SKIDMORE, OWINGS & MERRILL LLP
7 WORLD TRADE CENTER
250 GREENWICH STREET
NEW YORK, NY 10007

NYC EDC East New York Industrial Business Zone: 116 Williams Ave, Brooklyn, NY 11207

Building Assessment Report

27 January 2025

SKIDMORE, OWINGS & MERRILL LLP
7 WORLD TRADE CENTER
250 GREENWICH STREET
NEW YORK, NY 10007

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I. Executive Summary

Introduction

116 Williams Ave is a four-story building with a partial cellar, 71,000+/- GSF total (Partial Cellar 7,800+/- GSF and Ground to 4th Floor 63,200+/- GSF), currently occupied by the NYC Department of Homeless Services (DHS) as a shelter for the HELP Women's Center. DHS will be relocating at the end of 2025, which will leave the building vacant and available for future uses.

The goal of this building condition assessment report is to identify findings upon visual assessment of the condition of the building and assess the architectural, structural, mechanical, electrical, plumbing, and environmental elements.

Process

The following assessments are based on visual observations conducted on December 6th and 13th of 2024 by the consultant team - SOM, Lera, Langan, and Legacy.

Observations were conducted during site visits to the occupied building, and did not include any probes or destructive measures to observe concealed or hidden conditions. No lifts, scaffolds or other mechanical aids were used to conduct the observations in this report. Observations of the facade were conducted from the sidewalk level on Williams Avenue on the east, Glenmore Avenue on the south, and from the parking area on the west and north of the building.

During the assessment the team had access to the prior assessment reports of the building and a variety of historic design drawings of the existing building (Appendix B).

Key findings & recommendations

The building's load bearing masonry walls and steel encased in concrete columns supporting concrete floors are solidly built, with capacity for office, light industrial, or similar uses throughout the building. The roof slab is less adequate in regards to load capacity and will require reinforcement to support occupancy or equipment if required - please refer to the structural assessment section of this report. A lateral load resisting system is not evident except for the perimeter masonry wall in the existing building, and will need to be reviewed in a predominant building use type change.

The load bearing unreinforced masonry exterior wall is integral to the building structure and has been renovated and remains in fair condition. The exterior wall is not insulated and ongoing maintenance is required. The windows on the facade have been replaced around 2002 (as indicated in the DDC drawing set dated 08/05/2002 and titled Exterior Masonry Restoration & Window Replacement at Brooklyn Women's Center - Appendix B), and appear to be in fair condition. The existing conventional roofing system is understood to be replaced in the late 1990s and appears to be in poor condition (as indicated in the DHS drawing dated 02/23/98 and titled as Building Upgrade Brooklyn Women's Shelter). The roofing should be considered for holistic replacement as part of a renovation to increase insulation thickness and improve energy efficiency. This includes the roof over the auditorium space which appears to have been a playground when the building was a school.

The existing exit stairs can support the occupant load required for office, light industrial or similar occupancy, but under a fully upgraded code, the handrails will require review for compliance. The main entrance from Williams Ave is currently not ADA accessible and must be made compliant.

An investment for vertical transportation is recommended to access all the floors. A passenger elevator(s) and/or an oversized service elevator for light industrial use should provide access to all the floors. Vertical transportation will need to be accessible from the Ground Floor from the central circulation spine of the building which can be connected to the main entrance and a new service entrance/loading dock, which is a recommended component of the renovation.

The existing MEP systems and components show signs of aging but they have been well maintained and remain operational. The HVAC units, piping, and electrical systems show signs that they have surpassed their useful life expectancy, the systems have become increasingly inefficient. Upgrading to meet the latest NYC Building Code and Energy Conservation Code, which has become more stringent in recent years, will provide a more comfortable environment for the building's occupants, reduce energy consumption, and improve sustainability.

II. Architectural Assessment

General Information

A. Building Information

Address: 116 Williams Avenue
Block and Lot: Block 3699; Lot 01
Year Constructed: 1925
Certificate of Occupancy: BIS CoO 1971 designation Public School #63.
NYC Building Code: Building was constructed prior to 1938 Building Code.
For New Adaptive Reuse - 1968 Building Code will apply - as per section § [C26-103.4] 27-118 Alterations involving change in occupancy or use.
Construction Classification: Class 5 - Metal (1938 BC)
Predominant Occupancy Group: Two (2) Classrooms
Ancillary Occupancies: Not listed
Flood Zone: Zone X - Area of minimal flood hazard
Landmark Designation: None

B. Zoning

As-of-Right Zoning: M1-4: Manufacturing, Commercial, Community Facilities.
Total site area: 40,000 SF
Max FAR for manufacturing, commercial: 2.0
Max FAR for community facilities: 6.5
Existing FAR: 1.6

C. General Description

The building was erected in 1925 as a school, currently the building houses a women's shelter operated by DHS, which will relocate to a new facility at the end of 2025, which will leave the building vacant and available for future uses.

The building is shaped like an "E" in plan containing 71,000+/- GSF including a partial cellar. The building contains four (4) stories above grade of approximately 63,200+/- GSF and a partial cellar/basement of approximately 7,800+/- GSF. The middle leg of the "E" has (2) stories and a roof, enclosed with a fence.

The building's main facade faces east onto Williams Avenue and the main entrance is located at the center of this facade. Photos 01, 02, 03, 04, 05, 06.

Multiple renovations have been implemented over the years. Around 2002, it appears renovations were made to the exterior envelope including replacement of the windows and reworking of the masonry exterior including stucco on the north facade. Fire alarm, egress lighting and select mechanical distribution appear to be a more recent renovation, ca. 2019. Refer to Appendix B.

The building is surrounded by empty lots currently being used as parking spaces, located to the north, south and west. Both north and south side of the building are at the lot lines, and the west side is a through-lot making the frontage of the building at 200'-0" wide and depth of the lot at 200'-0". Light wells are cut into the north and south side of the building above the Ground Floor.

The middle leg of the "E" part of the building is a shorter structure by one story that contains the cafeteria and kitchen on the Ground Floor; office space, converted from an auditorium on the 2nd Floor; and a playground on the roof, which did not appear to be currently used.

Egress stairs exit at grade onto the west side of the building and at the Ground Floor there are exits on the Williams Ave side. Photos 07, 08, 09, 10, 11.

Exterior

A. Roof

The roof appears to be a modified bitumen roofing with a granulated cap sheet, and assumed rigid insulation pitched to the drains. The roofing was installed multiple years ago with a coved base at all walls with elevated painted flashing and counterflashing (as indicated in the DHS drawing dated 02/23/98 and titled as Building Upgrade Brooklyn Women's Shelter). The condition of the roofing is poor with multiple patches and re-caulking evident in the maintenance over the years and fixing leaks. Some ponding was noted as well and what appears to be loose precast pieces to help divert the water from the scupper downspouts from the roofing of the top of house mechanical structures. Photos 12, 13, 14.

On the roof of the middle leg of the "E" part of the building, there's a playground with what appears to be pavers on top, and at the perimeter, an expanded metal mesh fence that is supported by steel trusses and columns enclosing the entire area. This roof area can be only accessed by traveling outside through Stairs B & C, and was only visually accessible at the time of the assessment. Photo 46.

Recommendations: Replacing the roofing system completely with a new roofing product should be considered as part of the renovation for the upper roof.

For the roof of the middle leg of the "E" part of the building, programming for this space should be considered first which will inform the type of roofing required. Access and further investigation will be required to review the condition of this roof, steel structure,and metal mesh fencing.

B. Parapet

The building has a perimeter parapet consisting of exposed brick/masonry structure with stone coping with gargoyle sculptures at the Williams Ave side, which vary in height up to 9'-0" at the highest. Parapets for the mechanical penthouses and exhaust structures have terracotta coping that appears to have been re-caulked and re-flashed. The perimeter brick wall shows efflorescence and repointing done over the years. The condition of the parapet appears to be in fair condition. Photos 14, 15, 16, 17.

Recommendations: Re-pointing of the parapet walls should be part of the renovation and continued maintenance program to verify structural integrity of the parapet and any water penetrations or damages.

C. Windows

The windows were replaced around 2002 with aluminum windows that are glazed with units that contain integral horizontal blinds between the outer lite and inner lite that can be operated to open and close with a specialized tool. The configuration of the tall windows look to be proportioned to match the original configurations with segments on the bottom as double hung and segments at the top as a hopper, and fixed casement in the middle. On the interior, the caulking around the windows appears in good condition, keeping a good weatherseal. On the exterior. expanded metal mesh guards are installed as operable panels at all the windows. The metal mesh panels have been modified over the years to allow for AC window units to be installed at multiple locations, typically on the upper portion of the windows. Some windows have been modified for exhaust louvers - locations are random. Photos 32, 33, 34.

Recommendations: Coordination with new MEP systems will require repairs to the existing windows and replacement of louvers or glazing. Further investigation is required to ascertain air and water tightness of the window system, perimeter seal, and thermal performance.

D. Facade

The building facade is constructed of load bearing masonry walls at the perimeter of the building with punched windows. The Williams Ave facade, considered the main facade, has 7 large openings at each floor level across the elevation with decorative elements in stone articulating the head of window openings. A continuous band of stone articulation between the Ground Floor and Second Floor contains signage - engraved lettering that indicates that the building was an old school in its previous iteration. Additional decorative elements can be seen at the roof level with 3 gargoyles decorating the top of the pitched parapets. On the north facade, stucco panels were installed over the masonry around 2002 (see Appendix B). From the vantage point of the parking area, there appears to be some discoloration, cracking and signs of weathering. There are exhaust louvers and a mushroom exhaust fan located on this facade with exterior lighting that is over the property line. Photos 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11.

Conditions of the masonry wall looks fair including the mortar which looks like it has been repointed within the last number of years. Control or soft joints were difficult to discern from the street or parking area vantage. There are locations where there appears to be wider joints where there may be some separation in the masonry.

On the north elevation, the condition of the stucco is less than fair condition with signs of wear and cracking.

On the interior it appears that there is a lack of insulation on the exterior envelope (see photos 18,19,32,37).

Recommendations: Closer inspection of the facades should be performed to identify movement of the facade and water penetrations. This should include all elevations and systems including the parapet at the roof and lightwell. Energy efficiency of the envelope should be taken into account on future renovations to meet updated codes.

Interior

A. Life Safety

Stairs: There are six egress stairs enclosed in the building and a main double entrance stair. The main double entrance stair connects the Ground Floor to the 2nd Floor where the main auditorium space is located, when it was a school. Stair A & D located at the north end and south end of the building connect from the Ground Floor to the Roof. Stair B located in the middle south of the building connects from the basement/cellar to the 4th Floor. However Stair B provides a separated path to egress at the Ground Floor to the exterior and separated entrance to the basement. Stair C located in the middle north of the building connects from the Ground Floor where egress to the exterior is provided to the 4th Floor. Stair E & G located on the northeast and southeast of the auditorium structure connects the 2nd Floor and the Ground Floor egress to the exterior.

All the stairs have windows since they are located adjacent to the exterior walls. Instead of guardrails Stair B and Stair C have expanded metal mesh screens in between the flights with some intermediate landings cantilevering over. There are double-height handrails that were built at heights for children when the building was a school. Handrail height requires review in future renovations. The stairs are in fair to good condition with stair widths that will allow for occupant load for future uses. Photos 18, 19, 20, 21, 22, 23.

Recommendations: Adaptive reuse to a different occupancy or use may require full building upgrade and stairs will require close review.

B. Accessibility

Main Entrance: The main entrance from Williams Ave has 2 risers up from sidewalk/grade level to the floor level of the Ground Floor in the vestibule. Photos 24, 25.

Recommendations: Renovation of the main entrance and the vestibule will be required to provide ADA access.

Restrooms: Due to the nature of the facility, the consultants had partial access to the bathrooms. The majority of the bathrooms are located on the north and south end of the building, stacked from floor to floor. The upper floors with dormitory facilities have shower stalls and toilets for the current occupants. Photo 42, 43.

Recommendations: Renovation of the restrooms at all floors will be required to provide for ADA compliant bathrooms.

C. Vertical Transportation

The building does not have elevators or lifts.

Recommendations: Elevators will be required for accessibility and to effectively occupy all the floors for future use.

D. Finishes

The building has a partial cellar, Ground Floor and 3 floors above and a roof. The cellar contains the mechanical systems for the building, boilers, pumps and electrical distribution (see mechanical observations), and storage. Some parts of the cellar are not excavated so the footprint of the Ground Floor is larger than the cellar. The finishes are exposed concrete structure floors, walls and ceiling which have limited paint on hard surfaces / substrates. The cellar has a drain system with sump pumps with diamond plate covers.

At the Ground Floor and 3 floors above, exposed surfaces are hard - the floors are made up of tiles that appear to be vinyl composite tiles, which will require testing; and walls are plastered and painted over masonry or concrete.

There are exposed distribution pipes and ducts throughout the ceilings, some insulated, some not. There are some portions of the offices that have acoustical ceiling tiles, but most spaces have an exposed underside of slab.

Support spaces such as the bathrooms, laundry rooms, and kitchens have ceramic tiles on the floor and part of the walls, and acoustical ceiling tiles. Photos 28, 29, 30, 31, 35, 36, 37, 38, 39, 40, 41, 42, 43.

Recommendations: All interior finishes may need to be replaced fully.

