away in either direction from the Boerum Hill Historic District and the Cobble Hill Historic District. The small site measures 1410 ft², with a frontage of 23.5' on Smith St and 60' on Dean St. It has R6A zoning, which allows for ground floor commercial and residential above, and a total F.A.R of 3.0. As a corner lot under Zoning for Quality and Affordability the building is allowed 100% coverage of the site and requires a setback at a height of 60 feet.

According to the 1855 Perris Map Book of Brooklyn, the first building to be erected on the site was a residential four story wooden building. This building was demolished before 1930 and replaced with a commercial single story brick building as can be seen in the 1940 property card. Since then the site has seen various iterations of this model. The building on the site is still occupied by a single story restaurant. This speaks to the sites interesting location as a transition space between the residential and commercial streets. It also shows the historic importance and economic viability of maintaining a ground floor commercial program within the building. From the second floor up the proposed buildings contain two residential, market rate units. As many multifamily dwellings have been converted to single family dwellings in the popular neighborhood, this program is a response to the subsequent need for additional market rate housing.

Both architectural responses to the site have chosen to demolish the existing building as it is of little historic significance and is not structurally suitable or practical for adaptation into a multistory building.



DESIGN: 128 SMITH STREET

Student: Elizabeth Canon



The corner lot at Smith Street and Dean Street demands a design that incorporates commercial and residential architecture. Since the client is a developer, the design needs to fulfill the economic imperative, while also being sensitive to its location. Although the site is not located in a designated historic district, there is still a need to be sensitive to the historic surroundings. The most difficult part of this design is that the site is very small at twenty- three feet along Smith Street and sixty feet along Dean Street with a low FAR of 3.0. Dealing with the small lot size and low FAR the project is a four story, plus cellar, mixed-use building, using one hundred percent lot coverage on the ground floor. The ground floor is a restaurant, using 1,000 square feet at grade plus a 1,400 square foot cellar. Since Smith Street is commercial, having a restaurant on the ground floor is good for the texture of the neighborhood, while the residential units are placed above. The second floor is a simplex (1,200 SF) and the third and fourth floors are a duplex (1,800 SF). Besides the small lot size and the low FAR, the decision to design two residential market-rate units is because the building code is more lenient. For example, for one or two family dwellings there does not need to be an elevator or second egress stair—both very space-consuming elements that the small site cannot support. The building is forty-eight feet tall; four stories with a small utility bulkhead on the roof, totaling fifty-five feet. There are terraces on the second and fourth floors. The second floor terrace references the way many historic row houses are several stories tall with a one-story extension in the rear of the house. In that sense, the terraces are not out of context. The railings on the terraces are black glass panels that line up with the cornice line of the neighboring building on Dean Street and reference the cornices in the historic neighborhood.

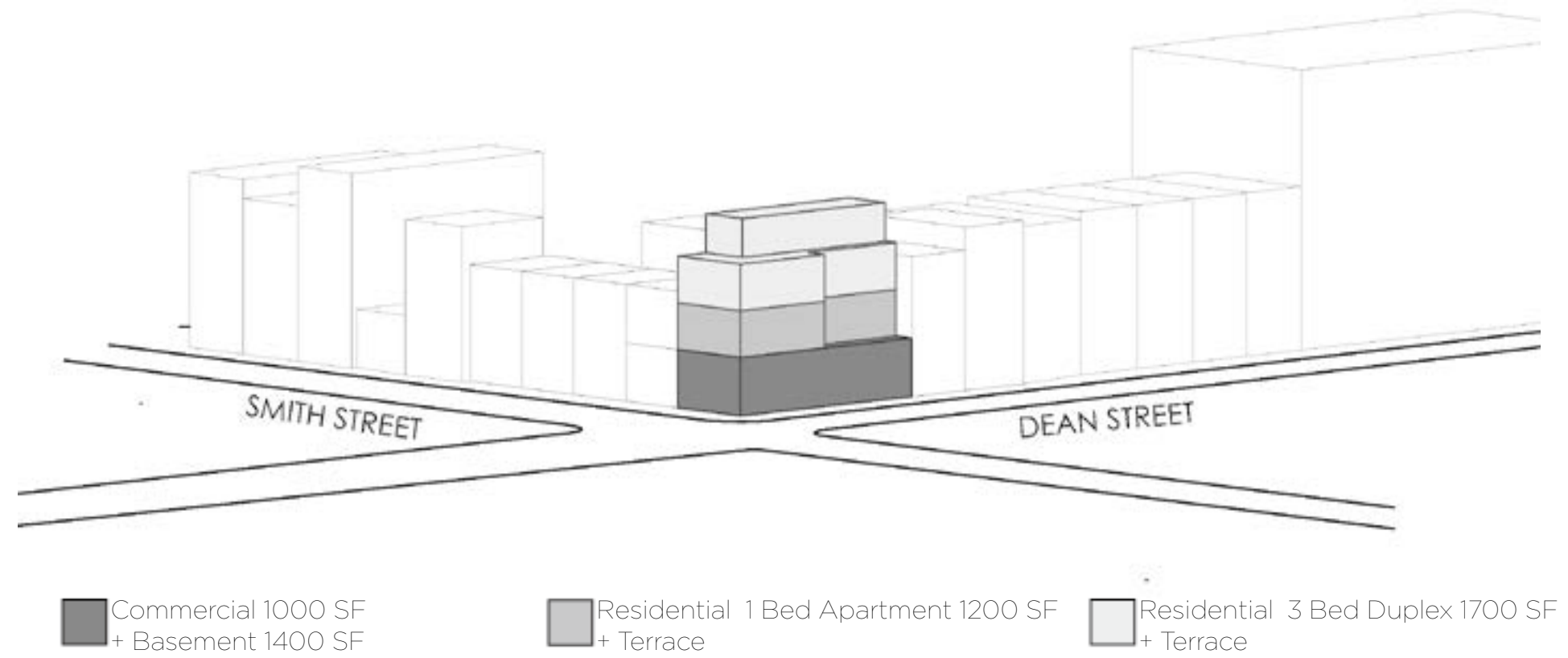
The concept for the design is two interlocking L shapes in elevation and plan, which create terraces and setbacks. The L that runs along the street line is dark grey brick and the recessed L is navy blue brick, creating a contrast and further defining the interlocking L's. The dark grey and navy color choices for the brick are different than historical brick colors, but also meant to complement and contrast the neighboring red brick buildings.

Windows are framed in black steel, and decrease in size as they go up the building; also referencing the Greek revival facades on Smith and Dean Street.

Structurally, there are load bearing masonry walls along the property lines (the south and west walls). Street walls (north and east) are load bearing metal stud with brick veneer. The floor system will be lightweight concrete metal deck and steel joists.



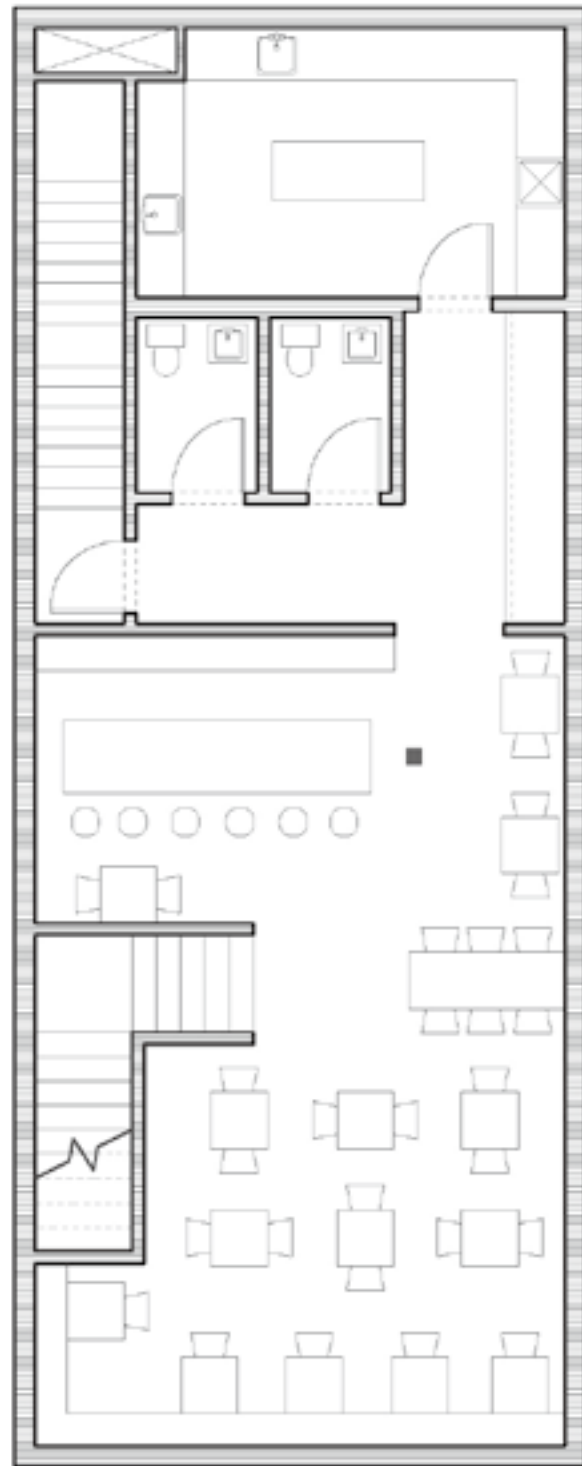
Massing and Program Distribution



Smith Street Context



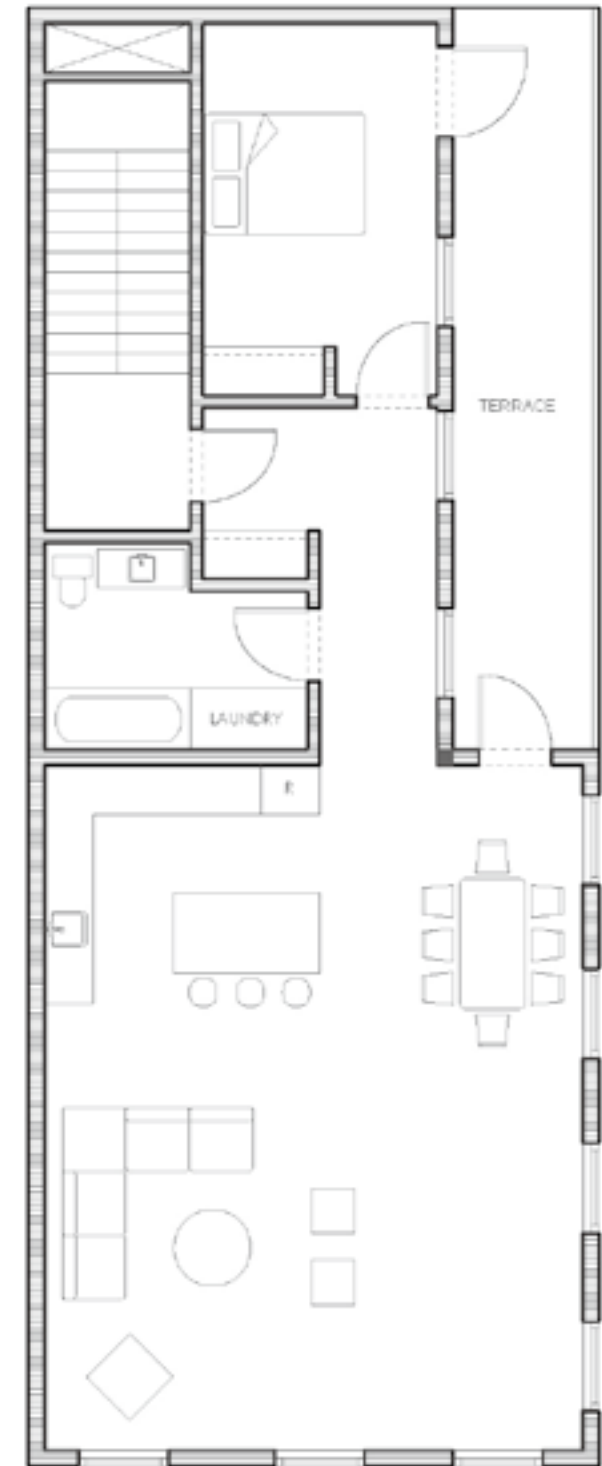
Cellar Restaurant



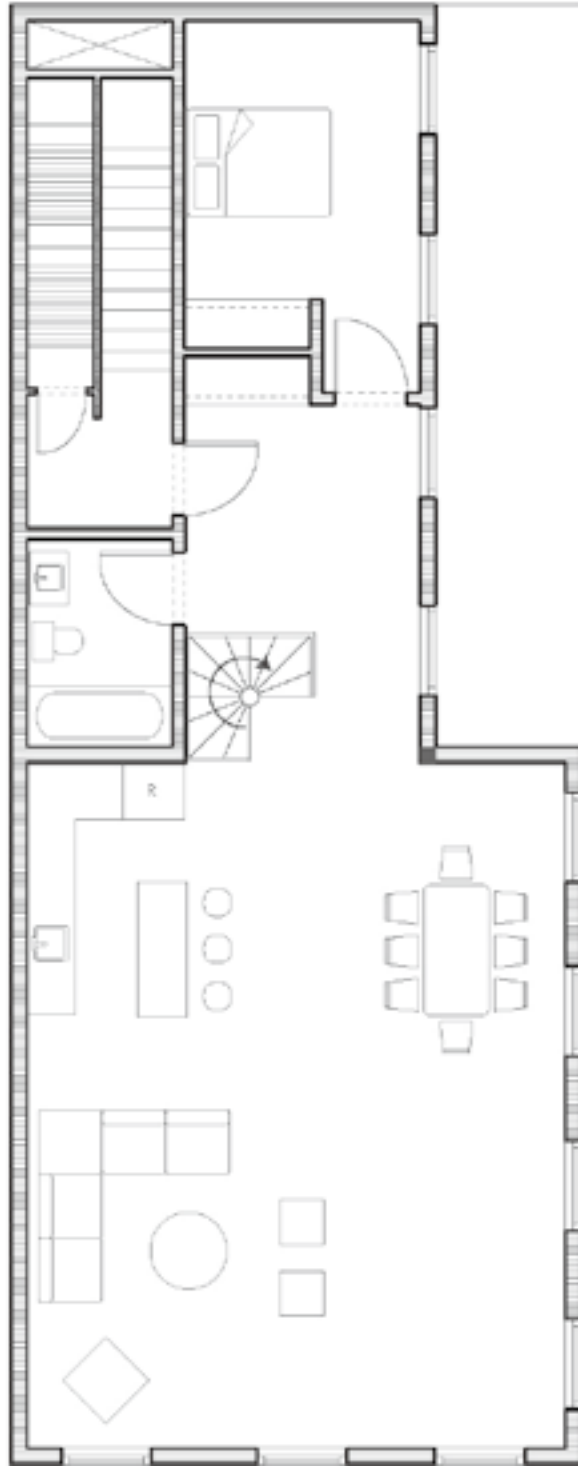
Ground Floor Restaurant



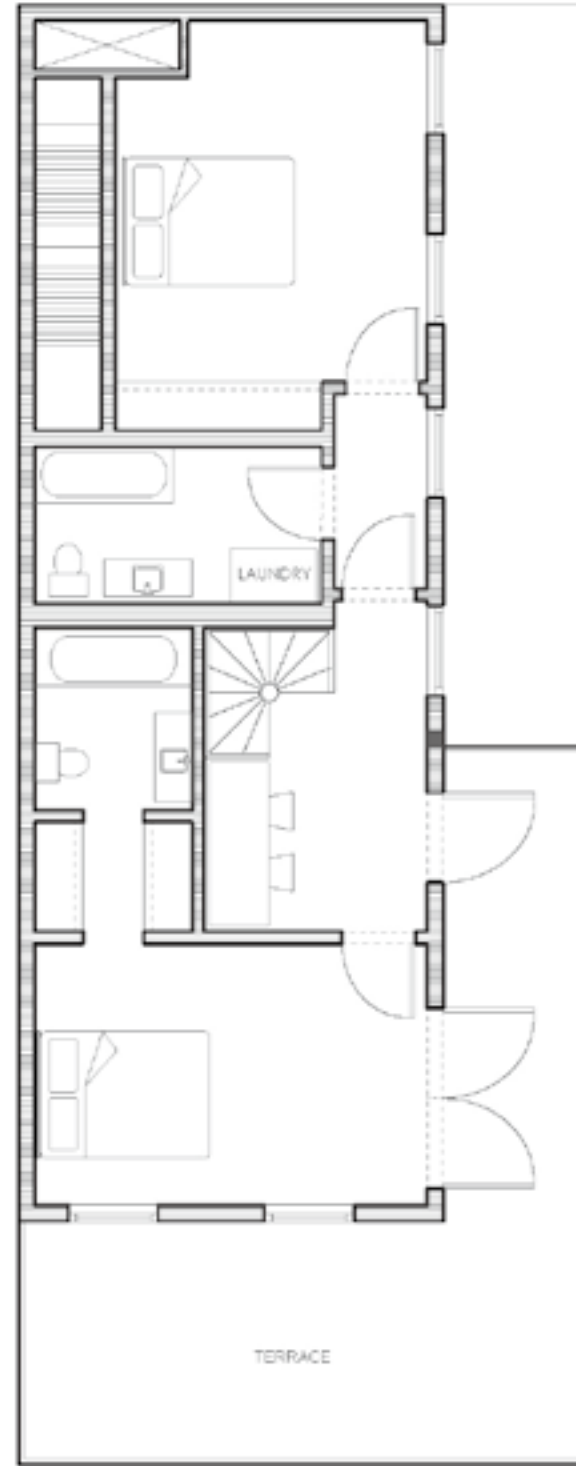
Second Floor Simplex



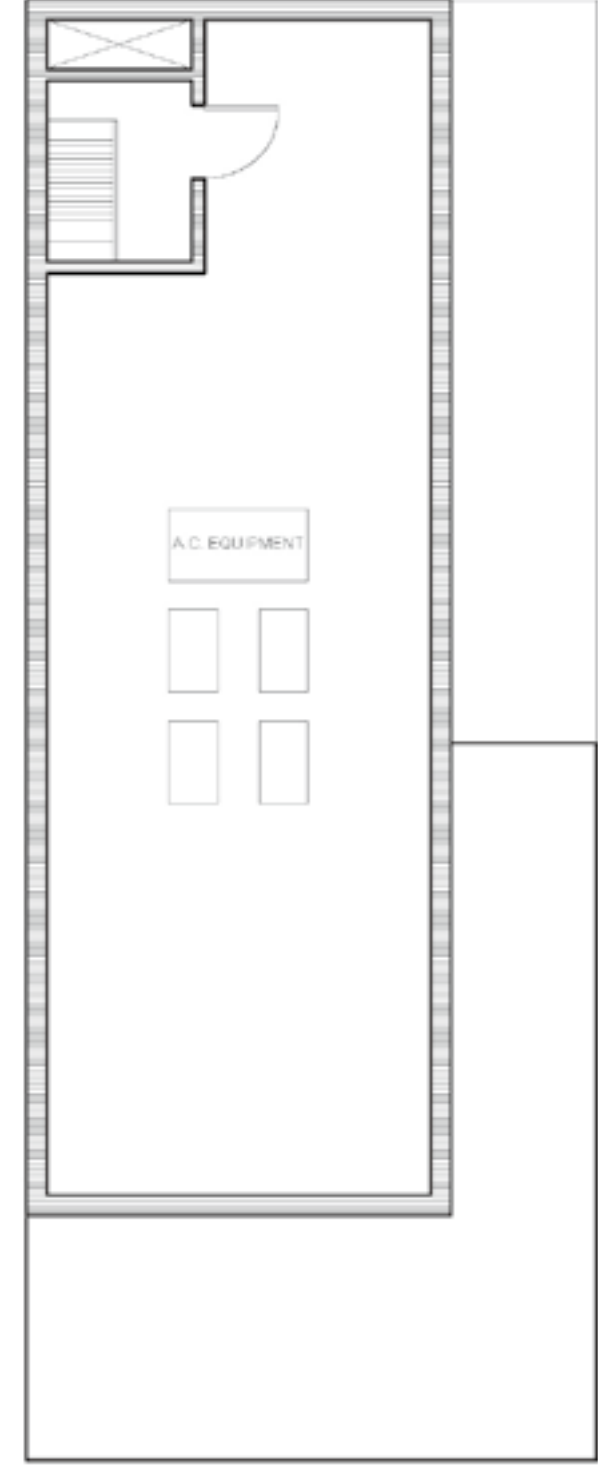
Third Floor Duplex



Fourth Floor Duplex

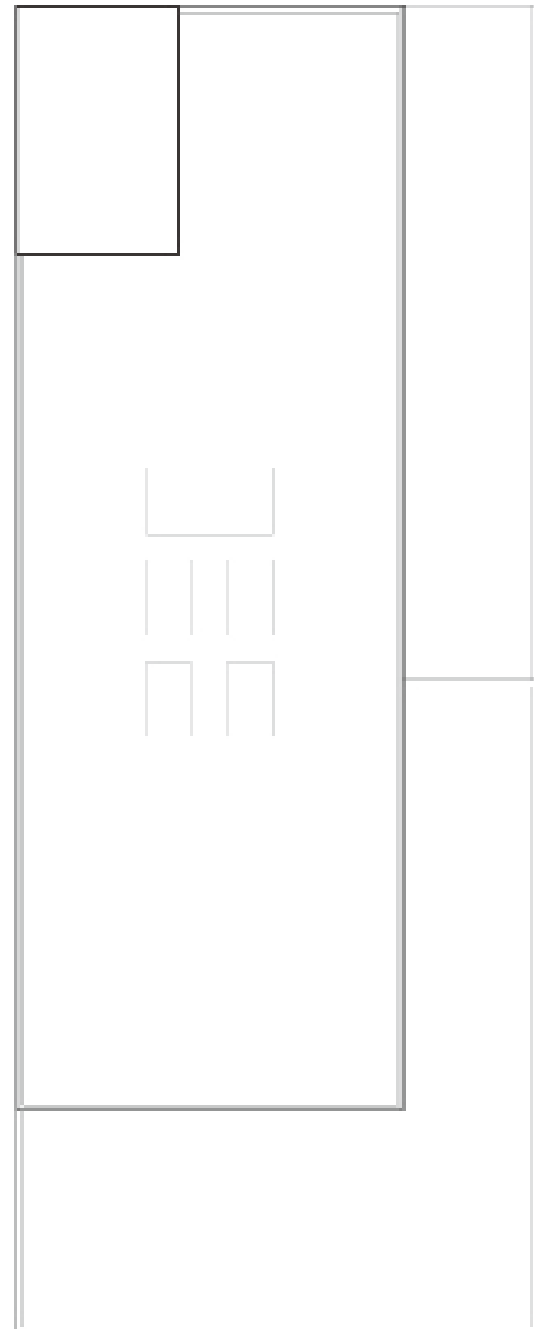


Roof

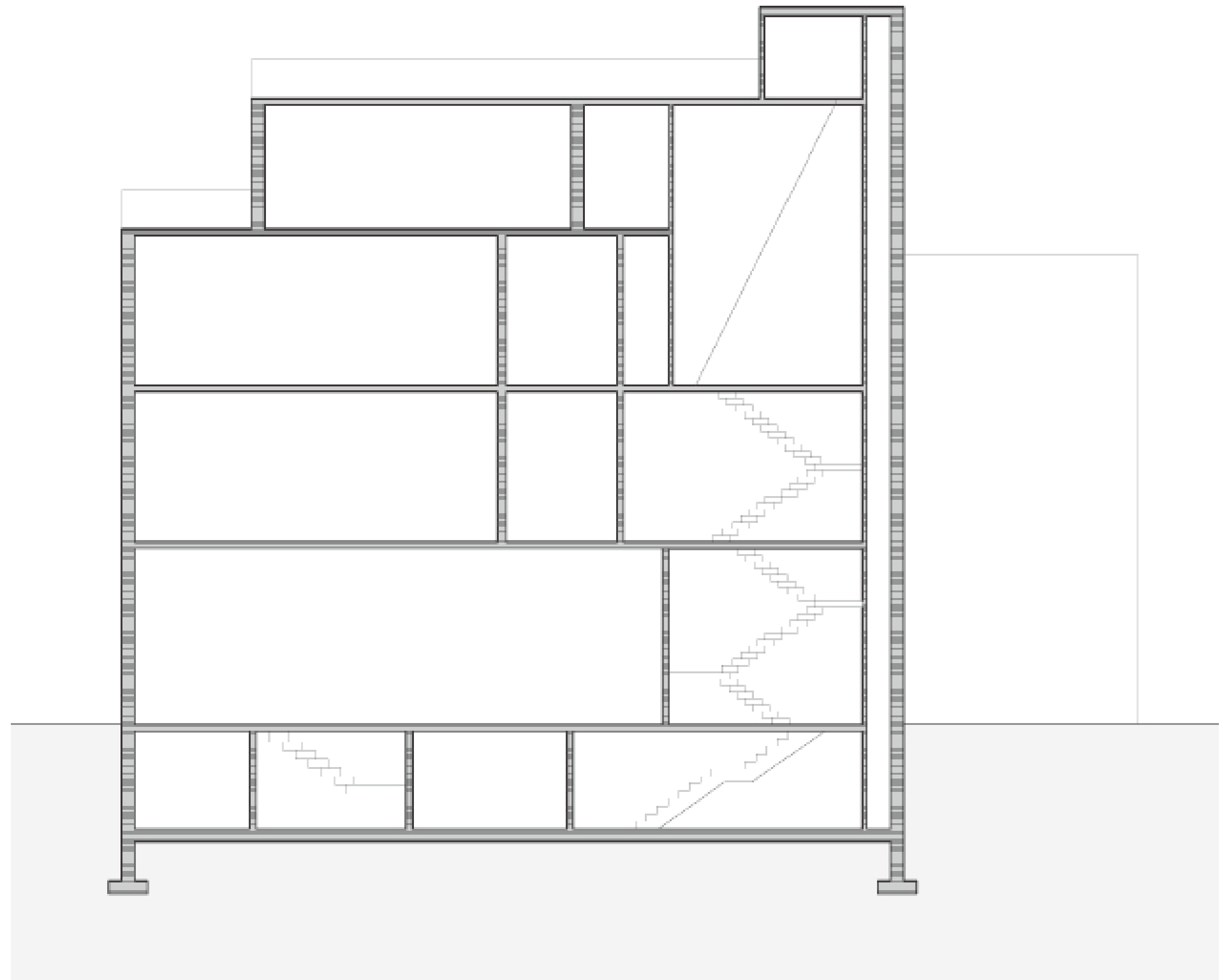


Sections

↖



↙



Study Model



DESIGN: 128 SMITH STREET

Student: Valentina Flora Angelucci



Slip Space

Located at the edge of two historic districts, at the intersection between residential and commercial, and surrounded by a variety of diverse programs, the site inspired a concept I've titled Slip-Space. For me, the most interesting characteristic of this site is its dynamic position, both spatially and temporally, in the neighborhood. It is from this fluctuating, morphing nature of the area that I have approached my building's design. Based on a focus on the historic fabric of the neighborhood around the site and with a desire to act appropriately towards them, I identified various character defining features that I have used to inform my design decisions within the Slip-Space concept.

