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July 11, 2025

STATEMENT OF FACTS AND FINDINGS

Premises: 51 Little West 12th Street
Block 645, Lot 21
Manhattan, New York (the "Premises")

PRELIMINARY STATEMENT

This variance application is filed pursuant to Section 72-21 of the Zoning Resolution of the City of New York, as amended (the "Zoning Resolution" or "ZR"), to permit the development of a 14-story mixed-use building in an M1-5 zoning district, contrary to ZR § 42-10.

EXISTING SITE CONDITIONS

The Premises is located within an M1-5 zoning district in the Meatpacking District neighborhood of Manhattan, within Community District 2. The Premises is known as Block 645, Lot 21 on the New York City Tax Map. The Premises is a small interior lot with 25 feet of frontage on Little West 12th Street, a narrow one-way street. The lot measures 25 feet by 103.25 feet with a total area of 2,581 square feet. The Premises is currently vacant and has been unimproved since 2010, when DOB issued an emergency declaration to demolish the then-existing 4-story commercial building.

The immediate neighborhood is characterized by commercial uses, including a 3-story commercial building (53 Little West 12th Street) built in 1910 to the west, a single-story

commercial building associated with the Standard Hotel to the east (848 Washington Street), and the 19-story Standard Hotel abutting the subject property to the north. Just east of the Premises is The Highline, a public NYC park; the Whitney Museum of Art is on the block facing the Premises.

PROPOSED SITE CONDITIONS

The applicant proposes a variance in order to permit a mixed-use building with a commercial use on the first two floors and residential use above. The applicant proposes a 14-story plus cellar building (the "Proposed Building") with 18,128 square feet of floor area (7.02 FAR). The proposed layout would include 12, two-bedroom units on the 3rd through 14th floors.

The Proposed Building would have a total building height of approximately 176 feet. The cellar of the Proposed Building would not contain a habitable space and would be used for storage, building mechanicals, and bicycle storage. The first floor would contain a residential lobby and retail space. The second floor would contain a terrace as part of the commercial use on the first floor. The variety of units in the upper floors are generally similar to the unit sizes in this neighborhood and will provide balconies and terraces. The two-bedroom units are 810 square feet and will also have balconies on every floor. One on-site parking space is provided. *See* Proposed Plans. The building would provide a 20'-3" rear yard and would be consistent with the built character of adjacent properties; however, as residential use is not permitted as-of-right within an M1-5 zoning district, a variance is required pursuant to ZR § 72-21.

A structural engineering report was prepared by DeSimone Consulting Engineering in connection with the proposed development, outlining the complex foundation and excavation requirements necessary to build on the Premises. *See* attached report (the "DeSimone Report"). The DeSimone Report identifies a range of geotechnical challenges, including (1) the small lot

size and configuration, (2) high groundwater table, (3) poor soil quality, and (4) the location within an AE flood zone. In addition, special structural precautions are needed to prevent undermining the adjacent 19-story building to the west. The proposed design incorporates a tangent pile wall system, which functions both as a support of excavation and a critical structural element to transfer loads from the superstructure. These premium construction conditions apply to any viable development scenario on the site and directly inform the scale and design of the proposed building.

The proposed 7.02 FAR is appropriate given the surrounding context and the evolving character of the neighborhood. The building directly adjacent to the Premises rises 19 stories, and there is an active city-sponsored RFP proposal for a 600-unit development directly across the street, signaling a clear trend toward increased density and height in the immediate area. Just a few blocks away, The Highline has further transformed the neighborhood into a vibrant, mixed-use corridor. In this context, the proposed bulk is consistent with the scale and intensity of surrounding development and supports the continued growth and vitality of the area.

AS-OF-RIGHT SITE CONDITIONS

The maximum permitted FAR in an M1-5 zoning district is 5.0 for manufacturing and commercial uses and 6.5 FAR for community facility uses. There is no side yard requirement in the M1-5 zoning district, but if an open area does extend along a side lot line, the open area must measure at least 8 feet wide, pursuant to ZR § 43-25. The M1-5 zoning district requires a rear yard with a depth of at least 20 feet pursuant to ZR § 43-26. The M1-5 zoning district permits industrial uses, commercial uses and certain community facility uses as set forth in ZR § 42-10. Such uses must meet the high-performance standards of M1 zoning as set forth in ZR § 42-20 et. seq. In general, there is little construction of speculative community facility space unless there are large

medical institutions in the immediate vicinity, or if the owner of the property is to be the end-user. Thus, the M1-5 zoning district requirements here would most likely result in an as-of-right building with up to a 5.0 FAR commercial or manufacturing use.

An as-of-right scenario at the Premises would consist of a six-story commercial building. The building would consist of 2,524 square feet in the cellar and 2,009 square feet on the first through 5th floors, with a 6th floor at 1,731 square feet. *See* As-of Right Plans. This ground floor would likely be a commercial use such as an eating and dining establishment, while the upper floors would likely be used for office space.

As discussed below, the lot size of the Premises is uniquely small and narrow in relation to nearby lots within the M1-5 zoning district. Due to the small lot area and narrow width, the subject site is not well-suited for modern commercial and manufacturing operations; nearly all nearby conforming commercial uses are on properties that have greater lot areas and wider widths than the subject site and those that are the same size as the development site, such as the two adjacent lots to the west, have been built since the early 1900's.

A vacant, 25-foot-wide zoning lot at this location cannot feasibly accommodate a modern manufacturing or commercial building as-of-right. Little West 12th street is a side street roughly 108 feet from Washington Street. Little West 12th Street is a narrow one-way street and is burdened with unrestricted parking along the north side of the street, which hinders truck navigation. As discussed below, the Premises is too small for a viable as-of-right use and would not provide a reasonable return.

DEPARTMENT OF BUILDINGS OBJECTIONS

On June 12, 2025, the Department of Buildings issued the following objection:

"ZR §§ 42-12(d) & 42-314(b): Residential use is not permitted as of right within an M1-5 zoning district"

SECTION 72-21 OF THE ZONING RESOLUTION

Pursuant to Section 72-21 of the Zoning Resolution, the Board of Standards and Appeals has the authority to vary the strict application of zoning regulations provided that the five findings of said section are satisfied. We submit that those findings are satisfied in the subject application as follows:

(A) UNIQUE CONDITIONS

There are several factors making the Premises unique among other properties in the neighborhood. As a result, unnecessary hardship and practical difficulties in complying strictly with the provisions of the Zoning Resolution are created. As stated in ZR Section 72-21(a) the Board must find:

> ***that there are unique physical conditions, including irregularity, narrowness or shallowness of lot size or shape, or exceptional topographical or other physical conditions peculiar to and inherent in the particular zoning lot; and that, as a result of such unique physical conditions, practical difficulties or unnecessary hardship arise in complying strictly with the use or bulk provisions of the Resolution; and that the alleged practical difficulties or unnecessary hardship are not due to circumstances created generally by the strict application of such provisions in the neighborhood or district in which the zoning lot is located;***

The following unique conditions pertaining to the Premises have been cited for uniqueness in previous applications before the Board:

Subsurface Conditions

According to the Geotechnical Engineering Report, the Premises is comprised of land fill as the site lies west of the historic shoreline of the Hudson River. *See* attached report (the "Geotechnical Report"). Groundwater was discovered approximately 11.4 feet below grade which necessitates a dewatering program for foundation, cellar and elevator pit construction. The Premises is also in an AE flood zone with a Base Flood Elevation of 11 feet. The Geotechnical Report recommends a deep foundation system consisting of micropiles to transfer the proposed building loads to the sand that lies below the land fill. According to the DeSimone Report, the subsurface conditions specified in the Geotechnical Report, when combined with the small lot size, result in premium costs. The premium costs for development at the subject site are due to (1) the small lot size and configuration, (2) the high-water table and potential flooding in an AE flood zone, (3) the poor soil quality, and (4) special preparations to avoid undermining the adjacent structure to the west. Thus, a tangent pile wall system is proposed as part of a complex foundation that serves not only as a support of excavation but also the structural support that transfers loads at the ground level to then construct the building's superstructure.

Small Lots / Conforming Uses

There are other unique conditions pertaining to the Premises which create practical difficulty and unnecessary hardship in strictly complying with the provisions of the Zoning Resolution. The lot size of the Premises is uniquely small at 2,581 square feet in relation to lots in the M1-5 zoning district. The Premises also has a narrow width of only 25 feet. In the subject M1-5 zoning district within 600 feet of the Premises, most conforming commercial uses are situated on larger lots with greater widths. *See* Radius Map.

As a further example of site uniqueness, when looking at the 8 lots on the subject block, of the 3 lots with lot area of 2,500 square feet or less, none contain manufacturing buildings. Within a 600-foot radius of the Premises in the subject M1-5 zoning district (the "Study Area"), only Pier 54 supports manufacturing use.

The Premises is inadequate for modern manufacturing use, which requires large, uniform floor plates and wide frontages to accommodate loading. Conforming uses in this area are clearly established on larger parcels. The small lot size of the Premises is not conducive to a conforming manufacturing use, and its longstanding history of vacancy reflects the absence of a market for smaller sites for conforming uses. Manufacturing activities typically involve the use of large machinery and equipment. A small lot may not provide sufficient space to accommodate necessary tools and machinery, leading to congestion and hindered operations. A small lot may also pose challenges for storage, and adequate storage space is crucial to store materials, work-in-progress inventory, and finished goods. Finally, the small lot size limits the rent potential of the Premises to a warehouse building, which is insufficient to offset development costs.

Vacant Lot

The Premises previously contained a three-story loft building constructed prior to 1961. In 2009, due to structural instability caused by the construction of the adjacent Standard Hotel and the high ground water in the area, the Department of Buildings issued an emergency demolition order. *See* attached order.

The Premises is the only privately-owned vacant site within a 600-foot radius, underscoring its unique condition in the surrounding built-up context. The prolonged vacancy here underscores

the hardship at the Premises, especially given the high cost of new construction and the presence of a high groundwater table in this area, which significantly increases foundation and waterproofing costs. These conditions render development particularly burdensome compared to nearby properties that were built before these constraints became as pronounced or costly to address.

In sum, the Premises presents a unique set of physical conditions that severely limit its reasonable use as-of-right. Its narrow 25-foot width constrains functional layout and access, while the high groundwater table significantly increases construction complexity and costs. These challenges are compounded by the site's long-standing vacancy and the fact that it is the only undeveloped lot within a 600-foot radius. Together, these factors make it impractical to support conforming manufacturing or commercial uses and warrant relief.

BSA Precedent

The Premises, like the site in BSA Cal. No. 2024-03-BZ (117 Spencer Street), is a narrow, 25-foot-wide lot that is currently vacant. In that case, the Board found that such a narrow width created a unique physical condition that rendered the lot unsuitable for modern manufacturing uses, due to limitations in accommodating necessary floorplates, circulation, and loading access. The Board also acknowledged that many similar-sized lots were either developed with nonconforming uses or were under common ownership, and that few truly comparable lots remained, highlighting the subject lot's uniqueness.

In the present case, those same limiting factors apply, compounded by the presence of a high groundwater table, which further escalates construction costs, particularly for foundation

work and waterproofing. Unlike Spencer Street, where the site was merely narrow and vacant, this property faces additional geotechnical challenges that materially increase the hardship in developing a conforming use. As such, the site not only meets but exceeds the threshold of uniqueness and hardship recognized by the Board in past precedent, warranting greater relief as permitted under ZR § 72-21.

In BSA Calendar No. 299-12-BZ, the Board granted a variance to allow additional bulk and height on a constrained site burdened by subsurface conditions, including a high water table and contaminated soils. The applicant demonstrated that these conditions significantly increased foundation and dewatering costs, requiring a larger building envelope to make the project economically viable. The Board agreed that the presence of the Highline and geotechnical challenges created a legitimate hardship that justified relief, even though the zoning district (M1-5) generally did not permit that level of bulk. Notably, this variance was granted in 2014, when construction costs were materially lower than they are today.

Similarly, the Premises suffers from unique constraints that make conforming development infeasible. Like the Tenth Avenue site, the Premises is burdened by physical conditions including a narrow 25-foot width and a high groundwater table, which significantly increase foundation costs and limit buildable floor area. Unlike the Tenth Avenue property, the Premises is also vacant, with no existing structure to generate revenue or absorb upfront development risk. Given these conditions, the requested waivers are essential to achieve a viable project. The Board's reasoning in 299-12-BZ supports this position: when physical and economic conditions combine to make as-

of-right development infeasible, variance relief is appropriate, particularly in today's climate of rising construction and financing costs.

(B) REASONABLE RETURN

Section 72-21(b) of the Zoning Resolution states:

> ***that because of such physical conditions there is no reasonable possibility that the development of the zoning lot in strict conformity with the provisions of this Resolution will bring a reasonable return, and that the grant of a variance is therefore necessary to enable the owner to realize a reasonable return from such zoning lot; this finding shall not be required for the granting of a variance to a non-profit organization;***

Because of the unique factors discussed above, unnecessary hardship arises in complying strictly with the use provisions of the Zoning Resolution, and the grant of a variance is therefore necessary to enable the owner to realize a reasonable return at the Premises. Submitted with this application is an economic analysis prepared by Barbara Cohen, Real Estate & Planning Consultant. The analysis examines two scenarios using a capitalization approach and concludes that as-of-right development is not financially feasible at the Premises. The two scenarios are as follows:

1. "As-of-Right" Commercial – FAR 5.0 ("AOR Scenario"): The construction of a five-story restaurant/office rental-type building.
2. Proposed Fourteen-Story, Mixed-Use Elevator Bldg. – FAR 7.02 ("Proposed Scenario"): The construction of a fourteen-story, elevator mixed-use building totaling 18,128 square feet of net floor area.

This pro forma analysis compares the two development scenarios outlined above. Under the AOR Scenario, the project yields a total zoning floor area of 12,904 sq. ft., primarily for office use, whereas the Proposed Scenario allows for a larger 18,258 sq. ft. development with nearly 10,000 sq. ft. of residential space and more restaurant area. However, the increased size and change in use comes with significantly higher development costs, $24.6 million for the proposed plan versus $17 million for the AOR.

Despite the higher cost, the Proposed Scenario provides a financially viable development. The AOR Scenario generates just $1.16 million in gross rental income and results in an estimated project loss of nearly $5 million, with a negative annualized return of -11.3%. This poor outcome is due in part to low revenue potential from office and restaurant use, even before accounting for high foundation costs. In contrast, the Proposed Scenario results in over $6.9 million in profit and a positive 6.7% return, driven largely by residential condo sales and increased project value. These figures demonstrate that the AOR Scenario is not financially feasible, whereas the Proposed Scenario results in a reasonable return on investment.

Overall, the risk level of the Proposed Scenario is lower than the AOR Scenario, which is reflected in the lower capitalization rate for a commercial building. The economic study thus supports the finding required pursuant to ZR § 72-21(b), as the grant of a variance is necessary here to enable the Applicant to realize a reasonable return from development at the Premises. *See* Financial Report.

(C) CHARACTER OF THE NEIGHBORHOOD

As stated in ZR Section 72-21(c), the Board must find:

> ***that the variance, if granted, will not alter the essential character of the neighborhood or district in which the zoning lot is located; will not substantially impair the appropriate use or development of adjacent property; and will not be detrimental to the public welfare;***

Within the 600-foot study area, there is one manufacturing/transportation use located on the block to the west of the Premises, Pier 54. The prevailing built form in the area consists of commercial office buildings, surface parking lots, and mixed-use buildings with ground-floor commercial space and residential uses above. Building heights in the immediate vicinity vary significantly: the building directly east of the Premises rises 19 stories, while the building to the west is 3 stories tall.

The surrounding area has been subject to a number of land use approvals initiated by the NYC Department of City Planning ("DCP"). One of them was the Far West Village Rezoning. This rezoning, south of the Premises, rezoned approximately 14 blocks in the far western part of the West Village (known as the "Far West Village"). The rezoning area was bounded by Horatio Street to the north, Washington Street to the east, Morton Street to the south, and West Street to the west. The rezoning allowed for the continued development of residential buildings and neighborhood-oriented retail at densities and heights consistent with the existing scale of the neighborhood. The Far West Village was traditionally a manufacturing area that, for many years, was connected to the working waterfront along the Hudson River. The remaining loft buildings and smaller-scale hotels are remnants of the area's industrial and maritime history. Over the last thirty years, the character of the area has become predominantly residential, with a diverse mixture of residential buildings that included converted loft buildings, 19th-century row houses, the 42 six-

story buildings in the West Village Houses complex, and more recent, taller residential buildings. Distinct clusters of lower-scale buildings are located along Christopher and Weehawken Streets, and Charles Lane, while medium-scale, street wall buildings are located along West and Washington Streets north of Bethune Street. Taller residential buildings are located along West Street between Charles and West 11th Street. Land uses in this area are primarily residential, with most of the lots developed with residential use and some with commercial uses.

Currently under review by the NYC Economic Development Corporation are development proposals for a parcel of about 10,000 square feet located at the corner of Little West 12th Street and 10th Avenue, opposite the subject site. The redevelopment of the corner parcel is to be a part of a larger, coordinated redevelopment of the majority of Block 644. It is contemplated that the entire block, bounded by Little West 12th Street, Washington Street, Gansevoort Street and 10th Avenue will be rezoned as part of a single, comprehensive Uniform Land Use Review Procedure ("ULURP") process. The proposed Gansevoort Square project seeks to provide 600 residential units, thereby acknowledging that this neighborhood can benefit from additional housing, especially when considering that the area today features a vibrant blend of uses, including art galleries, fashion showrooms, design studios, and creative offices.