Appendix A: Architectural Photographs

Photo 01: Looking northwest at corner of Williams Ave and Glenmore Avenue

Photo 02: Looking southwest at corner of Williams Ave and Liberty Avenue

Photo 03: Main entrance at Williams Ave

Photo 04: Articulation of the facade on Williams Ave

Photo 05: Incoming services behind fencing and AC window units

Photo 06: Cameras and Lighting at exterior

Photo 07: North facade with stucco renovation and light well

Photo 08: South facade with light well above Ground Flr.

Photo 09: West facade

Photo 10: Trash Compactor in rear yard

Photo 11: Looking at the Protrusion

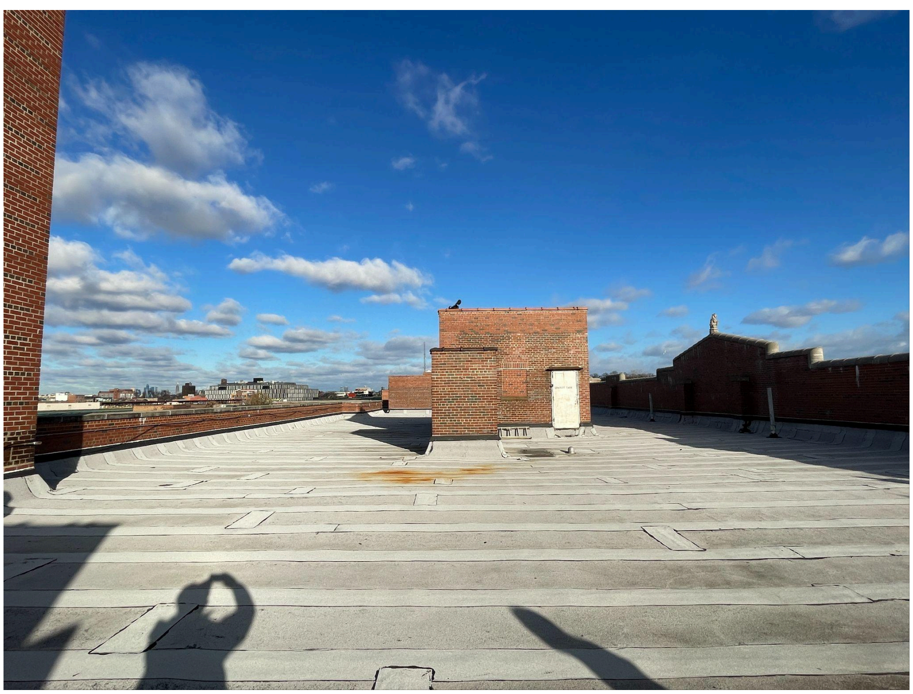


Photo 12: Roofscape looking North

Photo 13: Mechanical structures on roof

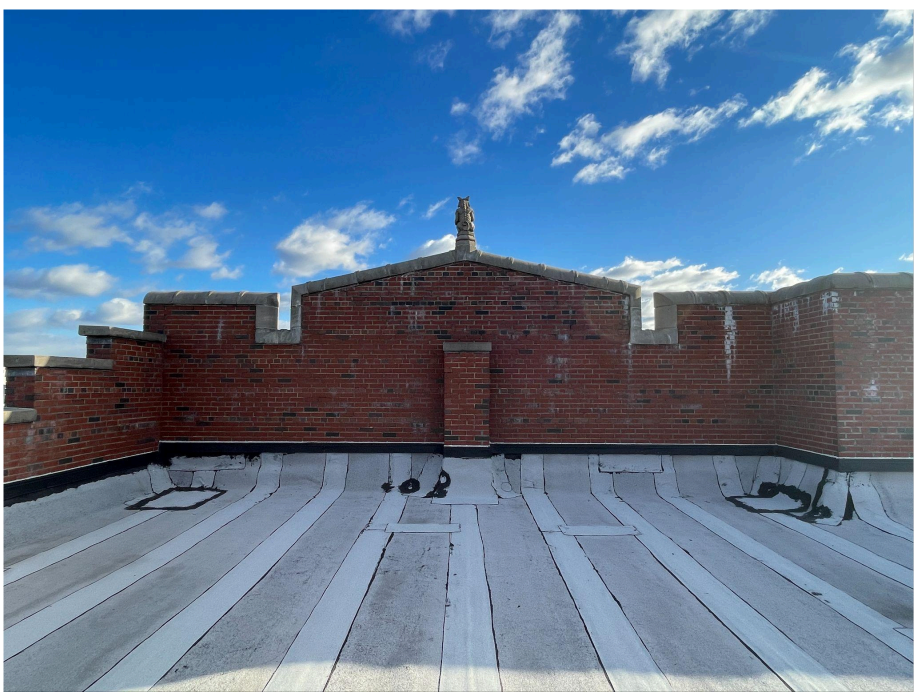


Photo 14: Looking at parapet on Williams Ave with gargoyle in stone


Photo 15: Detail of the back of gargoyle

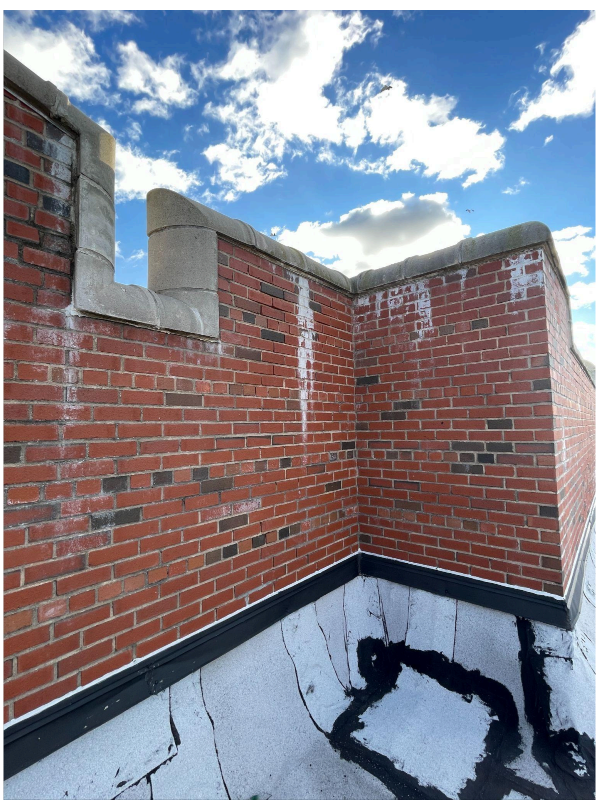


Photo 16: Efflorescence at the parapet wall; patching at roof


Photo 17: Renovated flashing under terracotta coping and mortar repair


Photo 18: Stair D at roof landing

Photo 19: Stair D at floor landing

Photo 20: Stair width typically 4’-0”