Most notably, these features are:

- Acknowledgement of the wood building originally built on the site (and therefore referencing the timber buildings across the street too)
- Maintenance of building scale between Dean and Smith Street
- Material choices to reference the historic or neighborhood materials without mimicking them
- For the building to act as a transition space between residential and commercial, and old and new. The building should also help bridge the gap between the aesthetics and style of both streets.
- Maintenance of the existing relationship of commercial program to both streets

The ground floor and one level below grade have been designed for commercial use. With the provision of kitchen and storage space these levels are best suited to a café/restaurant with retail space such as a specialty book store. The ground floor also provides two separate access points for the residential units above, with one entrance on Dean St and the other on Smith St.

The layout of the residential units is based on the circumambulation around the central light well. From the second floor up, floor plates are split to create dynamic multi-level apartments. Each apartment measures approximately 1480 ft² and has two bedrooms with en-suite bathrooms, a kitchen, living room with guest bathroom, dressing room or office, and a roof terrace with bar area. Due to the nature of the split levels, residents of both units get dynamic interaction with both Smith and Dean Streets. The central light well, which also acts as a circulation core, is clad with glass and moveable screens. This creates the opportunity for visual communication between the commercial and residential space, and between the residential units. The movable screens allow for privacy when desired, and also create a dappled light effect within the apartments. The light well has an automated skylight that opens for natural light and ventilation, even in rainy conditions.

Dean Street Context



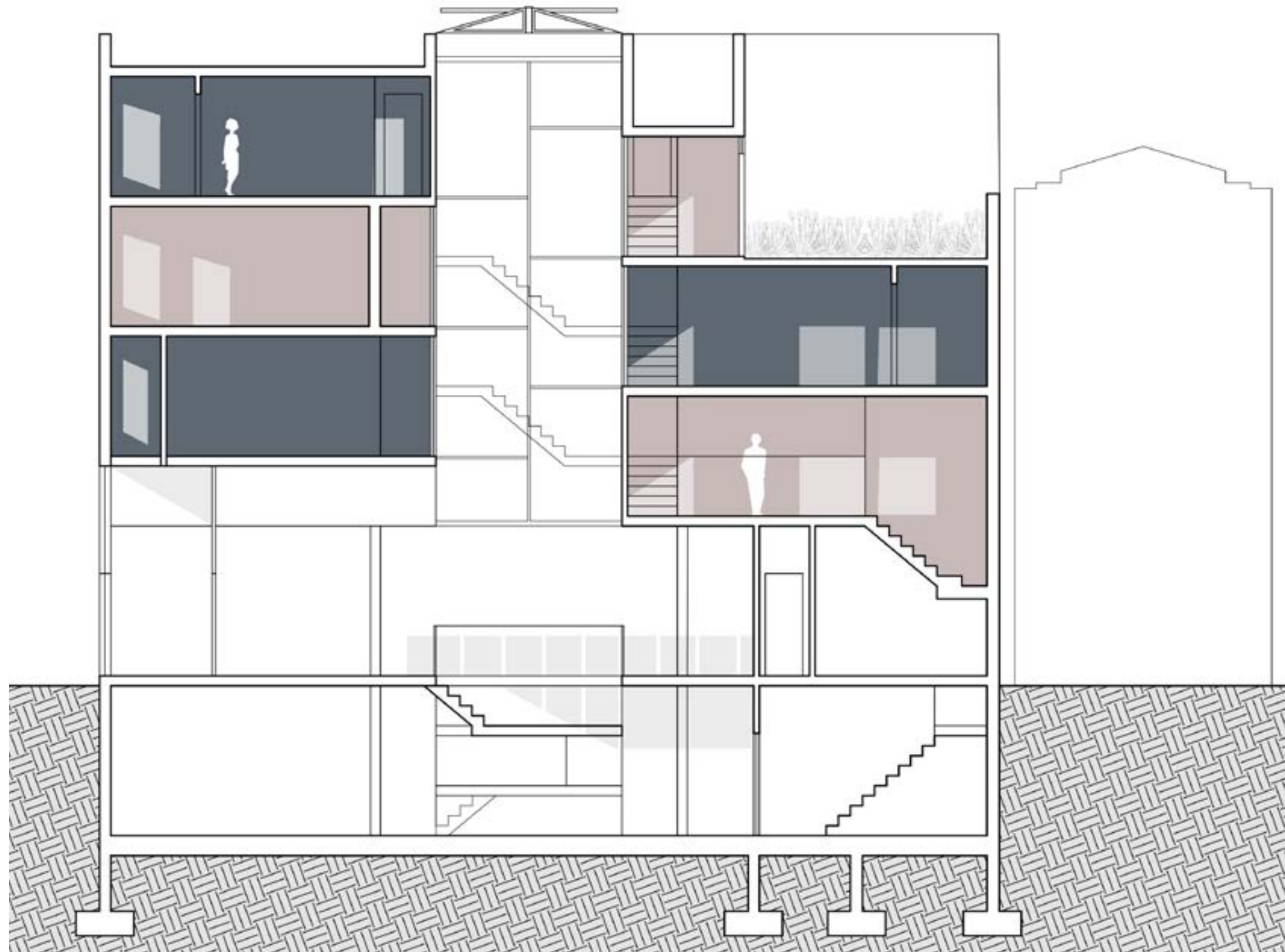
Dean Street Elevation



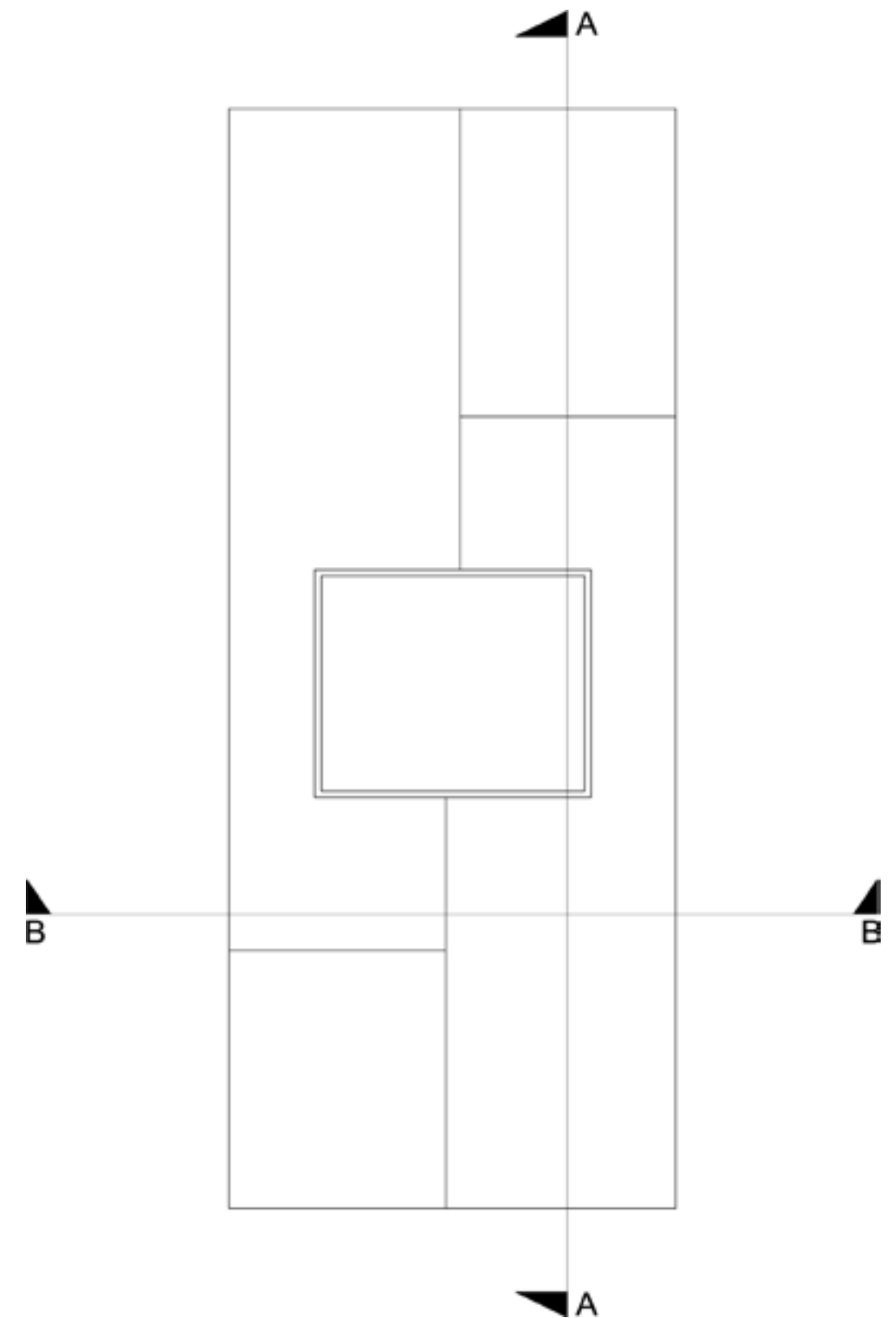
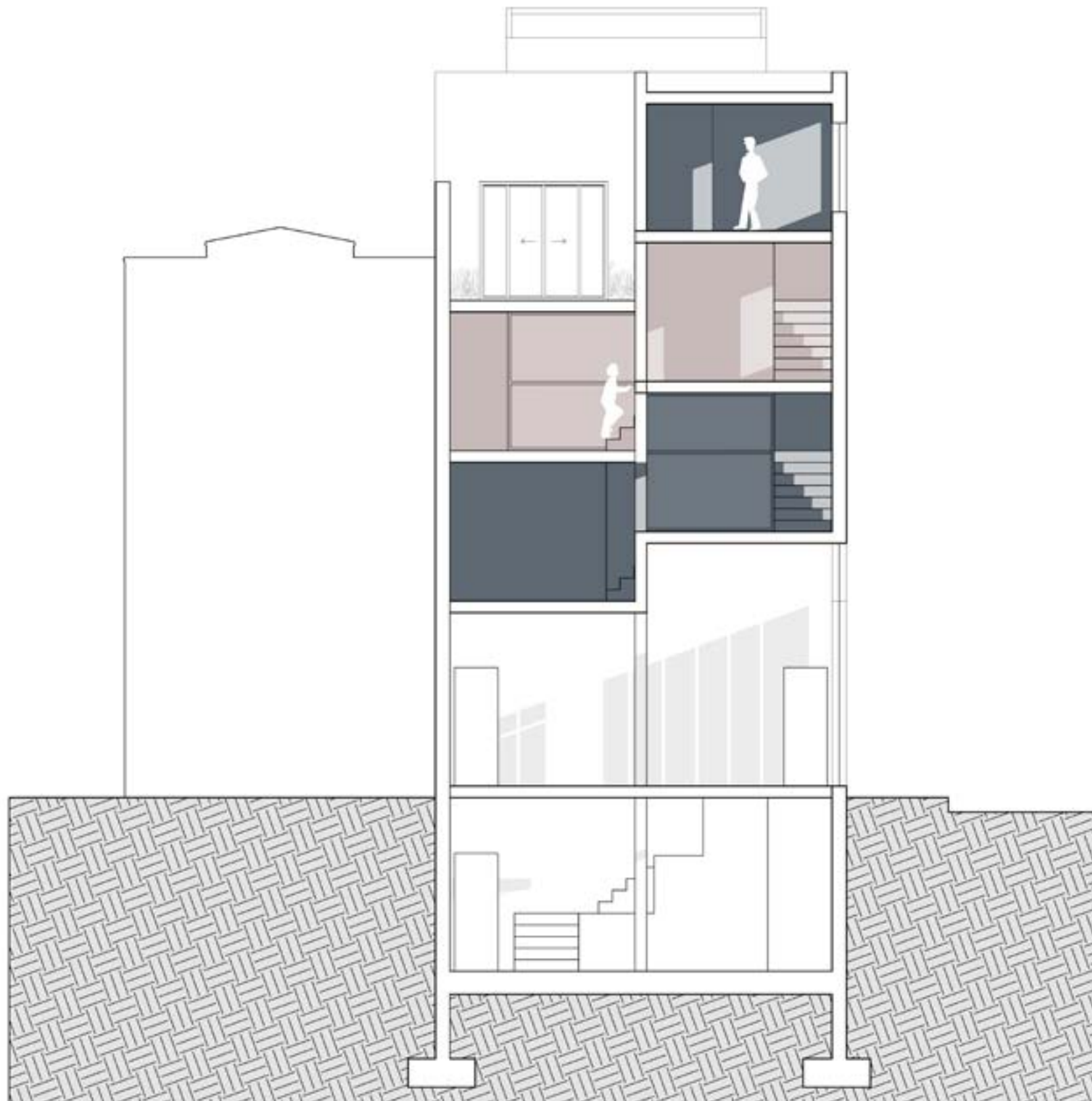
Smith Street Elevation