(D) SELF-CREATED HARDSHIP

The Board is further required to find:

that the practical difficulties or unnecessary hardship claimed as a ground for a variance have not been created by the owner or by a predecessor in title; however where all other required findings are made, the purchase of a zoning lot subject to the restrictions sought to be varied shall not itself constitute a self-created hardship; and

The practical difficulties encountered on this site are not caused by the owner of the site or a predecessor in interest. In 1961, the Premises was not larger nor was it connected to another lot. As the Premises maintains the same lot dimensions as existed in 1961, no self-created hardship exists regarding the configuration of the subject lot. We have included a deed chain chart below detailing the ownership history of the Premises.

Owner	**Year**
BERTHIS REALTY CORP	1960
GOLDEN PACKING CO INC	1977
UPSTREAM DVLPMT CORP,INC	1984
ARADAL SYNDICATIONS,INC	1984
LITTLE W 12TH ST INC.	1985

Importantly, the site's vacant nature is not the result of a self-created hardship. The original four-story loft building, which predated 1961, was demolished in 2009 under an emergency order issued by the Department of Buildings due to structural instability caused by construction on the adjacent lot. The loss of the building was therefore involuntary and underscores the unique challenges the owner now faces in redeveloping the site.

Based upon the forgoing, the Premises is faced with a hardship that arises out of the clear impracticality of strictly complying with the underlying zoning.

(E) MINIMAL VARIANCE NECESSARY

The Board must finally find:

that within the intent and purposes of this Resolution the variance, if granted, is the minimum variance necessary to afford relief; and to this end, the Board may permit a lesser variance than that applied for.

The extent of the variance request is no greater than is necessary to provide reasonable relief. The subject site is uniquely suited for the requested variance, which will enable this small and narrow vacant lot to be utilized for a practical purpose. The proposed development scenario enables feasible use of the lot without being overreaching or excessive and represents the minimum variance necessary to afford relief. The relief requested is well within BSA precedent for similar relief granted to other lots within the surrounding area. We therefore submit that the findings of ZR § 72-21(e) have been met.

CONCLUSION

The variance sought reasonably and minimally meets the needs of the applicant. We are confident that the findings of Section 72-21 have been satisfied in the instant matter and respectfully request that the Board approve the instant application in all respects.

Respectfully submitted,

Richard Lobel

Barbara J. Cohen
Real Estate & Planning Consultant

ECONOMIC ANALYSIS

51 Little West 12th Street
New York, New York

July 2025

Prepared For
Sheldon Lobel P.C.

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ECONOMIC ANALYSIS

51 LITTLE WEST 12TH STREET
Manhattan

Prepared For:

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July 2025



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TABLE OF CONTENTS

INTRODUCTION 1
- Summary of Findings & Conclusions 2

SITE DESCRIPTION 4

ZONING & DEVELOPMENT OPTIONS 8

SITE VALUATION - "AS IS" 11

COMPARABLE SALES AND LEASE COMPARABLES 17
- Restaurant Lease Comparables 17
- Commercial Office Lease Comparables 22
- Residential Condominium Sales Comparables 26
- Comparable Rate Summary 34

COST ANALYSIS 35

PRO FORMA ANALYSIS 37
- Economic & Financial Assumptions 37
- Exhibit 7 – Basic Development Assumptions 38
- Exhibit 8 – Development Cost Summary 39
- Exhibit 9 – Pro Forma Analysis Summary 40

APPENDIX

- Residential Condo Stacking Plan
- GZA Geo Technical Report
- DeSimone Engineers Preliminary Structural Designs
- Development Cost Estimates – "As-of-Right" – ConsultMAB & Marshall & Swift
- Development Cost Estimates - Proposed - ConsultMAB & Marshall & Swift
- Douglas Elliman Sales Report – 1st Qtr 2025 - Manhattan
- The Corcoran Report – 1st Qtr 2025 - Manhattan
- *RealtyRates.com*
- Qualifications

INTRODUCTION

The following has been prepared for Sheldon Lobel P.C. in order to assess the financial feasibility of an "as-of-right" commercial office and restaurant development scenario and a proposed residential and restaurant project for the subject property located at **51 Little West 12th Street (Block 645, Lot 21)** in the West Greenwich Village - Meatpacking District neighborhood of Manhattan. The subject site, a vacant parcel totaling 2,581 square feet, is located on the north side of Little West 12th Street between Washington Street and 10th Avenue and is situated within the M1-5 zoning district which provides for a FAR of 5.0 for commercial and certain community facility uses.

Under both the "as-of-right" commercial development scenario and proposed restaurant and residential plan, site conditions impact the design layouts, construction means and methods and marketability. In great detail, the Geo Technical report, the preliminary structural drawings, and the architectural design plans demonstrate how the site conditions present challenges to overcome in order to development the site. Although the primary focus is on the subsurface conditions and adjacency issues, the lot size and narrowness represent an over-arching constraint evident in many design decisions and space utilization. Moreover, the multiple floors required to achieve the full development potential of the site results in a more costly, less efficient building due to structural requirements compared to a shorter, wider building.

The limitation of one elevator to serve multiple tenants is a daily concern for both the "as-of-right" office building as well as the proposed residential development. The small floorplate is reduced once the circulation core is taken into account, limiting the utility of the space itself. The ground floor commercial space is a challenge, as the display window is ineffective since the 25 feet of frontage must also accommodate the building's lobby and cellar entrance. Given the high water table at the subject site, the utilities are above grade on the MEP level between the ground and second floor. Additionally, the support of excavation and the foundation requires a tailored approach to address small site challenges, subsurface soil and water issues, adjacency concerns, and overall structural components to support a tall, narrow building.

In order to overcome the challenges inherent in the subject site, the applicant seeks a variance to development the proposed restaurant and residential development scenario which reflects a match to the market for residential apartments as well as the restaurant use with its outdoor terrace adjacent to the level of the High Line directly to the east.

Summary of Findings & Conclusion

The subject property is located at **51 Little West 12th Street** in the West Village-Meatpacking neighborhood of Manhattan and is zoned M1-5 which allows for commercial development. The small, narrow-shaped lot is a challenge for any development option. The 25 feet of lot width requires that any new development seek to strike a balance between the overall development costs, the buildable area, and the marketability of the prospective tenancy, whether it be commercial office use, retail or restaurant use, or residential use.

The neighborhood continues its transformation with the development of the Standard Hotel, abutting the subject site to the north, and the Whitney Museum to the south on Block 644, opposite the subject site, which is now the focus of a planned mixed-use development by the NYCEDC called Gansevoort Square. This planned development for Block 644 includes the enlargement of the Whitney Museum and a 60-story residential tower at the southeast corner of Little West 12th Street and 10th Avenue. The impact of this development will severely impact the marketability of the residential units at the subject site, as views of the Hudson River, extending as far as the Statue of Liberty, will be obstructed.

Both the “as-of-right” and proposed development scenarios are represented by multi-story buildings. The 6-story “as-of-right” commercial office plan approximates 14,905 gross square feet of above grade building area, and 12,904 square feet of zoning floor area, or an FAR of 5.0. This scenario incorporates restaurant space at the ground level with an elevator to the cellar level for restaurant support services. From the lobby area, a passenger elevator provides access to the upper floor commercial office space. The utility of the office spaces is limited, as the gross square feet of the floors (approximately 2,034 gross square feet) is reduced to 1,380 square foot once the circulation core is taken into account.

This higher than typical loss factor contributes to the competitive disadvantage in the marketplace for the “as-of-right” commercial office development scenario. The estimated project value, which capitalizes the net operating income of the office and restaurant use is $12.0 million, insufficient to offset development costs of $16.9 million and does not provide for a reasonable return on investment.

The proposed plan provides for a 14-story building and incorporates restaurant space at the ground and second floors with a cellar level providing the support services to the restaurant. The open terrace at the second floor, accessed through the ground floor restaurant space benefits from the adjacency to the High Line. The proposed design recognizes the small subject site and the need to bring a certain level of height in order to not be over-shadowed by the Standard Hotel along the northern property line, the High Line to the east, and the planned Gansevoort Square project to the south.

The proposed plan has a total of 20,633 gross square feet of above grade building area and 18,258 zoning square feet, or an FAR of 7.0. The project value is represented by the capitalized value of the net operating income of the restaurant use and the total sales revenue generated from the residential condominium apartments, and approximates $31.6 million, sufficient to offset the total development costs approximate $24.6 million to generate a reasonable return. The proposed development scenario provides for a return on project cost on a condominium basis of 6.7% annually over the construction and sell-out time periods. The projected return, which reflects modest expectations for a condominium project, is measured against the tax implications of a buy and sell transaction and the risks associated with real estate development as measured against alternative investments.

Exhibit 1

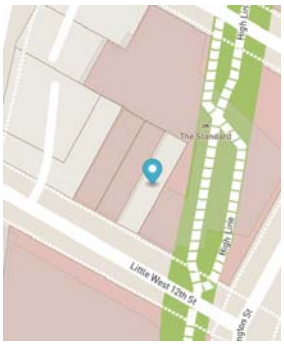
Project Value and Profit Summary

	Project Cost	**Project Value**	**Project Profit or Loss**	**Annual Return as % of Cost**
"As-of-Right" Commercial Office & Restaurant Use – 6-story - FAR 5.0	$16,964,267	$12,008,959	($4,955,308)	-11.3%
Proposed Restaurant & Residential Condo Use- 14-Story - FAR 7.0	**$24,619,776**	**$31,595,027**	**$6,975,251**	**6.7%**

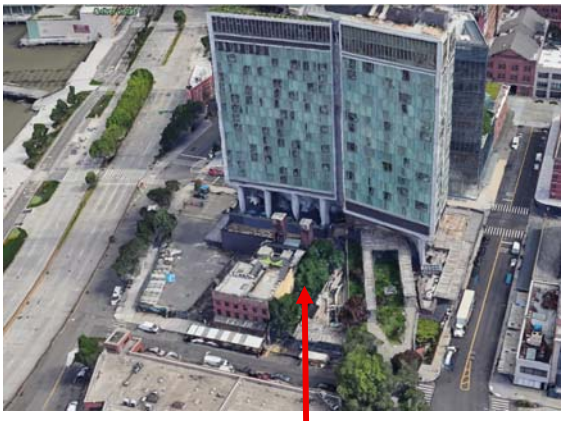
SITE DESCRIPTION

The subject site is represented by **Lot 21** on **Block 645** in the West Village-Meatpacking area of Manhattan. Located at **51 Little West 12th Street**, the subject property has a lot size of approximately 2,581 square feet (a lot width of 25 feet) and is unimproved since 2010 when DOB ordered an emergency declaration to demolish the underbuilt 3-story commercial building, a result various construction impacts associated with the Standard Hotel. The potential development of the subject site recognizes the importance of monitoring and taking special precautions to avoid any negative impacts on adjacent buildings. The adjacent buildings are represented by a 3-story commercial building (53 Little West 12th Street) built in 1910 to the west, and a single-story commercial building associated with the Standard Hotel to the east (848 Washington St), and the Standard Hotel itself abutting the subject property to the north. The Highline is a dominate feature in this neighborhood, situated just east of the subject site, and the Whitney Museum, developed in 2015, is also a significant presence in the neighborhood. A map and photo of the subject site are presented below.

Subject Property
51 Little West 12th Street – Manhattan
Block 645 | Lot 21









Subject Site & View East



Subject Site & View West



Subject Site

Future Planned Development: Gansevoort Square

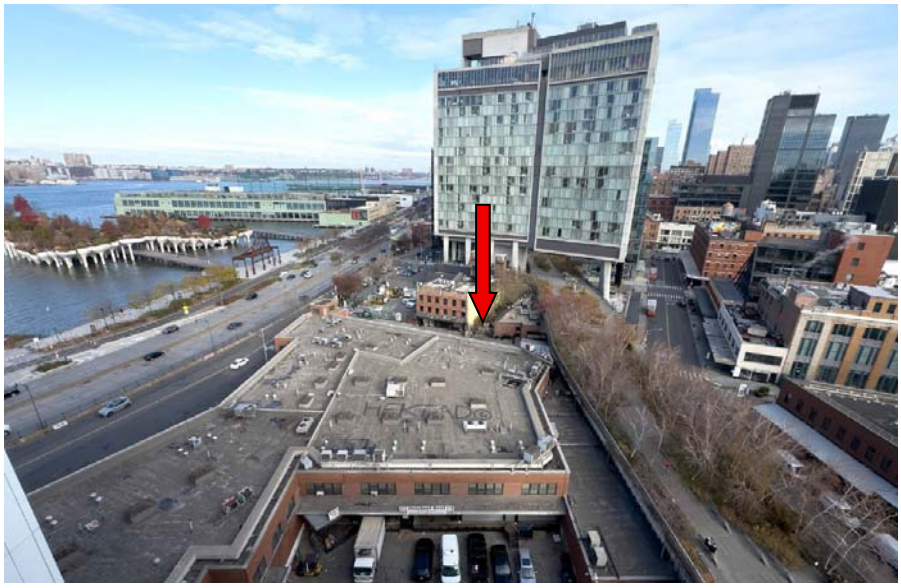
Under review by the NYC Economic Development Corporation are proposals to develop Block 644 to its fullest potential, which includes a parcel of about 10,000 square feet located at the southest corner of Little West 12th Street and 10th Avenue, opposite the subject site. The redevelopment of the corner parcel is to be a part of a larger, coordinated redevelopment of the majority of Block 644. It is contemplated that the entire block, bounded by Little West 12th Street, Washington Street, Gansevoort Street and 10th Avenue will be rezoned as part of a single, comprehensive Uniform Land Use Review Procedure ("ULURP") process.

The proposed Gansevoort Square project seeks to:

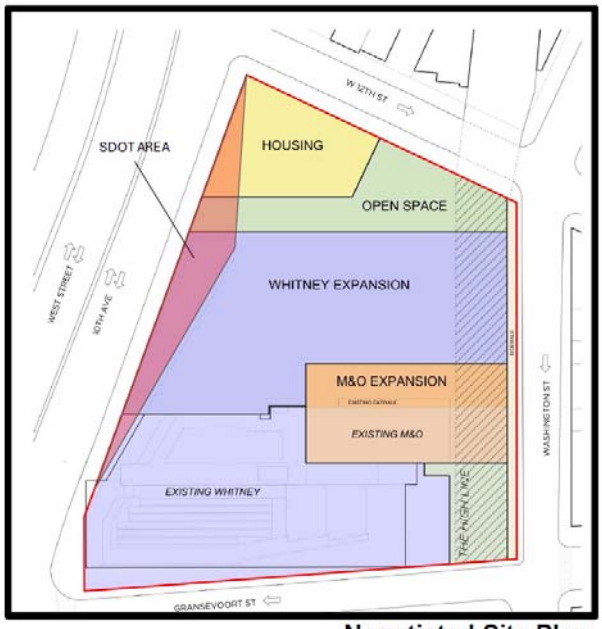
- Expand the Whitney Museum
- Expand the maintenance and operations space for future High Line needs with a focus on year-round programming
- Provide public realm improvements and new open space (11,200 square feet)
- Provide mixed-income housing (600 units)

While no official renderings have been released, it is expected that the new residential tower will be at a greater height (potentially double) than the Standard Hotel which at about 260 feet, is the current tallest building in the neighborhood.

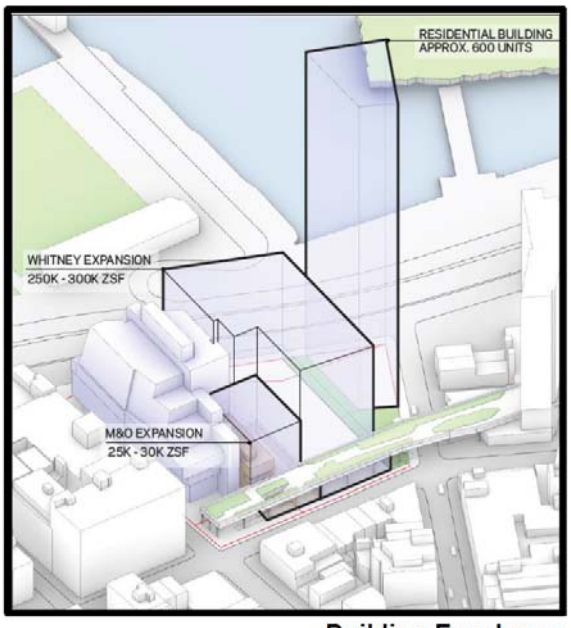
The development of corner of Little West 12th Street and 10th Avenue with a residential tower along with the redesign and expanison on the remaining Block 644 will no doubt impact the subject site's development, especially in terms of the view corridors towards the Hudson River, Lower Manhattan, and beyond to the Statue of Liberty.