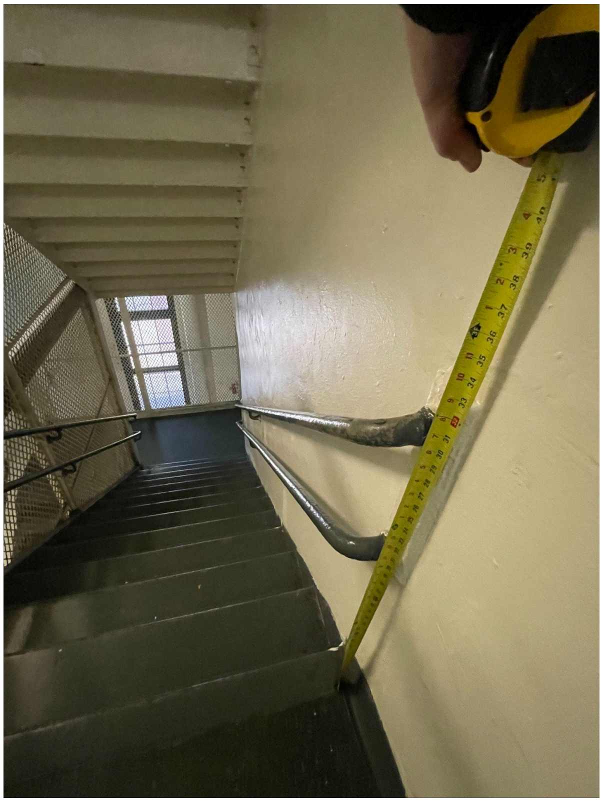


Photo 21: Double handrail for school type

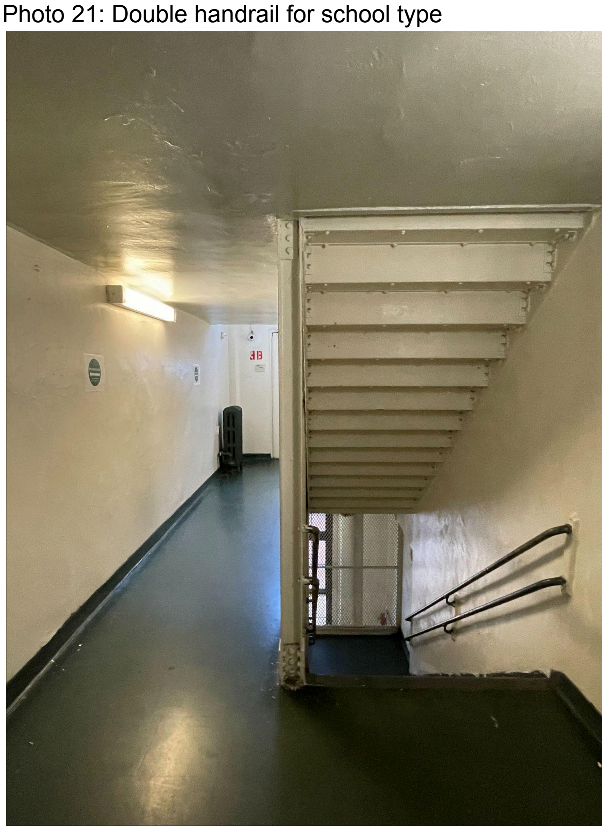


Photo 22: Stair C floor landing

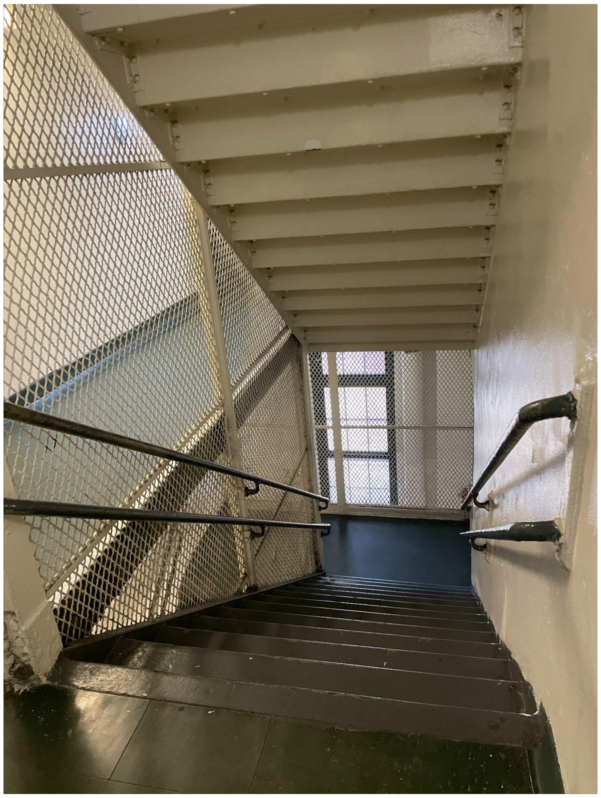


Photo 23: Cantilevered intermediate landing

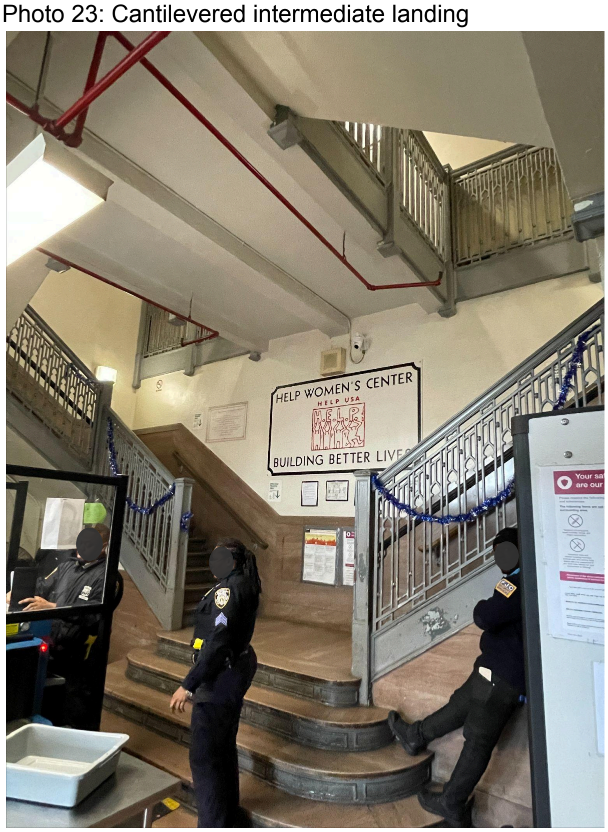


Photo 24: Open double stairs at Ground Flr

Photo 25: Steps at main entrance vestibule

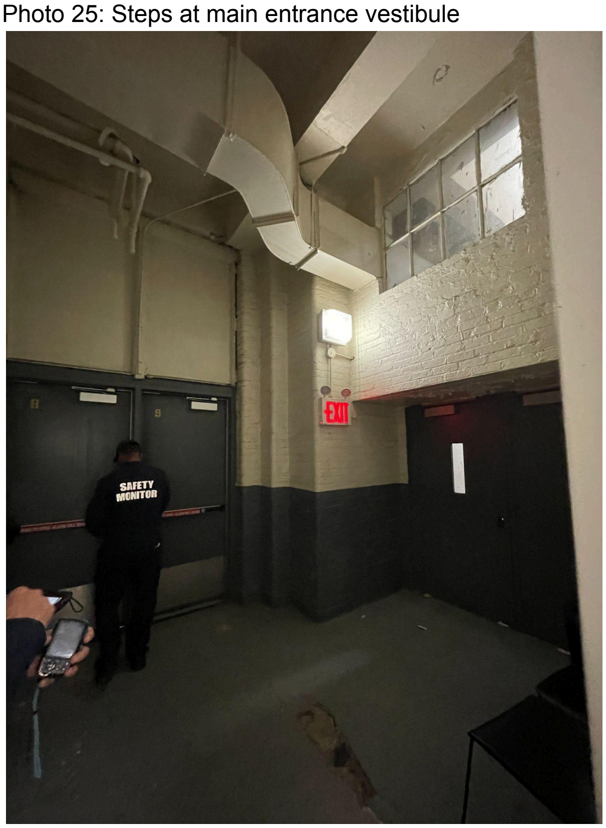


Photo 26: Egress to the exterior at west of bldg

Photo 27: Stair B Egress at Ground Flr

Photo 28: Central corridor at 4th Flr

Photo 29: Central corridor at 3rd Flr

Photo 30: Central corridor at Ground Flr

Photo 31: Typical stair doors from corridor

Photo 32: Typical window from interior

Photo 33: Window details

Photo 34: Window details

Photo 35: Looking into the 2nd Flr auditorium space turned offices with dividers

Photo 36: Looking to the west side of the auditorium space

Photo 37: Looking to the north side of the auditorium space

Photo 38: Looking into the cafeteria space at Ground Flr

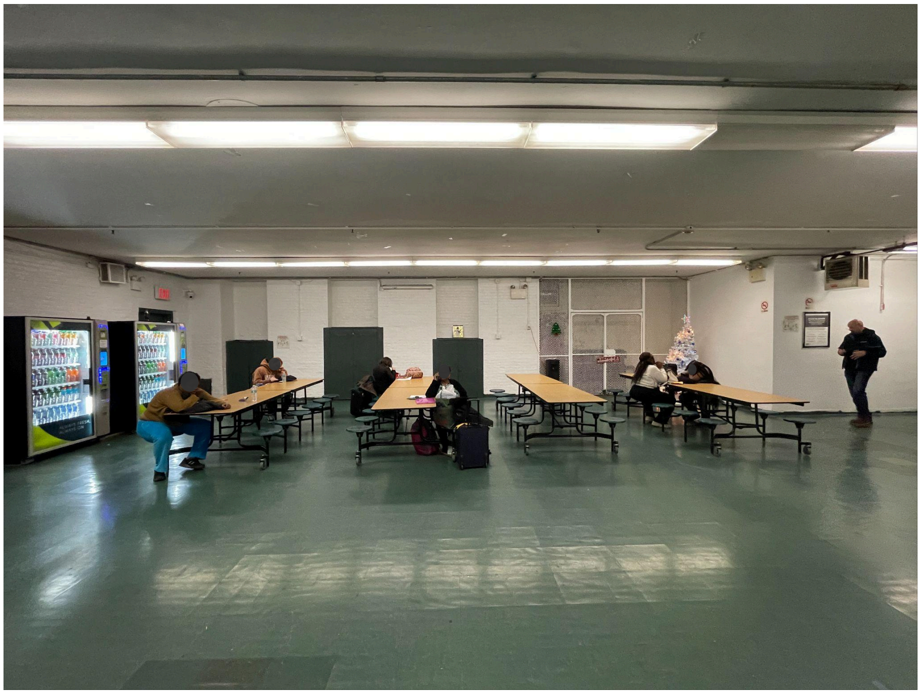


Photo 39: Looking into the cafeteria space at Ground Flr

Photo 40: Looking into the kitchen space at Ground Flr

Photo 41: Looking into the laundry room on 3rd Flr

Photo 42: Looking into bathroom at 3rd Flr

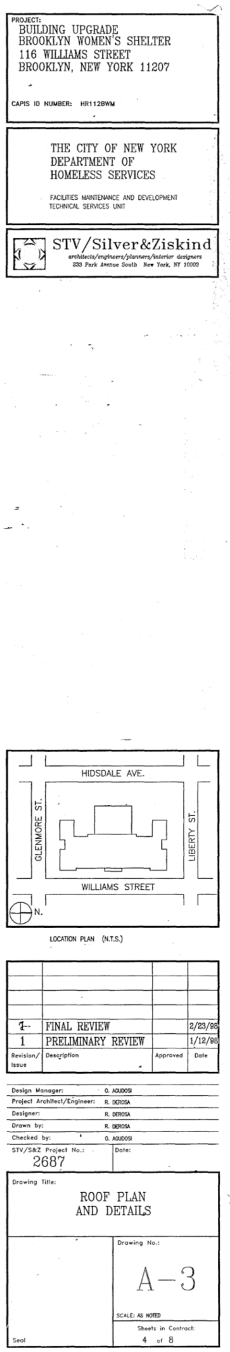
Photo 43: Looking into shower facility at 3rd Flr

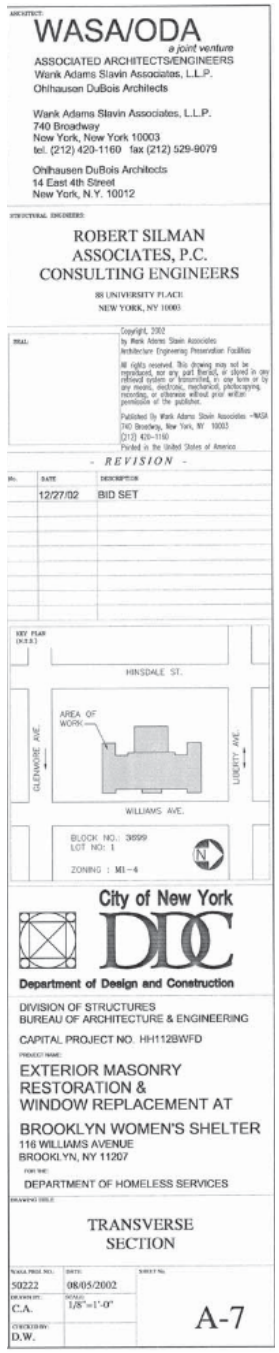
Photo 44: Looking into the Cellar boiler room

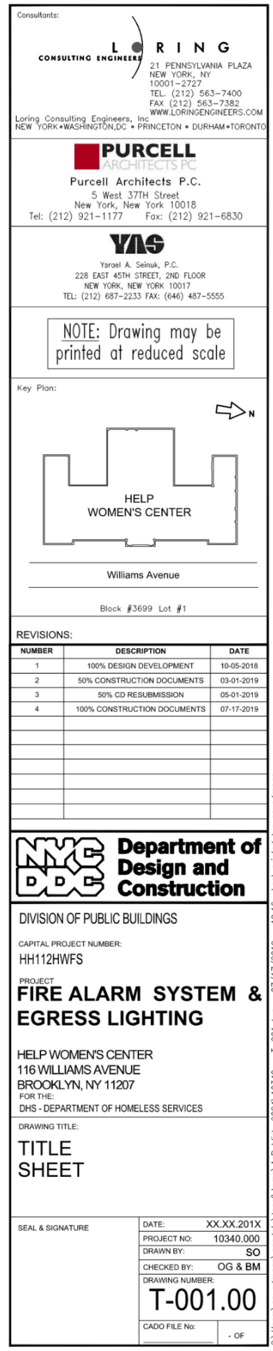
Photo 45: Fire Alarm Room at Ground Flr entrance

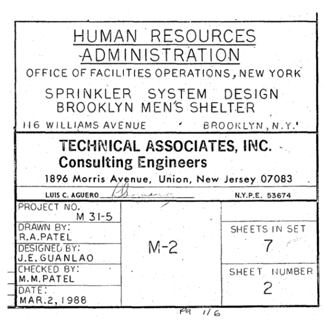
Photo 46: Looking at roof over the middle leg of the “E” part of the building.

Appendix B: Existing drawings and materials provided by EDC









III. Structural Assessment

A. Structural Systems

The structure of 116 Williams Avenue, presumed constructed 1925 originally as a public school, contains perimeter load bearing unreinforced masonry walls with an interior steel frame of columns and beams. The main front façade on Williams Avenue contains elements of limestone and terra cotta with brick masonry while the remaining perimeter walls are brick masonry. There is visual evidence of interior brick bearing walls along the central corridor at the first floor. Floors consist of concrete slabs spanning between steel beams and the brick walls.

Based on visual site observations, steel beams appear to be consistently encased in concrete for fire protection. The profile of the underside of floor slabs and beam encasements, likely plastered and painted, can be seen throughout the floors. Brick masonry is exposed and or painted in the cellar, in some corridor spaces at the first floor, in some stair wells, and at the roof. The underside of some steel beams are exposed in the cellar where hangers for MEP piping are connected (see photo). Based on observations of the beam profiles, it appears the beams. and likely the columns, are structural steel ASTM A7 material, and not wrought or cast iron. Part of the basement consists of a crawl space while the remainder consists mainly of a mechanical plant with various equipment and distribution supported on what appears to be a bearing slab on ground. It is presumed that the wall and columns are founded on shallow footings bearing on subgrade.

Based on a review of the interior spaces as well as various architectural layout drawings, it appears the interior columns are spaced on a regular grid on the order of 20 to 30 feet. The span of interior slabs is on the order of 6 to 7 feet. Slabs may consist of reinforced normal weight concrete or lightweight cinder concrete.

Based on its use as a school as well as a review of the New York City Building Codes in that period (1916 Code with amendments till 1922 and the 1938 Code), it is estimated that the majority of the floors were designed for a live load in range of 75 psf to 60 psf. The first floor, or parts thereof, was likely designed for a higher live load of 100 psf due to the presence of larger spaces, presumably initially intended for assembly.

If the building structure is intended to be used for light industrial occupancy, the presumed existing live load capacities may be generally acceptable, except as noted below. The current New York City Building Code requires a live load of 125 psf for light manufacturing. However, specific light loading uses such as boutique manufacturing (apparel, jewelry, etc.), 3D printing, some life sciences use, and more office like occupancies would impose less live loading (from people, equipment, and fit-out) on the floor structure than 125 psf and, therefore, would generally be acceptable structurally with an existing floor live load capacity of 60 to 75 psf. For reference, the Code live load requirement for offices is 50 psf. There are no specific Building Code prescribed live loads for different classifications/unique uses within “light manufacturing”.

The first level could be utilized for higher loading manufacturing or commercial kitchen use up to 100 psf demand (we understand there is a commercial kitchen there now as part of the current occupancy). The use of large equipment, machinery, tanks, and commercial kitchen appliances would generally not be acceptable for the upper levels of the existing building floor structure above the first level (unless reinforced). Where a building conversion to light industrial occupancy is to be designed, it is recommended that physical probing of beam sizes, slab thicknesses and reinforcement characteristics be accomplished to technically verify actual live load capacities. Above the first floor, it will generally not be feasible to increase the existing floor framing live load capacities above their current capability for conversion to a more demanding use throughout the entire building. However, strategic floor framing bays may be retrofitted with additional beams to locally increase capacity for future flexibility of use to allow heavier machinery and equipment.

In addition to upgrading floor capacities, potential modifications to the existing building to accommodate future flexible uses include the addition of a loading dock as well as an elevator. In order for new mechanical equipment to be located on the roof, new dunnage spanning between existing columns will be needed to support the equipment. Depending on the weight of the equipment, existing columns may need to be reinforced.

A loading dock can be added outside of the current building structure footprint or within by modifying the existing first floor framing.

A new elevator or two can be retrofitted within a particular framing bay with modifications to the steel frame at each level. Alternatively, where it is desired to locate the elevator outside the current building footprint, a new elevator tower on new foundations can be constructed.

In general, the condition of the observed building structure, both interior encased framing and the exterior masonry, appeared to be in relatively good condition. In some of the stairwells adjacent to the perimeter masonry walls, there are signs of some water and moisture intrusion in the brick as well as concrete encasement (see photo). The roof perimeter parapets show signs of moisture saturation as well as mortar joint deterioration in some locations (see photo). It is recommended that the exterior brick façade as well as adjacent interior spaces undergo maintenance and repair as part of any planned building use conversion.

B. Lateral System

The perimeter unreinforced brick masonry walls of 116 Williams Street form the lateral load resisting system for the building. Based on the current Building Code, a renovation of this building would likely not require the building structure and its lateral load resisting system to be upgraded unless the renovation was fairly extensive triggering system wide compliance with the current Building Code. A Code review would be required based on the proposed renovation. However, an addition to the existing building that is not isolated from the existing structure would require a Code review of potential upgrade requirements.

Where an exterior addition for new elevators is contemplated, these can be built as independent new structures on new foundations so they do not trigger any Code upgrades to the existing structure.