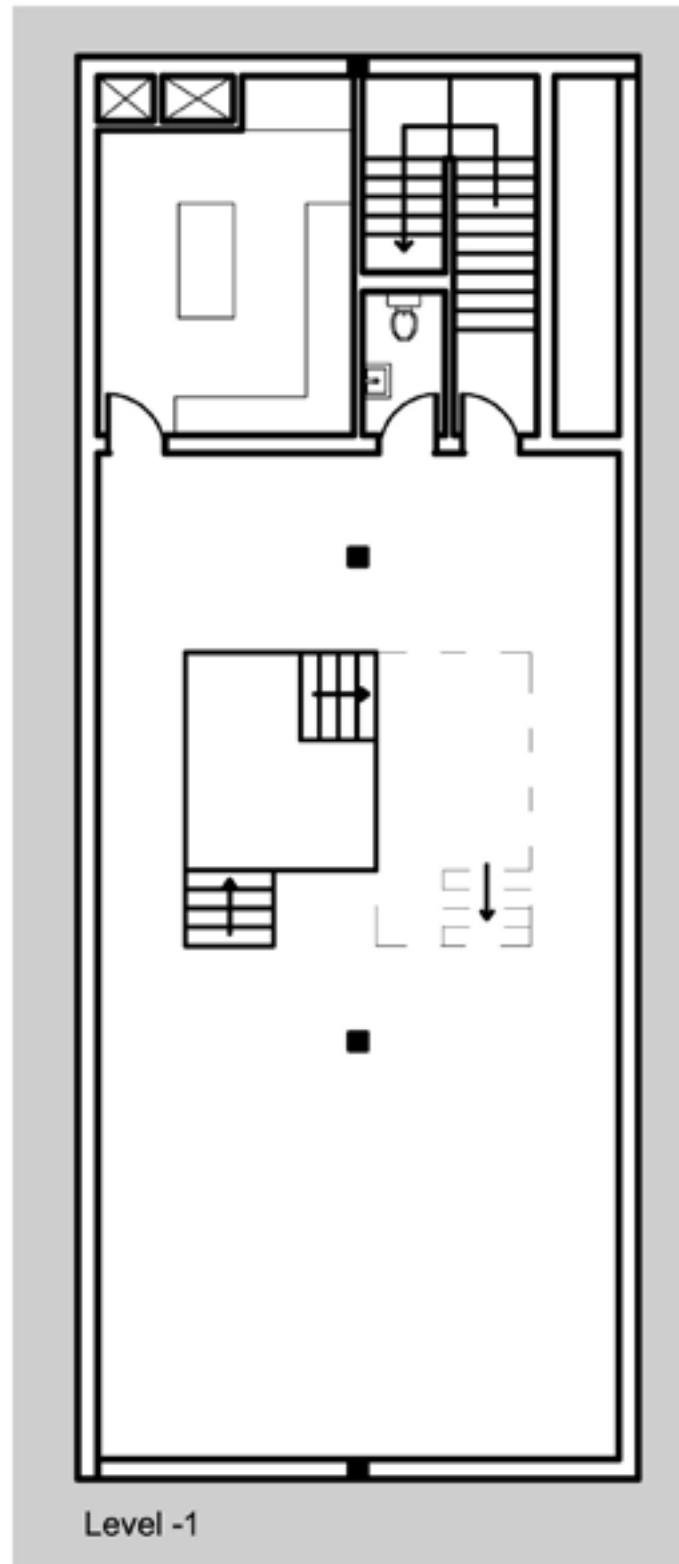
Section A-A



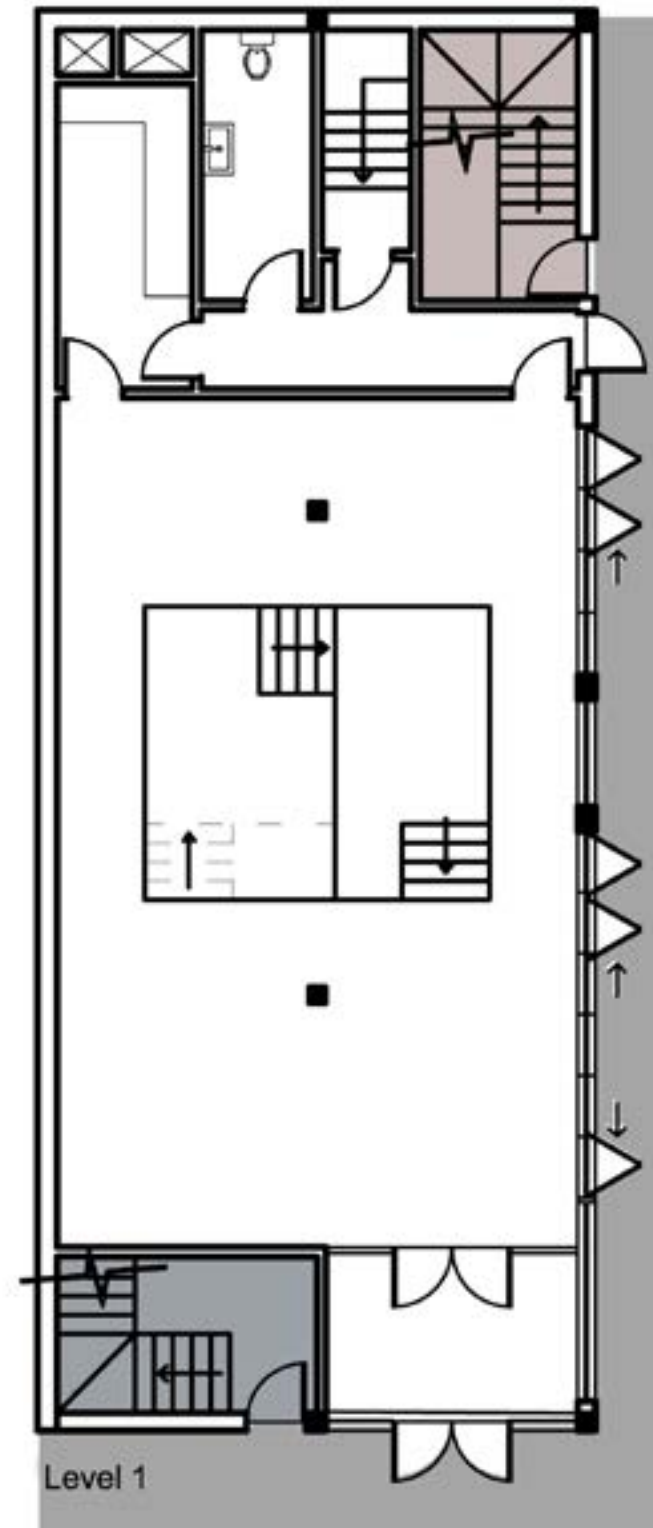
Section B - B



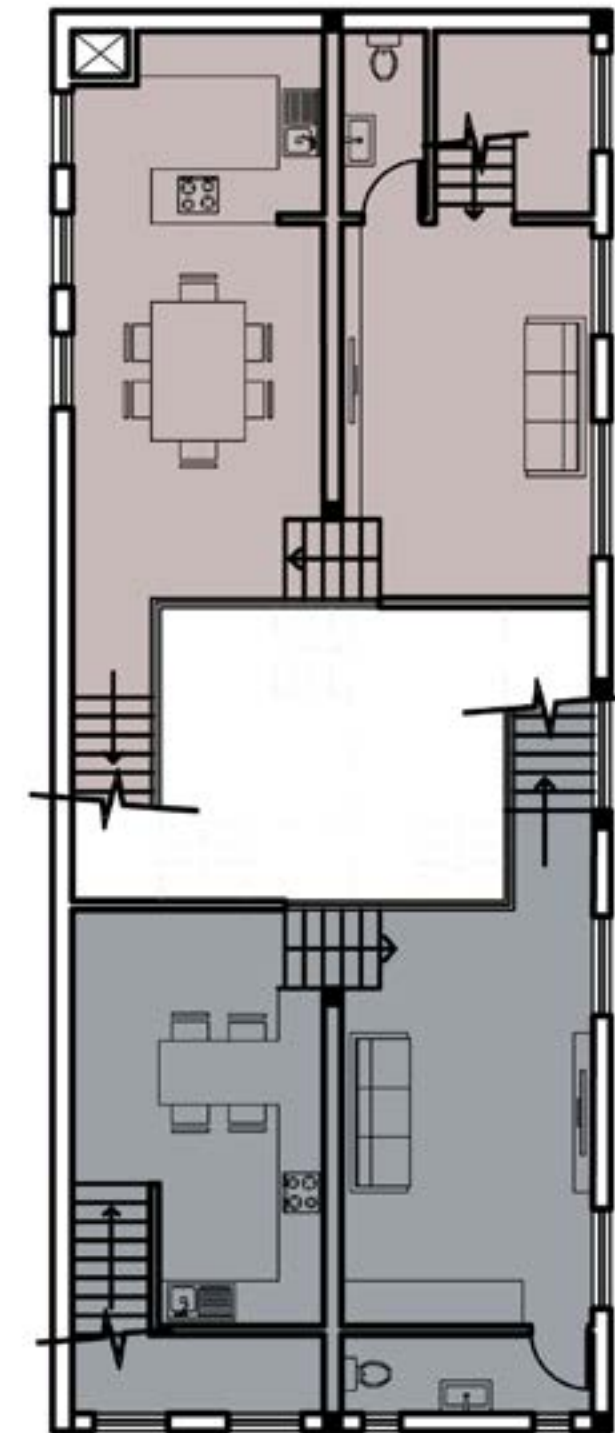
Level -1



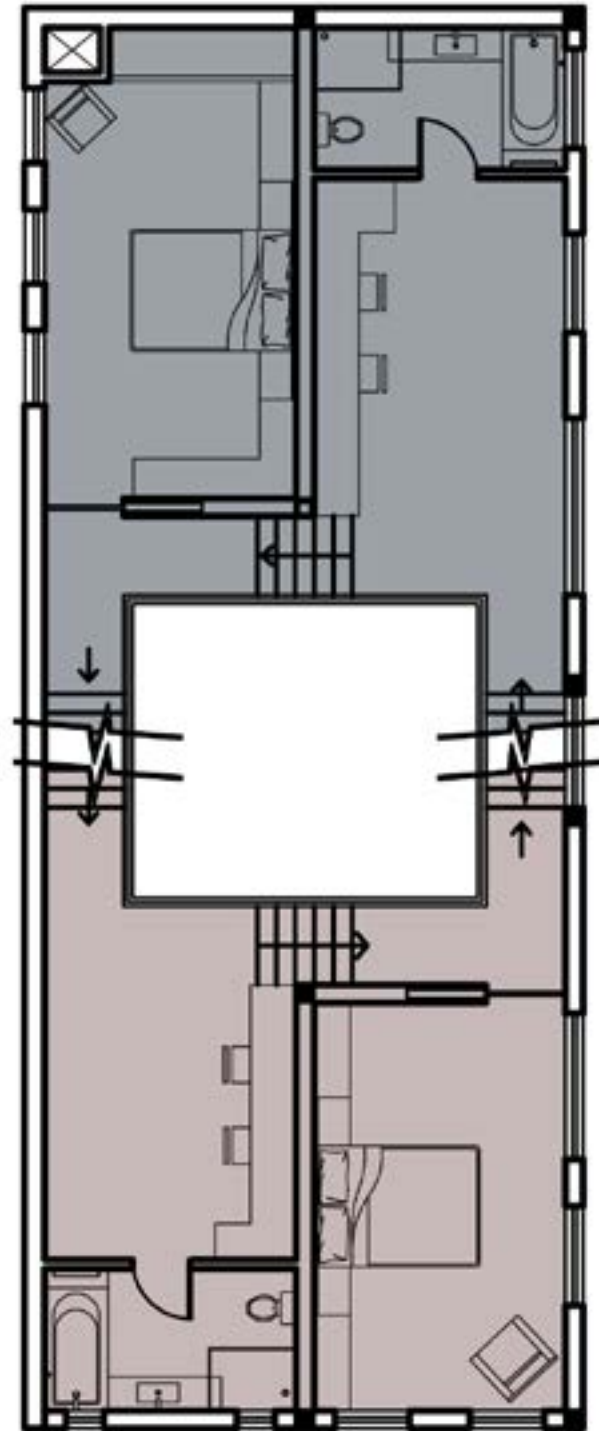
Level 1



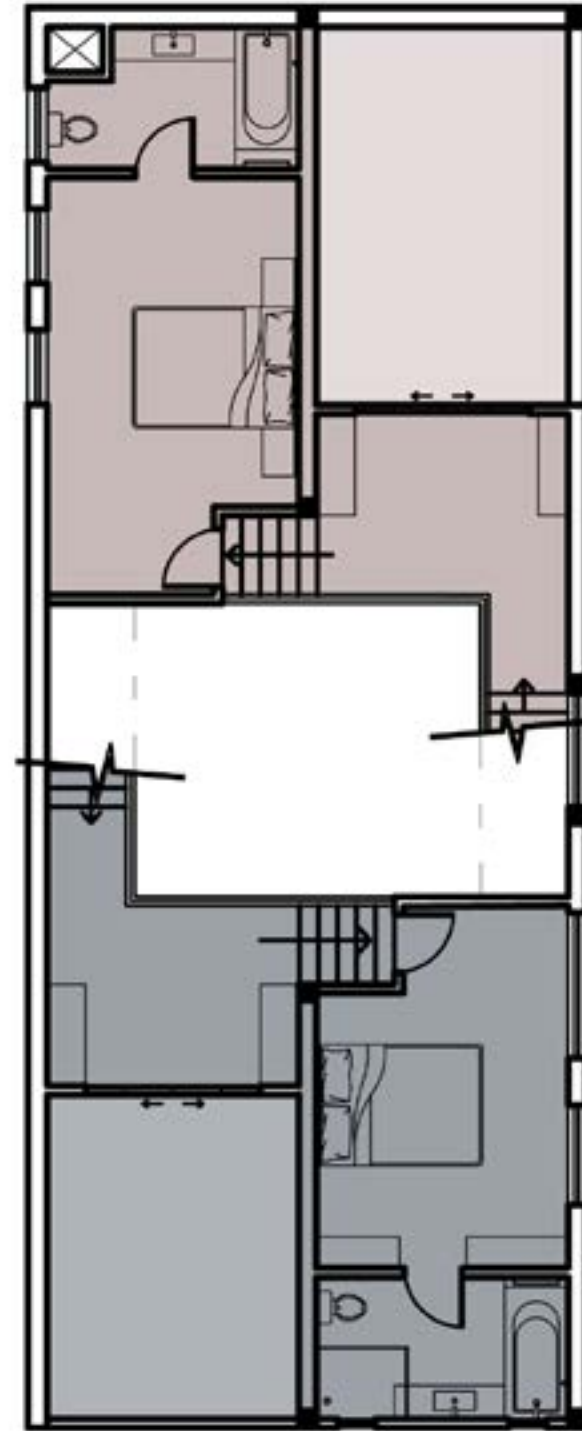
Level 2 & 2.5



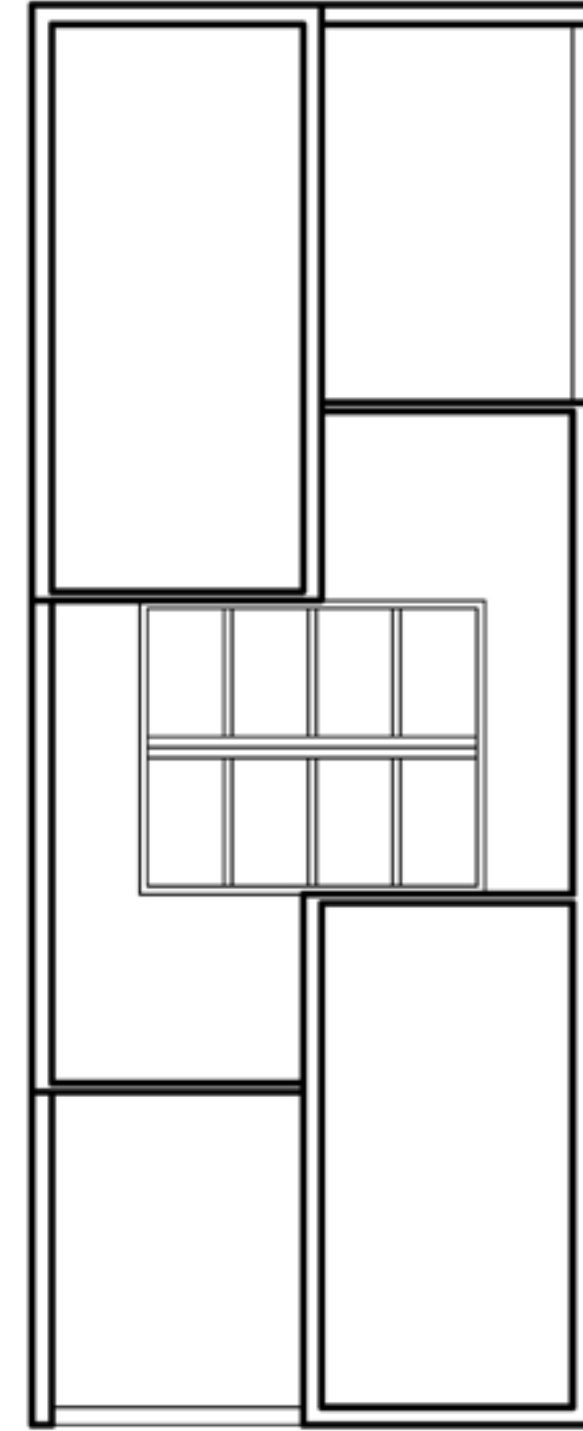
Level 3 & 3.5



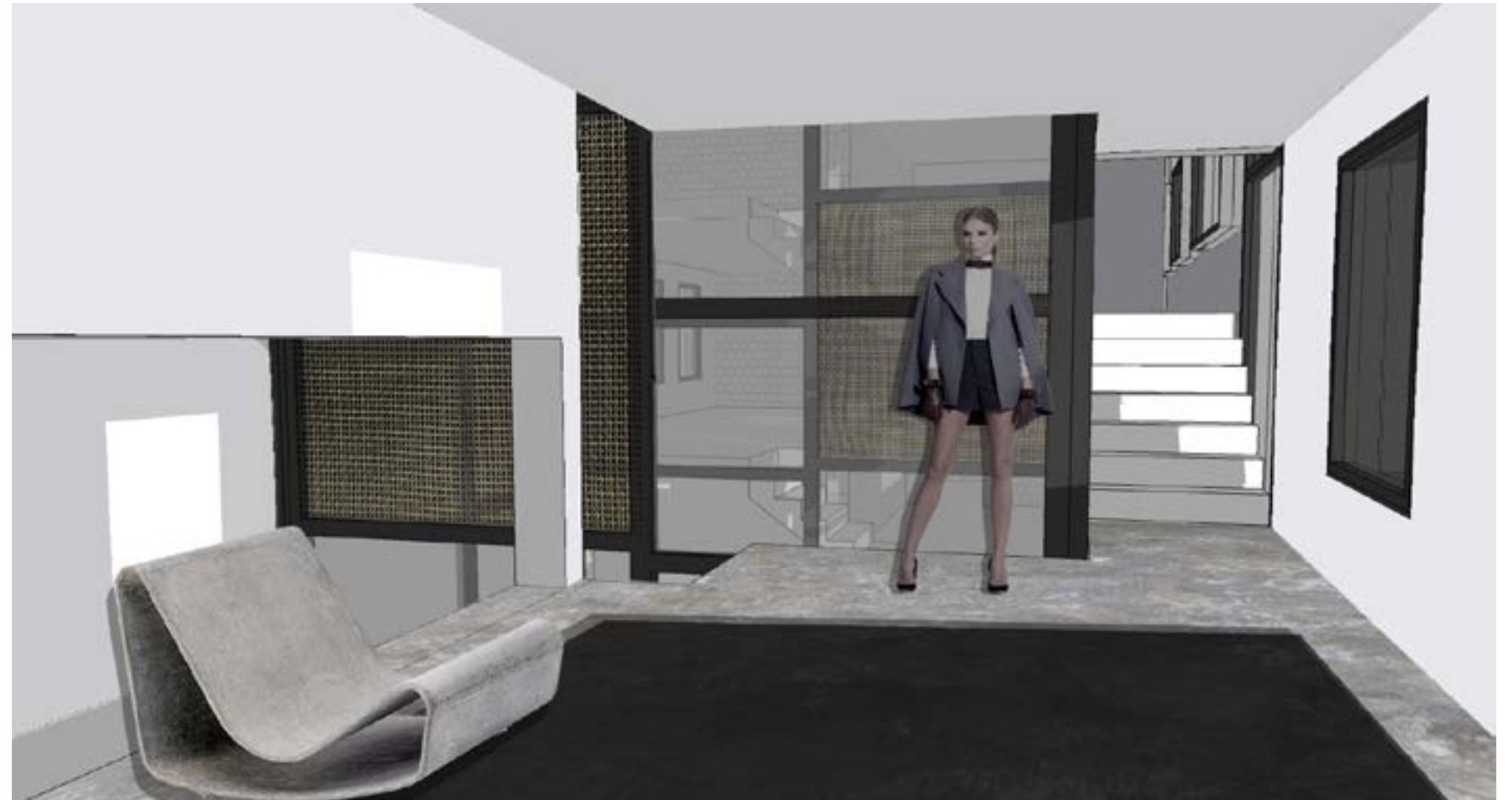
Level 4 & 4.5



Roof



Interior Views



Study Model



DESIGN INTERVENTION : 188 PACIFIC STREET

Andrea Sforza & Katrina

DESIGN SITE OVERVIEW

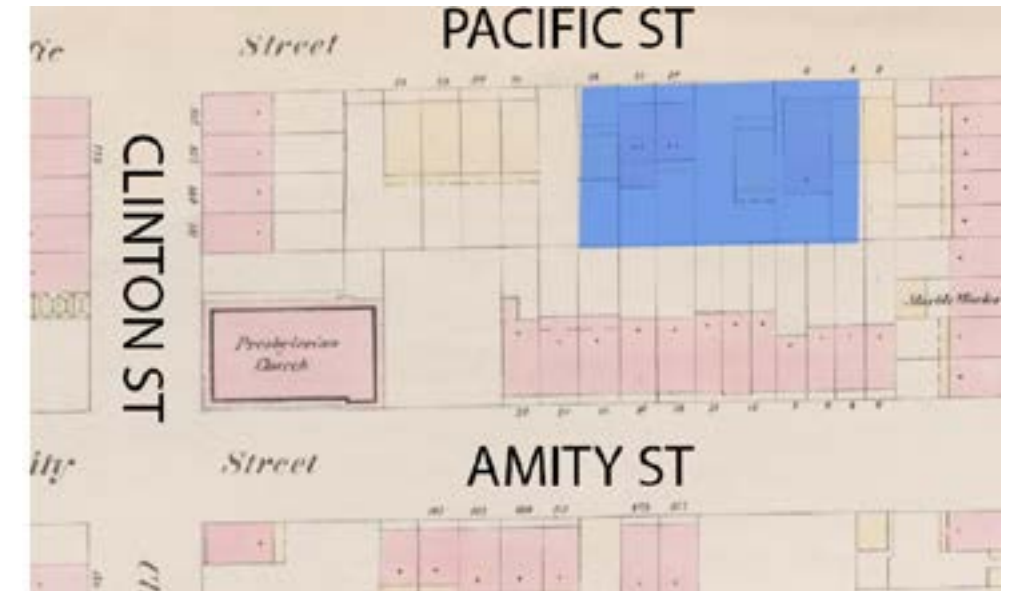
This site is located within the Cobble Hill Historic District is zoned C2-3/R6/LH-1 and is currently utilized as a paved, fenced-in parking lot between a school building turned co-op to the west, and a single, late-19th century row house to the east. Unlike the mostly uniform streetscapes of Cobble hill, the section of Pacific Street that the site lies on is composed of buildings of varying ages, scales, and typologies. The block's location at the edge of the historic district might explain its more heterogeneous character.

The earliest known building on the site included low wood and masonry residences that were demolished by 1880 and replaced by a row of masonry houses. Presumably, the single row house that remains today at 190 Pacific Street was one of these early residences. Between 1888 and 1889 the row houses were demolished and Public School No. 78 was constructed in their place. The architect, James W. Naughton, designed more than one hundred schools in Brooklyn during his career as Brooklyn's Superintendent of School Buildings and Repairs from 1879 to 1898. Most of Laughton's schools feature a similar combination of Victorian Gothic and French Second Empire styles.

In 1956 a parking lot was permitted on 188 Pacific Street after another row house had been razed. In 1965 the school building was converted from a New York City public school to the Louis Hirsch Memorial School. Shortly after, in 1969, the Cobble Hill Historic District was designated as a New York City landmark district. The designation report acknowledged the varied character of the buildings on the block and most notable lists the school as "dominating the street in height and picturesque mass". In 1982 the school was converted into 35 co-op apartments by The Arker Companies as an early successful adaptive reuse project. The fence separating the parking lots was removed and the two lots were combined as one parking lot for the co-op, as it is today.

Building Address	174 Pacific Street, Cobble Hill Historic District (School building converted to residential)	188 Pacific Street, Cobble Hill Historic District (half of parking lot)
Lot Size	16 000 Square Feet	2000 Square Feet
Building Size & Orientation on Lot	Building Frontage 104' Floors 34 Building Area 32 052 Square Feet	Building Frontage 0' Floors 0 Building Area 2000 Square Feet
Allowed or Maximum F.A.R	4.8 Residential F.A.R 2.43 Commercial F.A.R 0 Facility F.A.R 4.8	4.8 Residential F.A.R 2.43 Commercial F.A.R 0 Facility F.A.R 4.8
Actual or Built F.A.R	Built F.A.R 2	Built F.A.R 0
Total Development Rights	11 740 Square feet of total available development rights for both lots	

1855 Atlas



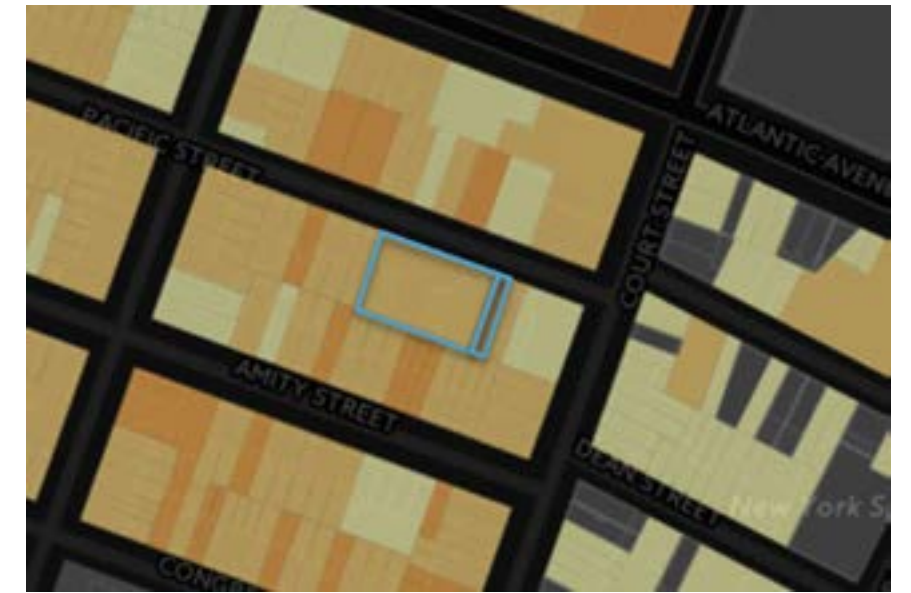
1930 Photograph



This infill site is composed of two lots. The school and half of the parking lot are one lot, and the other half of the parking lot adjacent to the row house is another lot. For the purposes of this design exercise, and with the knowledge that both lots are owned by the co-op, the two lots are combined to allow for more development, with combined development rights.

Zoning prompted logistical challenges such as meeting the required rear lot line set-back of 30 feet, the minimum courtyard clearance of 60 feet, and having to retain parking. The setbacks brought the interventions' footprints into a particular lot coverage area. The issue of parking is resolved by placing it below the ground. Although costly and potentially dangerous to the surrounding buildings, meeting the parking requirement was necessary in order to build on the site. The contextual zoning imposed a 50' height limit to the building.

MASNYC Zoning Map



2016 Photograph



DESIGN: 188 PACIFIC STREET

Student: Katrina Virbitsky



Concept Model

1980 Photograph



2016 Site Photo



For this site, located at the edge of the Cobble Hill Historic District, I designed a modern apartment building using glass and concrete. The building envelope recedes into the streetscape, establishing a presentation of the historic district as the main component of my design. Each of the six apartments uses sliding doors to break the building envelope and enhance interaction with the historic viewsapes.

The design allows the school building to remain free-standing, as it was designed historically, and engages with the content of the aesthetically diverse block by exploring levels of integration with the street level. The first floor and lobby is in line with the row house to the east, and the apartment cantilevers over the lobby, aligning with the school. The hyphen building, with the garage entrance at street level, follows the form of the row house to the east, and also sits back in plane with the other row houses on the block.

The north-facing apartments have three bedrooms, two full baths, and a half bath. The courtyard-facing apartments are one bedrooms, with two bathrooms per unit. The floorpan breaks at the fifth floor to give the north-facing apartment a terrace on the rooftop of the hyphen.

Further inspiration for this design came from a small garden between the co-op and fence of the co-op parking lot, the only greenspace on an otherwise uninviting block. My design developed around the idea of a community courtyard, shared between the co-op and the inhabitants of the apartments at 188 Pacific. The courtyard became the central element to my design.

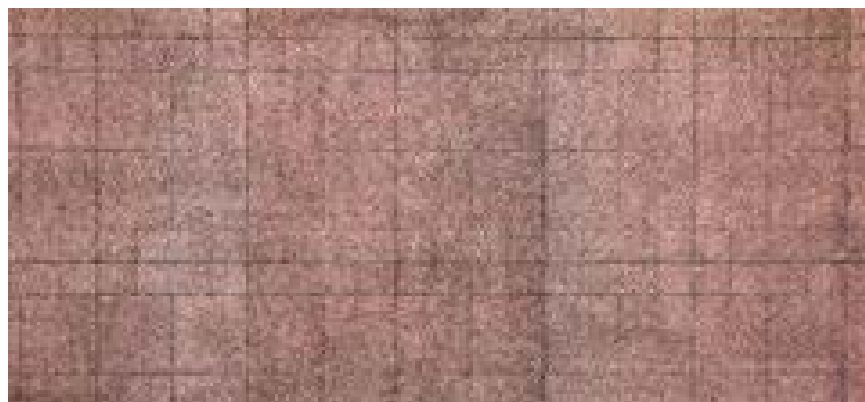
Pacific Street Context



I chose concrete for the building's structure and facade to enhance the building's identity as a modern apartment building in a historic landscape. The concrete is polished and tinted with iron oxide pigment to reflect the warmth of the brick in the historic district, and to blend these modern materials with the historic character of the Cobble Hill neighborhood. The large panes of glass emphasize the modern materials, and allow for interaction with the historic streetscape.

The variation in materials references the diverse typologies present on the block, especially felt in examples of one-off development in the Cobble Hill Historic district. The apartment program facilitates modern living in a historic district. On the north and south facades, the sliding glass doors bridge the interior and exterior divide and allow residents to experience the historic district, rather than mimicking a sense of historicity. The courtyard remains the central element of the design: the experience at street level invites light and air to filter through and create a more pleasant, more walkable entrance to the Cobble Hill Historic District.

Material Study



Front Rendering



Boerum Hill and Cobble Hill References

My design also references several examples of modernization in the Cobble Hill Historic District. There was an early effort towards modernization, which was noted as early as 1969 in the district's designation report. This was particularly notable at 122 Warren Street, which has been rehabilitated to more closely resemble the original row houses on either side of the building. I found this, and other examples, to be initially protested, but now welcomed by residents as sophisticated examples of Modern Architecture within the district.

And I kept my intervention in line with the full analysis of the studio's findings. What the studio found to be most significant about the area, as well as the most unprotected, was the element of diversity both in demographics as well as culture, design, and architecture. While it is true that overall, there is less new development within the historic district, we found several opportunities for such interventions..

To answer these challenges, I looked back to my buildings from Studio I in Boerum Hill, both of which I studied as significantly using the building exterior and streetlife to communicate with the neighborhood. 47 Bergen street, a few block away in Boerum Hill, was essential to understanding how residents are about to break out of the envelope.