Subject Site & Block 644 in Foreground



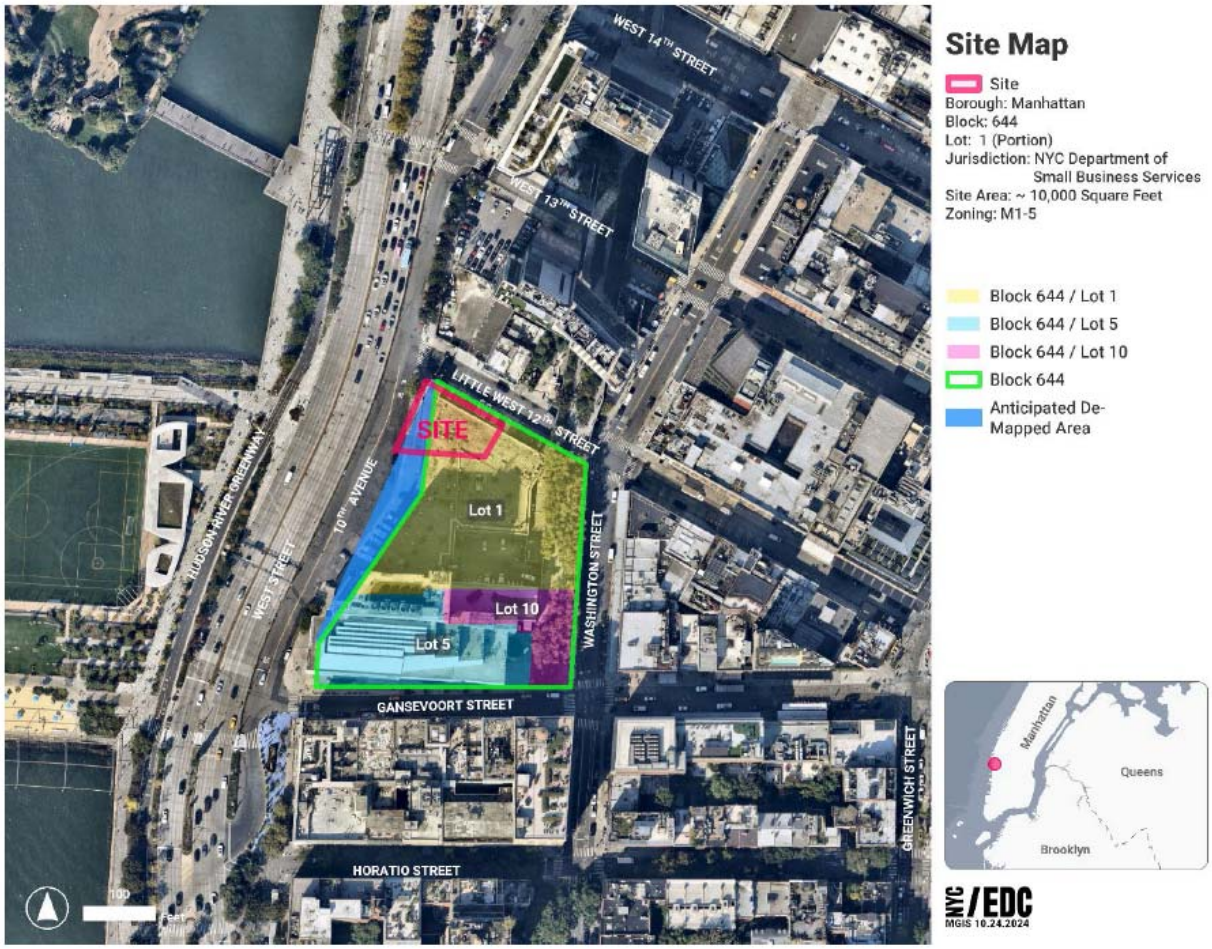
Negotiated Site Plan



Building Envelopes

FUTURE SITE PLAN

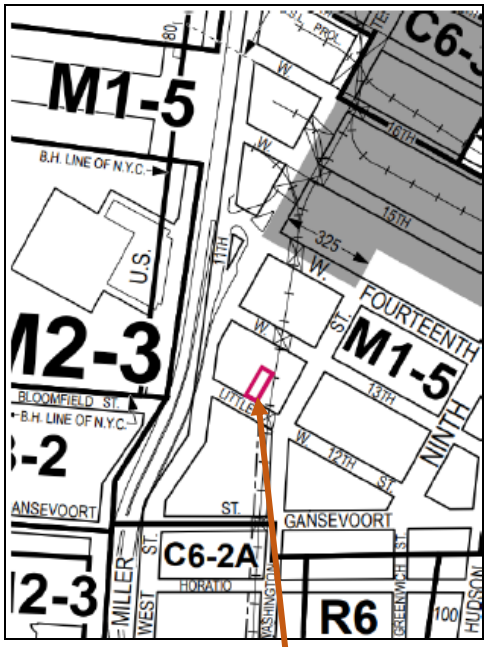
Source: NYC EDC – Gansevoort Square Mixed-Income Housing RFP



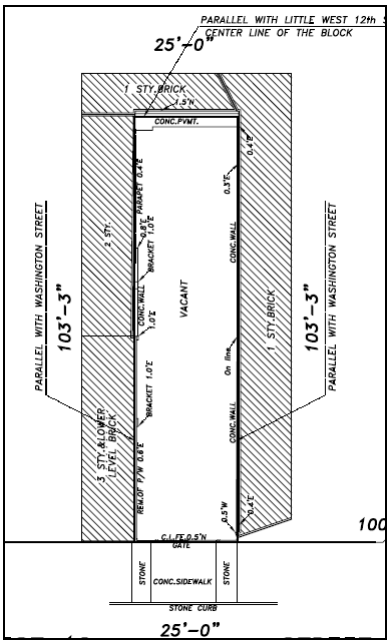
Source: NYC EDC – Gansevoort Square Mixed-Income Housing RFP

ZONING & DEVELOPMENT OPTIONS

The entire parcel is zoned M1-5, which provides a 5.0 FAR for commercial use and certain community facility uses.



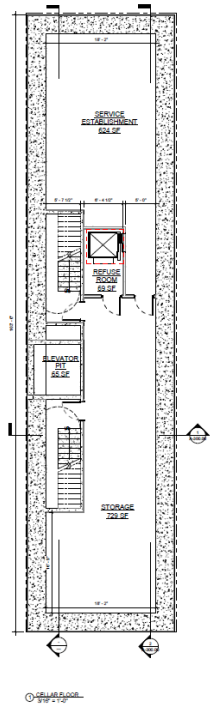
Subject Site: 51 Little West 12th Street



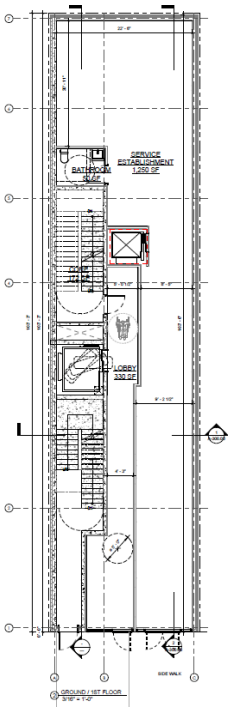
Subject Site Survey

The development scenarios analyzed in the report are as follows:

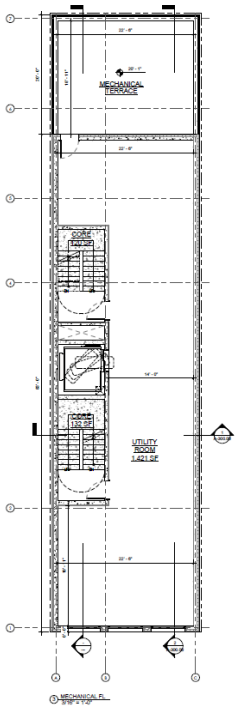
1. **"As-of-Right" Commercial Office & Restaurant Use – FAR 5.0 -** The current return of a new, 6-story commercial office development totaling 12,904 square feet of zoning floor area. All upper floors are assigned office use, while the ground floor is assigned restaurant use with a supporting cellar level accessed by a second elevator. Mechanical systems are located above the ground floor due to the high-water table. The loss factor is significant. For example, a typical upper floor of 2,034 gross square feet is reduced to 1,380 square feet of useable office space, once the core (i.e., elevator and stairwells) are taken into account.



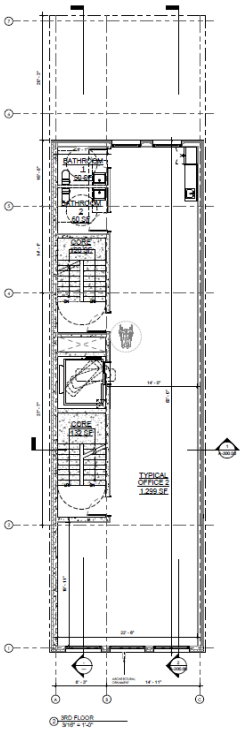
Cellar Level



Ground Flr – Restaurant Use

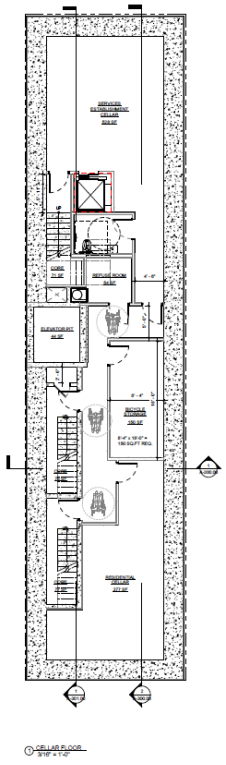


Mechanical Flr

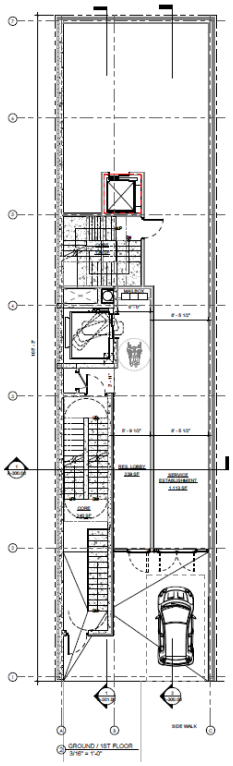


Typical Office Unit Floors 3 - 6

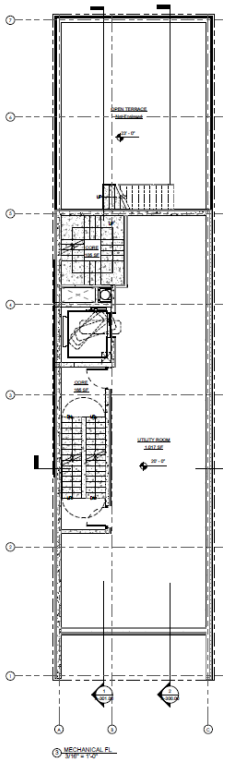
2. **Proposed Residential and Restaurant Use – FAR 7.0 -** The current return of a new, 14-story restaurant and residential condominium building totaling 20,633 gross square feet of above grade building area, and 18,258 square feet of zoning floor area. Restaurant space has three components: a support area at the cellar level (approx. 630 square feet), ground floor of approximately 1,250 square feet with an interior stairwell to access an open terrace (approx. 1,821 square feet) aligned with the nearby High Line and at the roof of the ground floor. The upper floors contain 12 residential condominium apartments on floors 3-14. Each unit approximates 818 square feet and configured as a two-bedroom/1.5 bath unit. No building-wide amenities are provided; however, individual units benefit from outdoor space, primarily balconies at the front of the building.



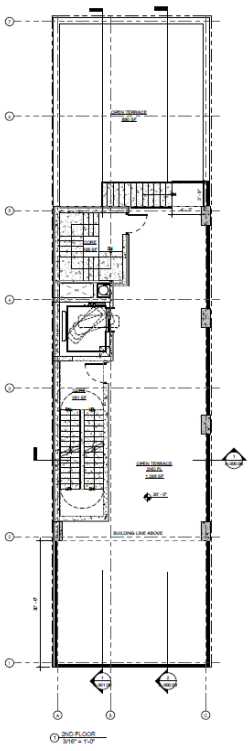
Cellar Level



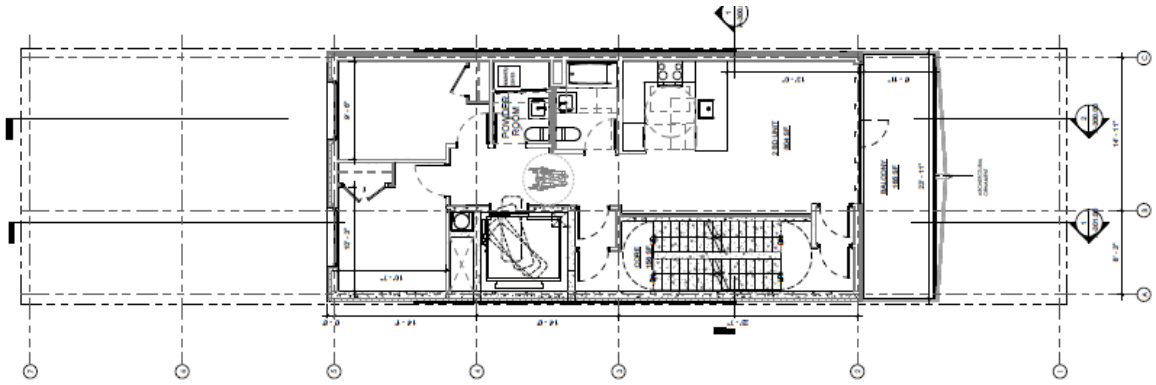
Ground Flr – Restaurant Use



Mechanical Flr



Open Terrace-Restaurant Use

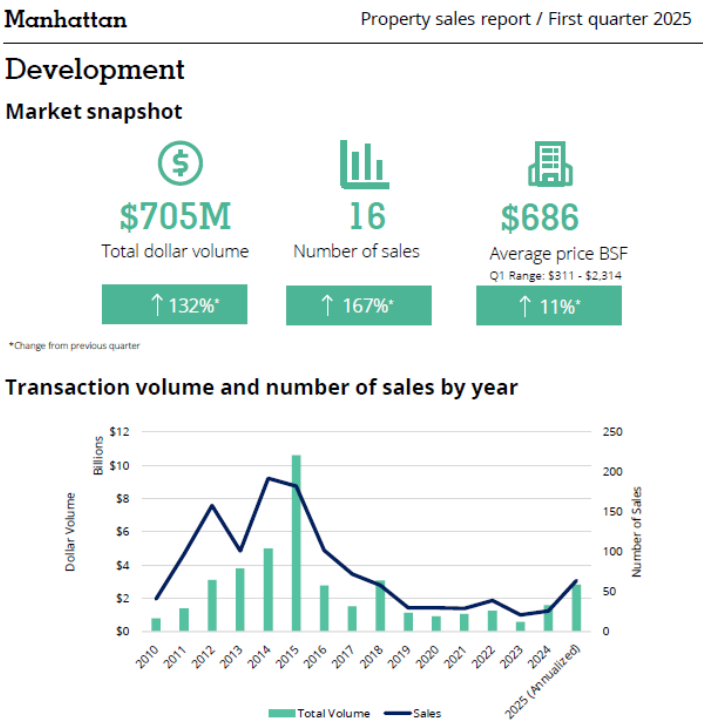


Typical Residential Unit (803 SF) – Floors 3-14

SITE VALUATION - "AS IS"

The site value is based on the research of recent sales of vacant land, under-utilized or development sites in the vicinity of the West Village-Meatpacking area. The value of the subject site as a vacant parcel will reflect the development potential dictated by current zoning, therefore all the sales comparables are presented on an Allowable Buildable Area ("ABA") square foot basis. Adjustments have been made to determine comparability to the subject site in terms of date of sale, location, site size and configuration and zoning designation's permitted uses. Additionally, site value is also reflected in the potential sales prices of the finished product (i.e., condominium apartments) which is firmly based upon location, the area's sales comparables, and the impact of the planned Gansevoort Square development.

According to the Avison Young's Manhattan Property Sales Report – 1st Quarter 2025, development sales transactions have increased from prior years. For Manhattan, the report identified 16 development type sales with an average of $686 per ABA square foot, which is skewed upwards, as it reflects a significant (assemblage) sales transaction at 576 Fifth Avenue for $175 million, or $2,314 per ABA SF.



Source: Avison Young: Manhattan Property Saels Report – 1st Qtr 2025

The property sales research to determine site value for the subject site represents over 200 transactions within a large surrounding area of the subject site. Of the total, there were 13 properties defined as vacant, none of which are zoned for solely commercial

use. Only 4 properties (all improved with buildings) are located within either a M1-5 or M1-6 zoning district. The remaining properties reflect mixed zoning designations that allow for residential use "as-of-right". Therefore, the sales comparables below require a downward adjustment to reflect the zoning districts that permit residential use. Lot size and configuration and location were key factors that informed the selection from a small universe of property sales and were adjusted accordingly.