C. Anticipated Probes and Tests

Because this building structure type is common throughout the city, it is anticipated that future recommended probes and tests would be targeted to determine information needed specifically for a future renovation (see live load discussion above). For instance, slab thickness, composition, and reinforcement may need to be determined to more accurately determine slab capacity, particularly if there is a desired zone of higher loading in the building. The existing steel material could be tested to verify its properties and confirm its weldability where desired for a structural renovation where steel framing is altered. A geotechnical investigation could be conducted where increased columns loads or modifications at the cellar level are considered.

D. Photos

Exposed Steel Beam Soffits at MEP Hangers in Cellar

Brick Efflorescence and Mortar Deterioration

Signs of Previous Moisture Infiltration in Stairwell

LEGACY ENGINEERS
498 Seventh Avenue
17th Floor-South
New York, NY 10018

Existing Condition Assessment Report

For **East New York IBZ DHS Building Assessment - MEP Systems Report**

116 Williams Avenue, Brooklyn, N.Y.11227

Heating, Ventilating, and Air Conditioning

Electrical

Plumbing

Fire Protection

Legacy Project No.: 24-032

January 27, 2025

Table of Contents

A. INTRODUCTION

Legacy Engineers have been retained by Skidmore, Owings & Merrill (SOM) to perform a comprehensive MEP (Mechanical, Electrical, and Plumbing) assessment for the NYCEDC East IBZ – HELP Women's Center, located at 116 Williams Avenue, Brooklyn, New York. The purpose of this assessment is to evaluate the current state of the building's critical infrastructure. The Legacy team conducted a thorough visual inspection of the existing HVAC, plumbing, fire protection, electrical, and fire alarm systems within the building on December 13th, 2024.

During the inspection, it was observed that while all systems and components are showing signs of aging, they have been well-maintained and remain operational. The HVAC, plumbing, and fire protection systems, along with the electrical and fire alarm systems, were originally installed over 30 years ago, and as a result, they have surpassed their useful life expectancy. The systems have become increasingly inefficient.

Specifically, the HVAC units, piping, and electrical systems show signs of wear and tear. While they continue to function, they are operating at less-than-optimal efficiency. These systems require an upgrade to meet the latest NYC Building Code and Energy Conservation Code, which have become more stringent in recent years.

Based on our findings, we recommend a complete HVAC upgrade to provide a more comfortable environment for new programs and an electrical service upgrade, as required to accommodate the electrical load for new MEP systems. This upgrade will not only enhance system performance but will also ensure compliance with current regulations, reduce energy consumption, and improve sustainability.

All future construction/upgrades shall be governed by the latest version of the following applicable Codes and Standards:

1. New York City Building Code
2. New York City Mechanical Code
3. New York City Electrical Code, 2011 Amendments
4. New York City Plumbing Code
5. New York City Fire Code
6. NYC Energy Conservation Code (Appendix CA, ASHRAE 90.1as amended)
7. National Fire Protection Association (NFPA)
8. National Electric Code (NEC)
9. ADA Standards for Accessible Design
10. New York State Accessibility Code (adopts without amendments ANSI 117.1)

The following sustainability requirements shall be considered for all future constructions/upgrades:

Regulation	Description	Compliance
Local Law 48 (NYCECC)	The **New York City Energy Conservation Code (NYCECC)** is comprised of New York City local laws and the current Energy Conservation Construction Code of New York State (ECCCNYS). By State law, all local government Energy Codes, including the NYCECC, must be more stringent than the ECCCNYS. This code regulates the design and construction of buildings for the use and conservation of energy over the life of each building.	Mandatory for MEP upgrades.
Local Law 31	**Local Law 31 of 2016** requires city-owned capital projects to be built to consume less energy than buildings built under current standards. It requires that city building conduct a mandatory feasibility analysis for the following projects. Note that the projects themselves are not mandatory, only the analysis. 1. Supplying at least 10% of their energy with on-site renewable generation. 2. Becoming a net-zero energy building, if the property height is three stories or less	Green Design Standard to be determined by LL51 of 2023 (Charter Section 224.1).
Local Law 32	**Local Law 32 of 2016** largely revises Local Law 86 of 2005, requires more stringent LEED® design standards for city-funded and city-owned capital projects and energy cost reductions. **Local Law 86 of 2005** has required many of our projects to achieve a LEED rating of Certified or Silver and, in many cases, to use energy and water more efficiently than current codes require.	Green Design Standard to be determined by LL51 of 2023 (Charter Section 224.1).
Local Law 66	**Local Law 66 of 2014** amended the administrative code of the city of New York, in relation to reducing greenhouse gases by eighty percent by 2050, relative to 2005 levels.	Mandatory

Local Law 97	**LL97 of 2019** requires most buildings over 25,000 square feet to meet new GHG emissions limits beginning in 2024, with stricter limits coming into effect in 2030. The goal is to reduce the emissions produced by the City's largest buildings 40 percent by 2030 and to net zero by 2050.	Mandatory – Financial penalty may apply.
Local Law 88	**Local Law 88 of 2009** requires owners of certain buildings to make upgrades to lighting power allowances and controls, in accordance with the requirements of Article 310 of Chapter 3 of Title 28 of the NYC Administrative Code; and to install electrical sub-meters in covered tenant spaces, in accordance with the requirements of Article 311 of Chapter 3 of Title 38 of the NYC Administrative Code.	Mandatory
Executive Order 52	**Executive Order 52 of 2020** commits to ending the expansion of fossil-fuel-related Infrastructure. To ensure that New York City's ambitious emissions goals are achieved. The City will not support the addition of infrastructure within its energy shed that expands the supply of fossil fuels via pipelines or terminals for the transfer of fossil fuels or via the construction of new fossil-fuel-based electric generation capacity.	Electrification feasibility study is recommended to determine compliance.
Executive Order 53	**Executive Order 53 of 2020** sets a goal for 100% of its fleet to be all-electric and carbon neutral by 2040. The City will issue, implement and update a Clean Fleet Transition Plan every two years to outline requirements for all City fleet units by type that leads to this goal.	Building decarbonization study is recommended to determine compliance.
Local Law 92 & Local Law 94	**Local Law 92 and Local Law 94** require that the roofs of certain buildings be partially covered with green roof or solar photovoltaic electricity generating systems in accordance with the New York City Building Code.	Appliable if the entire existing roof deck or roof assembly is being replaced.

Local Law 6	**Local Law 6 of 2016** requires new municipal buildings and HVAC retrofits to utilize the online NYC Geothermal Pre-Feasibility Tool to assess ground-source heat pumps (GSHP) as an alternative to other HVAC system designs. If the screening tool finds that a full or hybrid GSHP system is potentially viable for the project, LL6 requires a comprehensive engineering and cost analysis. If the analysis finds that GSHP has the best net present value of all alternatives considered, LL6 requires that GSHP be selected for implementation, and the Design-Builder must provide a complete GSHP design. **The Pre-Feasibility Tool is accessible at:** https://www1.nyc.gov/assets/ddc/geothermal	Geothermal Pre-Feasibility Tool determined that building lot is suitable for closed loop system with potential capacity of 61-Ton. Feasibility study is required to confirm landscape availability and determine water well quantity, spacing, depth and size.
Local Law 24	**Local Law 24 of 2016** requires all projects to provide the Department of Citywide Administrative Services (DCAS) an assessment of the solar photovoltaic (PV) potential of each city building with a floor area of 10,000 GSF or more, and to identify the cost, energy cost savings, and greenhouse gas emissions reductions of a PV system that fulfills this potential. Required procedures are outlined in the DCAS Solar 100 Report.	PV Potential shall be assessed to determine compliance.
Local Law 130	**Local Law 130 of 2013** introduces Electric Vehicle Capacity requirements for parking lots and facilities to support electric vehicle charging stations. This Local Law requires at least 20 percent of the parking spaces in new parking lots and garages or existing parking lots and garages undergoing an increase in electric service, to be equipped with electrical VOLUME 3 - SECTION 1030.50 - Page 2 HWHARPADM GENERAL PROJECT REQUIREMENTS raceways for the future installation of electric vehicle charging stations. Parking lots must also provide electrical panels with sufficient capacity to support the charging stations, and parking garages must provide sufficient space in their electrical rooms for such a panel. Actual installation of charging stations is at the discretion of DCAS and the sponsor agency unless it is part of the Specific Project Requirements or is needed in order to comply with LL86 or LL32.	Mandatory as determined per new construction plan.

B. HEATING, VENTILATING, AND AIR CONDITIONING

1. Applicable Codes & Design Criteria

   The HVAC system was installed based on the following code:

   NYC 1968 Code

2. Scope of Work

   a. Existing HVAC Systems

      i. Air-Conditioning

         The spaces in the building are primarily cooled via window mounted air-conditioning units. Some large rooms have as many as 3 window units. The operation of units was not assessed during the site survey.

      ii. Heating System

         The building's heating system is serviced by two 6300 MBH gas-fired steam boilers. The boilers nameplates indicate that they were installed in 1990. A two-pipe steam system, combined with a duplex condensate return pump system, provides heating throughout the building via local steam radiators. The Boiler Room is ventilated through an interlocked outside air opening with a damper, ensuring compliance with NYC 1968 Code, Article 9, Combustion. The local control panel monitors the outside air temperature sensor and regulates the boiler operation accordingly. Both the boiler and the pumps appear to be in acceptable condition.

The facility's steam piping and radiators appear to be original to the building, with minimal repairs or upgrades over the years. The piping seems to be in poor condition. The building's maintenance team indicated that they perform a boiler blow-down twice a day.


PLATINUM
ANY VOLTAGE T
SENSOR TERMINAL
ALL SENSORS MUST B
GOLD SERIES SENSOR
TIONS
accepts changes.
ns or changes settings.
us menu.
tput status.
ADJUST
PRESS TO
SELECT
BACK
AUTO
BYPASS
HELP
PREV.
(DEL)
DAY
NEXT


KNAACK

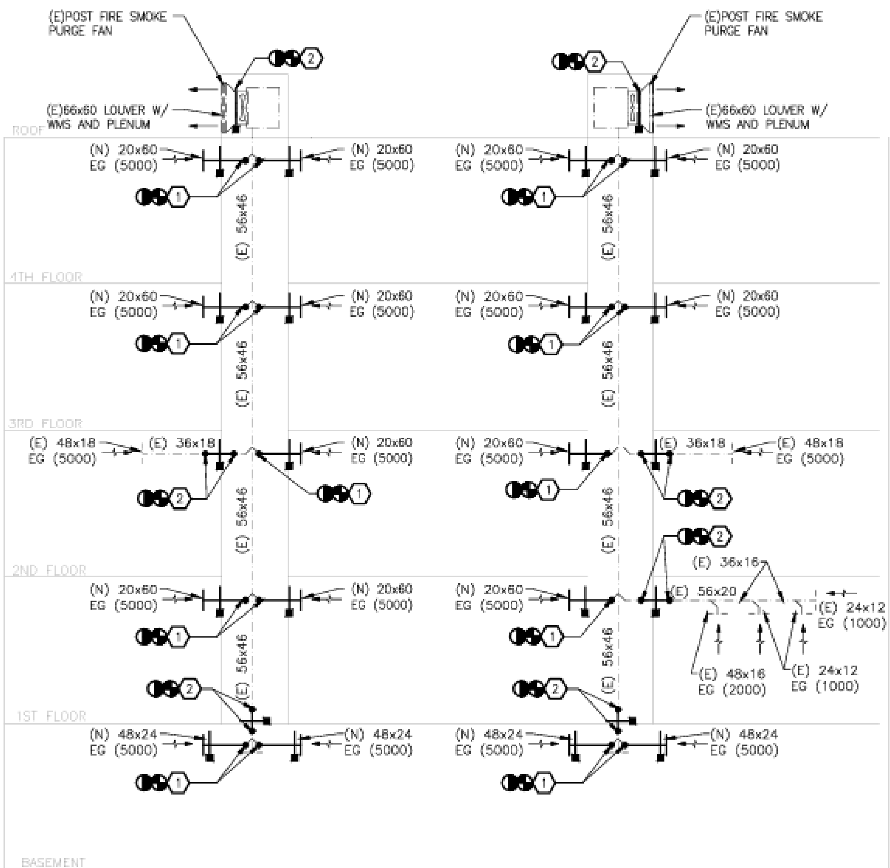

Dayton

iii. Ventilation

A single zone Heating and Ventilation (HV) unit, located in the basement, provides ventilation throughout the building. The supply fan draws outdoor air from a louver on the roof and discharges conditioned air into shafts on the floors above. The exhaust air is relief via return air openings through another louver on the roof. The steam valve serving the HV unit coil opens when the outside air temperature drops and enabling heating.

iv. Post-Fire Smoke Purge System

The building has a post-fire smoke purge system, and it is interlocked with the building fire alarm system.



v. Exhaust System

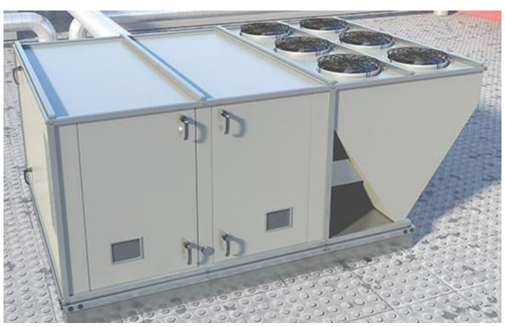
Inline toilet exhaust fans serve both the toilets and showers throughout the facility. The exhaust ducts vent to louvers on the building's façade. Additionally, there are (2) toilet exhaust fans are located in the Fan Rooms on the roof. These fans serve 3rd and 4th floor bathrooms.