Warren Street



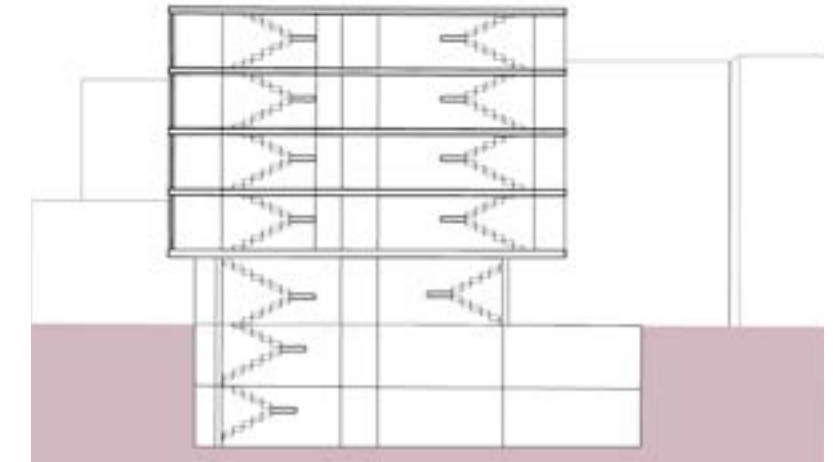
120 Boerum Place



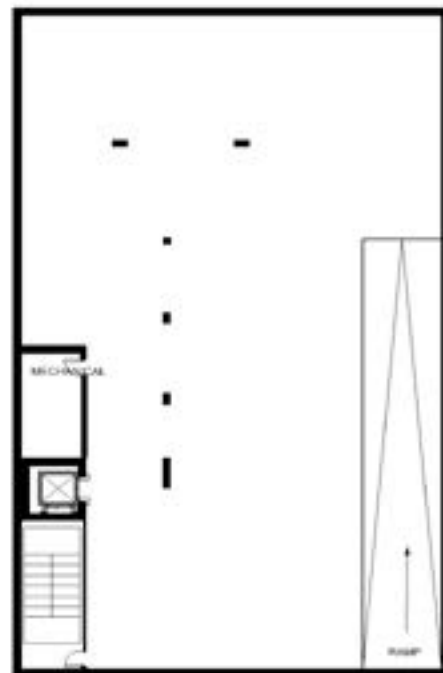
47-53 Bergen Street



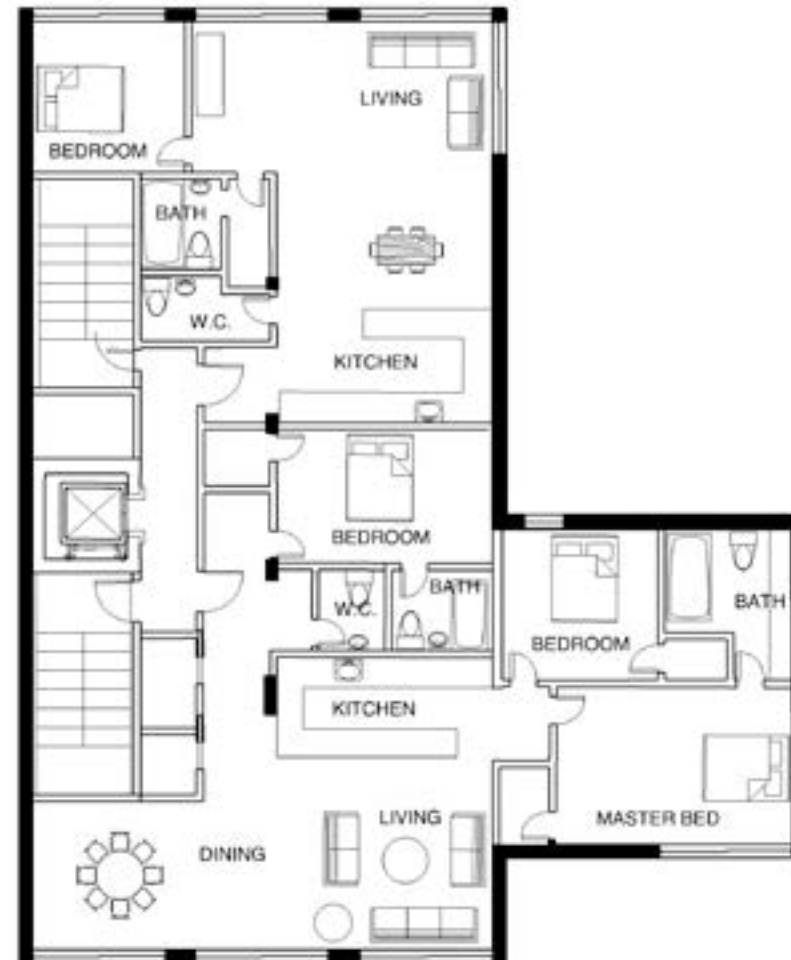
Section Through Vertical Circulation



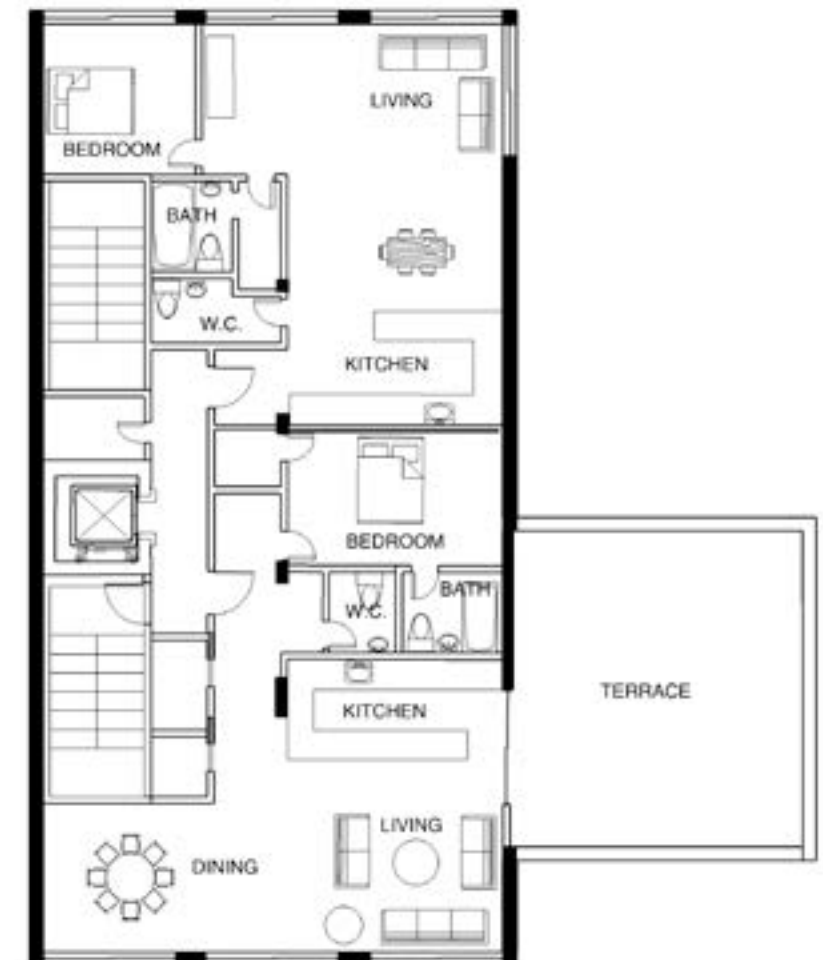
Subterranean Parking in Plan



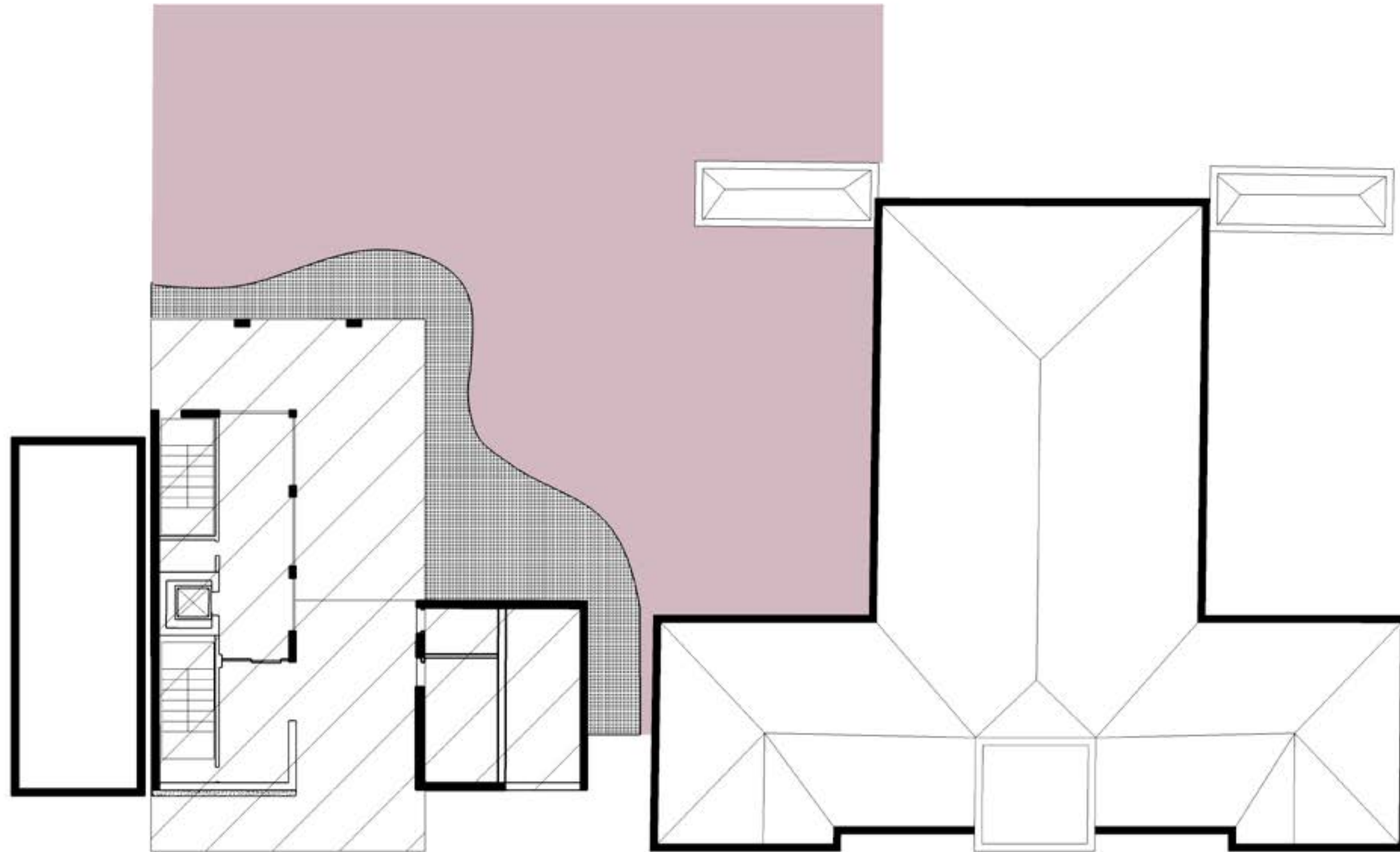
Second & Third Floor Typical Plan



Fourth Floor Plan



Ground Floor Plan



DESIGN: 188 PACIFIC STREET

Student: Andrea N. Sforza

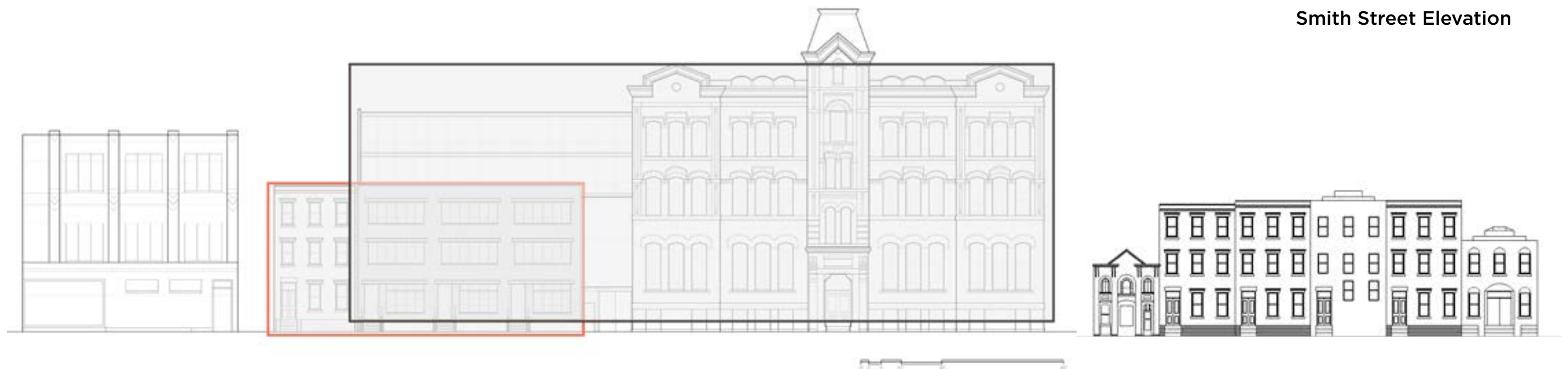


My design concept emerged from wanting to feature and incorporate the surviving historic row house into a design that would ultimately be more consistent with the scale of the school. The resulting structure takes inspiration in its design and scale from both building typologies. The program, a market rate apartment building, contains one bedroom to three bedrooms units laid out in an "L" shaped footprint, with the longer side completely infilling the length between the rowhouse and the school and the shorter side protruding into the backyard to frame a shared courtyard with the co-op.

The street facade is composed of two distinct elements – brick and glazed curtain wall. The main building mass consists of three brick triplex maisonette apartments that act as a visual extension of the existing rowhouse, completing the sentence and recalling the rowhouses that once stood on that site. While the facade pattern differs from the existing rowhouse, the scale is the same. The perceived solidity of this brick mass, especially compared with the glazed panels, make these apartments the main feature. The red brick was chosen to keep the material consistent with the historic district, yet the design makes clear that the structure is a modern intervention. The windows within this mass are multi-lite, steel frame, taking inspiration from the windows of the school building.

The glazed superstructure, lighter in color and perceived weight, plays a secondary role to the brick mass as it is set back from it by three feet. Below the maisonettes, the windows allow light into the first floor of the parking garage. The same glazed facade then extends over to the right side of the maisonettes and encapsulates the main entry for the apartments and the garage door. Above the maisonettes, the glazing provides views from large, three bedroom apartments that span the fourth and fifth floors. A moment of open space between the two "strips" of glass exposes the side of the school building and provides a peek at the landscaped courtyard beyond.

The rear of the building relates to the front facade while taking a step away. The same materials are used although the glazing takes a much larger role as it wraps around most of the exterior facade. Areas of brick are exposed but are kept at a minimum. Simple balconies protrude from the facade and connect to an existing stair in the school building, providing a secondary means of egress for the back apartments as well as additional exterior living space. The main feature of the building's rear yard is the entrance lobby, clearly defined with its angled fins that protrude from the curvilinear walls. The color, texture, and shape of the lobby allow it to stand out from the rest of the building, completely negating any historic attributes that the building maintains in the front. Between this feature and the curved walkways, the courtyard is a fun and playful green space in a neighborhood full of rectilinear rowhouses.



Smith Street Elevation

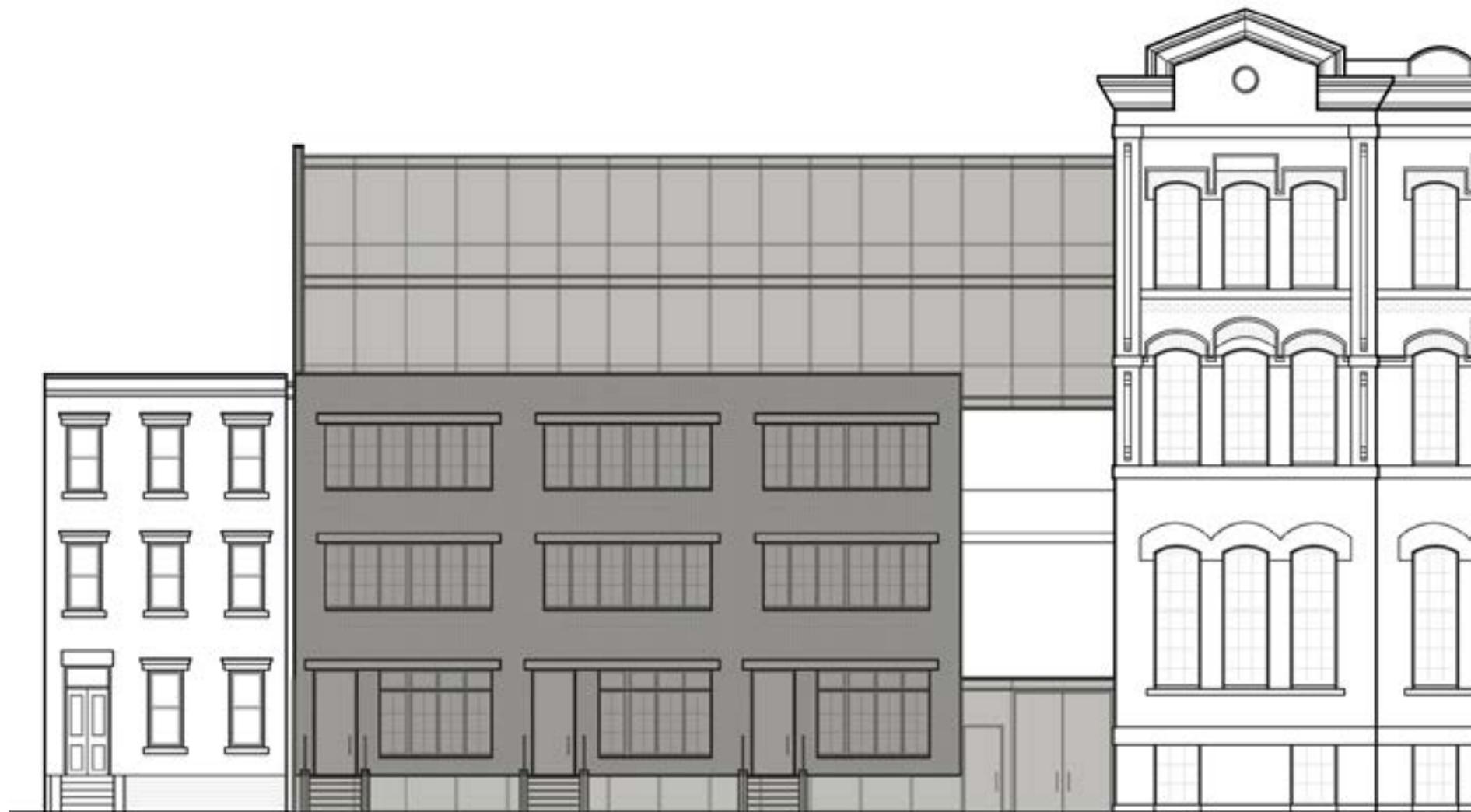
In plan, the three maisonettes and pseudo-rowhouses are all identical. They feature an open kitchen and living space on the first floor, two small bedrooms and a full bathroom on the second floor, and a master suite on the third floor. The two other units that face the street on the fourth and fifth floors span the entire length of the infill project and offer views of Brooklyn Heights to the north. These units are also three bedrooms with ample living and dining space, a powder room off the kitchen, and a master suite. The back units are one bedroom units with the exception of the top two floors that make up one duplex unit. With the exception of the maisonettes, all apartments are accessed through the entry lobby.

Overall, this design blends in with the varied landscape of the street and infills the unsightly parking space with a design that is appropriate for the historic district.