Exhibit 2

Property Sale Comparables - Adjustment Grid

	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5
Location	**30 Thompson St**	**33 West 14th St**	**10 West 17th St**	**112 Liberty St**	**525 Sixth Ave at W. 14 St**
Block/Lot	476-56	816-21	818-56	52-16	609-35,37,38,39,40,41
Zoning	M1-5/R10, SNX	C6-2M	C6-4A	C5-5 LM	C6-3A, C6-2A
Prior Existing - Building Size (SF) | DOB Demo Date		4,943 | 11/1/2024			
Lot Size (SF)	2,726	2,582	4,140	6,100	12,900
Lot Dimension	29 x 94 (Infill)	25 x 103 (Infill)	45 x 92 (Infill)	48 x 113 (Thru-Lot)	125 x 126 (Crnr)
Sale Date	1/14/2022	10/12/2023	12/16/2022	3/28/2024	12/15/2021
ABA SF *	27,260	15,544	41,400	61,000	97,008
Sales Price	$13,000,000	$9,000,000	$15,500,000	$21,687,750	$46,000,000
Price/ABA SF*	$476.89	$579.01	$374.40	$355.54	$474.19
Adjustment Factors					
Time	1.15	1.10	1.15	1.05	1.20
Location	1.05	1.05	1.05	1.10	1.05
Size	1.00	1.00	1.03	1.05	1.10
Configuration/Utility/Bldg On Site	1.00	1.00	0.95	0.95	0.90
Potential for Water Views	1.10	1.10	1.10	1.10	1.10
Zoning	0.95	0.95	0.95	0.95	0.95
Composite Adj.	**1.26**	**1.21**	**1.23**	**1.20**	**1.30**
Adj. Price/ABA SF*	**$601.76**	**$698.86**	**$462.27**	**$428.05**	**$618.12**
Avg Adj. Price/ABA SF	**$561.81 / ABA SF**				

* Allowable Building Area

Development Site Sales Comparables – Adjustment Factors

Time: According to recent market reports, development sales and demand have increased. Upward adjustments of various degrees have been made to all property sales comparables due to the date of the respective sales transaction.

Location: The subject site is well situated as the Meatpacking District continues to strengthen with recent and planned developments, including the Whitney Museum and the High Line. An upward adjustment was applied to all sales comparables.

Size: All property comparables, except for Comps # 1 and # 2, are subject to an upward adjustment due to their larger lot size compared to the subject site, as larger lots tend to reflect lower prices per square foot compared to smaller sites.

Configuration & Utility | Building on Site: A downward adjustment was made to all property sales comparables, except for Comp #1 and #2 with similar dimensions as the subject site. The remaining comparables reflect sites with dimensions that provide greater design flexibility and potential.

Potential for Water Views: An upward adjustment was applied to all property sales comparables to reflect the subject site's potential for water views compared to the inland sites.

Zoning: As noted above, there were no comparable sales that were zoned for commercial use only. All comparables provide for residential use and therefore, require a downward adjustment.

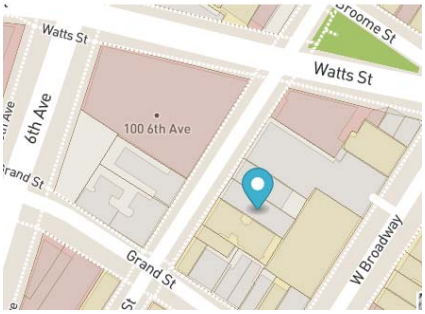
Based on the above, the site value assigned to the subject site is calculated as follows:

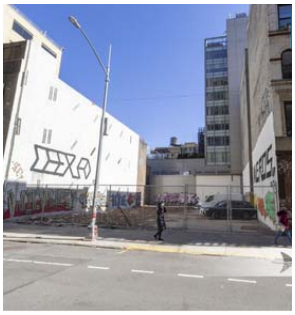
Allowable building area under current zoning =

Lot Area: 2,581 SF at 5.0 FAR = 12,905 ABA SF

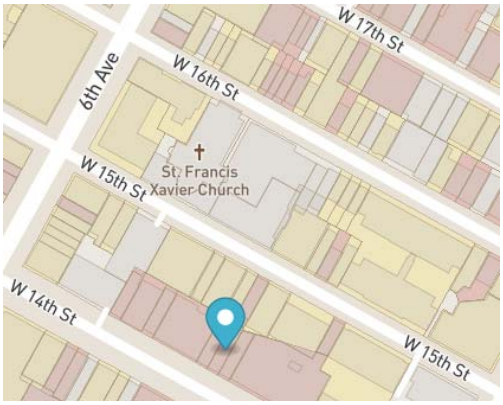
Site Value = 12,905 ABA SF @ $561.81 /ABA SF = $7,250,168

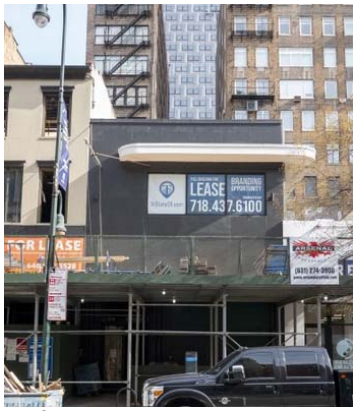
Photos and maps of the property sales comparables are shown below.





Property Sale Comp # 1 - 30 Thompson Street



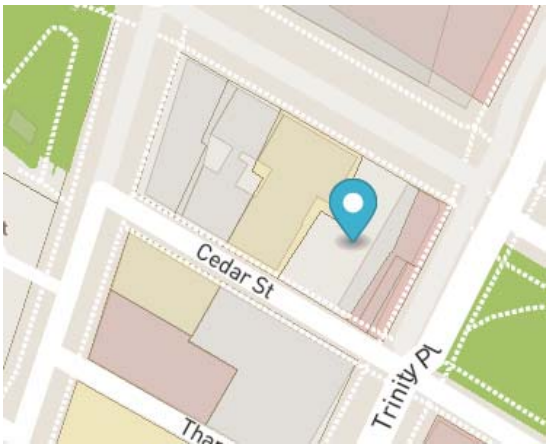


Property Sale Comp # 2 - 33 West 14th Street



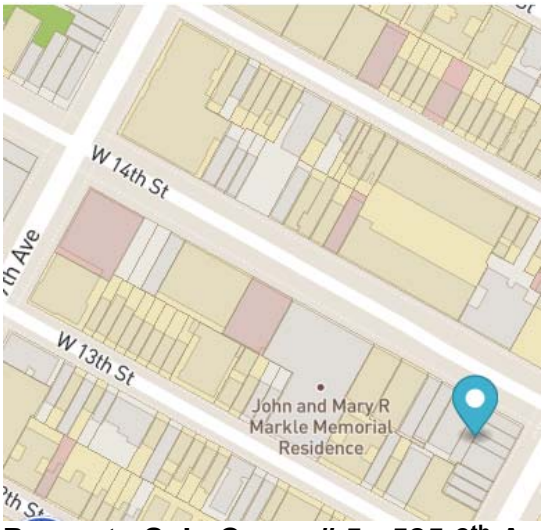


Property Sale Comp # 3 - 10 West 17th Street





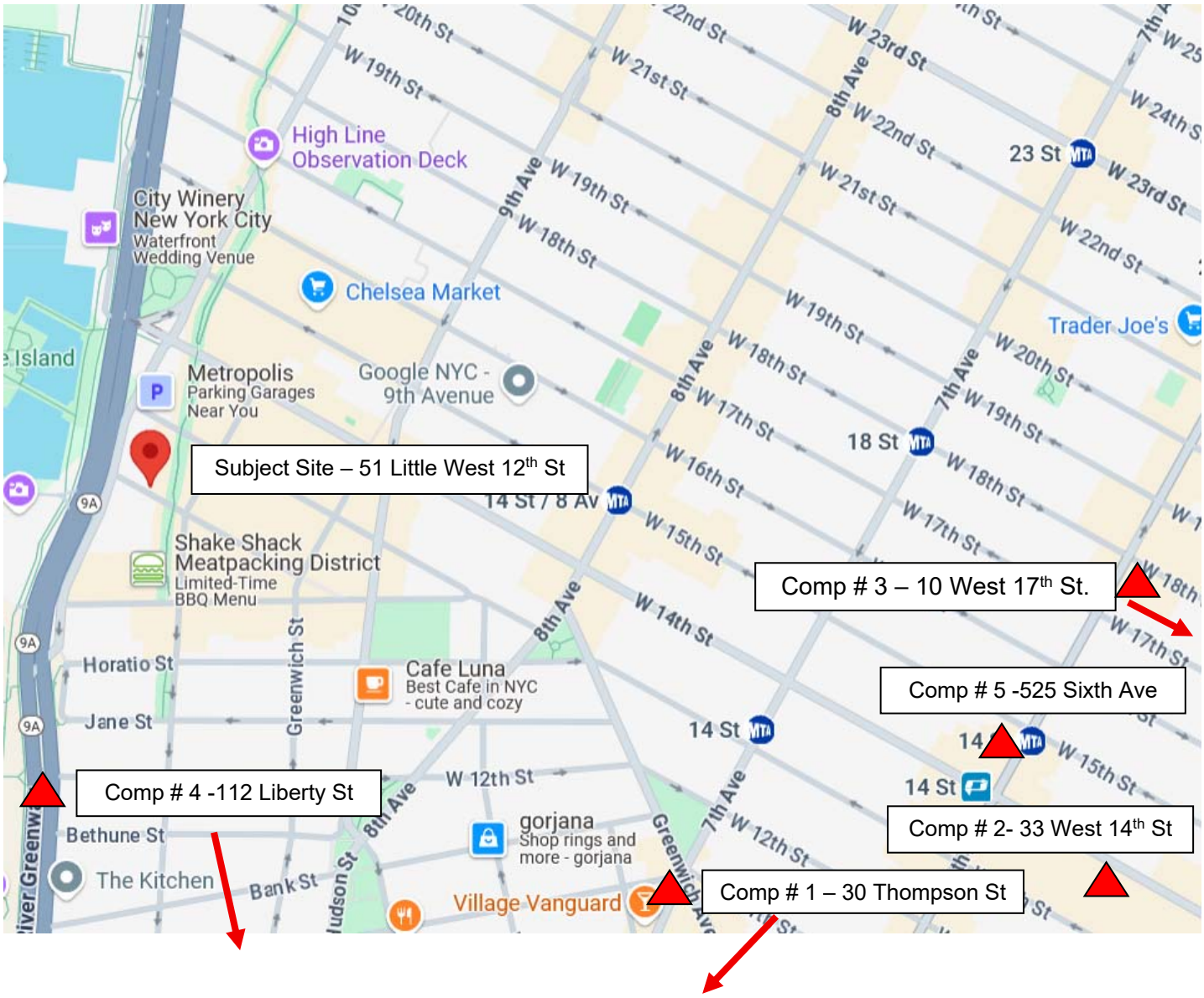
Property Sale Comp # 4 - 112 Liberty Street





Property Sale Comp # 5 - 525 6th Avenue

Property Sales Comparables and Subject Site



Investment sales summary

The Manhattan investment sales market had a mixed first quarter to start the year. For the first quarter of 2025, Manhattan recorded 84 transactions valued at $2.7 billion in total dollar volume. This represented a 12% increase and 17% decrease off the previous quarter, respectively. When annualized, 2025 is on pace to see a 26% increase and 5% decrease off 2024, respectively. There is confidence that the market will continue to build as 2025 progresses.

Multifamily/mixed-use

The multifamily market recorded sales of $444.0 million in total dollar volume across 28 transactions for the First Quarter

- Volume is down 31% from the previous quarter and down 34% when annualized compared to 2024
- Transaction are down 3% from the previous quarter and up 3% when annualized compared to 2024
- Pricing per square foot of $590 is down 17% from the previous quarter and down 4% overall when compared to 2024
- Cap rates of 5.81% are down 24 bps from the previous quarter and up 10 bps overall when compared to 2024
- The most notable transaction was A&E Real Estate Holdings' purchase of 501 East 87th Street for $116.5 million. The 21-story building totaled 180 units across 202,322 square feet, equating to $576 per square foot with a cap rate of 4.45%.

Retail

The retail market recorded sales of $604.0 million in total dollar volume across 22 transactions for the First Quarter

- Volume is up 21% from the previous quarter and up 5% when annualized compared to 2024
- Transactions are up 5% from the previous quarter and up 28% when annualized compared to 2024
- Pricing per square foot of $1,643 is up 27% from the previous quarter and up 29% overall when compared to 2024
- Cap rates of 6.66% are up 24 bps from the previous quarter and down 18 bps overall when compared to 2024
- The most notable transaction was Uniqlo's purchase of 666 Fifth Avenue for $355 million. The retail condominium equated to $20,526 per square foot and was an owner/user transaction.

Office

The office market recorded sales of $659.8 million in total dollar volume across 15 transactions for the First Quarter

- Volume is down 58% from the previous quarter and down 25% when annualized compared to 2024
- Transactions are up 15% from the previous quarter and up 58% when annualized compared to 2024
- Pricing per square foot of $541 is up 7% from the previous quarter and up 20% overall when compared to 2024
- The most notable transaction was B&H Photo Video's purchase of 333 West 34th Street for $150 million, equating to $524 per square foot.

Development

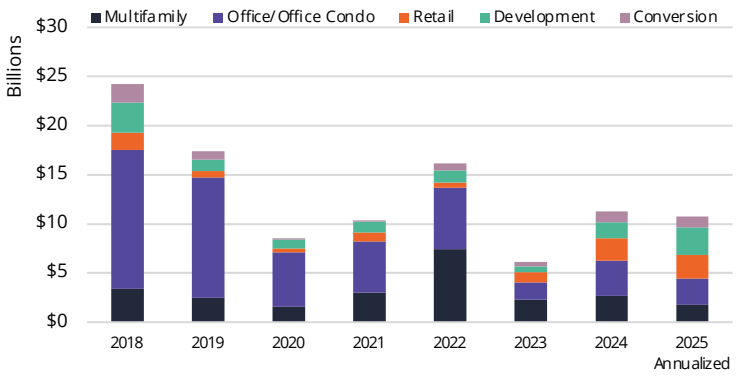
The development market recorded sales of $705.0 million in total dollar volume across 16 transactions for the First Quarter

- Volume is up 132% from the previous quarter and up 77% when annualized compared to 2024
- Transactions are up 167% from the previous quarter and up 146% when annualized compared to 2024
- Pricing per buildable square foot of $686 is up 11% from the previous quarter and up 10% overall when compared to 2024
- The most notable transaction was Extell Development's purchase of 576 Fifth Avenue for $175 million. The property had 75,615 buildable square feet, equating to $2,314 per buildable square foot. The site is part of an assemblage.

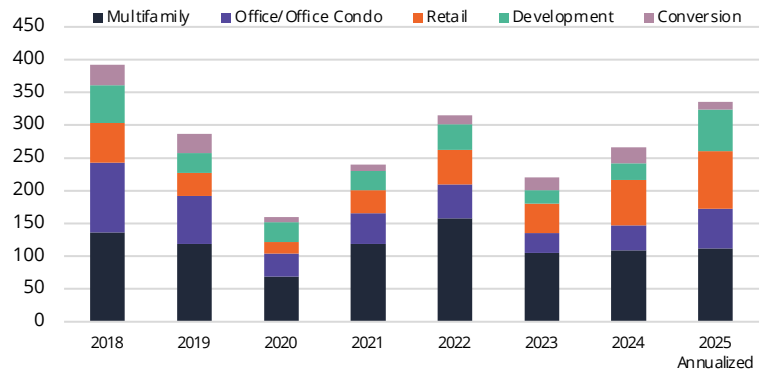
Trends to watch

- Will conversions and owner-occupied purchases of office buildings continue to be the norm?
- Can development build off its strong quarter for the rest of 2025?
- How will the market react to City of Yes?

Total dollar volume by asset class



Number of sales by asset class



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COMPARABLE LEASE AND SALES COMPARABLES

Restaurant Lease Comparables

The “as-of-right” commercial office development scenario and proposed development scenario envision a restaurant space at the ground floor with support services at the cellar level accessed by a second building elevator. The key distinction between the two scenarios is that the proposed plan provides for additional space in the form of an outdoor terrace, aligned with the height of the adjacent High Line. Although direct access from the High Line to the outdoor terrace is not available, the visibility is expected to have a positive impact on the restaurant operations. The nearest access point from the High Line is at Gansevoort and Washington Street, one block south of the subject site.

In general, under the proposed plan, there is an expectation that a premium would be paid for a restaurant space with a terrace in a desirable Manhattan location like the Meatpacking District. As shown below, the rents can range between $120 to $250 (and as high as $400) per square foot annually, depending on location foot traffic, the profile of the space itself, amenities, and views.

It is assumed that the restaurant space will be assigned a rental rate that reflects a blend of value of the cellar level and ground floor space, and in the case of the proposed plan, an added value will be assigned to the on-site front yard setback/parking area and the open terrace. It is expected that the rental rates will be influenced by the limited storefront display area as well as the configuration of the common core and its impact on the utility of the remaining space.

A restaurant use at the subject site is better suited to the challenges of the space configuration and size compared to a traditional inline retail use. Unlike traditional retail that benefits from a concentration or continuum of retail stores, a restaurant can establish its own identity and is less influenced by the location. Under both development scenarios, this commercial space has a specialty profile and is not an easy match to the limited commercial retail condominium sales in the area. Therefore, the revenue associated with this restaurant space is derived from rental income compared to sales transaction. The design of restaurant space at the subject site is unique, therefore, direct lease comparables are not available. The table below presents a best effort to provide a basis from which to assign a rental rate to the multi-level restaurant space under both the “as-of-right” and proposed development scenarios.