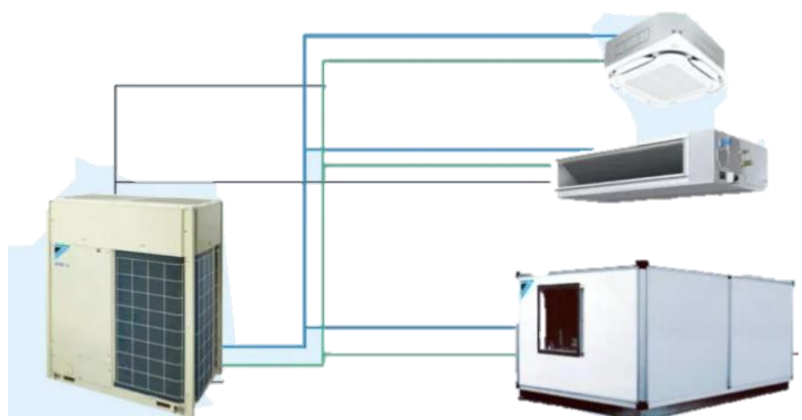
3. Key Finding and Recommendations

   The existing HVAC systems, including gas-fired boilers, window-mounted air conditioning units, and associated components such as pumps, piping, valves, and controls, have reached the end of their useful life. These systems should be disconnected and removed, including any necessary power and control wiring.

   We recommend a completed replacement of existing mechanical systems that aligns with contemporary trends and innovative design principles focused on sustainability, decarbonization, electrification, energy efficiency, resiliency, and indoor health and wellness. We recommend replacing the building's current natural gas-fired boiler and air conditioning unit with high-efficiency, all-electric heat pump systems. Additionally, a complete Direct Digital Control (DDC) system should be implemented for the monitoring and control of the HVAC systems through a central Building Management System (BMS). The LEED and WELL Building certification rating systems shall be used as resources in the design process.

Option #1: Rooftop Unit with VAV boxes combined with VRF System and DOAS system



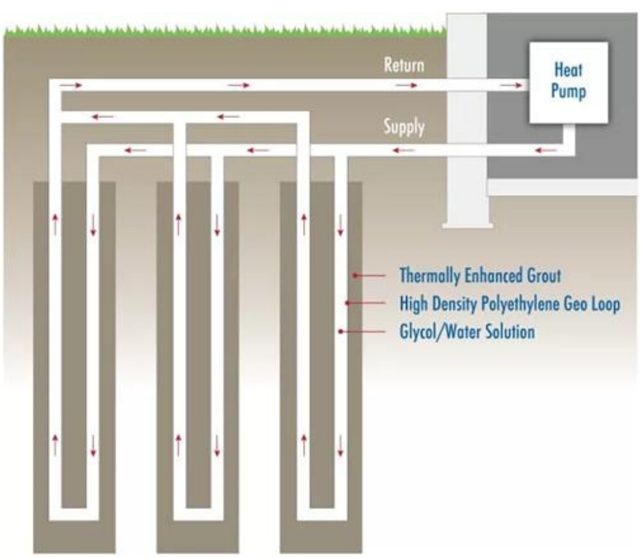


Packaged rooftop units combined with VAV terminal boxes provide a highly efficient and adaptable HVAC solution for larger buildings or facilities. The rooftop unit includes components such as compressors, a direct expansion (DX) coil, a supply fan, filters, and supply and return duct connections. It shall be connected to supply and return duct air risers, distributing conditioned air to individual VAV boxes throughout the building. The rooftop unit handles the primary heating and cooling functions, while the VAV boxes offer precise temperature control in individual zones. This combination improves overall system efficiency by optimizing airflow, reducing energy consumption, and maintaining consistent comfort levels across the building by adjusting to varying demand. This system is ideal for large tenant spaces with mixed-use occupancy type, such as light commercial workshops, meeting rooms and offices.

Variable Refrigerant Flow (VRF) system is an air-source heat pump solution that includes outdoor condensing units connected to multiple indoor fan coil units through a refrigerant piping distribution system. This setup provides both heating and cooling to all spaces within the building. The indoor fan coil units will be either floor-standing console units installed below the windows, replacing the steam radiators or ducted air-handling unit hung from the ceiling or installed in Mechanical Equipment Room(s). Additionally, mechanical ventilation air shall be provided to all occupied spaces served to ai-conditioning units by a DOAS system. The system will include energy recovery that draws in fresh outdoor air and building exhaust while reclaiming its waste heat. Ventilation air will be ducted directly to the fan coil units/ait-handling unit and controls shall be provided to facilitate demand-controlled ventilation (DCV) during low occupancy periods in required areas. This system is ideal for small tenant spaces with small space load.

This system is energy-efficient and fully electrified, eliminating the use of fossil fuels for heating and complying with Local Law 97. It features low indoor and outdoor noise levels. However, the design must carefully consider refrigerant piping routes to avoid health hazards from potential leaks in small rooms and note that energy efficiency may decrease under extreme hot or cold weather conditions. Local electric resistance heating may be required to prevent freezing conditions in the space in the event of a system failure.

Option #2: Geothermal Heat Pump System with indoor Water-Source Heat Pump



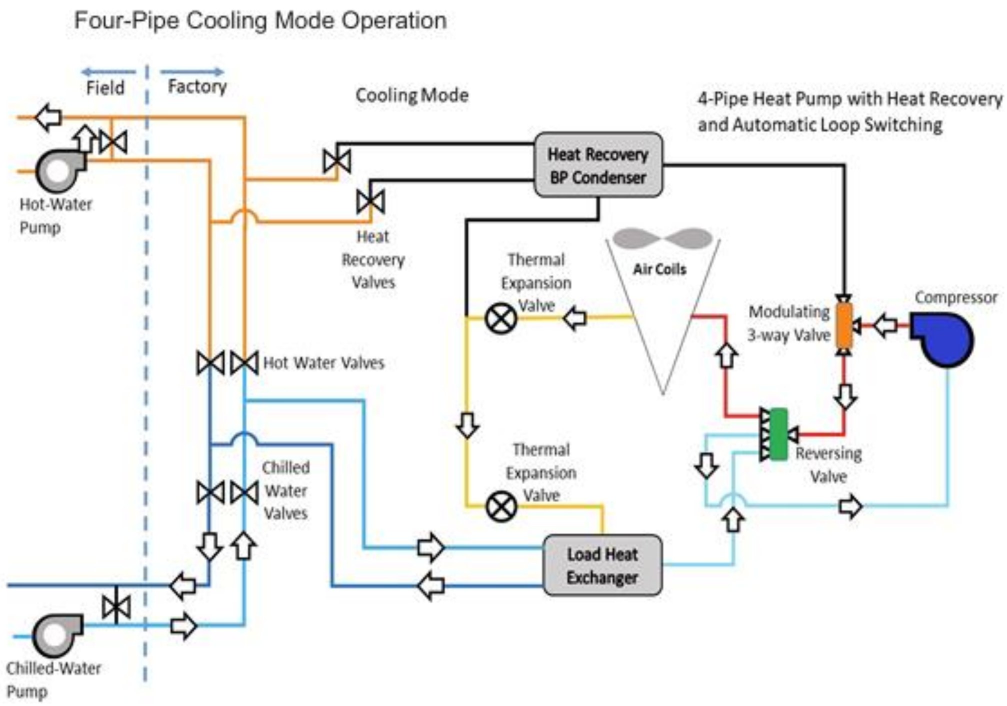
A closed loop GWSHP system shall consist of a geothermal water well field with several water wells spaced apart and buried deep into the ground. The system shall also include a piping header to combine all water well pipes, and a duplex pumping system along with an expansion tank, air separator and all other required valves and fittings which will likely be located in a mechanical room. Final geothermal water well quantity, spacing, depth and size shall be determined after further investigation of existing landscape, ground testing and building demand load requirement.

Geothermal systems may not be sufficient to handle the peak load demand, especially during extreme weather conditions. A supplementary infrastructure system, such as a cooling tower or an air-source heat pump chiller will be required to maintain the space peak load condition. The combination of a geothermal system with supplementary infrastructure ensures that the building can maintain optimal temperature control year-round, without overloading the geothermal system during high-demand periods. While these additional systems increase upfront and maintenance costs, they provide reliable backup solutions to ensure consistent comfort and energy efficiency.

Several water source heat pump (WSHP) units of different capacities will be located throughout the building serving the occupied spaces. The WSHP units will be provided with dx coil, electric heater and supply/return ductwork, ensuring the efficient distribution of conditioned air to the individual spaces.

Geothermal systems are a renewable energy source for heating and cooling that are both highly energy-efficient and sustainable. These systems have a minimal environmental impact, producing little to no greenhouse gas emissions, and can significantly reduce energy bills over time. Previous studies in the Brooklyn and Long Island areas have confirmed that the landscape is suitable for geothermal heat pump systems. However, further conductivity testing of the geothermal field is needed to assess the actual capacity of the site. Furthermore, a more detailed cost-benefit analysis by a geothermal consultant is required to determine whether the system is a viable option. The initial installation cost of a geothermal system can be high due to the need for drilling or trenching for the ground loop.

Option #3: Air Source Heat Pump Chiller and Air Handling Units



An air source heat pump chiller is a dual heating and cooling system used in commercial and industrial applications to provide hot water and chilled water to the building air-conditioning units. A supplement electric hot water boiler may be required to meet the heating peak load demand during extreme weather conditions. Generally, air source heat pumps chillers are easier to install and maintain compared to water-cooled chillers, as they do not require a separate water treatment or cooling tower system. They are generally less energy-efficient than water-cooled systems because they depend on the ambient air temperature to dissipate heat. Despite this, they remain a popular choice for buildings where water infrastructure constraints make water-cooled options impractical.

Indoor Air-Handling units with hot water and chilled water coil will be located throughout the building. These units will be responsible for conditioning and circulating air to maintain a comfortable indoor environment. The use of water-based coils allows for greater energy efficiency compared to traditional air-based heating and cooling systems. The water circulates through a closed-loop system, reducing energy loss and ensuring that temperature adjustments can be made more precisely and effectively.

C. ELECTRICAL

1. Applicable Codes & Design Criteria

   The Electrical system was installed based on the following code:

   NYC 1968 Code

2. Scope Of Work:

   a. The Electrical Contractor shall include lighting, power and signal systems required for the intended use of the facility.

   b. Energy efficiency shall be of the highest priority in the selection and design of all electrical equipment and systems, particularly motors and lighting.

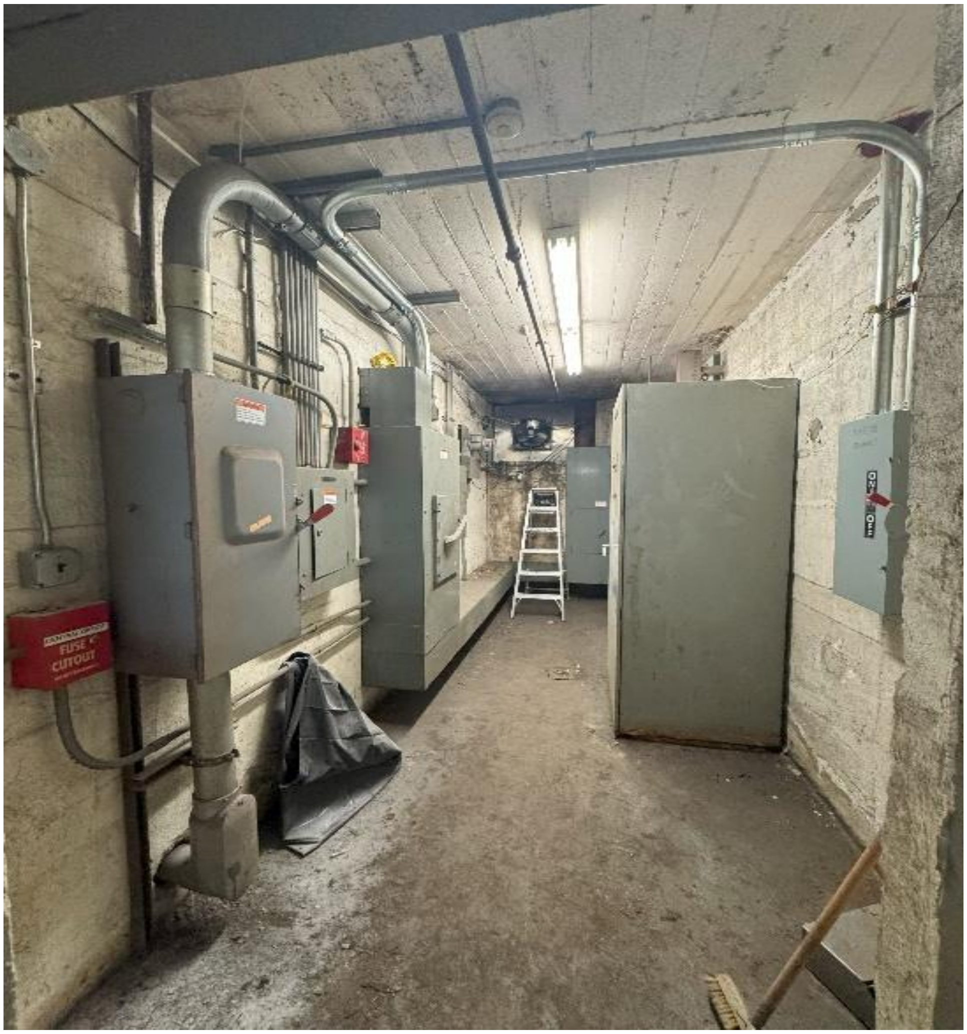
   c. Existing Electric Service

      i. Power:

         The electrical utility service appears to be original to the 116 Williams Avenue building and is functional. The incoming electrical service enters at the Cellar floor level into the existing Electrical Service room. The utility service endbox and utility direct building meter are located on the perimeter wall within the Electrical Service Room. There is a new fuse cut-out which serves the facility fire alarm system.