Site Plan



Front Elevation



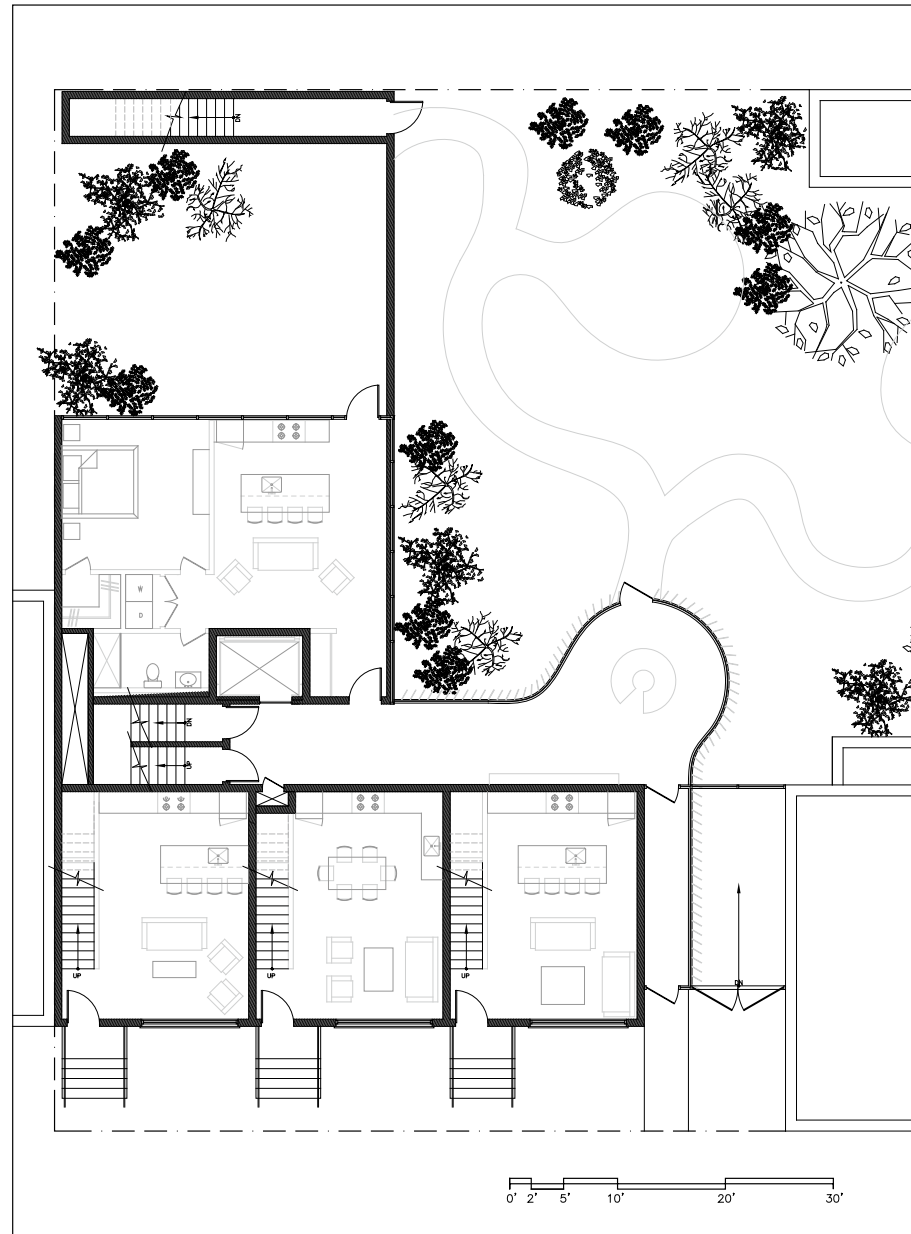
Rear Elevation



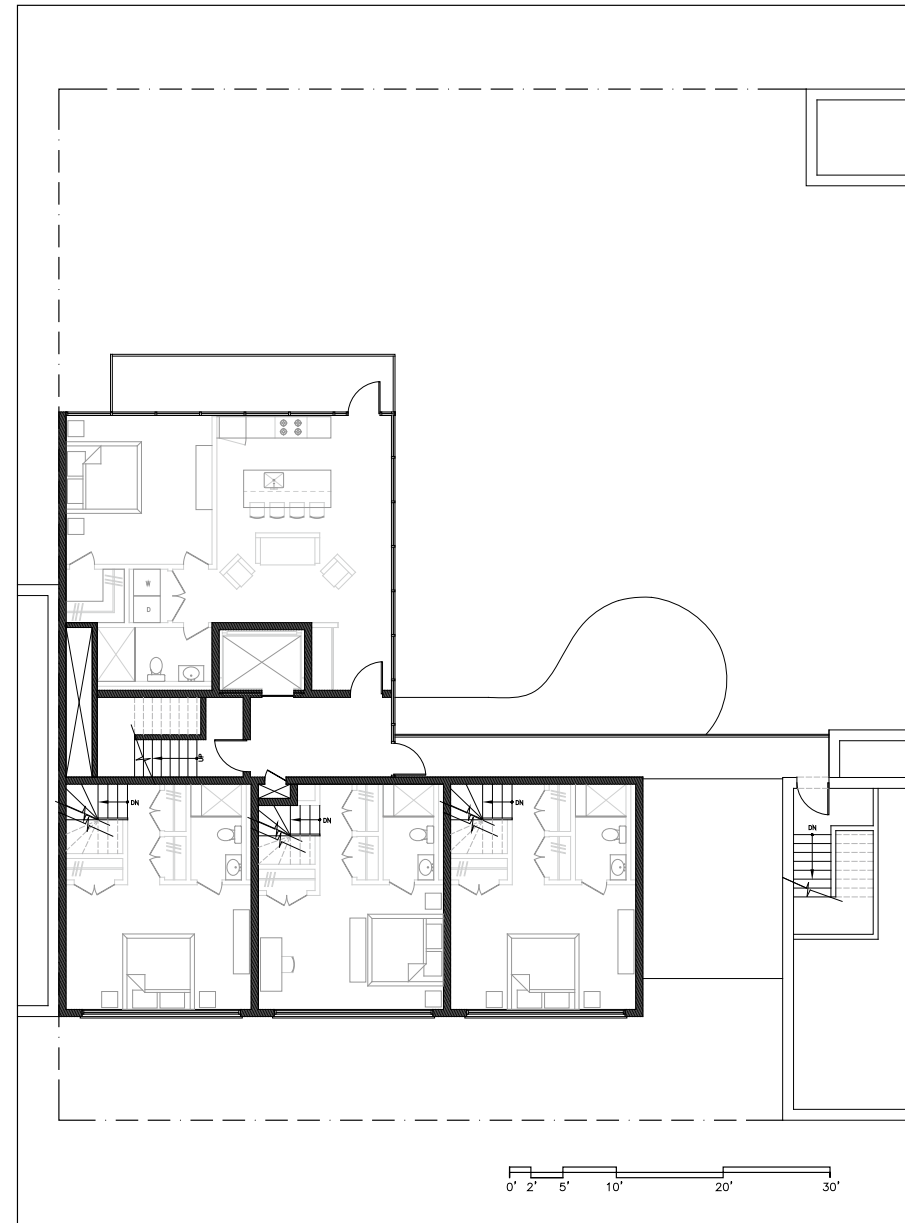
Rear Rendering



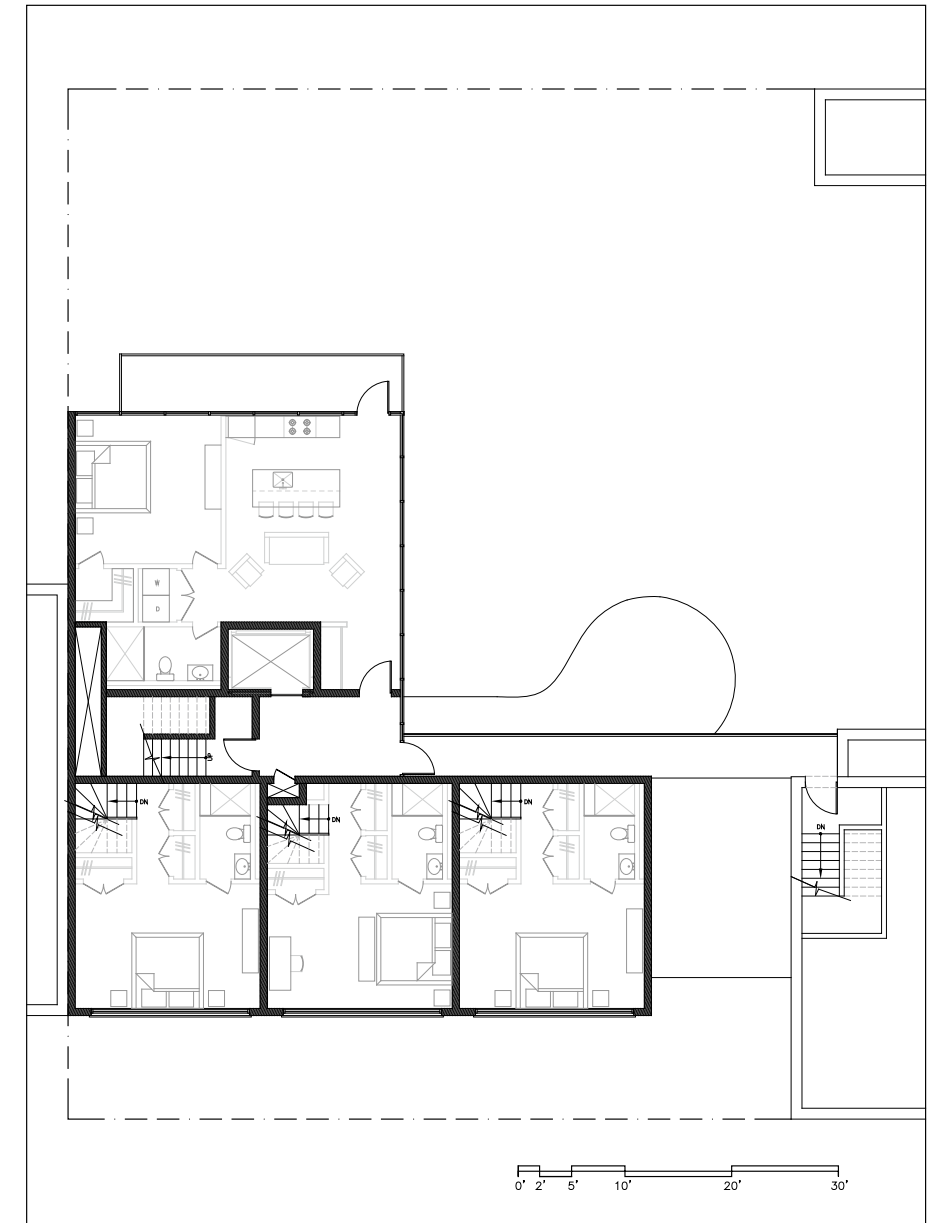
First Floor



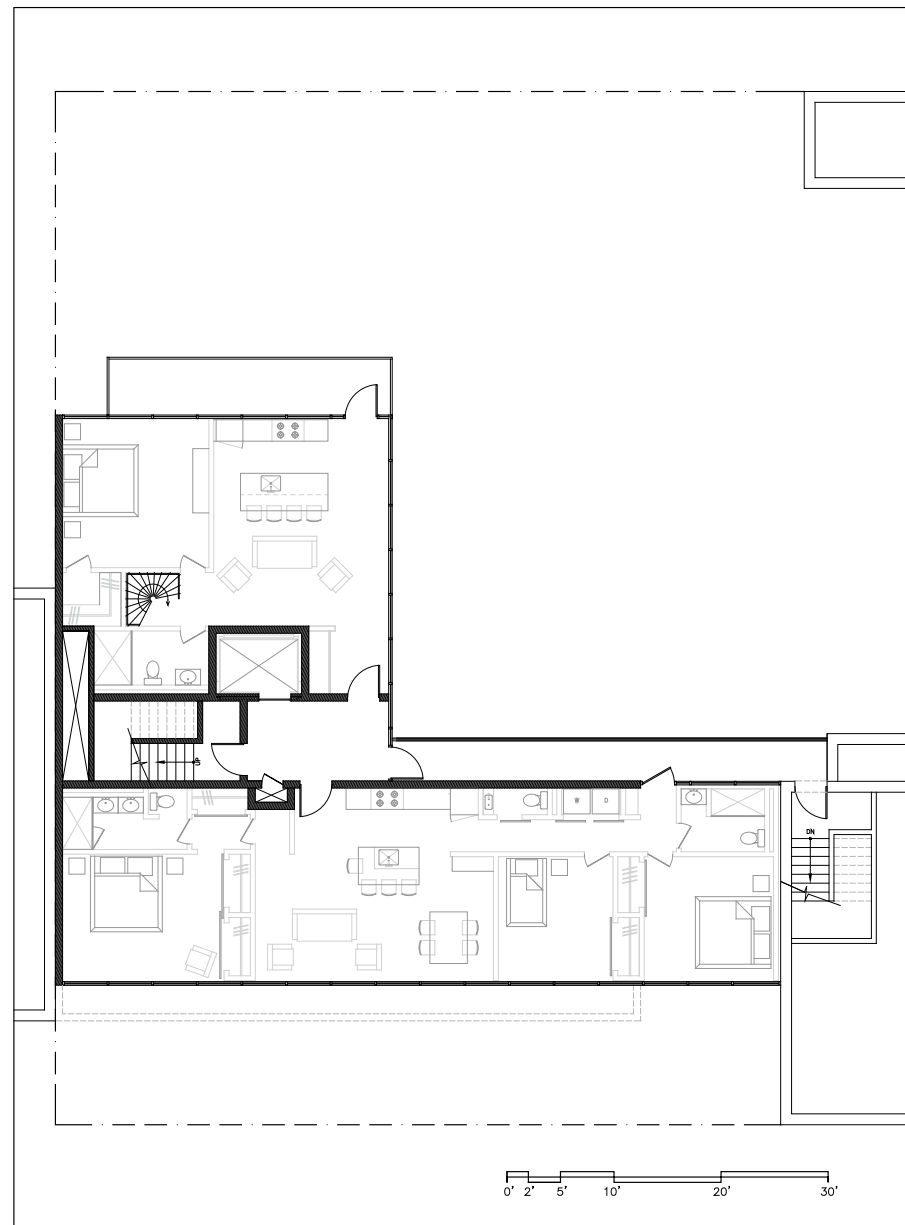
Second Floor



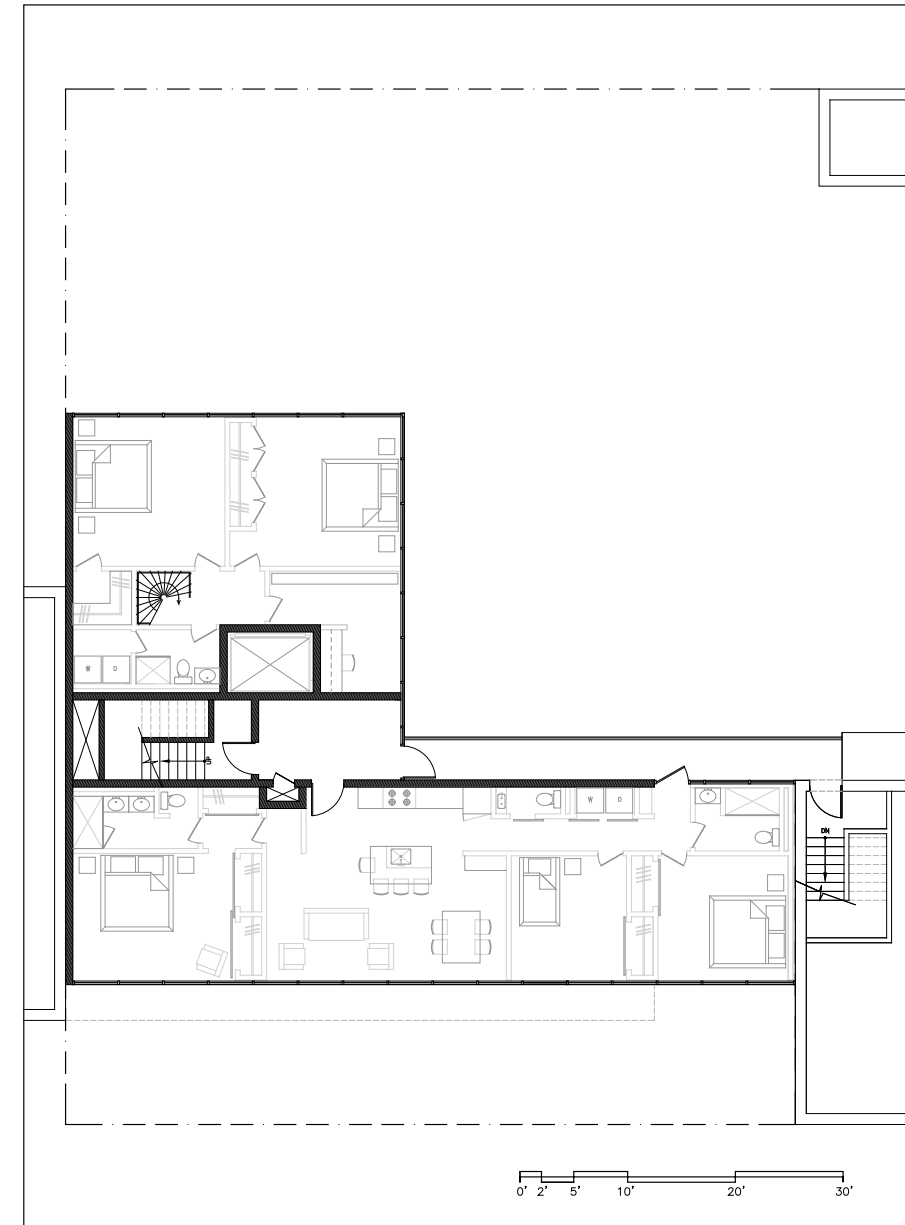
Third Floor



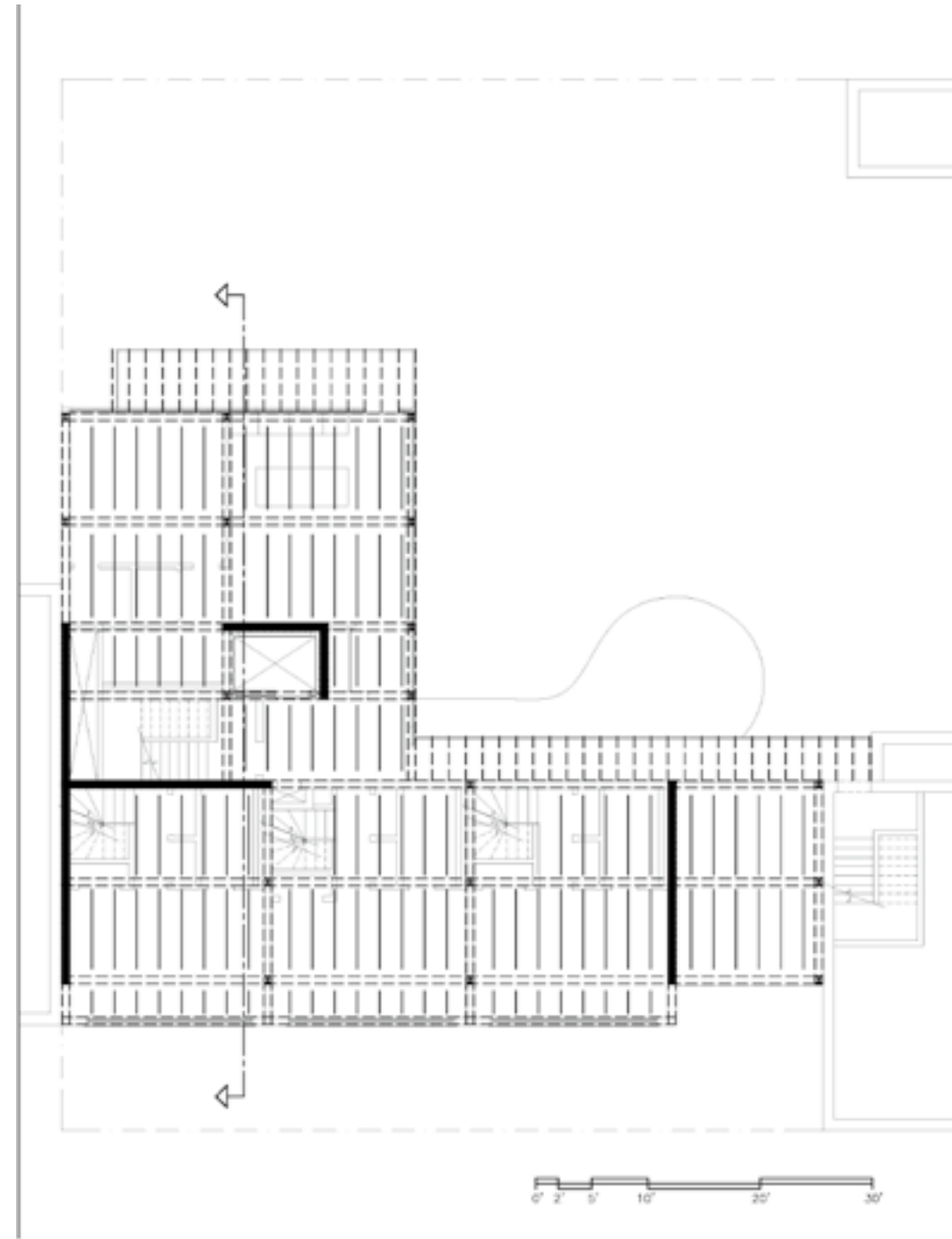
Fourth Floor



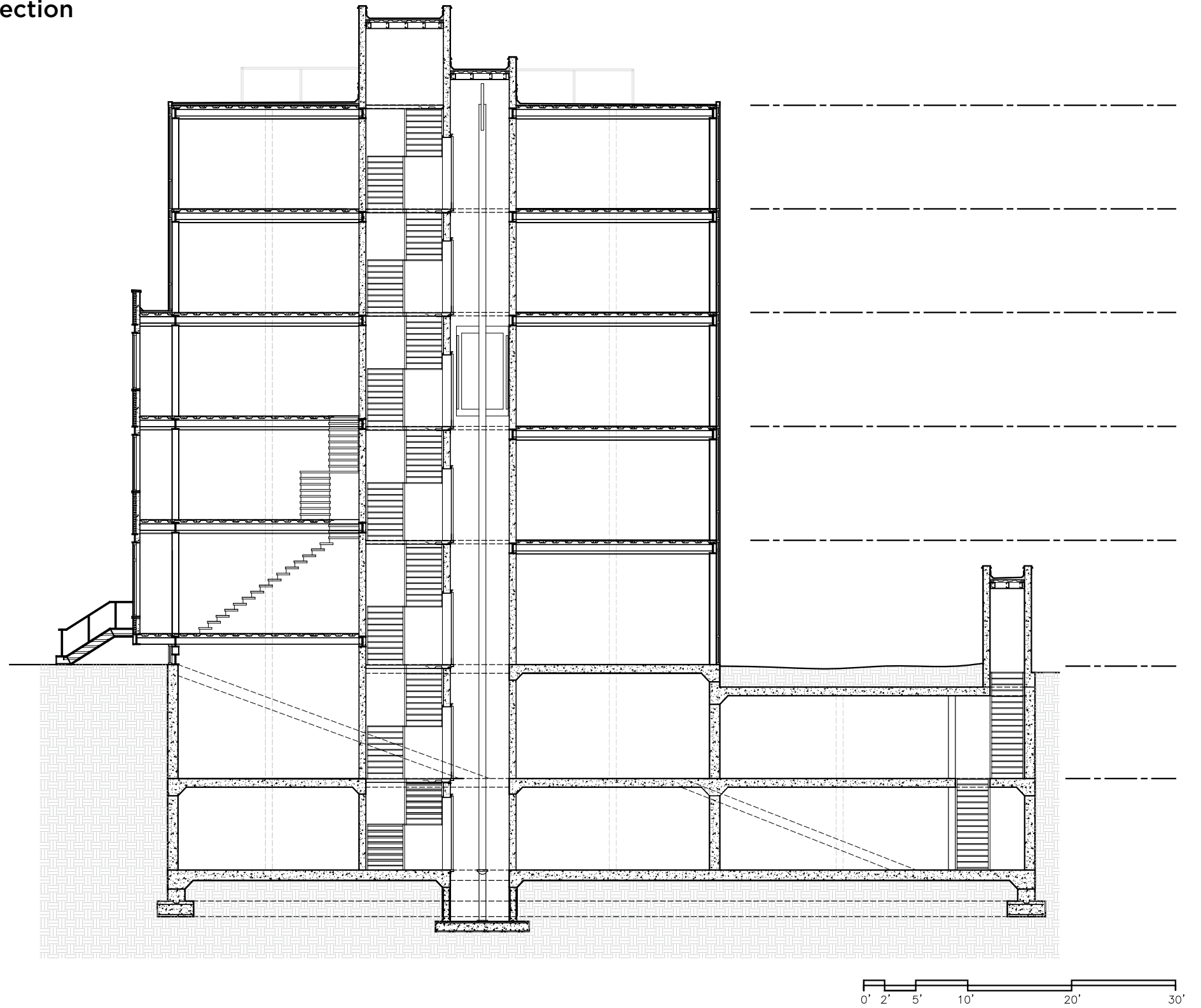
Fifth Floor



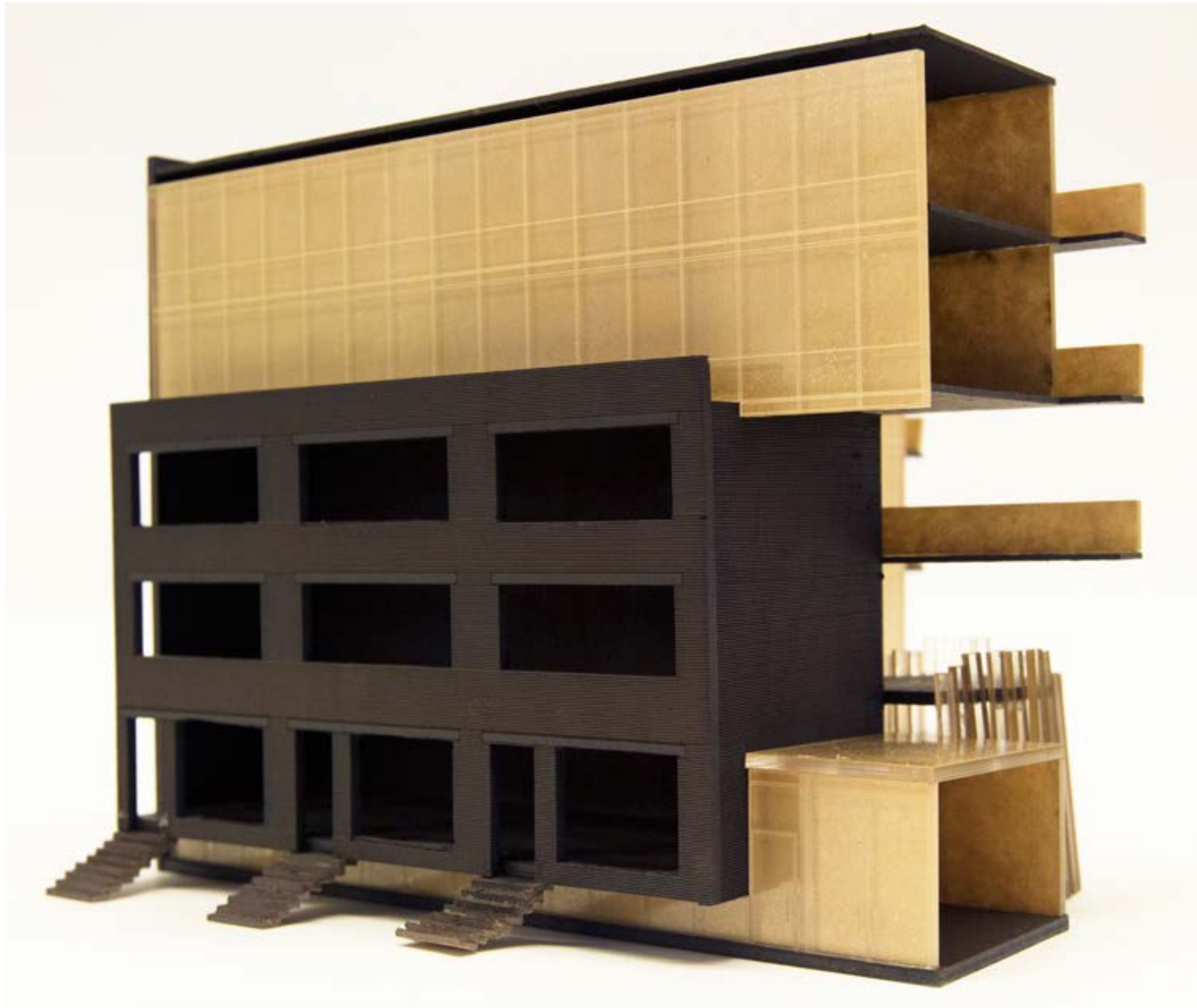
Structural Plan



Section



Study Model

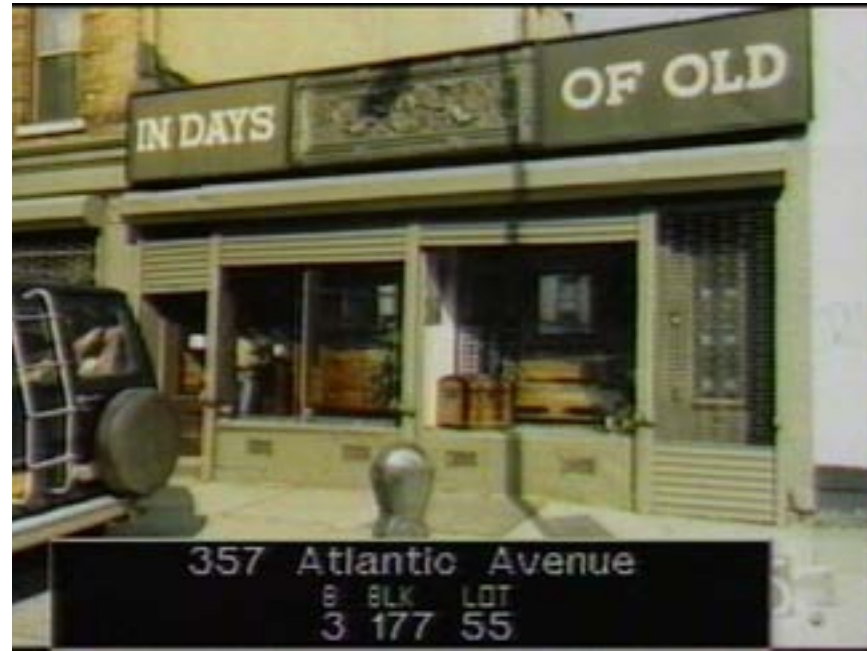


DESIGN INTERVENTION : 357-359 Atlantic Avenue

Ariane Prache & Mayssa Jallad

DESIGN SITE OVERVIEW

1980 Tax Photo



Building Address	357 - 359 Atlantic Avenue	350 State Street
Lot Size	6750 Square Feet	4500 Square Feet
Building Size & Orientation on Lot	90' Frontage 75' Depth	90' Frontage 50' Depth
Allowed or Maximum F.A.R Regular Zoning per R6B on State Street, and R7A, with C2-4 overlay on Atlantic Avenue	4 Residential F.A.R 4 Commercial F.A.R 2	2 Residential F.A.R 2 Commercial F.A.R 0
Allowed or Maximum F.A.R ZQA	5.1 Residential F.A.R 5.1 Commercial F.A.R 1	2.2 Residential F.A.R 2.2 Commercial F.A.R 0
Lot Coverage	Commercial 100% Residential 60%	60%

1980 Tax Photo



1904 Map



1916 Map



Located on Atlantic Avenue between Hoyt Street and Bond Street and stretching through to State Street, this case study considers the development of two adjacent lots as a site for one project (purchased by one owner or through a partnership), creating an L shaped lot 75 feet wide on Atlantic Avenue, 50 feet wide on State Street, and 180 feet in depth through the block. These adjacent sites presently have two one-story buildings on them, both currently used as commercial stores on Atlantic Avenue.

Atlantic Avenue is characterized by mostly four-story mixed use structures in brick or stucco, generally with a historic or historicized storefront on the first floor. On State Street, we find purely residential buildings whose ages vary. These two streets are at different ends of the spectrum with regards to their noise levels, street widths, and activity.

According to the earliest 1855 map, the site used to contain five lots (instead of two), with wooden buildings on Atlantic Avenue and State Street. In 1904, the map indicates a laundry on 361 Atlantic Avenue and the disappearance of the first wooden building of these lots at 357 Atlantic Avenue. By 1916, the buildings on Atlantic Avenue had been replaced with the two one-story brick buildings that exist today. The one that spans 50 feet is marked "autos," which was the Mendel Rosenweig automobile dealership. The dealership occupied the three buildings on Atlantic Avenue from 1908 until at least the 1930s when the first tax photo was taken (which shows that it was still a dealership). The wooden buildings on State Street were demolished sometime in the 1950s and the space has remained a makeshift extension to the large warehouse ever since.

The site is a through-lot on Atlantic Avenue and State Street, at the intersection of very different kinds of zoning regulations. On Atlantic Avenue, we are faced with R7A and a C2-4 overlay, while on State Street we are required to follow R6B zoning. The challenge of this site was to combine the overall square footage and create a building that followed one set of rules on half the site, and another set on the other half. For example, while Atlantic Avenue zoning allowed us to build up to a potential height of 80 feet, State Street capped the height limit at 55 feet. The application of Zoning for Quality and Affordability to one of the design projects made the height and FAR difference all the more palpable, as State Street remained restricted to 55 feet in height while Atlantic Avenue was permitted to grow to 105 feet tall.

At the same time, Atlantic Avenue's Special Zoning Subdistrict regulations also came into play. The regulations specify a range of limitations - such as a continuous wall along Atlantic Avenue, commercial use at the ground floor, a minimum of 50% glazing at the ground floor, and show window sill heights that cannot exceed 2'-6" in height. Additionally, the regulations stipulate a limited range of materials for walls (stone, brick, and stucco) and trim (wood and metal), as well as a limited range of paint colors (ranging from brick red, limestone white, blue, green, and yellow for the walls, and blue, green, black, brown, and dark red for the trim). Our challenge was to incorporate these regulations - often very superficial - into our designs. One advantage of the Special Zoning, however, was the exemption from parking requirements, which came in handy when preserving the existing fabric was a concern.