Exhibit 3

Restaurant Lease Comparables - Adjustment Grid

	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5
Location	823 Washington St	248 West 14th St (Built-Out)	245 West 14th St (Build out)	70 Seventh Ave (Built Out)	301 West 13th St (Built-Out)
Block-Lot	644-23	618-9	764-7503	764-39	629-42
Lease Date	Immediate	Immediate	Leased	Immediate	Immediate
Size (SF)	1,125	2,000	3,964	1,200	500
Price/SF	$185.00	$180.00	$135.00	$185.00	$240.00
Time	0.95	0.95	1.05	0.95	0.95
Location	1.00	0.95	0.95	0.95	0.95
Size	0.90	0.95	1.00	0.90	0.80
Condition (Built Out)	1.00	0.90	0.90	0.90	0.90
Visibility	0.80	0.80	0.80	0.80	0.80
Outdoor Dining / Event Space	1.25	1.25	1.25	1.25	1.25
Composite Adj.	0.86	0.77	0.90	0.73	0.65
Adj. Price/SF	**$158.18**	**$138.89**	**$121.20**	**$135.24**	**$155.95**
Avg. Adj. Price/SF		**$ 141.89 /SF**			

Commercial Restaurant Lease Comparables – Adjustment Factors

Time: Adjustments downward were made to all lease comparables to reflect the negotiability of asking prices. Comp #3 was leased about a year ago and requires an upward adjustment.

Location: Except for Comp # 1, nearby the subject site, a downward adjustment was made to the remaining lease comparables as they front active corridors and are a part of a continuum of retail use.

Size: A downward adjustment was made to lease comparables with spaces smaller than the subject site, as rental rates tend to garner a higher rates per square foot for smaller spaces.

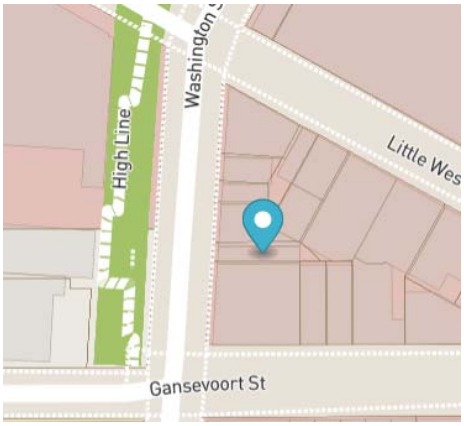
Condition (Built-Out): Downward adjustments were made to all comparables, except Comp # 1, to reflect the restaurant built-out construction condition.

Visibility: The subject site offers very little storefront display frontage, while the lease comparables provide a traditional storefront merchandising-signage area for the prospective tenant.

Outdoor Dining/Event Space: Unique to the proposed plan is the commercial space that offers outdoor dining and event-showroom type space which allows for additional revenue. Under the "as-of-right" scenario, there is no outdoor dining; therefore, the rental rate does not incorporate the added value as noted above.

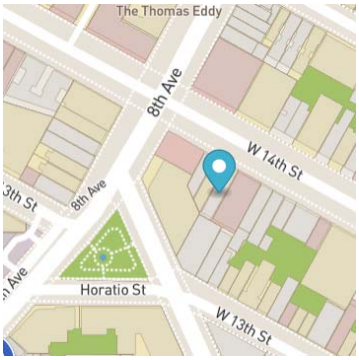
Based on the above, the "as-of-right" space totaling 2,143 square feet reflects a blended rental rate of $163 per square foot (i.e., $200/sf assigned to the ground floor space and 50% of the ground floor rate for the cellar space).

The proposed plan that totals 3,701 square feet applies the same blended rental rate methodology and results in $134 per square foot. More specifically, $200/sf is assigned to the ground floor space, and 50% of the ground floor rate is assigned to the cellar space and the outdoor dining terrace including the interior stairwell and the additional outdoor terrace at the rear of the mechanical floor, accessed from an exterior stair.





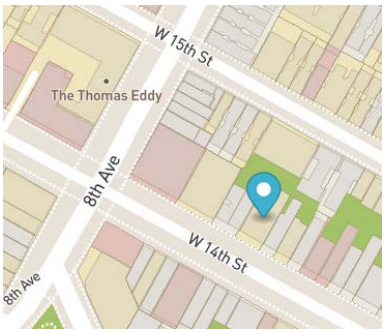
Comp # 1 - 823 Washington Street







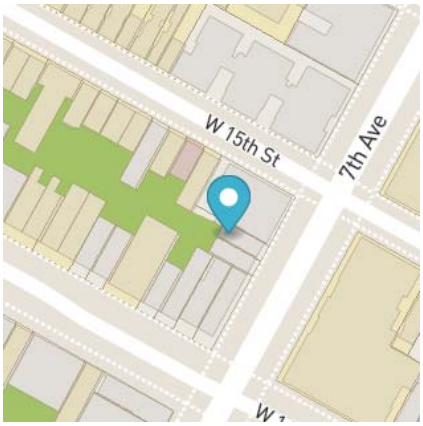
Comp # 2 - 248 W 14th Street





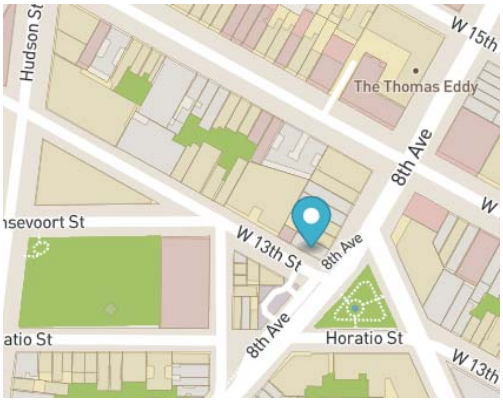


Comp # 3 - 245 W 14th Street





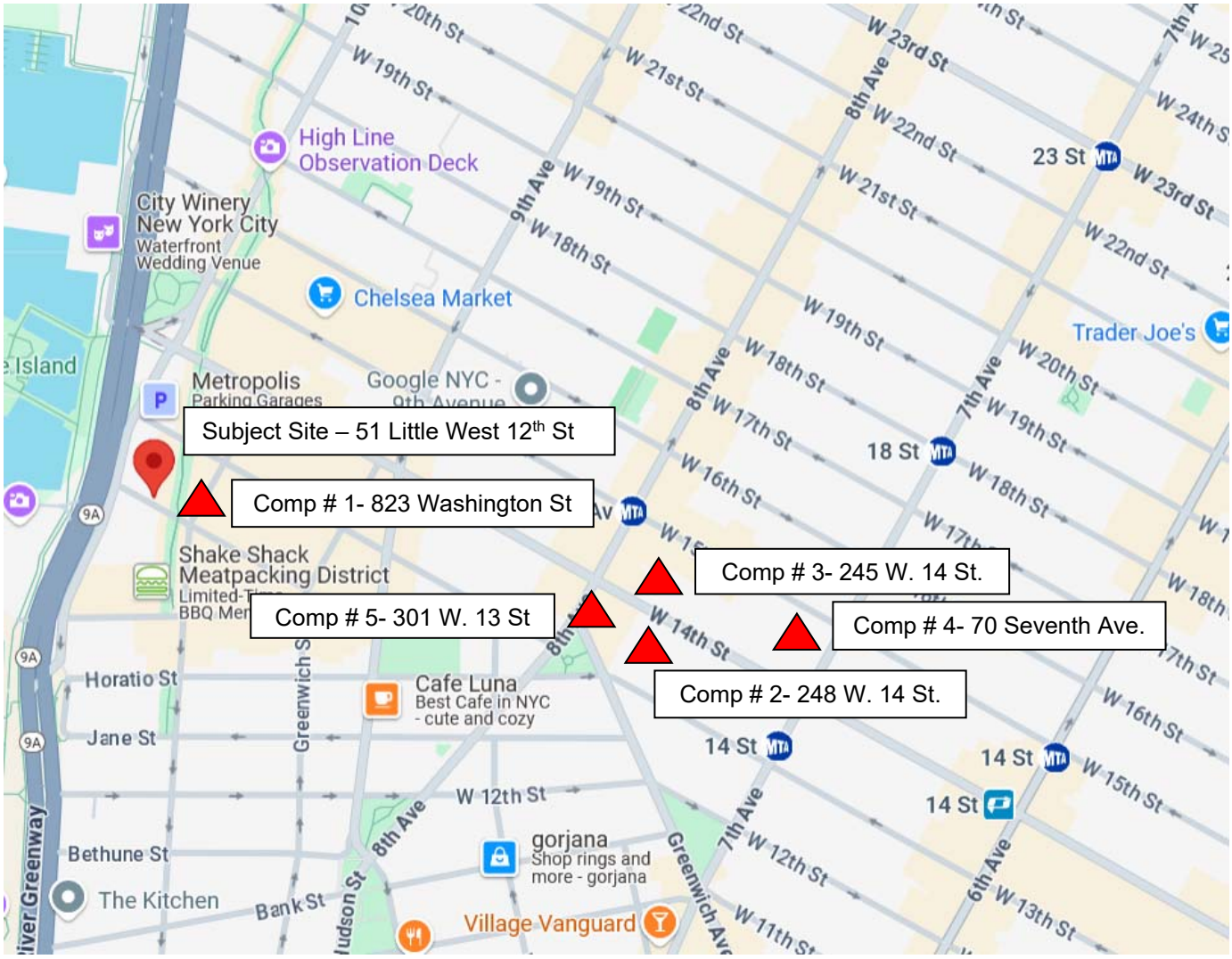
Comp # 4 - 70 Seventh Avenue





Comp # 5- 301 West 13th Street

Subject Site and Restaurant Lease Comparables



Office Lease Comparables

The "as-of-right" commercial development scenario consists of a 6-story building with restaurant space on the ground floor and commercial office space on the upper floors above the 2nd floor mechanical level. The common core requirements reduce the utility of the office space overall, as the floorplate of 2,034 gross square feet is reduced to 1,380 square feet. Additionally, although a small building, the single elevator increases wait times which also negatively impacts marketability. Lastly, although the useable space from a tenant perspective is very important as alternatives are considered, the overall rental income (from the landlord's perspective), is based on gross square feet of non-restaurant ground floor space and upper floor office use (13,556 sf total), not net square feet of the office space itself.

Exhibit 4

Office Lease Comparables - Adjustment Grid

	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5
Location	314 West 14th St (Partial Built-Out)	426 West 14th St - 2nd flr	112-114 West 14 St - 5th Flr	31 Washington Sq. West - (Medical-Built Out) - 3rd flr	419 West 13th St- 2nd flr
Block -Lot	629-28	646-29	609-31	552-61	646-56
Lease Date	Immediate	Immediate	Immediate	Immediate	Immediate
Size (SF)	1,100	3,212	1,159	1,200	3,023
Price/SF	$60.00	$59.00	$56.45	$65.00	$70.00
Adjustment Factors					
Time	0.95	0.95	0.95	0.95	0.95
Location	0.95	1.00	0.95	0.95	1.00
Size	1.00	1.05	1.00	1.00	1.05
Condition (Built-Out)	0.95	1.05	1.05	0.95	1.05
Composite Adj.	0.86	1.05	0.95	0.86	1.05
Adj. Price/SF	**$51.44**	**$61.80**	**$53.49**	**$55.73**	**$73.32**
Avg. Adj. Price/SF		**$ 59.16/SF, Say $60.00/SF**			

Commercial Office Lease Comparables – Adjustment Factors

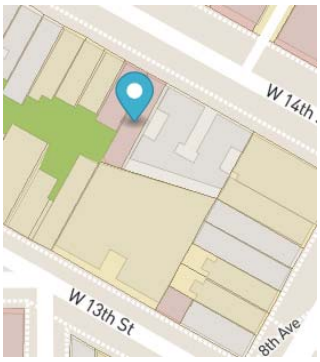
Time: A downward adjustment was made to all comparables to reflect the negotiability of asking prices.

Location: Downward adjustments were made as all the lease comparables, except Comps # 1 and #5, as they are better located in terms of proximity to public transportation.

Size: An upward adjustment was made to Comps # 2 and # 5, as the unit size for the "as-of-right" office use at the subject site are smaller, which tend to garner a higher price per square foot.

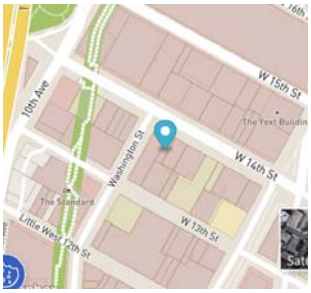
Condition: Upward adjustments were made to all comparables, except Comps # 1 and # 4, to reflect the new construction at the subject site. The downward adjustment for Comps #1 and # 4 reflects the built-out condition of the space.

Based on the above, the commercial office space is assigned $60.00 per gross square foot in the "as-of-right" development scenario.



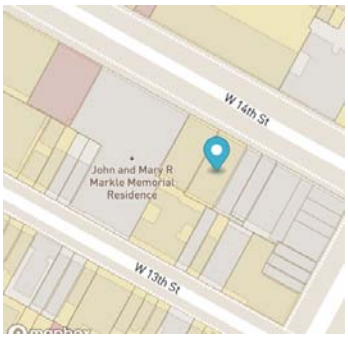


Comp # 1 – 314 W 14th Street



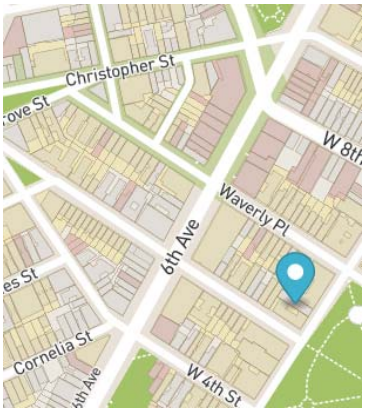



Comp # 2 - 426 W 14th Street



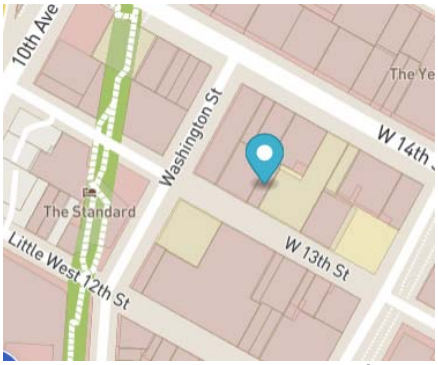


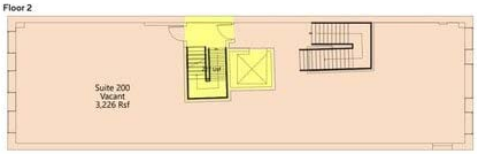

Comp # 3 – 112-114 West 14 Street





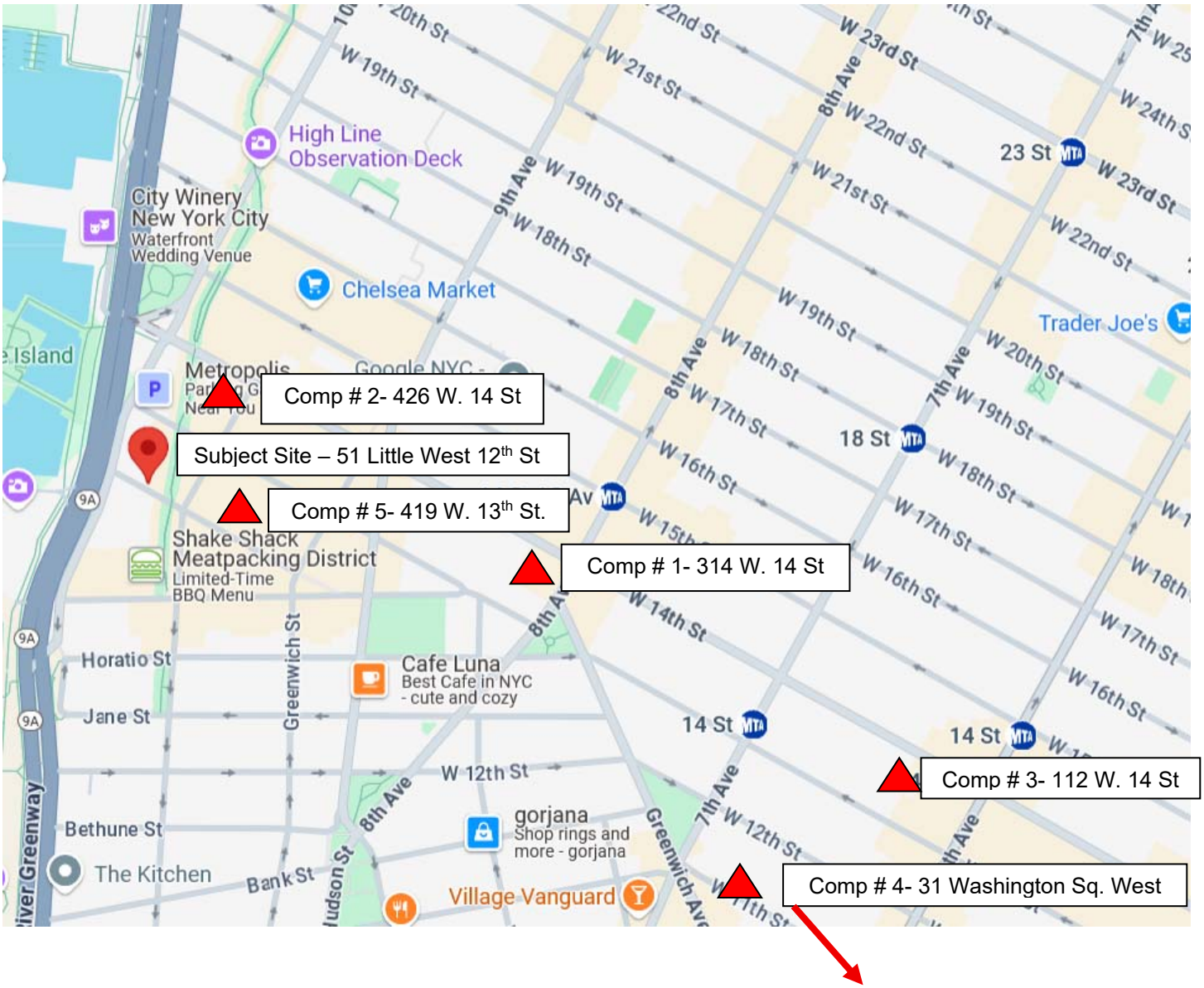

Comp # 4 - 31 Washington Square West



Comp # 5 - 419 West 13th Street

Subject Site and Commercial Office Lease Comparables



COMPARABLE RESIDENTIAL SALES

The proposed development scenario analyzed in this report is represented by a 14-story building with restaurant space associated with the cellar level, ground floor, front yard parking area, and an outdoor dining terrace at the second floor and rear roof terrace at the mechanical floor. The 12 residential condominium units consist of two-bedroom/1.5 bath units on floors 3 through 14. The unit size of 818 square feet is the same for the all the two-bedroom units. In total, the net residential area totals 9,816 square feet. Individual units benefit from balconies at the front (Little West 12th Street) of the building with a downtown and river view extending south to the Freedom Tower and Statue of Liberty. However, given the planned Gansevoort Square development opposite the subject site, it is expected that the view corridors at the subject site will be negatively impacted in some manner, thereby affecting the sale price.