         The main Electrical service is 1200A and original to the building, the existing main service board (MSP) is an old Royal Switchboard company. The main panel (MSP) has a Fused Switch of 1200A and serves other Panels within the service room.
         An old 16Pole Royal Switchboard fused lighting Panel feeds a labelled "24hour Panel "via the MSP. A labelled "Exit light cutout Panel" is also fed from MSP. There is also a 12 pole Main Lugs Only lighting panel labelled "clock terminal Cabinet "fed from the MSP. A New 200A fused switch feeds unknown loads on the fourth floor. A painted red 2000A bolted pressure switch has a service tap that feeds the Fire Pump. There is an old 1200A Automatic Transfer Switch within the service room that is abandoned.

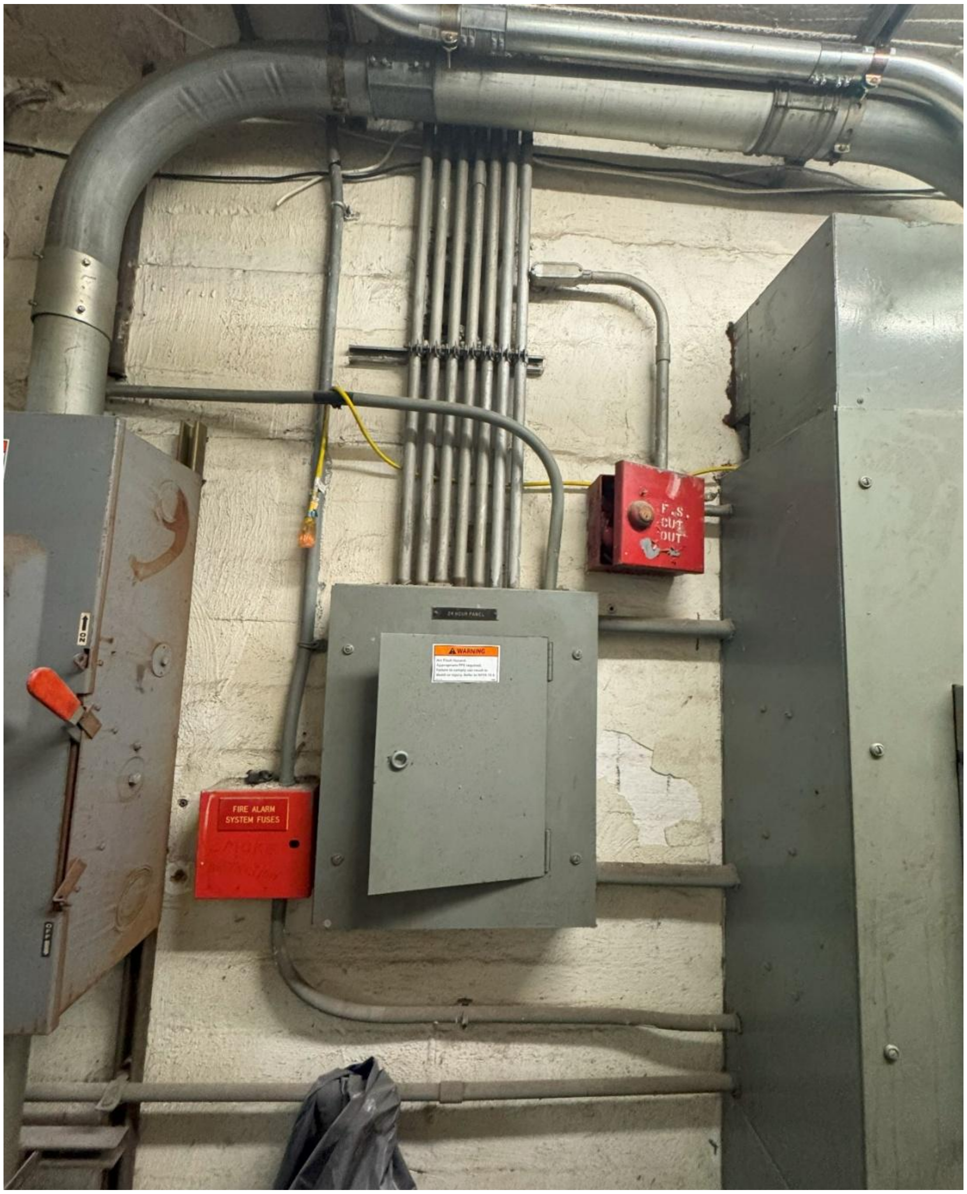
         There are existing Electrical Panels original to the building on the Basement level, and first through 4th Floor centrally placed on each floor that feeds miscellaneous receptacles, and lighting power loads on each floor. These panels were secured and locked typically, with the interior of each panel undetermined. The Main Service Panel (MSP) serves all electrical loads for this building but is extremely old and functional.



Existing Electrical Service Room

Existing Service Meter

Existing floor corridor panel



ii. Lighting:

Fluorescent Lighting fixtures and controls observed were operable and functional.

There is an IT/security closet in the cellar that was not accessible.

Existing corridor Floor Panels

iii. Emergency Power:

There is an emergency power generator in this facility but size and functionality could not be determined. Emergency self-contained Battery packs and two heads and three heads frog eyes integral with exit signs appear to be feeding emergency lighting in the means of egress in the facility. Code-compliant emergency lighting deficiencies were noted in the corridors of each floor.

iv. Fire Alarm

The Fire alarm panel serving

The building manual and automatic smoke, heat and carbon monoxide detection fire alarm system with central station communication is relatively old, in working condition and appears to be installed in 2002. It is an existing FIRE-VAC 7200 system located in an adjacent office at the Main Entrance.

There are existing smoke detectors, pull stations, strobes and combination speaker /strobes devices throughout the 116 Williams Ave Building that are code compliant and are placed centrally throughout the facility.

Fire Alarm Control Panel

v. Security Camera

Security cameras were observed inside and exterior to the building. They are placed adequately throughout the facility.

vi. Key Finding and Recommendations

The existing MDP, 208V, 3-Phase, 4-Wire 1200 ampere electrical infrastructure is sized for a warehouse type occupancy with partial office building fit-out undetermined programming. The existing panels located in the corridor and Electrical Service Room have met their useful life. These panels should be replaced in kind with megger tested feeders prior to reconnecting to new replacement panels. The panel replacement and new upgraded service will be based on the facility's final use.

A new electrical service rated 4000-A, 120/208V, 3-Phase, 4-Wire will be required. A future use with multiple tenant occupancy might require sub-metering for each tenant, unless the owner prefers including the electrical cost in the lease agreement. A direct meter to each tenant is also an option if the owner wants each tenant to pay their own electrical bill.

The fire alarm system initiation/notification new devices will be added to the existing modified fire alarm system panel based on final programming of the facility and coordination with the facility fire alarm vendor.

The fire alarm system shall be replaced with an addressable system to accommodate new potential programming upon an evaluation of the fire alarm system vendor.

D. PLUMBING

1. Applicable Codes & Design Criteria

   The facility Plumbing system installed based on the following code:

   NYC 1968 Code

2. Scope Of Work:

   a. All labor, materials and equipment necessary for the installation of complete Plumbing Systems are briefly described below:

   b. Existing Plumbing Systems

      i. Sanitary Drainage:

      All plumbing fixtures waste, kitchen equipment waste and laundry equipment waste are collected through the vertical stacks which collect at the cellar and exit the building through a house trap to a street combined sewer. All fixtures and floor drains below the invert of the sewer leaving the building flow to a simplex sewage ejection system. Piping consists of cast iron pipe with no-hub and hub and spigot connections.

ii. Storm Drainage:

Roof drains are collected through vertical leaders which collect at the cellar ceiling and exit the building to a combined street sewer. All clear water floor drains below the invert of the sewer leaving the building flow to a simplex sump pump system.

iii. Domestic Water

A 3-inch metered domestic water service enters the building from a William Street water main. The water service is not protected by a BFP device as per D.E.P. Cross connection requirements. The water service connects to a duplex water booster system that pressurizes water main and risers serving plumbing fixtures, kitchen equipment and laundry washers. Water piping consists of copper piping with solder joints.

iv. Domestic hot water:

Domestic hot water is generated by two gas fired storage waters which are connected to a domestic hot water storage tank. The system feeds mains and risers to all plumbing fixtures, kitchen equipment, and laundry equipment. The hot water system also has a hot water return system back to the water heaters with a circulating pump.

v. Natural Gas System:

A 6-inch gas service enters the building’s basement from William Street with the meter regulators etc. located on the outside of the building. The main gas service the boilers, the water heaters and the kitchen equipment. Gas piping consists of screwed and welded schedule 40 black steel piping.

vi. Key Finding and Recommendations

The recommendations are per NYC Plumbing 2022, NFPA 2016 and NFPA 14 2024 compliance.

The existing domestic service does not meet the D.E.P. backflow prevention code requirements. The water service will need to be filed with D.E.P. for BFP devices. The existing duplex booster will have to be evaluated due to the loss of incoming pressure. A new hydrant flow test is recommended. All equipment is in fair condition, pumps, heaters, etc. The domestic hot water system will be generated by three options:

- Option #1: Point of use electric water heaters on all floors.

- Option #2: A central electric domestic water heater system consisting of mains risers and a return system back to a set of electric water heaters in a mechanical room.

- Option #3: The existing gas fired water heaters with a central distribution system.

E. Fire Protection

1. Applicable Codes & Design Criteria

   The facility fire protection system is installed based on the following code:

   NYC 1968 Code

2. Existing Fire Protection Systems

   The building is fully sprinklered on all floors.

   Two 6-inch water services enter the building, one is from William Street, the second is from Hinsdale Street. Both services are cross connected in the basement level to a fire pump, a jockey which connects to sprinkler risers, serving all floors through floor control assemblies. Fire department connections are provided from two streets, William and Hinsdale streets.


AUTOMATIC SPRINKLERS
Bypass
OPEN
THIS VALVE CONTROLS
AUTOMATIC SPRINKLERS
Bypass
OPEN


Joslyn Clark
ELECTRIC FIRE PUMP CONTROLLER
Joslyn Clark
FIRE PUMP TRANSFER SWITCH

3. Key Finding and Recommendations

   The recommendations are per NFPA 2016 and NFPA 14 2024 compliance.

   The existing fire service does not meet the D.E.P. backflow prevention code requirements. The service will need to be filed with D.E.P. for BFP devices. The existing sprinkler system is in good condition. Under the new code's recommendation, a fire standpipe system should be considered. The standpipe system will need to replace the existing fire pump with a new 100 H.P. pump controller etc. The present sprinkler system can be altered to provide sprinkler protection for light hazards (office) or industrial occupancy.

V. Environmental Assessment

A. Hazardous Material Preliminary Regulated Building Materials (RBM) Evaluation for Help Women's Shelter, at 116 Williams Avenue, Brooklyn, NY 11207 (Block:3699, Lot:1)

Langan Engineering & Environmental Services, Inc. (Langan) has completed a preliminary visual assessment of regulated building materials (RBM) at the HELP Women's Shelter at 116 Williams Avenue, (Block 3699, Lot 1) Brooklyn, NY 11207 (Subject Property). The visual reconnaissance was qualitative in nature with a goal of identifying suspect asbestos containing materials (ACM) and other RBM that would have a material impact on future site re-development costs. The objective of the visual survey was to qualitatively assess the potential presence and potential extent of significant hazardous materials, for purposes of supporting the opinion of probable order of magnitude remediation cost estimates. Our due diligence level assessment did not include performing any type of sampling (destructive or intrusive) of suspect.

PROJECT INFORMATION

Client Name:	Skidmore, Owings & Merrill LLP	Survey Dates:	December 6, 2024
Professional's Project #:	100749501	Construction Dates:	1925
Professional's Project Manager:	Craig Napolitano	No. of Building(s):	1
Phone No.:	973-560-4610	No. of Stories:	4 + Cellar
Email:	cnapolitano@langan.com	Estimated Gross Footage:	±71,000 gsf
Property Address:	116 Williams Avenue, (Block 3699, Lot 1) Brooklyn, NY 11207	Property Use:	Public Facilities and Institutions

SITE BACKGROUND

The Subject Property identified as the DHS HELP Women's Shelter building is located at 116 Williams Avenue in Brooklyn, New York. The Site, identified as Block 3699 Lot 1, is in the East New York Industrial Business Zone (ENY IBZ) and is zoned M1-4. The site consists of a former school building built in 1925 and is currently used as a women's shelter.

SUMMARY OF OBSERVATIONS

Asbestos Containing Materials (ACM) and PCB containing (PCBs) caulk:

The preliminary ACM assessment was completed on December 6, 2024, by Langan's Miroslaw Baran and Fernando Velasquez, NYCDEP/NYSDOL certified asbestos investigator(s)/inspector(s).

Please note that this assessment was limited to a visual assessment for building condition analysis purposes only. As such, this report cannot be used as documentation for identification of ACM prior to the renovation or demolition of the building.