Through-lot at 357-359 Atlantic Avenue
Source: student-created infographic



357-359 Atlantic Avenue
Source: student photograph



Through-lot at 350 State Street
Source: student photograph

DESIGN: 357 - 359 ATLANTIC AVENUE

Student: Ariane Prache



This new development site, originally the location of two one-story structures, is to be a mixed-use site containing one floor of commercial space, seven floors of senior affordable housing on the Atlantic Avenue side, and four floors of full-floor market-rate apartments on the State Street side. One of the main issues of the study area, noted throughout our investigation, has been the severe lack of affordable living; in addition, the age demographic is shifting towards the mid-30s range with families. While this is becoming the more prominent demographic, it is important for the overall health of the area to promote a diversity of ages among residents - therefore this project uses the Zoning for Quality and Affordability regulations as an opportunity to redress the lopsided living standards of the area. However, as we are being realistic, it is unlikely that a private developer would develop the entire lot as affordable housing, so the State Street side program is market rate, in order to offset the cost of affordable housing units on Atlantic Ave.

In order to respect the low scale of the commercial uses originally on the site, and along the entire avenue, the ground floor on Atlantic Avenue is subdivided into three sections following the axes of the structural steel columns. The project removes the original buildings there in part because evidence through tax photos confirms that the commercial structure on 357 Atlantic was historicized (the fabric is not original and therefore does not have a claim to authenticity), because the character of Atlantic Avenue is mixed use along the entire street (generally these are buildings of 3-5 stories, not single-story buildings), and finally because affordable housing requires a simple structure, which would be both difficult and costly to erect above these small-scale buildings.

The resulting structure is technically two buildings with massing pushed to the outer edges of the through lot, connected by a glass corridor at the ground floor. On State Street this results in a total of 9,900 square feet, 55' high, and 4 floors total. The fourth floor is set back 15 feet from the front façade in order to abide by R6B zoning height and setback restrictions. On Atlantic Avenue the building is 34,425 square feet, 8 stories tall. The overall height of the building is 85 feet total, with a setback above the 5th floor. The Atlantic Avenue component of the complex consists of one floor of commercial space built to the full allowable 90-foot depth, one floor of event and community space, and 6 floors of senior affordable housing, totaling 33 one-bedroom and studio apartments.

Atlantic Avenue Context



As affordable housing is often stigmatized and separate from the environment, the goal was to clad the structure in a material that would neither continue to stigmatize this type of use, nor try to hide the fact that it is a new program being introduced to the avenue. It is clad in white brick (which also conforms to Atlantic Avenue's Subdistrict regulations), set off by black anodized aluminum window frames, copings, railings at the balcony and roof level, and panels between the windows on floors 6 to 8. The windows follow the inner pattern of the room layout, naturally grouping them into 3 loosely defined sections on the façade of about 25 feet each – providing some mirroring of the typical 25 foot-wide brick buildings along most of Atlantic Avenue. Above the 6th floor setback (required by zoning), the window grid change. These windows are held together by long bands of black aluminum, which suggest the strip windows. At the ground floor, the commercial facades are broken up into 3 bays, with the residential entrance on the far right. These storefronts are simple constructions of black anodized aluminum and glass, providing a modern iteration of the historic storefront.

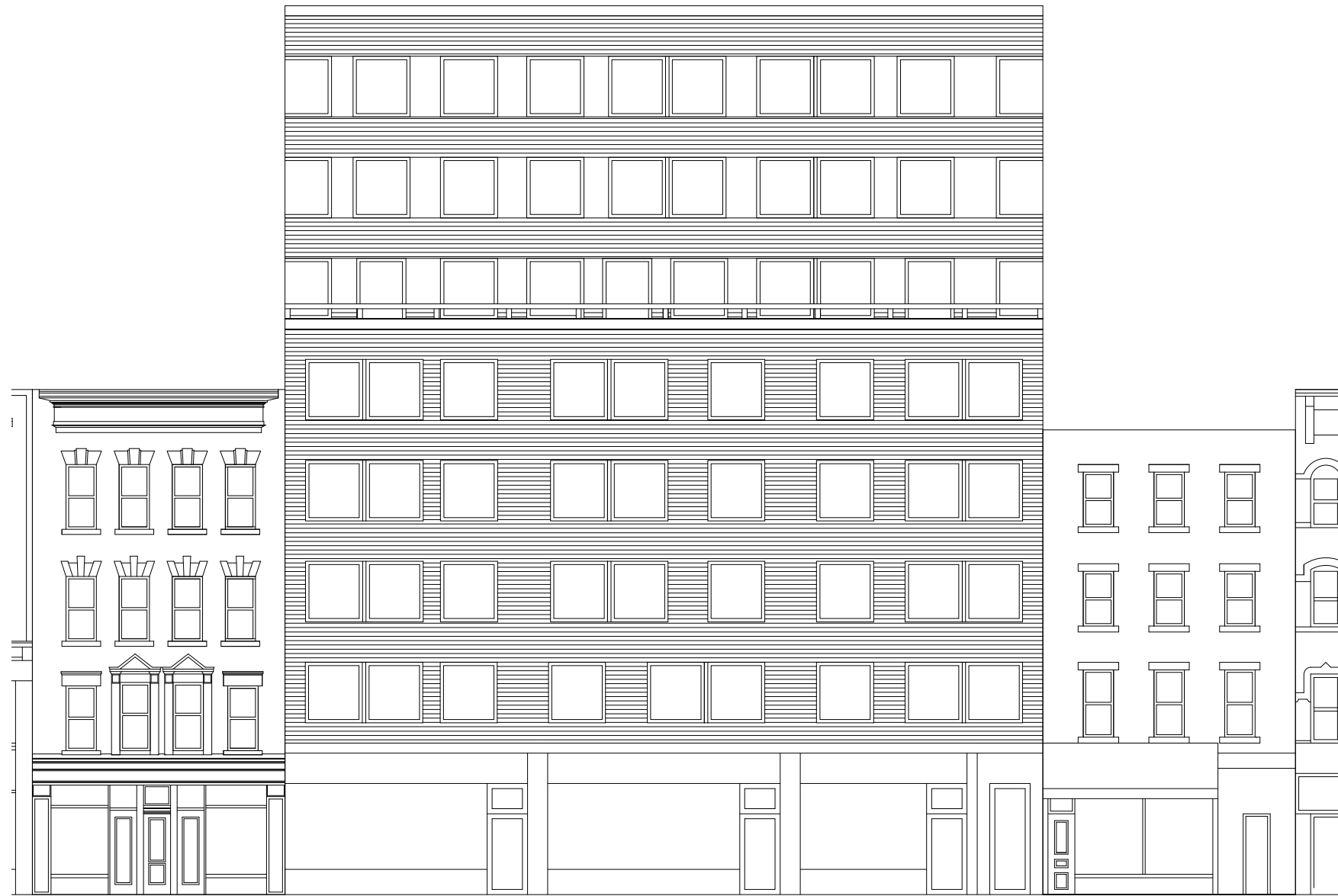
The State Street façade is more restrained. Made of dark grey brick, again punctured by black aluminum windows and thin strips of black at the setback and roof cornice lines, the four rows of 7 windows are evenly spaced along the building. The ground floor windows are 12 feet tall and 4 feet wide. In plan, this ground floor is a split level – there are stairs going up five feet to the rear half of the apartment, and down to a recreation room in the basement.

The space between the buildings is a garden space, accessible from the glass corridor and the emergency exit at the rear of the Atlantic Avenue commercial ground floor. The inner courtyard facades are reflections of one another, both with strip windows. The shared banding not only connects the two buildings visually, but also references their symbiotic relationship.

State Street Context



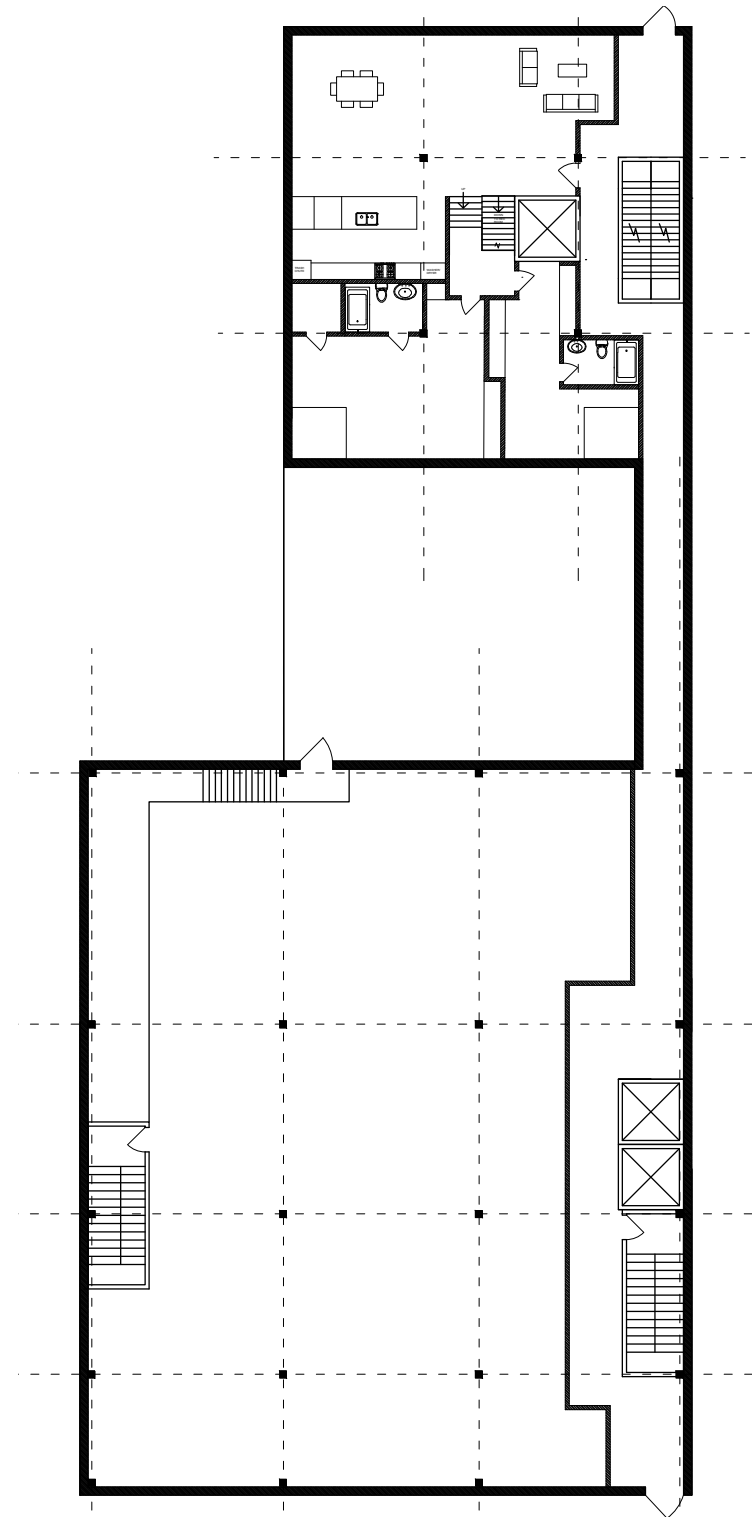
Atlantic Avenue Elevation



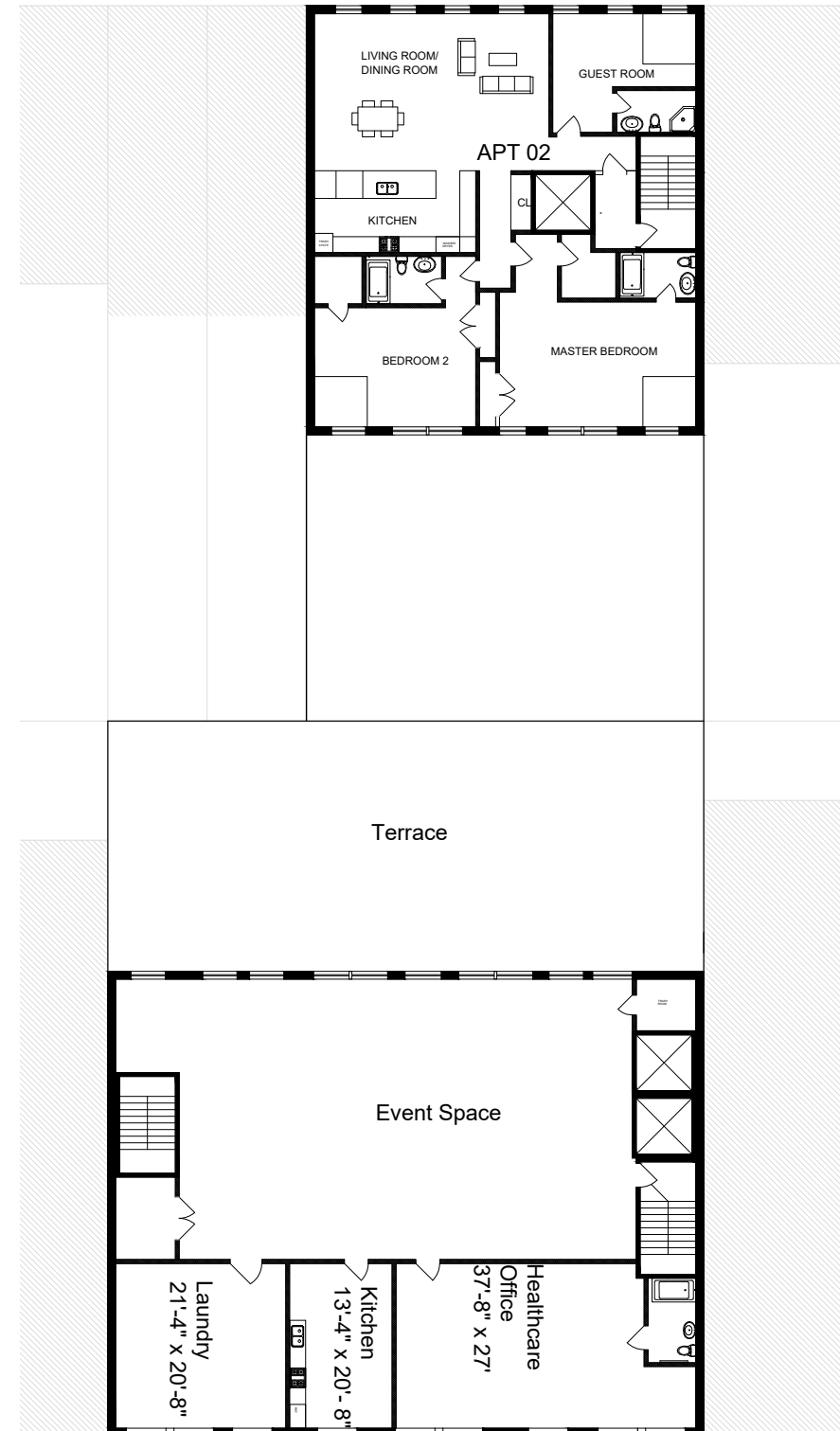
State Street Elevation



Structure Diagram



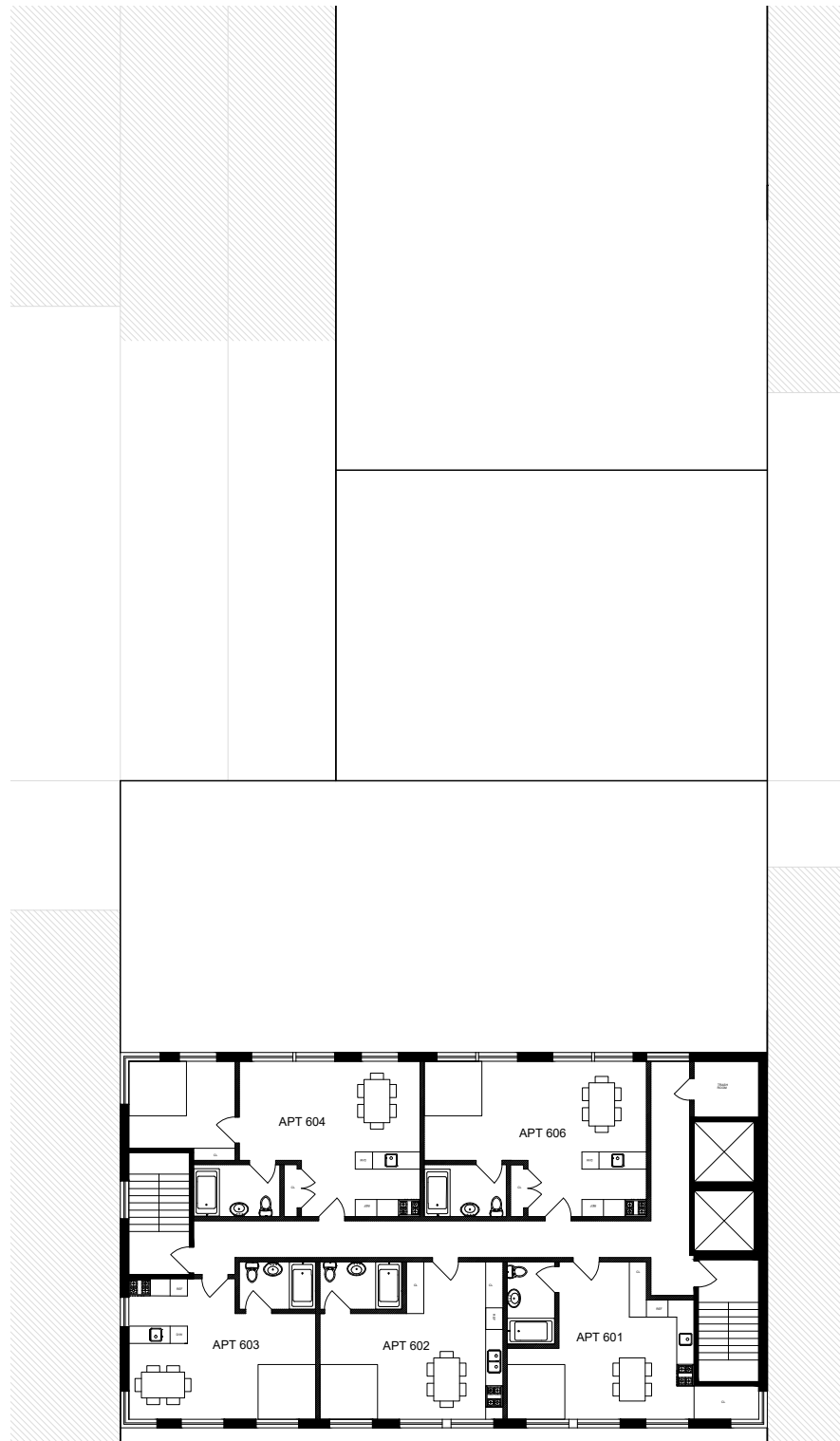
Second Floor Plan



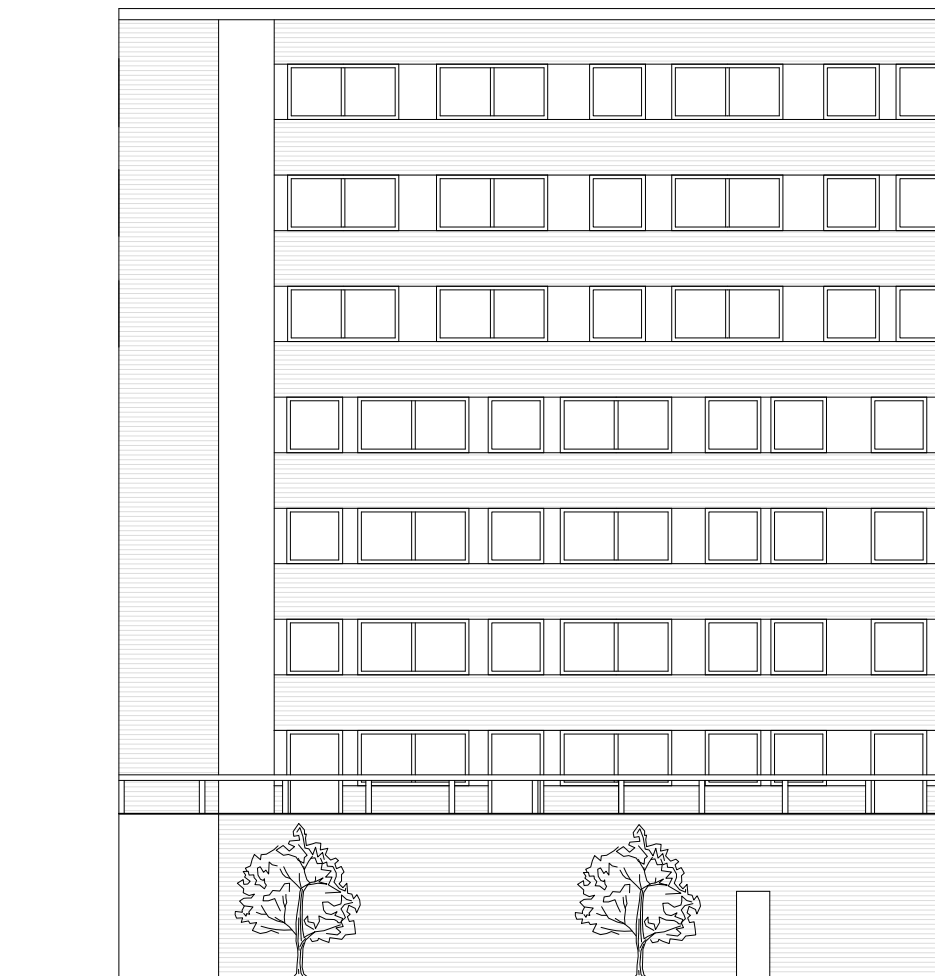
Fourth Floor (Typ. floors 3,4, and 5)



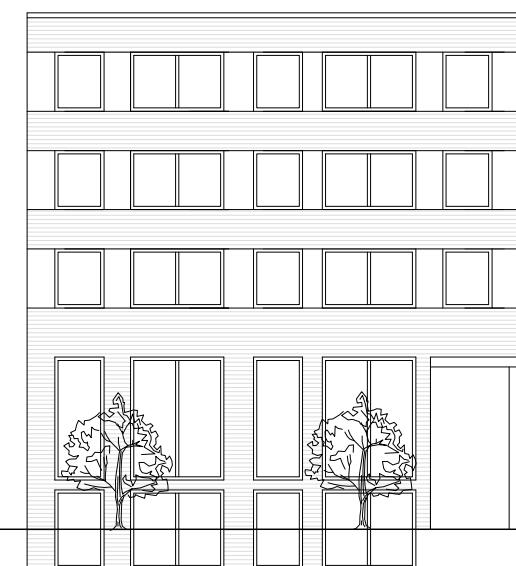
Sixth Floor (Typical for floors 6 - 8)



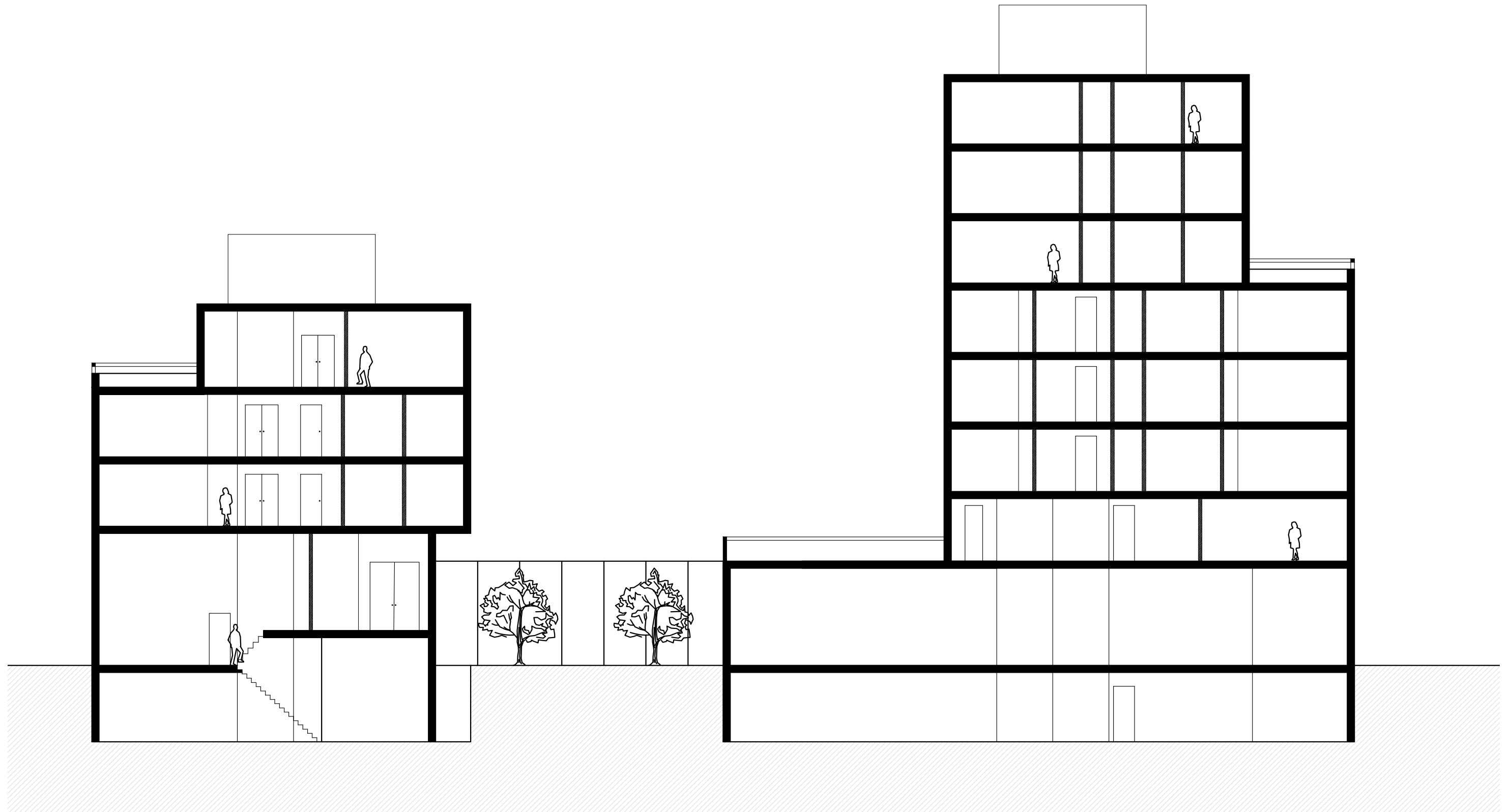
Atlantic Avenue Internal Courtyard Elevation



State Street Internal Courtyard Elevation



Section



Atlantic Avenue



State Street



DESIGN: 357 - 359 ATLANTIC AVENUE

Student: Mayssa Jallad



What is "historical integrity"? And if you are not sure if a building is historical, how do you respond to the ambiguity?