Due to the small size of the site, the proposed development scenario has a single elevator servicing all the floors which may increase wait times. Moreover, although the interior stairwell incorporated into the ground floor restaurant space to access the 2nd floor terrace will serve most patrons, the residential passenger elevator will shared by some restaurant patrons.

The proposed residential development scenario at the subject site, when compared to the available units in the market are generally smaller and tend to be located within existing buildings, as new condominium developments offer larger units of 1,000 square feet or more and also incorporate full service amenities as well. The subject site will be at a competitive disadvantage due to its lack of building-wide amenities, lower ceiling heights (i.e., standard is 10 feet) and the one elevator to service all 14 floors. Moreover, maximizing the development potential for Block 644 (Gansevoort Square) as described in the NYCEDC presentation will no doubt leave the subject site (again) in the shadows of adjacent oversized properties, which will negatively impact the sales of the condo units. It is expected that the subject site's condominium units will have high quality finishes throughout to offset some of the disadvantages compared to other available units offered in the market. These quality finishes are assumed to be represented by Luxury High Rise occupancy category shown in the Marshall & Swift Valuation Service cost manual.

Residential Condominium Sales Market

The Manhattan condominium sales reports prepared by Douglas Elliman and Corcoran for the 1st Quarter 2025 provide context for determining comparability to the proposed plan for the subject site. The focus is on new developments, particularly in the Downtown target area and for units that approximate 803 square feet, whether the units are a one-bedroom or two bedroom. Both reports provide similar statistics, although

The Corcoran Report offers insight into the Downtown market, while the Elliman report only evaluates Manhattan sales overall. Both reports are provided in the Appendix.

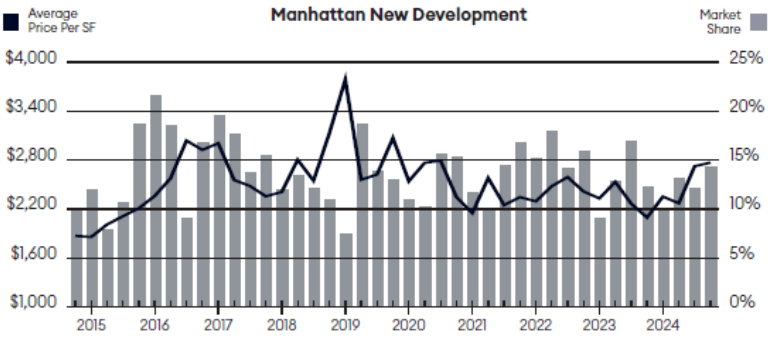
According to The Corcoran Report, condominium sales within new developments had a median sales price of $2,355,000 or $1,914 per square foot in 1st quarter 2025, a minimal increase from the 1st quarter 2024. The median price for studio units was $812,000, $1,245,000 for a one-bedroom, and $2,495,000 for a two-bedroom unit.

<u>Manhattan – New Development Sales Overall</u>

New Development

- Sales surged annually at a much greater rate than resales, especially sales exceeding $5 million
- Average sales size grew annually at its second-fastest rate in over four years
- Market share of new development sales aligned with the decade average for the first quarter

New Development Mix	Sales Share	YoY% Sales Change
‹ $1M	15.6%	54.5%
$1M - $3M	46.8%	36.6%
› $3M	37.6%	156.3%



New Development Matrix	Q1-2025	%Δ (QTR)	Q4-2024	%Δ (YR)	Q1-2024
Average Sales Price	$3,951,377	-7.7%	$4,281,763	21.4%	$3,255,063
Average Price per Sq Ft	$2,563	-7.4%	$2,769	9.0%	$2,352
Median Sales Price	$2,380,000	-2.0%	$2,427,500	13.3%	$2,100,000
Number of Sales (Closed)	327	-8.7%	358	69.4%	193
Days on Market (From Last List Date)	88	-14.6%	103	6.0%	83
Listing Discount (From Last List Price)	7.5%		5.4%		6.6%
Listing Inventory	1,165	-2.2%	1,191	6.0%	1,099
Months of Supply	10.7	7.0%	10.0	-37.4%	17.1
Sales Share of Overall Market	12.8%		14.3%		9.7%

Questions or comments? Email report author
Jonathan Miller at jmiller@millersamuel.com
Methodology: millersamuel.com/research-reports/methodology

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Source: Elliman Report – Manhattan Sales – 1st Quarter 2025

New Development Prices

PRICES	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
MEDIAN PRICE	$2.355M	$2.363M	0%	$2.410M	-2%
AVERAGE PRICE	$3.752M	$3.592M	4%	$4.430M	-15%
MEDIAN PPSF	$1,914	$1,876	2%	$2,059	-7%
AVERAGE PPSF	$2,404	$2,384	1%	$2,809	-14%
MEDIAN PRICE BY BEDROOM					
STUDIO	$812K	$768K	6%	$940K	-14%
1 BEDROOM	$1.245M	$1.400M	-11%	$1.250M	0%
2 BEDROOM	$2.495M	$2.300M	8%	$2.485M	0%
3+ BEDROOM	$5.750M	$4.400M	31%	$6.095M	-6%

Source: The Corcoran Report – Manhattan – 1st Qtr 2025

Manhattan – New Development – Downtown Area

Within the Downtown target area defined in The Corcoran Report, the median sales price for all unit types was $2,950,000, or $2,155 per square foot, practically no change from 2024 1st quarter. The median price for studio units was $875,000, $1,535,000 for a one-bedroom, and $3,322,000 for a two-bedroom unit. It is important to note that the increase in sales prices from 2024 1st quarter for two-bedroom units ($2.8 million to $3.2 million) as well as three-bedroom units is direct reflection of new developments providing large units with full service, building-wide amenities. The residential condominium pricing under the proposed plan is expected to be more aligned with the smaller units, regardless of unit type.

	NEW DEVELOPMENT		
	1Q25		1Q24
Median Price	$2.950M	0%	$2.951M
Average Price	$4.462M	+11%	$4.015M
Median PPSF	$2,155	-1%	$2,175
Average PPSF	$2,618	+6%	$2,463

NEW DEVELOPMENT

1Q25

STUDIO	$875K	+13%
1 BEDROOM	$1.535M	-21%
2 BEDROOM	$3.322M	+18%
3+ BEDROOM	$7.921M	+34%

1Q24

STUDIO	$774K
1 BEDROOM	$1.947M
2 BEDROOM	$2.811M
3+ BEDROOM	$5.925M

Source: The Corcoran Report – Manhattan – 1st Qtr 2025

Residential Sales Comparables

Research on recent residential condominium sales was undertaken to identify buildings and units that may be comparable to the residential units presented in the proposed plan. Of the 114 residential condo sales identified within the vicinity of the subject site, approximately 70 or 61% were units with over 1,000 square feet, not comparable to the proposed plan units that average 818 square feet presented as two-bedroom/1.5 bath units. The limited universe from which to identify comparables was further defined by the subject site's location, recent construction, building-wide amenities, and its potential for water views from an exterior balcony of each unit. Given that condo sales are primarily based on unit size (ie., price per square foot), the following sales comparables presented in **Exhibits 5** reflect units of similar size to the proposed plan.

Units between 800 and 850 Square Feet

The proposed plan provides for two-bedroom units on floors 3-14. Each unit is 818 square feet and incorporates a front balcony facing a southern view.

Exhibit 5

Residential Sales Comparables (Between 800-850 Square Feet) – Adjustment Grid

	NO. 1	NO. 2	NO. 3	NO. 4
Location	150 Barrow St	150 Barrow St	299 West 12th St	400 West 12 St
Unit #	6E	6C	11F	16D
Block-Lot	604-7502	604-7502	625-7501	640-7501
Sales Date	1/27/2025	9/25/2024	11/21/2024	5/12/2025
Unit Size (SF)	829	848	850	855
Sales Price	$2,670,000	$2,650,000	$2,500,000	$2,400,000
Price/SF	$3,221	$3,125	$2,941	$2,807
Adjustment Factors				
Time	1.00	1.00	1.00	1.00
Location	0.95	1.00	1.05	1.00
Size	1.00	1.00	1.00	1.00
Bldg Wide Amenities	0.75	0.75	0.85	0.75
Condition	1.05	1.05	1.05	1.05
View Corridor	1.00	1.00	1.15	1.00
Composite. Adj.	**0.75**	**0.79**	**1.08**	**0.79**
Adj. Price/SF	**$2,410**	**$2,461**	**$3,170**	**$2,211**
Avg. Adj. Price/SF:		**$ 2,563/SF**		

Time: The sales comparables reflect recent sales and don't require an adjustment.

Location: Although all the sales comparables are within proximity of the subject site and are considered attractive locations, Comp #3 is located more inland and requires an upward adjustment to reflect the subject site's distance from the waterfront.

Size: The sales comparables are similar to the subject site and don't require an adjustment.

Building-Wide Amenities: Downward adjustments were made to all sales comparables, as to reflect the building-wide amenities offered such as a gym, full time doorman/concierge, generous roof deck, extra storage etc. compared to the subject site where a small amount of extra storage is available to all residents.

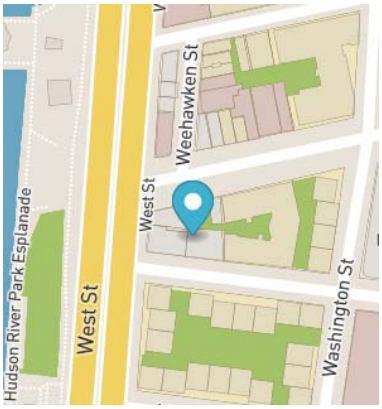
Condition: An upward adjustment is assigned to all comparables as the subject site will be new construction.

View Corridor: All sales comparables, except Comp # 3, are located within buildings that are a short distance to the Hudson River and provide water views and therefore do not require an adjustment.

Based on the above, the average adjusted sales price per square foot for the 818 square foot units on floors 3-14 of the proposed plan is $2,563 per square foot. Individual pricing of each unit was applied to reflect the value of both the interior and the exterior space for each unit, as well as the location within the building. A residential stacking plan and is presented in the **Appendix**. The pro forma analysis utilizes the average unit price shown in the stacking plan.

Photos, unit floor plans and a map are shown below for each of the residential sales comparable presented in **Exhibit 5**.





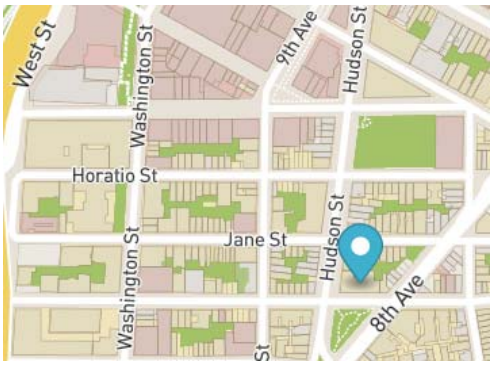
Comps #1 and #2 - 150 Barrow - #6E & #6C



Comp # 1 - Unit #6E



Comp # 2 - Unit #6C







Comp # 3 - 299 West 12th Street - #11F

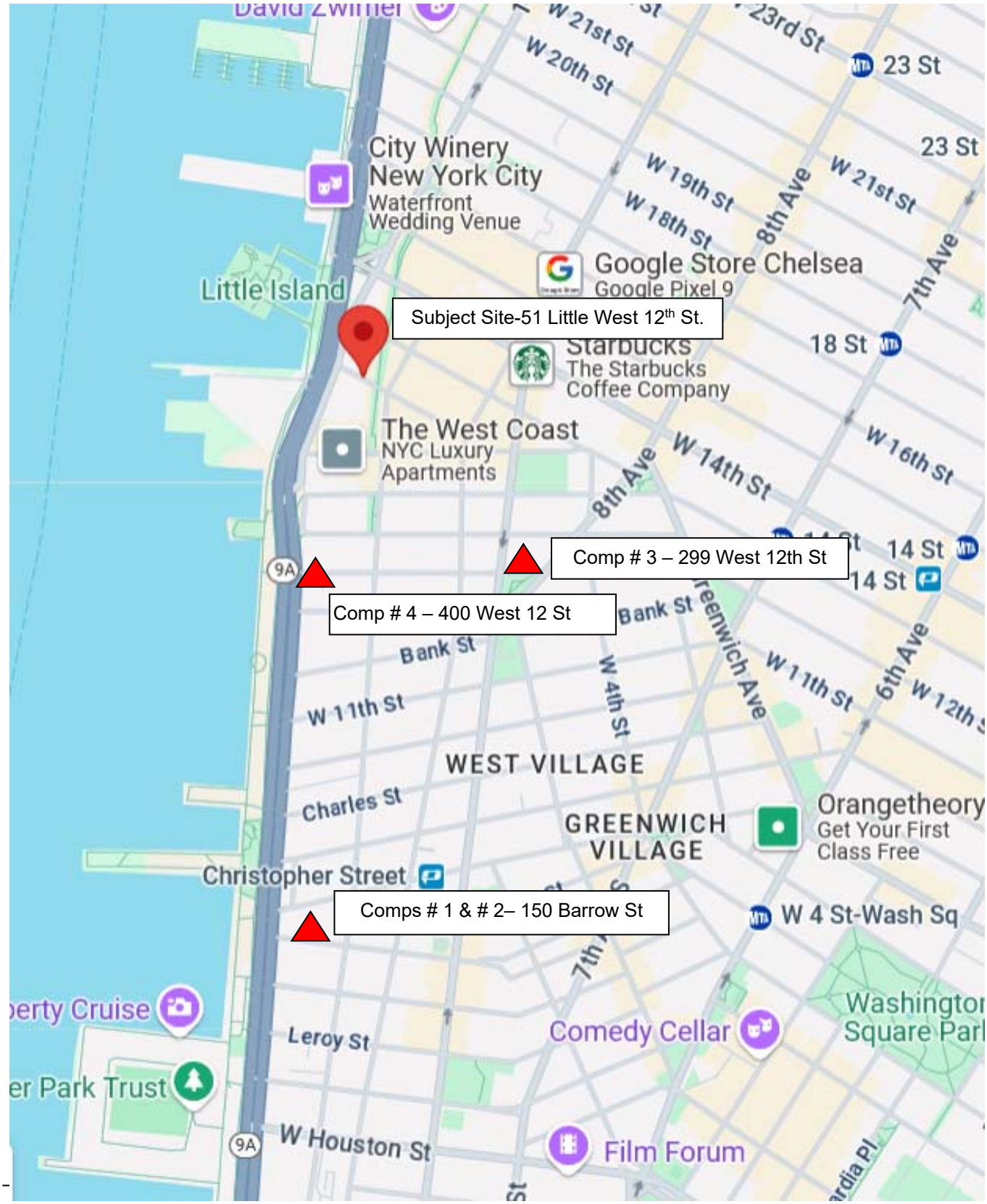






Comp # 4- 400 West 12th Street - #16D

Subject Site and Residential (Units 700-850 SqFt) Sales Comparables



Outdoor Space

An added value of the outdoor space was incorporated into the overall sales price for each unit based on an accepted methodology or rule of thumb, put forth by Miller Samuel Inc. - Real Estate Appraisers and Consultants. Based on Manhattan apartment sales data, it was stated that the "general relationship between finished terrace space and interior space – terraces valued at 25%-50% of the price per square foot of the interior space".

To incorporate that added value to the private open spaces associated with the units in the proposed development scenario, the Residential Stacking Plan (See Appendix) applied the 30% rule as described above to the units. The value of the exterior space anticipates the negative impact associated with the planned Gansevoort project, with its maximizing development scheme for the entire Block 644 and the 60-story residential tower situated at the corner, directly obstructing the water views from the front balconies of the proposed plan for the subject site.

Comparable Rate Summary

Exhibit 6 below summarizes the adjusted comparable rates for the subject site's "as-of-right" and proposed development scenarios.