The contracted and completed scope of services included assessment of accessible areas of the building. Sampling of suspect ACM was excluded from the scope. Entire building including exterior, roofing systems, and hidden/concealed areas will need to be fully surveyed for the presence of ACM prior to performing planned renovation or demolition activities that may disturb those materials and/or areas.

PCB Bulk Product Waste is defined in 40 CFR 761.3 with specific disposal options identified in 40 CFR 761.62. PCB Bulk Product Waste means waste derived from manufactured products containing PCBs in a non-liquid state (e.g. Caulk and glazing sealants), at any concentration where the concentration at the time of designation for disposal was ≥50 parts per million (ppm) PCBs.

The PCB screening sampling involved a visual examination of the building for the presence/absence of suspect caulking or sealant materials. Sampling of suspect PCBs was excluded from the scope.

Both friable and non-friable assumed ACM and assumed PCBs materials were observed in Site building. **Table 1** presents a preliminary summary of findings of the walk-through assessment.

Lead-Containing Paint (LCP) and Universal and Hazmat Waste Articles:

Testing of painted building components and preparing an inventory of Universal and Hazmat Waste Articles was excluded from Langan's scope of services. All painted surfaces are assumed to contain at least detectable levels of lead. Overall, the paint on various building components was observed in fair to good condition with selected building areas where pilling and cracking paint was noted.

As mandated by Subtitle C of the Resource Conservation and Recovery Act (RCRA), EPA promulgated hazardous waste regulations in 1980 to ensure that wastes which pose a threat to human health and the environment should be managed safely. Hazardous waste is a waste with properties that makes it potentially harmful to human health or the environment. Hazardous waste is divided into listed wastes, characteristic wastes, universal wastes, and mixed wastes. The following hazardous waste articles were identified in the building:

- *Universal Waste Group:* Fluorescent lamps, Emergency lights with Batteries, Batteries, MCE Thermostats, HID, MVC, HPS, MH lamps, Compact Fluorescent Lamp (CFL)
- *Waste Containing Radioactive Materials Group*: Smoke detectors, Exit signs

- *PCBs Containing Waste Group*: Fluorescent Light Ballasts, Electronic equipment containing circuit boards with capacitors such as Computers and Peripherals, Telephones, TVs, etc., Wall mounted electronic devices containing circuit boards with capacitors, Electrical motors containing capacitors (associated with pumps, fans, shutter door openers, etc.), Hydraulic Lift Systems (hydraulic pumps, cylinders, pistons, oil tanks, oil heater/cooler, etc.), Voltage Regulator (Old Liquid containing Transformers)
- *Waste Containing CFCs and/or HCFCs Group*: Interior and Exterior mounted A/C, HVAC, Air Handling, cooling units
- *Mixed Hazardous Wastes Group:* Fire extinguishers, Bottles/Cans/Drums of unknown liquids

RECOMMENDATIONS

Asbestos Containing Materials (ACM)

Assumed asbestos containing materials were identified in the building. Refer to **Table 1** for the summary of asbestos survey findings. Identified ACM affected by the scope of work shall only be removed by a properly certified asbestos abatement contractor in accordance with applicable federal, state, and local regulations prior to being disturbed, including maintenance, renovation, or demolition activities. As required by the NYCDEP and NYSDOL regulations, the abatement project must be monitored by a NYS-DOL certified project monitor. Proper notifications must be filed with the US-EPA, NYS-DOL, NYC-DEP and other regulatory agencies prior to performing such activities.

In accordance with the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) established National Emission Standards for hazardous Air Pollutants (NESHAP) to protect the public from exposure to airborne pollutants. Asbestos was one of the air pollutants, which was addressed under the NESHAP 40 CFR Part 61. The purpose of asbestos NESHAP regulations is to protect the public health by minimizing the release of asbestos when facilities, which contain ACM, are being renovated or demolished. The EPA is responsible for enforcing regulations related to asbestos during renovations and demolition, however, the CAA allows the EPA to delegate this authority to State and Local Agencies. Even after EPA delegate's responsibility to a state or Local agency, EPA retains the authority to oversee agency performance and to enforce NESHAP regulations as appropriate.

Polychlorinated Biphenyls (PCBs) Containing Materials

PCBs are regulated under the EPA Toxic Substance Control Act (TSCA) regulations (40 CFR 261) program as well as EPA regulation 40 CFR 761. The caulk/sealant with exterior doors and windows, window sill, and roofs were identified to be assumed PCBs containing materials. PCBs containing materials which would be impacted by planned renovations will need to be properly removed and disposed. Building materials (e.g., masonry, wood, concrete, etc.) in contact with PCBs containing materials (caulk/sealant) shall be considered PCBs contaminated. Building material that is contaminated by PCBs containing material is considered as PCBs bulk product waste. PCBs containing caulk and contaminated materials shall be properly decontaminated and/or removed and disposed in accordance with applicable federal, state and local regulations.

Lead Containing Paint (LCP)

Although the USEPA defines LBP as paint having lead concentrations equal or greater than 1.0 mg/cm^2, the OSHA considers any concentration of lead in paint to be LCP and LCP is regulated by OSHA's lead regulations. Regardless of the lead concentrations in paint, contractor are required to comply with OSHA Standard 29 CFR 1926.62, Lead in Construction. Employers of construction workers engaged in the repair, renovation, removal, demolition, and other construction activities where lead is present are responsible for the development and implementation of a worker protection program (i.e. Lead Compliance Program) in accordance with 29 CFR 1926.62 (e)(2) Compliance Program.

Universal and Hazmat Waste Articles:

Hazardous waste articles affected by the project activities must be properly removed, recycled and/or disposed of at a landfill permitted to accept such waste. The removal, handling, recycling, and disposal shall be performed in accordance with applicable Federal, State, and Local regulations.

ROUGH ORDER OF MAGNITUDE (ROM) REMEDIATION ESTIMATES

The cost scenario should include all assumed ACM, PCBs and LCP are confirmed to be positive based on analytical testing. The budget shall include completing a supplemental hazmat survey, testing of suspect ACM/LCP/PCBs, ACM/LCP/PCBs abatement, oversight and closure.

In a more realistic scenario, some of the materials initially assumed to be ACM/LCP/PCBs may not actually be classified as ACM based on analytical testing. Additionally, the quantities of impacted materials that would be classified as ACM/LCP/PCBs will be refined and reduced based on a more accurate scope of the renovation. As a result, the remediation costs would be significantly lower.

The conceptual cost estimates shown above are based on the following assumptions:

1. All friable and non-friable ACM including concealed ACM will be abated from the building prior to renovation or demolition.
2. Painted surfaces will be managed during renovation or demolition and the waste generated will be appropriately disposed in accordance with Federal and State regulations at a landfill permitted to accept such waste.
3. The removal, handling, recycling, and disposal of Hazardous waste articles will be performed in accordance with applicable Federal, State, and Local regulations.
4. Labor employed will be bases on prevailing wages as per city requirements.
5. Includes budget for full Hazmat Survey, report, preparation of abatement bid documents, abatement project monitoring, sample analysis and closure.

These preliminary hazardous materials remediation conceptual costs estimates are for planning purposes. Actual costs will depend upon findings of a full pre-renovation or demolition hazmat survey and conditions encountered during abatement/renovation/demolition of the structures.

Enclosures:

Attachment A:	Table 1 - Preliminary Findings of Walk-thru ACM and PCBs Assessment
Attachment B:	Photo Log

Attachment A

Preliminary Findings of Walk-thru ACM and PCBs Assessment

Table 1 - SUMMARY OF WALK-THRU ASBESTOS & PCB ASSESSMENT FINDINGS
116 Williams Avenue, Brooklyn, NY 11207 (Block:3699, Lot:1)

Material	Material Locations	Survey Results	Estimated Quantity of ACM & PCB		Notes/ Comments
ASSUMED ACM/PCB FINDINGS - ROOFS					
Built-up roofing materials and roof flashing/mastic materials	Bulkhead Roofs Roof	Assumed ACM	1,150	SF	---
	Main Roof	Assumed ACM	13,300	SF	---
	West Roofs over 2nd Floor	Assumed ACM	3,800	SF	Roofing material under concrete pads.
	East Roof over 2nd Floor - Front Canopy	Assumed ACM	240	SF	---
	North & South Roofs over 1st Floor	Assumed ACM	440	SF	---
Concealed waterproofing mastic/tar under terracotta parapet wall caps	Bulkhead Roofs Roof	Assumed ACM	420	SF	---
	West Roofs over 2nd Floor	Assumed ACM	250	SF	---
Concealed waterproofing mastic/tar under concrete parapet wall caps	Main Roof	Assumed ACM	950	SF	---
	East Roof over 2nd Floor - Front Canopy	Assumed ACM	60	SF	---
	North & South Roofs over 1st Floor	Assumed ACM	55	SF	---
Caulk at parapet wall coping joints	Main Roof	Assumed ACM & PCB	40	SF	~475 LF PCB
	North & South Roofs over 1st Floor	Assumed ACM & PCB	2	SF	~24 LF PCB
Counter flashing caulk	Bulkhead Roofs Roof	Assumed ACM & PCB	23	SF	~280 LF PCB
	Main Roof	Assumed ACM & PCB	70	SF	~845 LF PCB
	West Roofs over 2nd Floor	Assumed ACM & PCB	19	SF	~230 LF PCB
	East Roof over 2nd Floor - Front Canopy	Assumed ACM & PCB	6	SF	~70 LF PCB
	North & South Roofs over 1st Floor	Assumed ACM & PCB	8	SF	~100 LF PCB
	Bulkhead Roofs Roof	Assumed ACM	560	SF	---

Table 1 - SUMMARY OF WALK-THRU ASBESTOS & PCB ASSESSMENT FINDINGS
116 Williams Avenue, Brooklyn, NY 11207 (Block:3699, Lot:1)

Material	Material Locations	Survey Results	Estimated Quantity of ACM & PCB	Notes/ Comments
Concealed waterproofing mastic/tar within Bulkhead and Parapet Walls (associated with cap/wall flashing)	Main Roof	Assumed ACM	1,690 SF	---
	West Roofs over 2nd Floor	Assumed ACM	460 SF	---
	East Roof over 2nd Floor - Front Canopy	Assumed ACM	140 SF	---
	North & South Roofs over 1st Floor	Assumed ACM	200 SF	---
Chimney liner	West Elevation	Assumed ACM	480 SF	---
ASSUMED ACM/PCB FINDINGS - BULKHEADS				
Pipe insulation and pipe joint/fitting insulation - Observed	Tank Room Bulkhead	Assumed ACM	70 LF	---
Concealed waterproofing materials (mastic/tar) behind brick veneer including window and door lintel flashing	Perimeter Walls Throughout	Assumed ACM	2,000 SF	Exterior Probes would be needed
Old electrical wire insulation within electrical conduits (exposed and concealed within wall and ceiling cavities)	Scattered Locations Throughout the Bulkheads	Assumed ACM	200 LF	Estimated quantity reflects linear footage of electrical conduits. The number of wires varies.
Door core insulation (metal doors)	Scattered Locations Throughout the Building	Assumed ACM	100 SF	~5 doors
Door frame caulk	Perimeter Walls	Assumed ACM & PCB	8 SF	~100 LF PCB
Window & Louver frame caulk	Perimeter Walls	Assumed ACM & PCB	17 SF	~200 LF PCB
ASSUMED ACM/PCB FINDINGS - 4TH FLOOR				
Flooring materials - multilayers, various size & color (i.e. VAT, mastic, etc.)	Throughout	Assumed ACM	11,300 SF	---
Baseboards and associated adhesive	Throughout	Assumed ACM	870 SF	---
Pipe insulation - Estimated concealed within metal pipe enclosures, pipe chase; wall, floor and ceiling cavities, etc.	Throughout	Assumed ACM	2,000 LF	---
Duct insulation, adhesive, pin glue, etc. - Estimated concealed within wall, floor and ceiling cavities, etc.	Throughout	Assumed ACM	500 SF	---

Table 1 - SUMMARY OF WALK-THRU ASBESTOS & PCB ASSESSMENT FINDINGS
116 Williams Avenue, Brooklyn, NY 11207 (Block:3699, Lot:1)

Material	Material Locations	Survey Results	Estimated Quantity of ACM & PCB	Notes/ Comments
ASSUMED ACM/PCB FINDINGS - 4TH FLOOR				
Ceiling plaster/ ceiling gypsum board	Throughout	Assumed ACM	12,250 SF	---
Wall plaster/ wall gypsum board	Throughout	Assumed ACM	32,000 SF	---
Tag boards and concealed adhesive/mastic	Corridor	Assumed ACM	160 SF	---
Cement/Transite wall panel and concealed adhesive/mastic	Corridor	Assumed ACM	280 SF	---
Thinset, grout, bedding mortar with ceramic floor and wall tiles	Restrooms, Janitor & Locker Rooms	Assumed ACM	2,800 SF	---
Concealed waterproofing materials under ceramic floor tiles	Restrooms, Janitor & Locker Rooms	Assumed ACM	780 SF	Interior Floor Probes will be needed
Old electrical wire insulation within electrical conduits (exposed and concealed within wall and ceiling cavities)	Throughout	Assumed ACM	3,000 LF	Estimated quantity reflects linear footage of electrical conduits. The number of wires will vary.
Transite elements, arc breakers, backing boards, etc. associated with electrical breaker panels (estimated to exist in active electrical boxes)	Select Locations	Assumed ACM	30 SF	---
Door core insulation (wooden and metal doors)	Scattered Locations Throughout the Building	Assumed ACM	1,000 SF	~50 doors
Window frame caulk - New exposed	Perimeter Walls	Assumed ACM & PCB	75 SF	~900 LF PCB
Window frame caulk - Old that may exist behind aluminum cladding	Perimeter Walls	Assumed ACM & PCB	133 SF	~1,600 LF PCB
Concealed waterproofing materials (mastic/tar) behind brick veneer including spandrel beam, window and door lintel flashing	Perimeter Walls	Assumed ACM	7,500 SF	Interior Wall Probes will be needed
Stucco plaster system	North Perimeter Wall	Assumed ACM	1,350 SF	---
Chimney liner	West Elevation	Assumed ACM	240 SF	---
ASSUMED ACM/PCB FINDINGS - 3RD FLOOR				
Flooring materials - multilayers, various size & color (i.e. VAT, mastic, etc.)	Throughout	Assumed ACM	11,300 SF	---