The character-defining, one story storefronts that punctuate our study area are undergoing a rapid extinction due to their identification as "soft sites" that are not satisfying their maximum area capacity according to zoning, and are often located outside of historic districts and undervalued. Indeed, one of the first questions I was asked about this site was "Are you keeping these buildings?" The DIY feel of the buildings on this site is also a notable feature, as the first shop was "historicized" with a new detail of unknown origin (added in the 90s?) and the second's facade is covered with a flashy graffiti. However, when you enter this former automobile dealership built in 1908, the 50 foot span startles you and you wonder if it is not worth preserving. These buildings' quirks are perhaps valuable and could be dealt with as assets and unique features of the site rather than disruptions to the fabric.

My intervention responds by floating a facade two and a half feet away from the existing structure, creating a gap. This facade is flush with the Atlantic Avenue buildings, keeping with the Special Zoning recommendations. The steel structure for this floating facade follows the lines of the existing buildings and is covered with a stainless steel mesh with a brick pattern, similar to storefront security gates. The openings in this stainless steel open facade follow the rhythm of the street's windows and respond to the apartments behind them. This "screen" creates a semi-open buffer to the apartments, whose bedrooms are on the Atlantic Avenue side. Behind this facade, I created varied setbacks echoing the ones required by the zoning law. These setbacks act as balconies to each of the three apartments per floor on the Atlantic Avenue side.

Because the existing buildings are preserved as storefronts on Atlantic Avenue, the access to all residential units of the project is on State Street, which has compelled me to connect the two portions of my building on this "thru site" with a circulation corridor. On State Street, the facade expresses the gap vertically with the adjacent building by recessing the facade on its sides in a light colored stainless steel. The rest of the facade's material is vertical board-formed concrete, as a commentary on the "brownstone stucco" used on the adjacent building.

This project is a play on the Atlantic Avenue Special District recommendations, which allow for diversity in colors and materials of facades. But the project is also a critique of the Special District's facadism and superficial aesthetic regulations. The design offers a recommendation for preserving anomalies in the city, because they preserve the unique character of the neighborhood and because, in a few years, they will be missed as breaths of fresh air and a reminder of the architectural and typological diversity of the neighborhood.