Exhibit 6

Comparable Rates and Pro-Forma Rate Summary

Use	Comparable Rate	Pro Forma Rate
Site Value	**$7,250,168**	**$7,250,168**
Restaurant (Blended) Rental		
As-of-Right	$ 141.89/SF	$ 163.00/SF
Proposed	$ 141.89/SF	$ 134.00/SF
Office Rental	$ 59.16/SF	$ 60.00/SF
Residential Condo Sales		
Units 800-850 SF	Avg. $2,563/SF	Avg. $2,548/SF See Stacking Plan

COST ANALYSIS

Construction costs for each of the scenarios analyzed is represented by the Marshall & Swift Valuation Service for the above grade building area and the estimated foundation costs prepared by DeSimone Engineers and ConsultMAB LLC. The Marshall & Swift costs are adjusted to local conditions and updated according to the June 2025 cost modifiers shown in the Marshall & Swift cost manual. They are assumed to represent typical costs in the New York market for the type of structure contemplated in each scenario. Where special items exist, such as sprinklers, elevators, HVAC systems, or office finishes, they have been added to the base cost.

Development at the subject site is a challenge in many ways. The small lot size and narrow configuration informs architectural and structural design decisions. Moreover, the subsurface conditions as they relate to soil capacity, the high water table and the uncertainty of the existing adjacent building (53 Little West 12th Street) to the west built in 1910, all contribute to the foundation design and premium costs for both the "as-of-right" and proposed development scenarios.

Special Premium Costs: Foundation

The structural design prepared by DeSimone Engineers presents an integrated support of excavation and foundation design that serves multiple functions. The cost estimate prepared by ConsultMAB reflects the premium cost for this complex foundation system under the "as-of-right" and proposed development scenarios. These costs are presented as a separate line item in the pro forma analysis. Details for all construction cost components are in the **Appendix**.

6-Story Commercial Building

According to Marshall & Swift Valuation Service, the base cost for a Good Class B commercial building is $296.02 per square foot of above grade area, and includes the tenant elevator, an added elevator and stop to the cellar, the shell space for the ground floor restaurant use and sprinklers. The configuration of the lot has a major effect of the size and shape of the building. More specifically, the large proportion of exterior wall area (i.e. façade) to the overall floor area adds a premium to the cost of the building. In addition to the base cost, façade ratio adjustment, building and floor height adjustments are applied. The local multiplier for Manhattan and the adjustment to reflect current June 2025 costs was applied as well. The base construction costs for this type of structure rise to $438.06 per square foot of above grade building area, or a total cost of $6,529,225. Alternatively, the cost per square foot for the gross building area including the cellar level foundation is $454.66 per square foot.

14-Story Residential and Restaurant Building

According to Marshall & Swift Valuation Service, the base cost for a Good Class B Luxury residential elevator building is $363.39 per square foot of above grade area, and includes the residential passenger elevator, an added elevator and stop to the cellar level, the shell space for the ground floor restaurant use, the open (second floor) terrace, balconies, the parking area at the front yard, and sprinklers. In addition to the façade ratio adjustment, building and floor height adjustments were applied as well as the multiplier for Manhattan and adjusting to June 2025 costs. The base above grade construction costs for this type of structure rise to $593.93 per square foot of above grade building area, or a total cost of $12,254,657. Alternatively, the cost per square foot for the gross building area including the cellar level foundation is $529.18 per square foot of above grade building area.

Development Scenario	**Est. Base Construction Cost**
"As-of-Right" Scenario: 17,429 gross sf (incl. cellar)	
Above Grade Building Area	$6,529,225
Below Grade Foundation	$1,395,127
Total	$7,924,352, $454.66/SF
Proposed Plan: 23,158 gross sf (incl. cellar)	
Above Grade Building Area	$12,254,657
Below Grade Foundation	$ 1,797,160
Total	$ 14,051,817, $606.78/SF

PRO FORMA ANALYSIS

Exhibit 7 presents a summary of the assumptions used in each scenario. **Exhibit 8** presents a summary of costs, income, and expenses for each development scenario, as well as an investment analysis for each scenario.

Exhibit 9 presents a breakdown of the development costs for each scenario, including land valuation, base construction costs, FF & E costs, financing and soft costs. Additionally, a breakdown of the soft costs and financing costs for each scenario is presented.

Economic and Financial Assumptions

The building size, zoning floor area and rentable area are as per the architectural schemes prepared by Walter Marin Architect. The hard construction costs (above grade) are as per the estimates provided by the Marshall & Swift Valuation cost manual; the preliminary structural design was prepared by DeSimone Engineers and the premium cost associated with the support of excavation and foundation was prepared by ConsultMAB LLC.

The **construction loan rate for market rate scenarios** is based on the average paid in a survey of 312 appraisers, lenders and developers taken by *RealtyRates.com* in the second quarter of 2025.

The **construction loan amount** is equal to 75% of the total development costs, as this is the average loan to cost ratio according to the *RealtyRates.com* survey.

Lease and Sales rates were based on an analysis of comparable sales (see **Exhibit 6**). **Current and New Real Estate Taxes** are the actual 2025 taxes on the property for the “as-of-right” commercial development scenario and the commercial space associated with the restaurant use of the proposed plan.

Soft costs are based on industry standards for each type of development envisioned in each scenario. Where they are typically calculated on a percentage basis, this is shown in **Exhibit 9**.

Exhibit 7

Basic Development Assumptions

	As of Right Restaurant & Office Rental - 6 Story	Proposed Restaurant & Residential Condo - 14 Story
Site Area	2,581	2,581
Gross Building Area - Above Grade (SF)	14,905	20,633
Gross Building Area - Including Cellar (SF)	17,429	23,158
Number of Stories	6	10
Zoning Floor Area (SF)	12,904	18,258
FAR over Entire Site	5.00	7.07
Rentable/Saleable Area		
Commercial Office Gross SF	13,556	
Restaurant SF: Cellar,Grnd Flr, Adj. Highline & Rear Terrace		3,701
Restaurant SF: Cellar,Grnd Flr	2,143	
Residential -Two Bedrm/1.5 Bath: # Units		#REF!
Total Residential Units		12
Net Residential (SF)		9,816
Construction Loan Rate	5.0%	5.0%
Lease up/Sellout Time - Months	11	20
Construction Loan Amt.	$11,792,989	$16,073,640
Site Value	$7,250,168	$7,250,168
Sales & Lease Rates - Sq. Ft.		
Commercial Office-$/SF	$60	
Restaurant (Blended)- $/SF	$163	$134
Residential Unit - Approx 818 SF : Avg. $/SF		$2,548
Commercial Vacancy Rate	5.0%	5.0%
FF&E (Restaurant & Ofc. Only | Resid Condo incl. MS Cost)	$35.00	$35.00
Base Constr. Costs/SF - Entire Bldg. (incl. Cellar SF)	$454.66	$606.78
Total Base Constr. Costs (Above Grade SF)	$6,529,225	$12,254,657
Total Premium Foundation Cost	$1,395,127	$1,797,160
M&O Expenses	$7.30	
Management	5.0%	
Current Real Estate Taxes	$39,732	$39,732
New Real Estate Taxes *	$39,732	$39,732
Capitalization Rate	7.5%	7.0%

Exhibit 8

Pro Forma Analysis Summary

	As of Right Restaurant & Office Rental - 6 Story	Proposed Restaurant & Residential Condo - 14 Story
Building Area (Sq. Ft.)		
FAR	5.00	7.07
Total Zoning Floor Area	12,904	18,258
Rentable/Saleable Residential Area	0	9,816
Rentable Restaurant Area	2,143	3,701
Rentable Commercial Office Area	13,556	0
Capital Investment Summary		
Site Value	$7,250,168	$7,250,168
Base Constr. Costs (Above Grade Bldg SF)	$6,529,225	$12,254,657
Total Premium Foundation Cost	$1,395,127	$1,797,160
FF&E (Int. Dec. & Fixt.)	$549,465	$129,535
Est. Soft Costs	$1,240,282	$3,188,256
Est. Total Dev. Costs	**$16,964,267**	**$24,619,776**
Rental Income and Expenses		
Restaurant Rental Income	$349,200	$495,100
Commercial Office Rental Income	$813,360	$0
Gross Rental Income	**$1,162,560**	**$495,100**
Less Vacancy	($58,128)	($24,755)
Effective Rental Income	**$1,104,432**	**$470,345**
Less M&O Expenses	($108,807)	
Management	($55,222)	
Less Real Estate Taxes (Commercial Part)	($39,732)	($7,127)
Net Operating Income	**$900,672**	**$463,218**
Return on Investment		
Project Development Cost	$16,964,267	$24,619,776
Less Capitalized Value of Net Operating Income	($12,008,959)	($6,579,803)
Less Residential Sales		($25,015,224)
Est. Project Value/Profit	**($4,955,308)**	**$6,975,251**
Annualized Return As % of Cost	**-11.3%**	**6.7%**

Exhibit 9

Development Cost Summary

		As of Right Restaurant & Office Rental - 6 Story	Proposed Restaurant & Residential Condo - 14 Story
	Basis		
Site Value		$7,250,168	$7,250,168
Base Constr. Costs (Above Grad Bldg SF)		$6,529,225	$12,254,657
Total Premium Foundation Cost		$1,395,127	$1,797,160
FF&E (Int. Dec. & Fixt.)		$549,465	$129,535
Est. Soft Costs		$1,240,282	$3,188,256
Est. Total Dev. Costs		**$16,964,267**	**$24,619,776**
Est. Const. Loan Amount		$11,792,989	$16,073,640
Est. Const. Period (Mo.)		20	30
Est. Soft Costs:			
Archit. & Engin. Fees; Nominal Bldg Permit Fees & Survey		Incl. in MS Cost	Incl. in MS Cost
Construction Management	3.5%	$296,584	$745,569
Controlled Inspections, Borings & On-Going Surveys/Expediting		$35,000	$35,000
Dev. Legal Fees		$25,000	$45,000
Site Safety/Security & Other Consultants		$30,000	$30,000
Permits & Approvals		$25,000	$30,000
Accounting		$5,000	$7,500
Real Property Tax		$102,641	$167,007
Insurance	3%	$195,877	$367,640
Appraisal Fees		$6,500	$6,500
Con. Loan Int., Loan Rate@	5.00%	Incl. in MS Cost	Incl. in MS Cost
Con. Lender Fees	1.25%	$147,412	$200,921
Con. Lender Legal		$15,000	$15,000
Bank Inspect. Engin.		$7,500	$7,500
Residential Brokerage-Sales	6%	$0	$1,500,913
Commercial Brokerage	30%	$348,768	$29,706
Total Est. Soft Costs		**$1,240,282**	**$3,188,256**

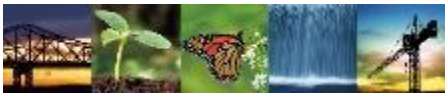
APPENDIX
RESIDENTIAL CONDO STACKING PLAN

Proposed Development Scenario
Residential Stacking Plan - Condo

Floor	Unit Type	Unit SF	$/SF	Sales Price	Unit Outdoor Space	Outdoor Space: Add-On Value	Outdoor SF	Outdoor Space: 30% of Value of Interior SF
14	Two Bedrm/1.5 Bath	818	$2,835	$2,319,049	Front Balconies (165 SF)	$132,326	165	$802
13	Two Bedrm/1.5 Bath	818	$2,779	$2,273,577	Front Balconies (165 SF)	$129,731	165	$786
12	Two Bedrm/1.5 Bath	818	$2,725	$2,228,997	Front Balconies (165 SF)	$127,188	165	$771
11	Two Bedrm/1.5 Bath	818	$2,672	$2,185,291	Front Balconies (165 SF)	$124,694	165	$756
10	Two Bedrm/1.5 Bath	818	$2,619	$2,142,442	Front Balconies (165 SF)	$122,249	165	$741
9	Two Bedrm/1.5 Bath	818	$2,568	$2,100,434	Front Balconies (165 SF)	$119,852	165	$726
8	Two Bedrm/1.5 Bath	818	$2,517	$2,059,249	Front Balconies (165 SF)	$117,502	165	$712
7	Two Bedrm/1.5 Bath	818	$2,468	$2,018,871	Front Balconies (165 SF)	$115,198	165	$698
6	Two Bedrm/1.5 Bath	818	$2,420	$1,979,286	Front Balconies (165 SF)	$112,939	165	$684
5	Two Bedrm/1.5 Bath	818	$2,372	$1,940,476	Front Balconies (165 SF)	$110,725	165	$671
4	Two Bedrm/1.5 Bath	818	$2,326	$1,902,428	Front Balconies (165 SF)	$108,554	165	$658
3	Two Bedrm/1.5 Bath	818	$2,280	$1,865,125	Front Balconies (165 SF)	$106,425	165	$645
Total		**9,816**	**$2,548**	**$25,015,224**				

Total Units	**12**
Total Unit SF	**9,816**
Total Sales Revenue	**$25,015,224**
Average Unit SF	**818**
Aerage Sales Price/Unit	**$2,084,602**
Average Unit $/SF	**$2,548**

APPENDIX
GZA
Geo Technical ReportFoundation
January 2025



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January 30, 2025
GZA Project No.: 41.0163381.00

Mr. Novac Noury
51 Little West 12th Street
New York, New York 10014

Re: Geotechnical Engineering Report
51 Little West 12th Street
New York, New York 10014



Dear Mr. Noury,

GZA GeoEnvironmental of New York (GZA) is pleased to submit this geotechnical engineering report for the proposed development at 51 Little West 12th Street in New York, New York (Site).

SCOPE OF SERVICES

Our services were performed in accordance with our proposal number 41.P000374.25R1, and are subject to the terms of our agreement and the limitations presented in **Appendix A**.

Our scope of services consisted of performing a subsurface exploration program, geotechnical engineering analyses of the subsurface conditions encountered at the site, and preparation of this engineering report summarizing our observations and geotechnical recommendations.

Elevations in this report are in feet and are referenced to the North American Vertical Datum of 1988 (NAVD 88), unless otherwise noted. This geotechnical report meets the general requirements in Section 1803 of 2022 New York City Building Code (NYCBC) for the proposed work referenced herein.

PROJECT BACKGROUND

Our understanding of the project is based on our email correspondences, subsurface exploration program described herein, and the following documents:

- Draft BSA Plans for the Site, prepared by Marin Architects, dated October 10, 2024;
- "As-of-Right" Architectural Drawings, prepared by Marin Architects, dated October 10, 2024; and
- Property Survey prepared by Kaba Land Surveying P.C., surveyed on May 24, 2024.

The Site is located at 51 Little West 12th Street in New York, New York, identified on tax maps as Block 645, Lot 21, New York City Department of Buildings (NYCDOB) BIN# 1091846, and is a vacant lot with a footprint area of approximately 2,581 square feet (sf). The property is bounded by a nineteen-story building to the north (North portion of 848 Washington Street) and a one-story building to the east (East portion of 848 Washington Street), a three-story building with a cellar to the west (53 Little West 12th Street), and Little West 12th Street sidewalk to the south.

At the time of this report preparation, a topographic site survey was not available. We have assumed that the existing ground surface elevation at the site is approximately El. +8, based on available topographic maps. A Site Location Map is included as **Figure 1**.

Proposed Construction

Based on the Draft BSA Plans, the proposed development may consist of the construction of a 10-story residential building with a full lot cellar level. This design scheme will be referred to as Option 1. The "As-of-Right" drawings depict the proposed development as a six-story commercial building with a full lot cellar level, retail space on a portion of the ground floor, and mechanical spaces and offices on the upper floors. This design scheme will be referred to as Option 2.

The proposed cellar in both options will have a finished floor elevation of approximately El. -1.0 (about 9 feet below the existing curb elevation), and a footprint area of approximately 2,520 sf. Both options also feature an elevator that extends to the cellar level which typically have pits that extend 5 feet below the cellar slab. We have assumed the foundation system could be up to 3 feet thick resulting an excavation depth of approximately 12 feet below existing curb with localized excavation of up to 17 feet at the elevator pit.

HISTORICAL SUBSURFACE INFORMATION

To check for former marshes or streams in the Site vicinity, we referred to the Sanitary & Topographic Map of the City and Island of New York prepared by Egbert L. Viele. A portion of that map is included here, showing that the project site lies within an area of reclaimed land from the Hudson River. With historic development, the Hudson River marsh and shoreline were extended west by backfilling and raising grades to develop the street grid.



SUBSURFACE EXPLORATION PROGRAM

We conducted a subsurface exploration to evaluate the subsurface materials underlying the project site in accordance with requirements of Section 1803 of the 2022 NYCBC, which consisted of two test borings, five test pits, and geotechnical laboratory testing of selected soil samples. **Figure 2** shows the approximate boring and test pit locations. The boring logs, log key, well log, and rock core log are included in **Appendix B**. Test pit sketches and photographic logs are included in **Appendix C**. Geotechnical laboratory test results are included in **Appendix D**.

You/Client retained PG Environmental Services, Inc. (PGES) of Hauppauge, New York to advance the test borings and test pits at the site between December 26 and 31, 2024. PGES performed the work under the observation of our field representative as described below.