Table 1 - SUMMARY OF WALK-THRU ASBESTOS & PCB ASSESSMENT FINDINGS
116 Williams Avenue, Brooklyn, NY 11207 (Block:3699, Lot:1)

Material	Material Locations	Survey Results	Estimated Quantity of ACM & PCB	Notes/ Comments
Baseboards and associated adhesive	Throughout	Assumed ACM	870 SF	---
Pipe insulation - Estimated concealed within metal pipe enclosures, pipe chase; wall, floor and ceiling cavities, etc.	Throughout	Assumed ACM	2,000 LF	---
Duct insulation, adhesive, pin glue, etc. - Estimated concealed within wall, floor and ceiling cavities, etc.	Throughout	Assumed ACM	500 SF	---
Ceiling plaster/ ceiling gypsum board	Throughout	Assumed ACM	12,250 SF	---
Wall plaster/ wall gypsum board	Throughout	Assumed ACM	32,000 SF	---
Tag boards and concealed adhesive/mastic	Corridor	Assumed ACM	160 SF	---
Cement/Transite wall panel and concealed adhesive/mastic	Corridor	Assumed ACM	280 SF	---
Thinset, grout, bedding mortar with ceramic floor and wall tiles	Restrooms, Janitor & Locker Rooms	Assumed ACM	2,800 SF	---
Concealed waterproofing materials under ceramic floor tiles	Restrooms, Janitor & Locker Rooms	Assumed ACM	780 SF	Interior Floor Probes will be needed
Old electrical wire insulation within electrical conduits (exposed and concealed within wall and ceiling cavities)	Throughout	Assumed ACM	3,000 LF	Estimated quantity reflects linear footage of electrical conduits. The number of wires varies.
Transite elements, arc breakers, backing boards, etc. associated with electrical breaker panels (estimated to exist in active electrical boxes)	Select Locations	Assumed ACM	30 SF	---
Door core insulation (wooden and metal doors)	Scattered Locations Throughout the Building	Assumed ACM	1,000 SF	~50 doors
Window frame caulk - New exposed	Perimeter Walls	Assumed ACM & PCB	75 SF	~900 LF PCB
Window frame caulk - Old that may exist behind aluminum cladding	Perimeter Walls	Assumed ACM & PCB	133 SF	~1,600 LF PCB
Concealed waterproofing materials (mastic/tar) behind brick veneer including spandrel beam, window and door lintel flashing	Perimeter Walls	Assumed ACM	7,500 SF	Interior Wall Probes will be needed

Table 1 - SUMMARY OF WALK-THRU ASBESTOS & PCB ASSESSMENT FINDINGS
116 Williams Avenue, Brooklyn, NY 11207 (Block:3699, Lot:1)

Material	Material Locations	Survey Results	Estimated Quantity of ACM & PCB	Notes/ Comments
Stucco plaster system	North Perimeter Wall	Assumed ACM	1,350 SF	---
Chimney liner	West Elevation	Assumed ACM	240 SF	---
ASSUMED ACM/PCB FINDINGS - 2ND FLOOR				
Flooring materials - multilayers, various size & color (i.e. VAT, mastic, etc.)	Throughout	Assumed ACM	14,500 SF	---
Baseboards and associated adhesive	Throughout	Assumed ACM	1,060 SF	---
Pipe insulation - Estimated concealed within metal pipe enclosures, pipe chase; wall, floor and ceiling cavities, etc.	Throughout	Assumed ACM	2,200 LF	---
Duct insulation, adhesive, pin glue, etc. - Estimated concealed within wall, floor and ceiling cavities, etc.	Throughout	Assumed ACM	800 SF	---
Ceiling plaster/ ceiling gypsum board	Throughout	Assumed ACM	16,000 SF	---
Wall plaster/ wall gypsum board	Throughout	Assumed ACM	39,000 SF	---
Tag boards and concealed adhesive/mastic	Corridor	Assumed ACM	160 SF	---
Cement/Transite wall panel and concealed adhesive/mastic	Corridor	Assumed ACM	280 SF	---
Thinset, grout, bedding mortar with ceramic floor and wall tiles	Restrooms, Janitor & Locker Rooms	Assumed ACM	2,800 SF	---
Concealed waterproofing materials under ceramic floor tiles	Restrooms, Janitor & Locker Rooms	Assumed ACM	780 SF	Interior Floor Probes will be needed
Old electrical wire insulation within electrical conduits (exposed and concealed within wall and ceiling cavities)	Throughout	Assumed ACM	4,000 LF	Estimated quantity reflects linear footage of electrical conduits. The number of wires will vary.
Transite elements, arc breakers, backing boards, etc. associated with electrical breaker panels (estimated to exist in active electrical boxes)	Select Locations	Assumed ACM	30 SF	---
Door core insulation (wooden and metal doors)	Scattered Locations Throughout the Building	Assumed ACM	1,100 SF	~55 doors
Window frame caulk - New exposed	Perimeter Walls	Assumed ACM & PCB	100 SF	~1,200 LF PCB

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Table 1 - SUMMARY OF WALK-THRU ASBESTOS & PCB ASSESSMENT FINDINGS 116 Williams Avenue, Brooklyn, NY 11207 (Block:3699, Lot:1)					
Material	Material Locations	Survey Results	Estimated Quantity of ACM & PCB		Notes/ Comments
Window frame caulk - Old that may exist behind aluminum cladding	Perimeter Walls	Assumed ACM & PCB	167	SF	~1,600 LF PCB
Concealed waterproofing materials (mastic/tar) behind brick veneer including spandrel beam, window and door lintel flashing	Perimeter Walls	Assumed ACM	8,900	SF	Interior Wall Probes will be needed
Stucco plaster system	North Perimeter Wall	Assumed ACM	1,350	SF	---
Chimney liner	West Elevation	Assumed ACM	240	SF	---
ASSUMED ACM/PCB FINDINGS - 1ST FLOOR					
Flooring materials - multilayers, various size & color (i.e. VAT, mastic, etc.)	Throughout	Assumed ACM	13,200	SF	---
Baseboards and associated adhesive	Throughout	Assumed ACM	1,220	SF	---
Pipe insulation - Estimated concealed within metal pipe enclosures, pipe chase; wall, floor and ceiling cavities, etc.	Throughout	Assumed ACM	2,500	LF	---
Duct insulation, adhesive, pin glue, etc. - Estimated concealed within wall, floor and ceiling cavities, etc.	Throughout	Assumed ACM	1,200	SF	---
Kitchen exhaust insulation, adhesive, pin glue, etc. - Estimated concealed within ceiling plenum.	Kitchen	Assumed ACM	250	SF	---
Ceiling plaster/ ceiling gypsum board	Throughout	Assumed ACM	16,000	SF	---
Wall plaster/ wall gypsum board	Throughout	Assumed ACM	42,000	SF	---
Thinset, grout, bedding mortar with ceramic floor and wall tiles	Restrooms, Janitor & Locker Rooms, Kitchen	Assumed ACM	5,870	SF	---
Concealed waterproofing materials under ceramic floor tiles	Restrooms, Janitor & Locker Rooms	Assumed ACM	1,750	SF	Interior Floor Probes will be needed
Old electrical wire insulation within electrical conduits (exposed and concealed within wall and ceiling cavities)	Throughout	Assumed ACM	4,000	LF	Estimated quantity reflects linear footage of electrical conduits. The number of wires will Vary

Table 1 - SUMMARY OF WALK-THRU ASBESTOS & PCB ASSESSMENT FINDINGS
116 Williams Avenue, Brooklyn, NY 11207 (Block:3699, Lot:1)

Material	Material Locations	Survey Results	Estimated Quantity of ACM & PCB	Notes/ Comments
Transite elements, arc breakers, backing boards, etc. associated with electrical breaker panels (estimated to exist in active electrical boxes)	Select Locations	Assumed ACM	40 SF	---
Door core insulation (wooden and metal doors)	Scattered Locations Throughout the Building	Assumed ACM	1,600 SF	~80 doors
Window frame caulk - New exposed	Perimeter Walls	Assumed ACM & PCB	83 SF	~1,000 LF PCB
Window frame caulk - Old that may exist behind aluminum cladding	Perimeter Walls	Assumed ACM & PCB	142 SF	~1,700 LF PCB
Door frame caulk	Perimeter Walls	Assumed ACM & PCB	27 SF	~320 LF PCB
Concealed waterproofing materials (mastic/tar) behind brick veneer including spandrel beam, window and door lintel flashing	Perimeter Walls	Assumed ACM	10,000 SF	Interior Wall Probes will be needed
Stucco plaster system	North Perimeter Wall	Assumed ACM	1,350 SF	---
Chimney liner	West Elevation	Assumed ACM	240 SF	---
ASSUMED ACM/PCB FINDINGS - CELLAR				
Flooring materials - multilayers, various size & color (i.e. VAT, mastic, etc.)	Offices	Assumed ACM	200 SF	---
Baseboards and associated adhesive	Throughout	Assumed ACM	15 SF	---
Pipe insulation and pipe joint/fitting insulation - Observed	West Storage	Assumed ACM	75 LF	---
Pipe insulation - Estimated concealed within inaccessible crawl spaces, confined spaces, pipe chases, wall, floor and ceiling cavities, etc.	Throughout - Except North Crawl Space that seems to be abated.	Assumed ACM	1,500 LF	---
Wall coating material	Boiler Room	Assumed ACM	4,000 SF	---
Thinset, grout, bedding mortar with ceramic floor and wall tiles	Restrooms	Assumed ACM	250 SF	---
Concealed waterproofing materials under ceramic floor tiles	Restrooms	Assumed ACM	50 SF	Interior Floor Probes will be needed

Table 1 - SUMMARY OF WALK-THRU ASBESTOS & PCB ASSESSMENT FINDINGS
116 Williams Avenue, Brooklyn, NY 11207 (Block:3699, Lot:1)

Material	Material Locations	Survey Results	Estimated Quantity of ACM & PCB	Notes/ Comments
Old electrical wire insulation within electrical conduits (exposed and concealed within wall and ceiling cavities)	Throughout	Assumed ACM	4,000 LF	Estimated quantity reflects linear footage of electrical conduits. The number of wires varies.
Transite elements, arc breakers, backing boards, etc. associated with electrical breaker panels (estimated to exist in active electrical boxes)	Select Locations	Assumed ACM	200 SF	---
Door core insulation (wooden and metal doors)	Scattered Locations Throughout the Building	Assumed ACM	200 SF	~10 doors
Chimney liner	West Elevation	Assumed ACM	160 SF	---
Concealed firebricks and liner with incinerator	Boiler Room	Assumed ACM	200 SF	---
Concealed firebricks and liner with boiler burner fire chambers	Boiler Room	Assumed ACM	100 SF	---
Boiler front and back insulation	Boiler Room	Assumed ACM	60 SF	---
Concealed waterproofing mastic/tar on foundation walls	Perimeter Foundation under Ground	Assumed ACM	4,600 SF	Interior Probes will be needed

Attachment B

Photo Log

Photo #1: Suspect ACM roofing, flashing, coping stone mastic

Photo #2: Suspect ACM/PCB Door Caulking

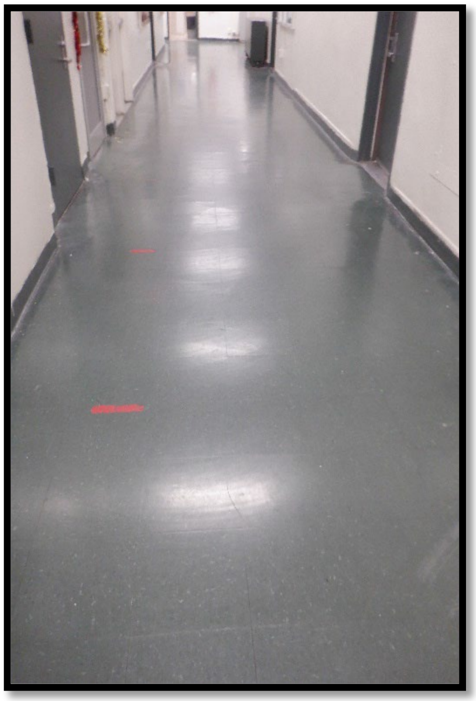

Photo #3: Suspect ACM Flooring

Photo #4: Suspect ACM Piping

Photo #5: Suspect Electrical Box Backing

Photo #6: Suspect Sheetrock/Joint Compound, Carpet Glue

Photo #7: Suspect ACM Flooring and Door Core Insulation

Photo #8: Suspect ACM Ceiling Tile, Sheetrock/Joint Compound