Atlantic Avenue Context

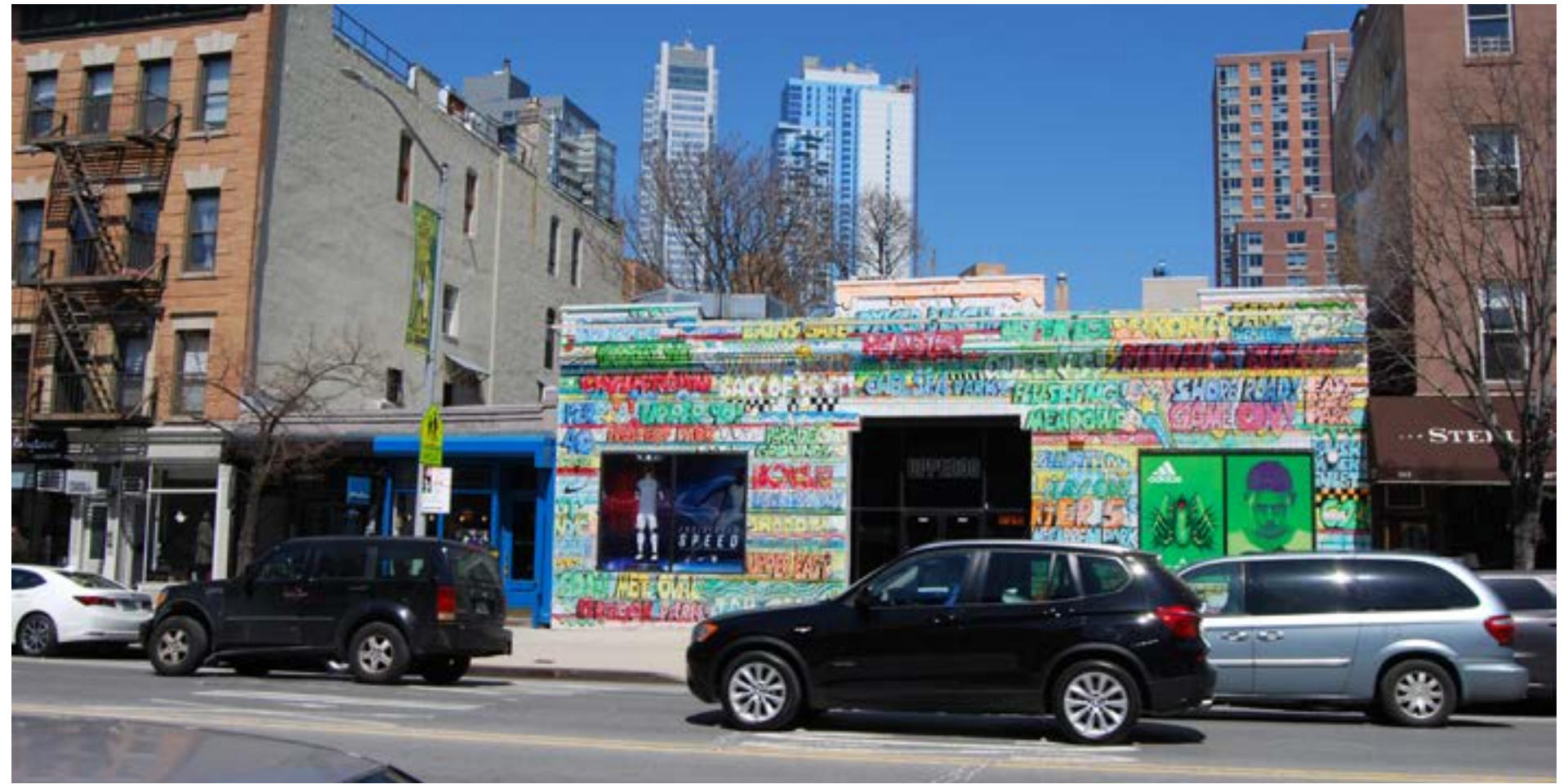


Site Photos

State Street



Atlantic Avenue



State Street Context



State Street Elevation



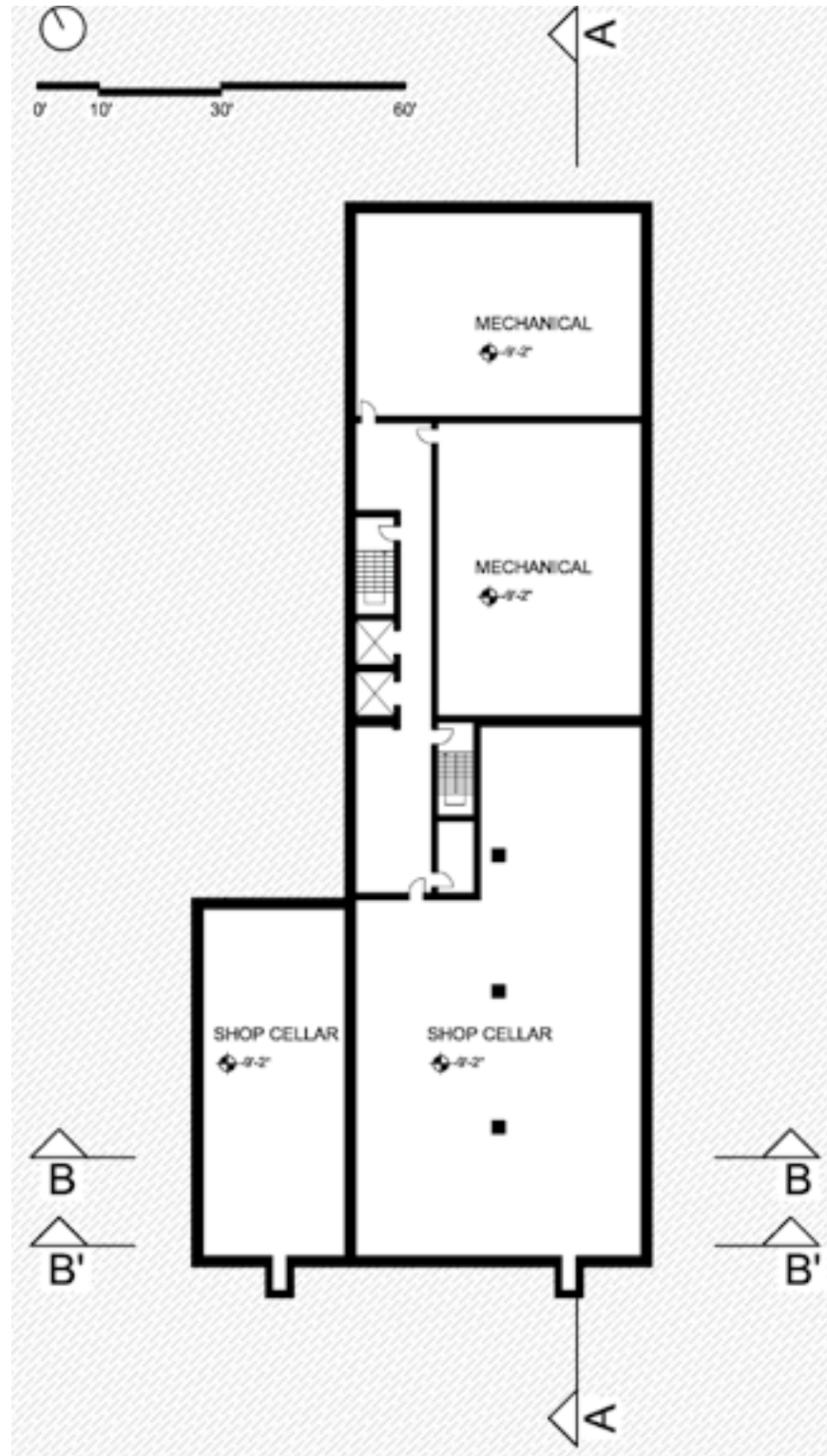
Atlantic Avenue Elevation



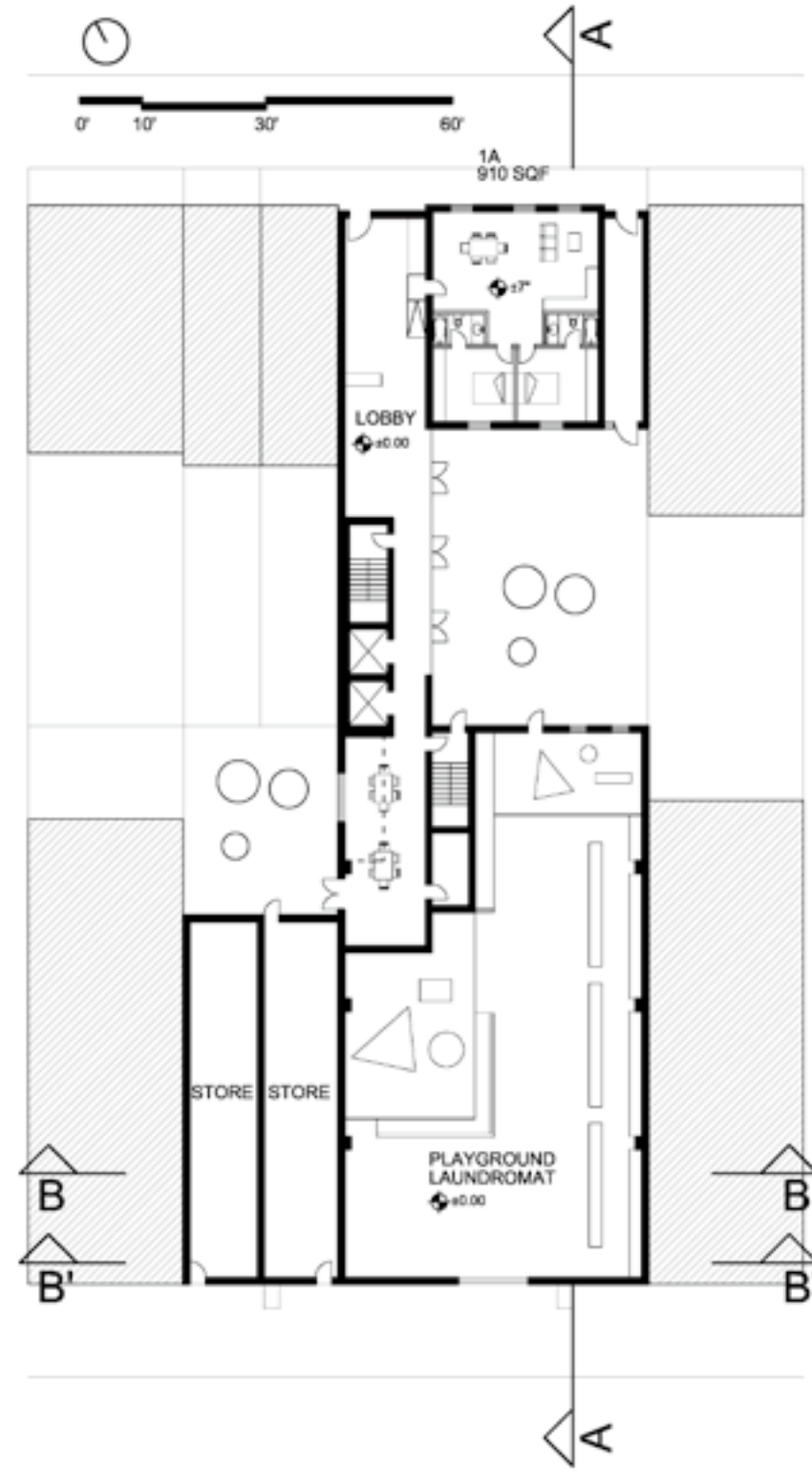
Materials



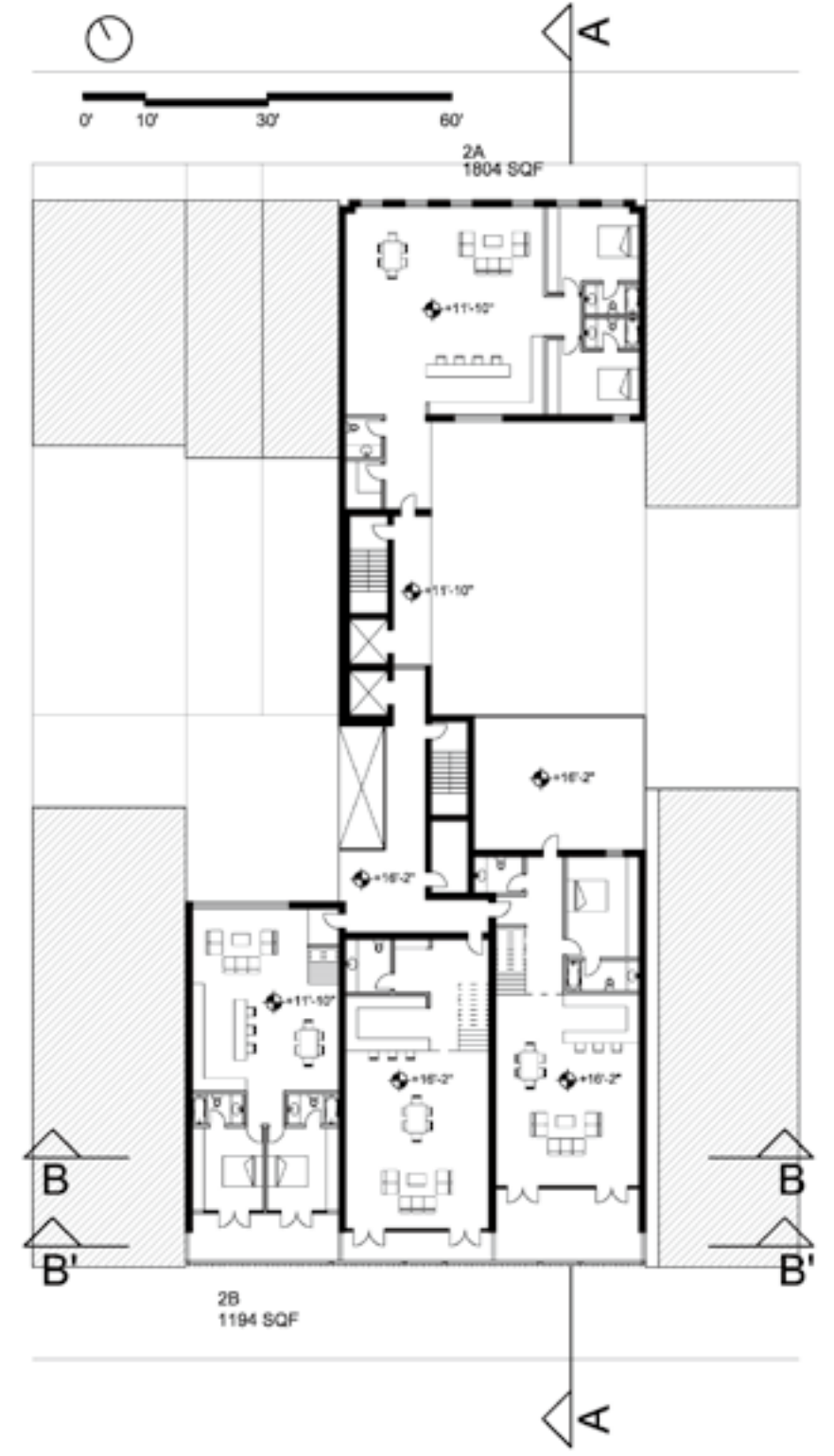
Cellar



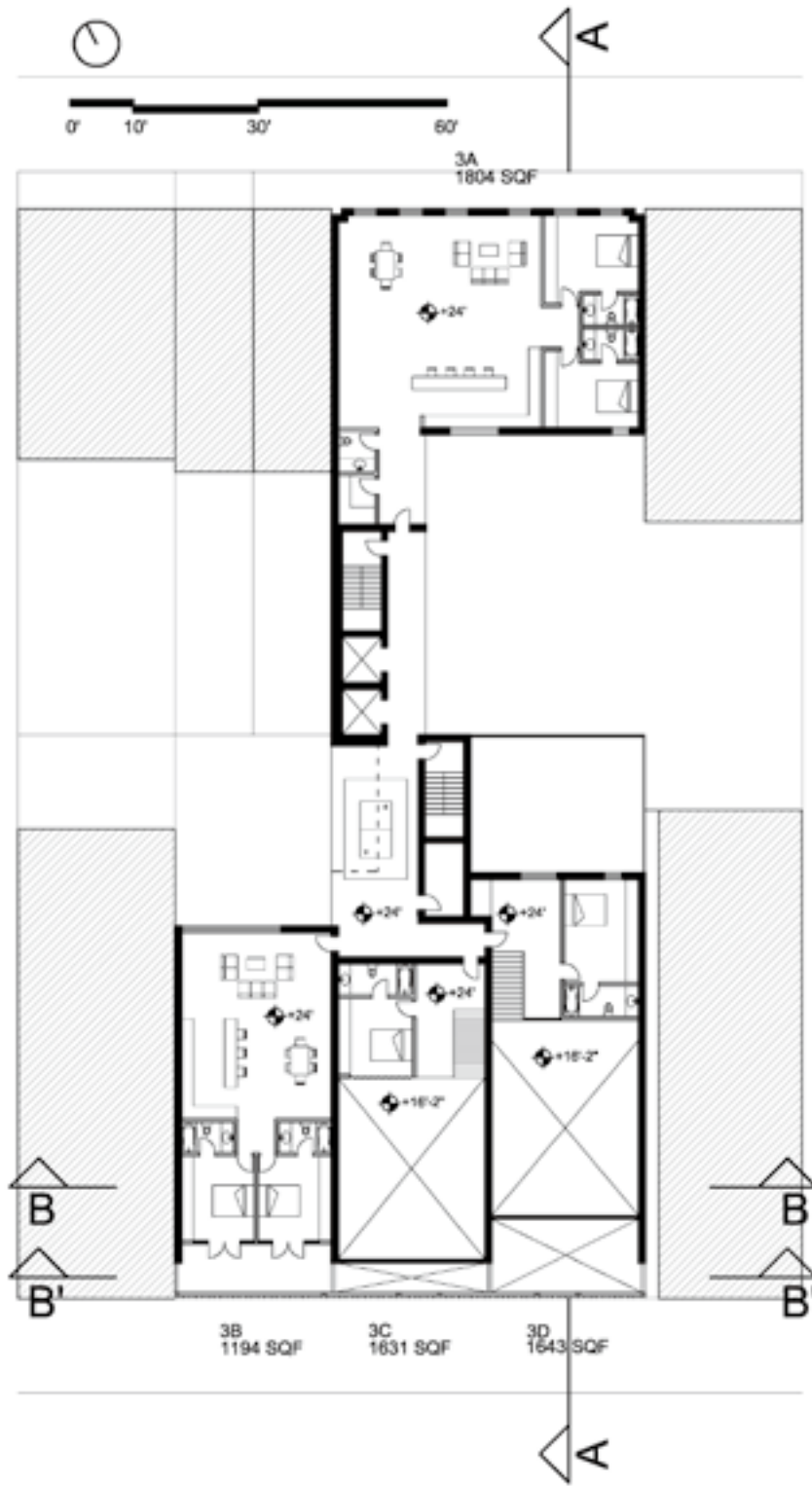
First Floor



Second Floor



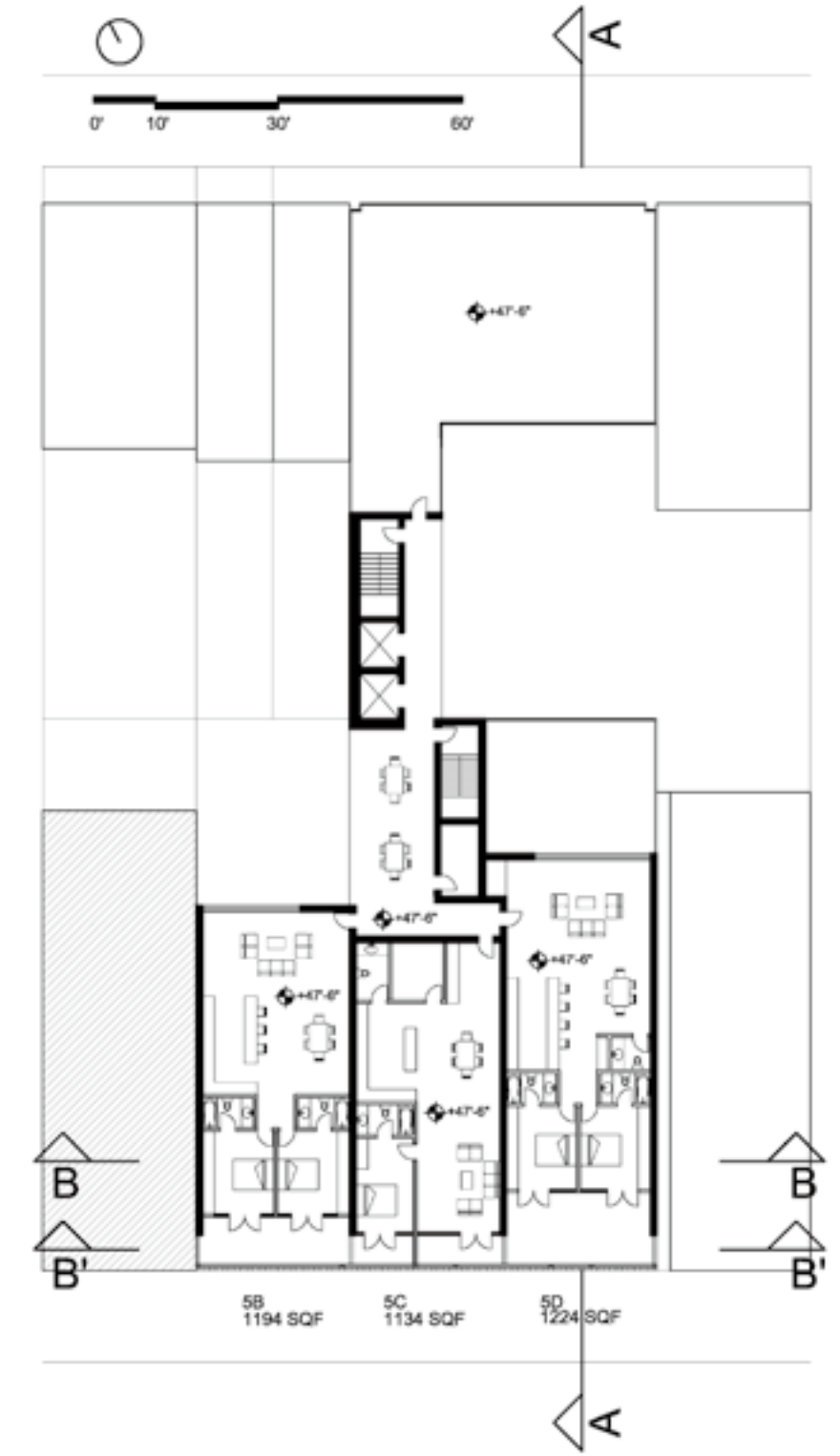
Third Floor



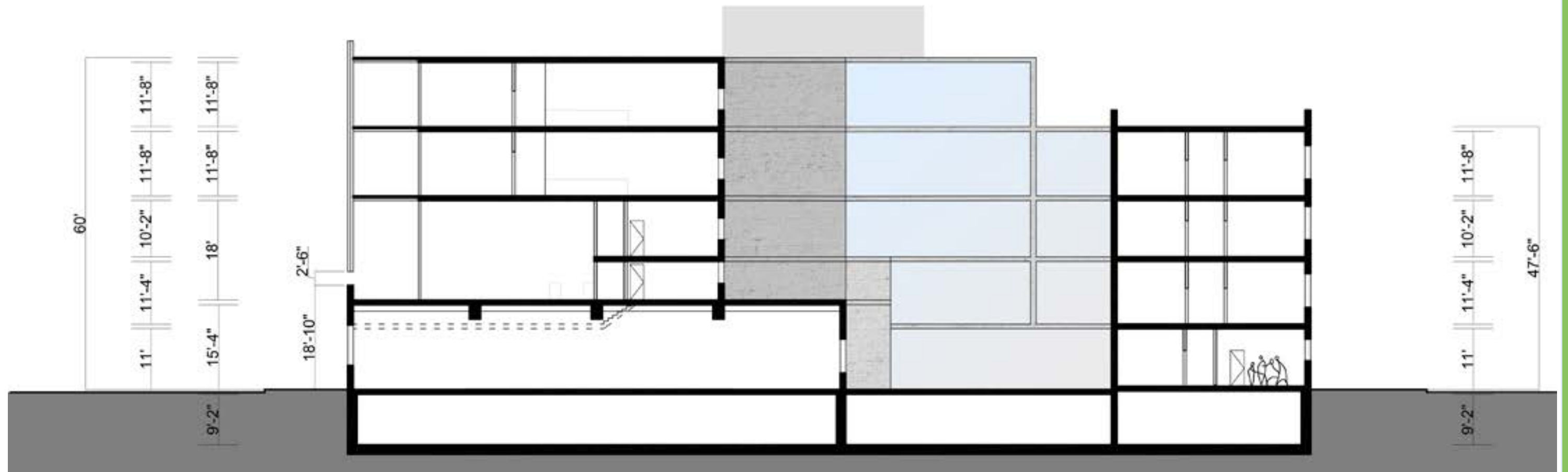
Fourth Floor



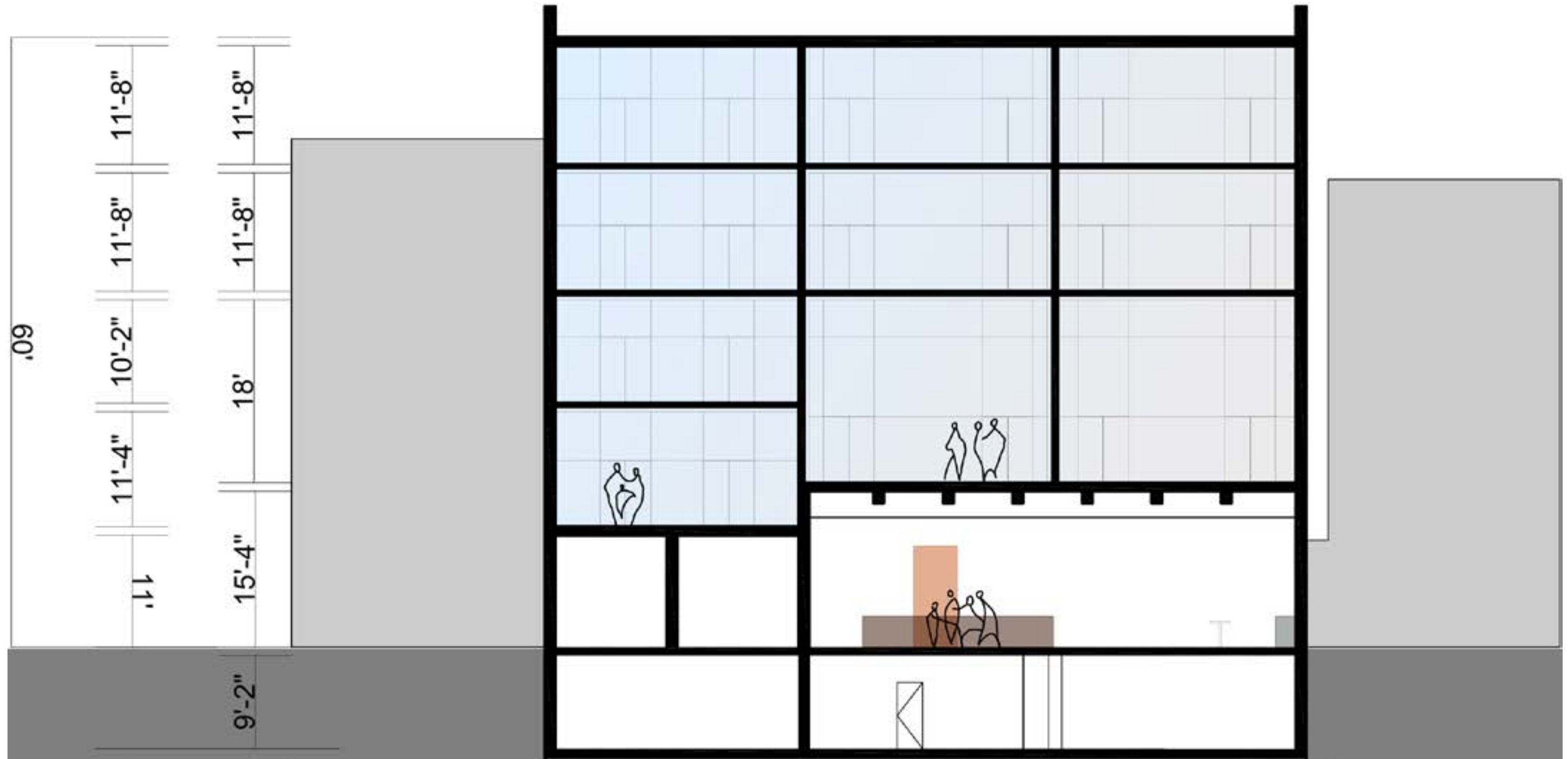
Fifth Floor



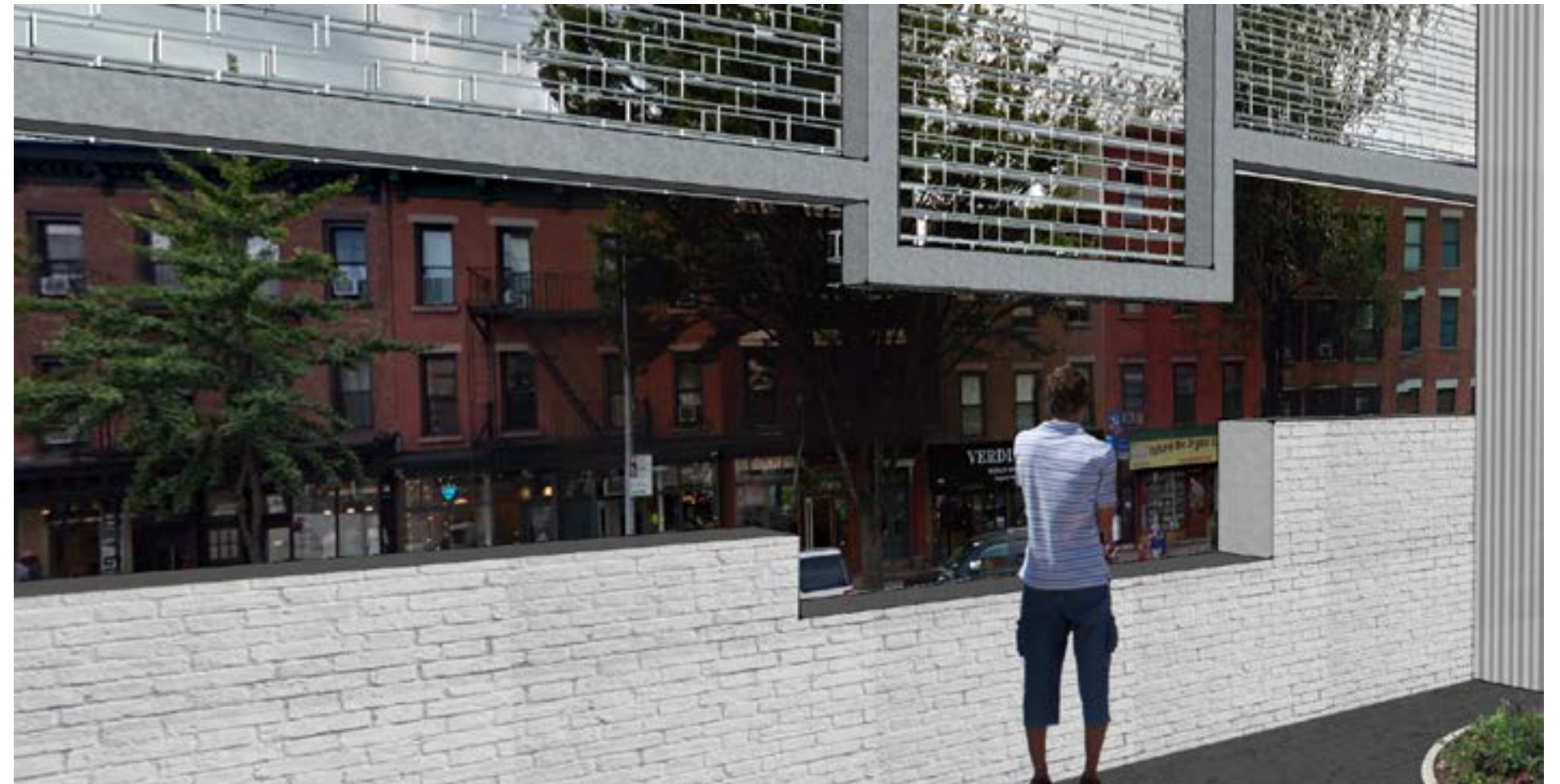
Section A-A



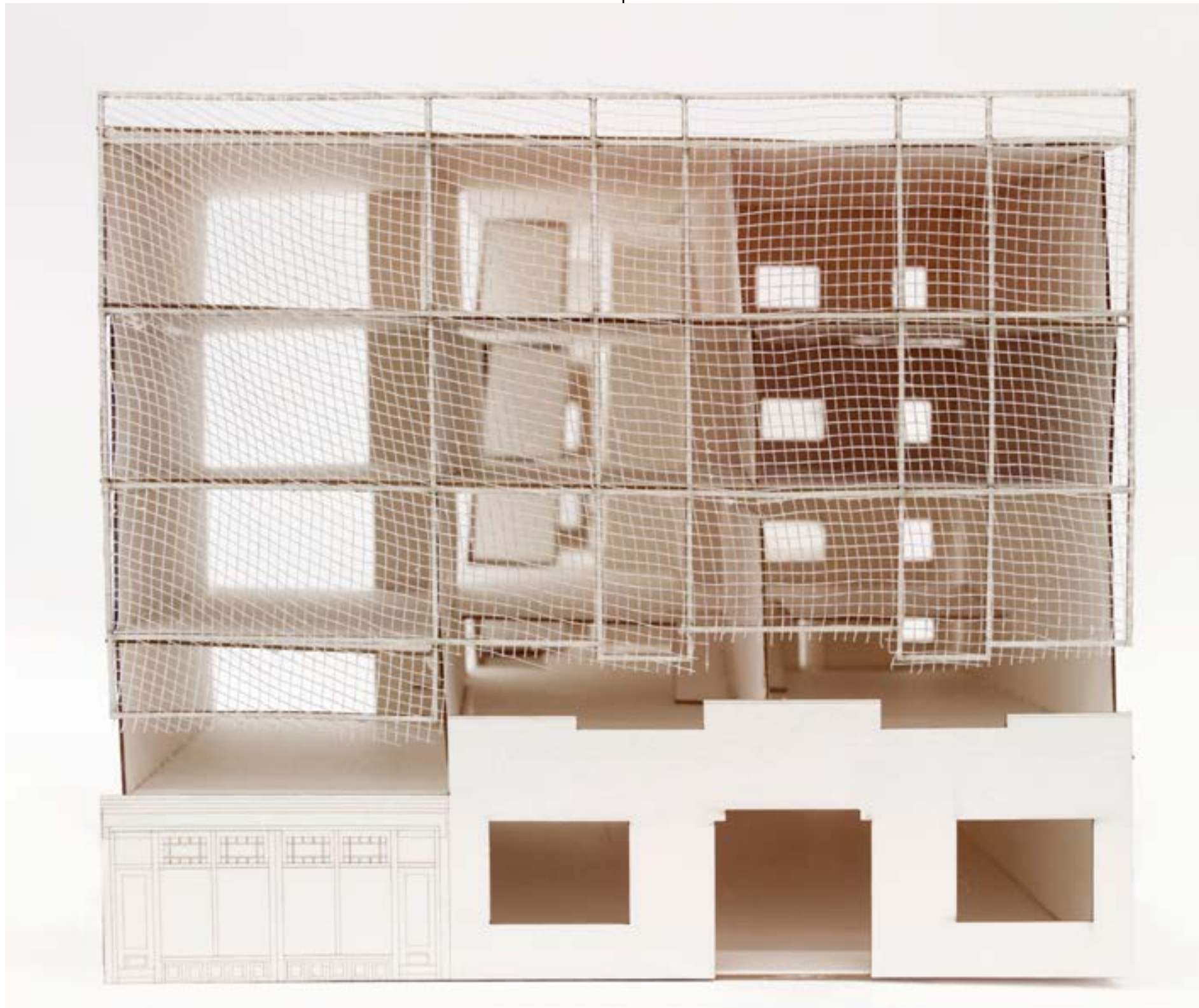
Section B-B



Interior Views



Atlantic Avenue



State Street





APPENDIX

Materials Case Study Details

We began our analysis by selecting a few case study blocks in the study area. We decided to study a small sample within the greater study area because the time and effort necessary to gather the data and conduct the historic photo analysis for the entire study area would have been prohibitive within the time constraints of this studio. We developed a methodology for data collection with respect to conservation, and we limited our choices according to the availability of early tax photos. For the selection of case study blocks, we used the overall conditions map that was produced using the initial raw data from the initial survey as our starting point. Based on the map, we looked for blocks that exhibited some distinctive characteristics both within and outside the historic districts of Cobble Hill and Boerum Hill. We chose the following eighteen case study blocks:

Blocks 195 & 386, 325 & 326, 408 & 414: (see the map on page 219 for a map detailing locations).

Each of these three pairs consists of blocks that were either adjacent or directly opposite to one another and exhibited drastic differences in their building conditions:

Block-195 has a large number of buildings in "fair" condition while Block-386 opposite to it on Bergen Street has an overall "good" building condition.

On Block-326 the buildings displayed an overall "good" condition while in Block-325, adjacent to it along Tompkins Place, the majority of the buildings were rated to be in "fair" condition.

We noticed that Block-414 had a mixture of building conditions while Block-408 next to it was primarily showing buildings in "good" conditions.

Blocks- 274, 275, 276, 285 & 286

The blocks that we chose on Atlantic Avenue were blocks 274-276, and 285-286. Because all of these blocks fell outside the Atlantic Avenue Special Purpose District, we also chose Block-177, which was in the Special Purpose District. It is one of the sites for design project. We wanted to know how and why building conditions along a commercial street differed from one block to the other and also how they differed for residential blocks that were either in or outside historic districts. Blocks 326, 408 & 414, too, fell in this category due to their location along Court Street.

Block- 171

Block 171 contains an interesting mix of historic buildings and new development. Block 171 was included as an example of a block that has undergone a lot of change. Was there a reason this block was particularly vulnerable to demolition? And what did that block have in common - or not - with the other study blocks?



Integrity 1: Block 408 lot 44
Source: student photograph

Blocks- 196, 385 & 387

These three blocks are just outside the Boerum Hill Historic District, and we thought that it would be interesting to know why blocks with similar looking rowhouses just outside this historic district were not included in the designation. Block-196 is particularly intriguing in this regard since half of this block (on Dean Street) is a part of the historic district but the other half (on Bergen Street) is not. We wanted to find out if there were any reasons related to condition, integrity, or material change through time that differentiated Bergen Street from the opposite row and may have justified its exclusion from the Historic District.

Blocks- 177, 193 & 292

These three blocks were included as case studies because of their selection and use as design project sites. We thought that an overall picture of the building conditions and characteristics of these blocks through time could possibly enrich the six different design projects being undertaken in the studio.



Integrity 2: Block 177 lot 45
Source: student photograph



Block 195 lot 63
Source: student photograph

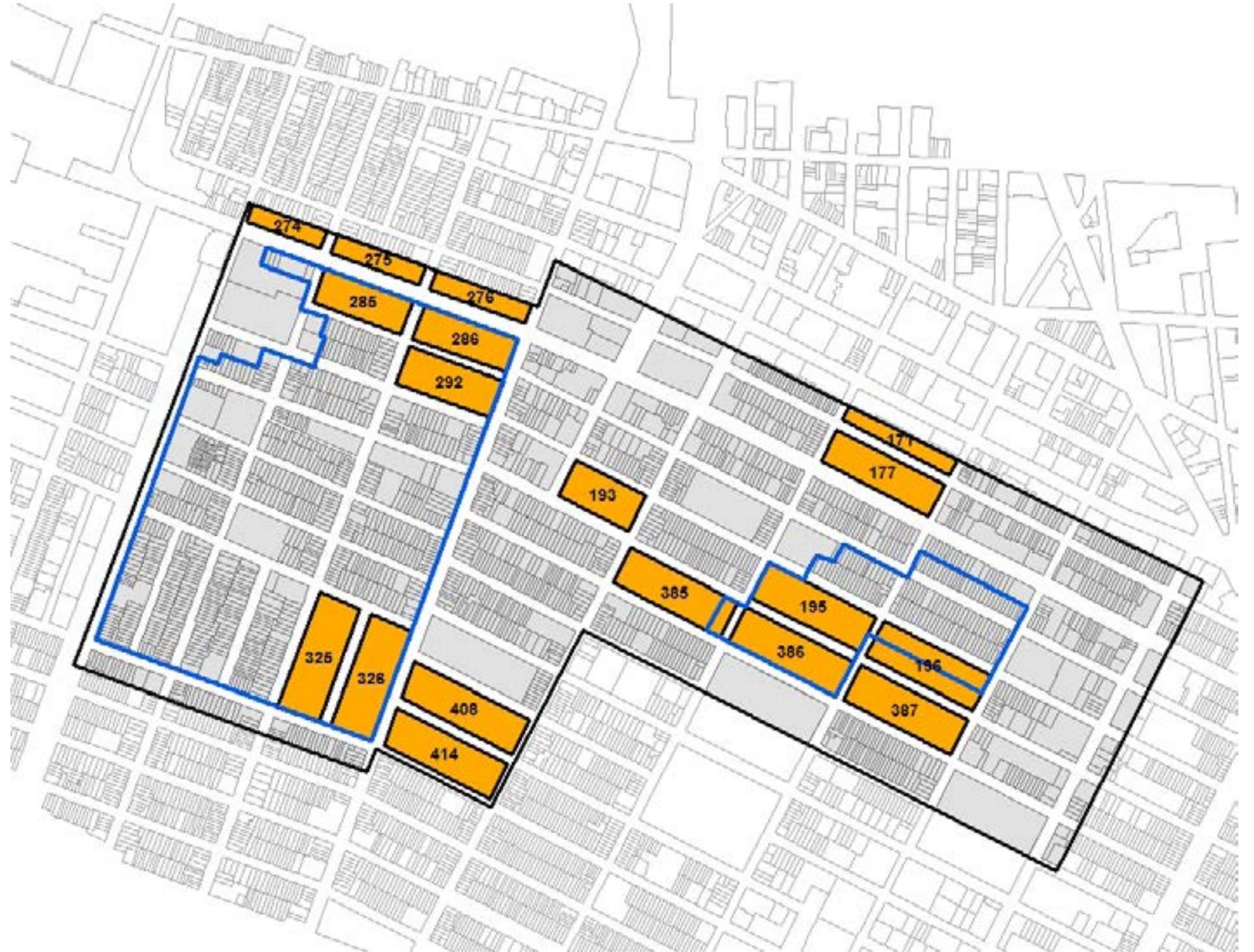
HISTORIC PHOTOGRAPH SURVEY

We created a second survey that focused on defining facade material use, the level of material condition, and the level of integrity in the neighborhood. The data from the second survey allowed the studio to identify how the study area has changed through time in regard to its built fabric. The second survey was implemented on collected tax photographs of the case study blocks from the 1930s-40s, 60s-70s, 80s and current photographs from the initial KoBo survey.

The questions asked included intentional overlap with the initial survey and also questions meant to create a more accurate understanding of facade materials and their condition and integrity through time. The second survey was crafted with mappable results in mind. The questions were created to highlight points of interest in the study, for example the trends related to the existence or nonexistence of the character defining features defined by the studio.

The historic photograph survey utilized a numerical value in lieu of the Good, Fair, Poor system, in order to apply quantitative analyses to the data. We assigned a numerical value to our survey responses. For this survey, a question of "What is the condition of the cornice?" would relate to the original Kobo survey data by 1 correlating to "Poor" condition, 2 to "Fair" condition and 3 to "Good" condition. Thus we assigned a condition value for the primary facade material, the secondary facade material and the following list of significant features: historic ironwork, stoop, historic storefront, notable sculptural ornament, terra cotta, cornice, stained glass, mansard roof, and dormer windows.

For quantifying integrity, the survey included two separate categories: stylistic integrity and material integrity. Integrity was defined as a way of assessing change through time with the origin point at the 1930s tax photograph being the earliest source for making these decisions (Figures 2, 3, 4). If the building's facade material was entirely replaced, such as brick being covered with stucco, the building would score low for material integrity. However, if the same building had all of the original formal features compared to its earlier photographs, it would score high for stylistic integrity. Buildings that were of a recent construction date, even in the case where they replaced a building we had previously surveyed, were given the highest integrity rating unless the integrity needed to be docked due to evidence from the new building's photographic timeline.



Map of Case Study Blocks
Source: student-generated GIS map

Whereas the initial KoBo survey addressed each building's condition relative to its neighbors, the historic tax photograph survey tackled the idea of condition and integrity through time on the same building lot. The historic photograph survey benefited from access to several images from the past to reference change through time on the each building's facade. To standardize the data collection within this survey, we created a set of parameters and definitions for materials, condition, and integrity. If a photograph did not show an element or facade clearly enough for our standards, the answer to that question was omitted from the final data analysis by being left unanswered.

Materials: For both the rapid building survey and the historic photograph survey, a photo-based reference sheet was created so that all surveyors could easily identify the common materials utilized in the study area. For example, it was important to distinguish between still intact brownstone, stucco that was used to imitate brownstone, and stucco not intended to imitate another material.

Building condition: The reference sheet created for condition assessment assigned a numerical value to severity of common deterioration modes. The sum of these values would allow the survey to place the building - or element - into the Good, Fair, Poor range. When assessing the condition of the building's facade we looked for varying levels of biological growth, peeling paint, crumbling stucco, cracking masonry, rusting, lime runs, crazing, broken glass, stains, water damage, rotten or splitting wood, spalling, efflorescence, settlement, displaced ornament, and other losses in material or structural integrity. Not all of these indicators were visually apparent in the historical photographs. The lowest score of 1 (Poor condition) would be applied in the case of "prolific deterioration of the materials, possible structural concerns, abandonment or prolonged neglect of maintenance." A score of 2 (Fair condition) would be applied in the case of "no deterioration of structural elements, however maintenance needed in ornamental or non structural facade materials. Neglect of any plantings or street furniture and bare-bones maintenance evident as building scars." A score of 3 (Good condition) meant that there was "evidence of regular maintenance and repairs, including ongoing construction, with a high standard of quality. There is evidence of intact ornament, upkeep of plantings, or emphasis on curb appeal." (building image for each of the 3 levels of conditions (Figures 1, 2, 3).

Building integrity: We quantified integrity in terms of change to the built fabric. Changing a facade material from painted brick back to bare red brick would affect the building's integrity, as would planing the lintels down. The former would be considered a change of material integrity and the latter would be considered a change in stylistic integrity. A change from brownstone to brownstone-imitating stucco would not significantly reduce the building's integrity, due to the necessity of the change. A removal of the stoop, which is a character defining feature of the study area, would have a significant effect on the building's integrity score.



Fig. 2. Condition 2: Block 325 lot 36
source: Student Photo



Fig. 1. Condition 1: Block 386 lot 49
source: Student Photo



Fig. 3. Condition 3: Block 194 lot 17
source: Student Photo

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VENUE

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COLONIE
DOLLAR
BAR
7PM
FRI

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SHOP
\$7