Test Borings

PGES advanced two test borings (identified as B-01[OW] and B-02) using a Geoprobe with mud-rotary drilling techniques and steel casing. The borings were advanced from the existing grade to depths ranging from approximately 99.3 to 100.1 feet. Soil samples were visually classified in the field by our field representative in accordance with the Modified Burmister Soil Classification System. Standard Penetration Tests (SPT) were performed at two-foot intervals during drilling within the top 22 feet and generally at five-foot intervals thereafter in general accordance with ASTM D-1586. A 140-pound automatic hammer was used to drive the split spoon sampler through a distance of 24 inches for each SPT sample. The number of blows required to drive the split spoon sampler from 6 to 18 inches is the SPT N-value, a commonly used indicator of soil density and consistency. The SPT N-values and hammer blows at various depths are recorded on the boring log as well as the Modified Burmister description and the NYCBC Class of Materials for each stratum.

Rock coring was performed in boring B-01(OW) using an NX-size double tube core barrel with a diamond bit. Recovered rock cores were described using a modified International Society for Rock Mechanics (ISRM) system. The rock description, core sample recovery, and the Rock Quality Designation (RQD) for each core run are recorded on the boring logs. Rock recovery is the length of the core recovered divided by the length of the core expressed as a percentage. RQD is defined as the sum of the length of recovered intact rock greater than four inches in length between natural breaks, expressed as a percentage of the total core run. RQD is an indication of the relative frequency of jointing or natural fracturing of the bedrock.

A 1.5-inch PVC temporary groundwater observation well was installed in test boring B-01(OW) to a depth of about 30 feet below ground surface (bgs). The screen interval was at a depth between 20 and 30 feet bgs corresponding to between approximately El. -12 and El. -22. Boring B-02 was backfilled with soil cuttings upon completion of drilling.

Test Pits

GZA observed test pits TP-01 through TP-05 which were excavated by PGES along the perimeter of the property line to expose existing adjacent foundations. GZA's field representative documented the test pits and prepared sketches of the exposed conditions. Dimensions were obtained using a tape measure. Upon completion of documentation, the test pits were backfilled with excavated material.

Soil Laboratory Testing Program

Selected soil samples were sent to Thielsch Engineering of Cranston, Rhode Island for laboratory testing to check our soil descriptions and provide data used in the development of our recommendations. Soil testing included Sieve Analysis (ASTM D-6913), Hydrometer Testing (ASTM D-7928), and Water Content Testing (ASTM D-2216). Laboratory test results are included in **Appendix D**.

SUBSURFACE CONDITIONS

Generalized Subsurface Stratigraphy

Based on the results of GZA's exploration program, the subsurface conditions at the site generally consist of the following, in order of increasing depth from existing grade.

Fill (NYCBC Class 7) – Fill was encountered at the ground surface in all borings and test pits. The Fill extends to depths ranging between approximately 18 and 20 feet bgs and consists of various shades of brown fine to coarse sand or gravel containing up to 50 percent sand, 35 percent silt or silt and clay, and up to 10 percent construction debris such as concrete and brick fragments. Former building foundations, including legacy timber piles or foundation debris is likely located within this Fill layer. Within boring B-02, gravel became wedged within the tip of the split spoon for the sample taken between 14 feet and 16 feet bgs. SPT N-values for tests performed in the Fill ranged from 7 blows per foot (bpf) to split spoon refusal, indicating a variable soil density.

Upper Sand (NYCBC Class 6) – An Upper Sand stratum consisting of primarily red-brown fine to coarse sand with up to 35 percent silt or silt and clay, and varying amounts of gravel and seashells was encountered in both test borings. The Upper Sand stratum extends

to a depth of about 26 feet in test boring B-01(OW) and 33.5 feet in B-02. SPT N-values for tests performed in the Upper Sand stratum ranged from 7 bpf and 28 bpf, averaging 14 bpf. This stratum was generally looser than the Lower Sand stratum encountered deeper in the borings, as described below.

Clayey Silt (NYCBC 5a/5b) – A Clayey Silt stratum (discontinuous) was encountered below the Upper Sand in boring B-01(OW) and was approximately 5 feet thick, extending from approximately El. -18 to El. -23. This stratum generally consisted of gray Clayey Silt containing up to 35 percent sand, and up to 10 percent seashells. The measured SPT N-value of 12 bpf indicates a stiff soil condition. Based on our experience in the vicinity of the Site, this stratum can be discontinuous and can vary in thickness and may be encountered within various sections of the site.

Lower Sand (NYCBC 3a/3b) – A Lower Sand stratum was encountered below the Clayey Silt in boring B-01(OW) and below the Upper Sand in B-02. This stratum was approximately 59 feet to 61.5 feet thick. The Lower Sand generally consisted of red-brown fine to coarse sand up to 50 percent silt or clayey silt, 10 percent gravel, and varying amounts of mica. Lab results indicated that sample S-16 within B-01(OW) (sampled between 50 to 52 feet bgs) consisted of clayey silt with up to 50 percent fine to medium sand. Measured SPT N-values generally varied from 11 bpf to 42 bpf, with an average of 23 bpf, indicating a medium dense condition throughout the soil material.

Decomposed Rock (Class 1d) – A Decomposed Rock stratum was encountered below the Lower Sand stratum in both borings. The Decomposed Rock stratum was encountered at a depth of about 90 feet bgs within B-01(OW), and 95 feet bgs within B-02. Split spoon samples taken within this stratum encountered refusal, indicating a very dense condition.

Bedrock (NYCBC Class 1b/1d) – Bedrock was encountered below the Decomposed Rock in B-01(OW) at a depth of about 94.7 feet, corresponding to a top of rock elevation of approximately El. -86.7 at this boring location. The Bedrock consisted of moderately hard and moderate to moderately severe weathered Manhattan Schist and was observed to have very close to close horizontal to sub-horizontal fractures. Recovery and RQD in the rock cores recovered at B-01(OW) were 0 percent and 83 percent.

Test Pit Observations

A brief description of our observations of test pits TP-01 to TP-05 is summarized below.

Test Pit TP-01: Test Pit TP-01 was excavated along the western property line (adjacent to the three-story portion of 53 Little West 12th Street) to a depth of approximately 10 feet bgs. The foundation wall of 53 Little West 12th Street is parged with an approximately 1/2 -inch-thick layer of concrete and transitioned to a mortared stone rubble. The foundation wall extended to approximately 9.2 feet bgs and is supported on a 6-inch-thick poured concrete footing which protruded 8-inches east of the wall face. A steel bar was used to probe up to 2 feet west of the wall face and did not encounter resistance. The excavated soil within the test pit consisted of brown, fine to coarse sand with some silt, little gravel, and miscellaneous concrete and brick fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-02: Test Pit TP-02 was excavated along the eastern property line (adjacent to 848 Washington Street) to a depth of approximately 10.1 feet bgs. The western concrete wall of 848 Washington Street protrudes approximately 8 inches west of the wall face about 13 inches bgs for a distance of 25 inches. An approximately 6-inch-thick poured concrete slab was observed below the protrusion, followed by an 8-inch-thick layer of gray sand. A 2-foot-thick section of brick was below the gray sand (likely a remnant perimeter wall). The brick was supported by 14 inches of stone which protrudes an additional 10- to 20- inches west. Following the stone layer, a 47-inch-thick stone rubble wall was observed to be supported by a 6-inch-thick concrete footing. This footing protrudes about 8-inches west of the wall face. A 3-foot probe below the footing did not encounter resistance. The excavated soil within the test pit consisted of brown, fine to coarse sand with some silt, little silt, and miscellaneous brick and concrete fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-03: Test Pit TP-03 was excavated along the western property line (adjacent to the two-story portion of 53 Little West 12th Street, and about 40 feet north of TP-01) to a depth of approximately 6 feet bgs. The eastern foundation wall of 53 Little West 12th Street is parged with an approximately 1/2 -inch-thick layer of concrete and protrudes approximately 6 inches east at the ground

surface. The wall extends about 2 feet below the ground surface and is supported by a 4-inch-thick poured concrete slab that protrudes another 10 inches east. The slab was underlain by about 8 inches of Fill material and followed by another 4-inch-thick poured concrete slab. A steel bar was used to probe up to 2 feet west of the wall face at a depth of about 5 feet bgs and did not encounter resistance. The excavated soil within the test pit consisted of various shades of brown or black, fine to coarse sand with varying amount of silt and gravel, and miscellaneous cinders and brick fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-04: Test Pit TP-04 was excavated along the eastern property line (adjacent to 848 Washington Street) to a depth of about 11.3 feet bgs. The western concrete wall of 848 Washington Street is supported by a brick wall at a depth of approximately 18 inches bgs. The brick wall protrudes approximately 8- to 10- inches west of the wall face over a distance of 28 inches. This brick wall extends to a depth of about 11 feet bgs. and is supported by a 4-inch-thick concrete footing that protrudes an additional 13-inches west of the brick wall face. The excavated soil within the test pit consisted of various shades of brown, fine to coarse sand with varying amount of silt and gravel, and miscellaneous cinders, brick, and porcelain fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-05: TP-05 was excavated at the northern portion of the site immediately south of a 4-inch-thick concrete slab. The test pit extended to a depth of approximately 4.5 feet bgs. The north side of the test pit exposed an approximately 26-inch-thick brick wall bearing on cementitious soil. To the west of the brick wall, a concrete mass was observed at a depth of about 26-inches below the top of slab, below the cementitious soil. The vertical and western extents of the brick wall and concrete mass were not observed in the excavation due to time constraints. The excavated soil within the test pit consisted of orange, fine to coarse sand with some gravel, little silt, and some miscellaneous brick and root fragments (Fill). Groundwater was not encountered within the test pit excavation.

Groundwater

A groundwater observation well was installed in Boring B-01(OW) to a depth of approximately 30 feet below existing grade. The average measured depth to groundwater within the observation well during the time of our exploration was about 11.4 feet below existing grade, corresponding to about El. -3.4. Groundwater observations were made within the observation well over three days. Groundwater well construction details and water depth readings are provided on the well log in **Appendix B**. Groundwater was not observed within the test pit excavation given the excavations were only open for a short period of time. Local pumping from adjacent buildings may be impacting the groundwater elevations, as we would expect that the groundwater would typically be at EL. 0 in this area.

Groundwater depths are expected to vary seasonally throughout the year depending on many factors, including precipitation and surface water infiltration, local pumping, utility leakage, and other factors different from those existing at the time the observations were made. Groundwater levels at the time of construction may differ from those presented herein.

Flood Elevation

Based on the Preliminary Flood Insurance Rate Map (FIRM) number 3604970182G, dated December 5, 2013 (after Post-Tropical Cyclone Sandy), the site appears to be within Area AE with a Base Flood Elevation of El. +11. Therefore, pursuant to NYCBC the design flood elevation must be considered in design.

GEOTECHNICAL ENGINEERING RECOMMENDATIONS

Our recommendations are based on our review of the documents noted above, and the subsurface conditions encountered during the exploration. Recommendations may require revisions if the scope of the proposed construction differs from that described herein, or if additional relevant information becomes available.

Key Geotechnical Issues

We have identified the following key geotechnical issues that should be considered by the Client, designers, and Contractor:

- The Fill stratum present below the existing ground surface is unsuitable for support of the proposed structure on shallow foundations and will require deep foundations.
- The Fill stratum contains construction debris, including, legacy timber piles, foundation debris, brick, porcelain, concrete, and cinders, and may lead to difficulty during deep foundation and/or excavation support installation.
- Groundwater was encountered at shallow depths and a dewatering program will likely be needed for foundation, cellar, and elevator pit construction. The dewatering will likely cause some level of settlement and manifest in cracking of masonry of the adjacent buildings founded on shallow foundations.
- The site lies within Flood Zone AE shown on the preliminary FIRM maps and must consider a design water elevation of El. +11.
- Depending on the final geometry and construction configuration, underpinning of the eastern foundation wall of 53 Little West 12th Street and western foundation wall of 848 Washington Street may be necessary for proposed below-grade construction. Underpinning of adjacent buildings will require coordination (legal access agreements) with adjacent property owners and may also require jet grouting due to the excavation below the groundwater table. Additionally, underpinning, support of excavation installation, and the required excavation that will cause some impacts (settlement, cracking) to the abutting buildings.

Geotechnical Design Parameters

Based on the results of our exploration, the following soil design parameters provided in **Table 1** below can be used in design of foundations and construction works such as excavation shoring, if required.

Table 1 – Recommended Soil Design Parameters

Stratum	Total Unit Weight (pcf)	Effective Unit Weight [1] (pcf)	Angle of Internal Friction (deg)	Cohesion (psf)	Coefficient of Friction (soil/concrete)	Earth Pressure Coefficients [4]		
						K_a	K_p	K_o
Compacted Granular Fill	125	62.6	32	-	0.45	0.31	3.3	0.47
Fill (7)	120	57.6	30	-	0.3	0.33	3.0	0.5
Upper Sand (6)	120	57.6	32	-	0.45	0.31	3.3	0.47
Lower Sand (3a/3b)	125	62.6	30	-	0.34	0.33	3.0	0.5
Clayey Silt (5b)	110	47.6	-	1,500	-	-	-	-
Decomposed Rock (1d)	135	72.6	38	-	0.6	0.24	4.2	0.38

Table 1 Notes:

[1] Effective unit weights should be used below the groundwater table in permanent design.

[2] Active and passive earth pressures may be computed using Rankine or Coulomb earth pressure theory.

[3] Surcharge and seismic loading should be included in accordance with the NYCBC.

[4] Refer to the Lateral Earth Pressure section below for additional information.

Foundation Recommendations

Based on the subsurface conditions observed in the test pits and test borings, we recommend that the proposed structure for both design options be supported on a deep foundation system consisting of micropiles bearing in the Lower Sand (NYCBC 3b or better) stratum. Micropiles will support both axial compression and buoyancy forces and can be utilized to transfer the proposed building loads to the Sand.

It is our understanding that both design options include construction of a cellar level with a finished floor elevation of approximately El. -1 (9 feet below existing sidewalk elevation). Deeper excavations of up to 17 feet below the sidewalk, and approximately 5.6 feet below measured groundwater will be required for the elevator pit and pile caps. Underpinning of adjacent building foundations to the bottom of excavation may be complicated by groundwater. To facilitate excavations within dry conditions, jet grout underpinning could be utilized. However, due to the cost, adjacent property legal agreements, extensive dewatering that would be required for excavation, and the impacts to adjacent building foundation from settlement, we recommend against using underpinning.

Our recommended, but still with risk of settlement of the surrounding buildings based on the Contractor's related means and methods, is to utilize tangent micropiles bearing in the Lower Sand stratum. The tangent micropiles can act both as a support of excavation (SOE) system and as foundation elements for the new cellar foundation walls. Installed from the existing site grade, the tangent micropiles would resist a portion of both lateral earth and groundwater pressure, as well as permanent vertical and uplift loads. A liner wall system (designed by others) would be needed inboard of the tangent micropiles to resist permanent groundwater and seismic loads and to allow for the installation of insulation, drainage, and waterproofing between the liner wall and inside of the tangent micropiles. The use of a tangent micropile system will require that these walls be installed inboard of the property line by up to 3 feet, reducing the new cellar footprint. This tangent micropile system can also be used with a soil grouting program to reduce possible settlement of adjacent structures and the groundwater volume that would need to be dewatered and discharged to the sewer system during construction.

Tangent Micropiles

Tangent micropiles are constructed by rotating a steel casing into the ground until it reaches the design tip elevation in a suitable bearing stratum. Soil is removed within the casing with a low-pressure internal water flush and/or using an auger within the casing, followed by injecting a cement grout through a tremie tube to the bottom of the excavation. Tangent micropiles would be installed from the existing ground surface, spaced adjacent to each other without overlapping, forming a relatively continuous wall with minor gaps between each pile.

Tangent micropiles along the perimeter of the property will function as the temporary support of excavation (SOE) and will carry some of the permanent lateral loads. The allowable axial capacities of the tangent micropiles can be determined during the design phase in coordination with structural engineer once foundation loads and proposed cellar geometry is determined. Axial compression and uplift capacity can be achieved at select tangent piles by drilling an additional grouted bond zone below the steel cased section of the pile with a center bar to allow for load transfer, similar to micropiles discussed later in this report. Sacrificial tangent micropiles will need to be installed and tested to check the various loading conditions per NYCDOB requirements. This tangent micropile system would be designed as part of the Support of Excavation process.

Micropiles

Micropiles (similar to tangent micropiles) are drilled grouted piles that transfer structural loads into a suitable bearing stratum. A bond zone is constructed in the bearing stratum where the grout is in contact with the surrounding soil. Above the bond zone, the grout is contained in a permanent steel casing. A full length, high-strength steel bar is placed in the center of each micropile. The grout-soil bond is enhanced through pressurization of the fluid grout immediately upon placement or through post-grouting, where additional grout is pumped into the micropile after the initial grout is set to compact the surrounding soil.

We recommend 10.75-inch diameter micropiles with a casing thickness of 0.545 inches designed for allowable axial loads of 100 kips (50 tons) and 200 kips (100 tons) for supporting the proposed structure. The micropiles should be permanently cased to a depth of 20 feet below the final excavation elevation. The micropiles should be constructed with Grade 75, threaded steel bar over its full length and minimum 4,000 psi cement grout. Centralizers spaced every 10 feet and placed within the top 5 feet of the pile should be attached to the steel bar. Each micropile shall be pressure-grouted through the casing during casing removal. The minimum bond zone is summarized in **Table 2**.

The allowable uplift capacity of the micropiles will vary depending on the length of the pile and structural capacity. The estimated allowable uplift capacities are summarized in **Table 2**.

Table 2: Micropile Summary Table

Micropile Dimensions (in.)	Allowable Compression Capacity (tons)	Allowable Uplift Capacity (tons)	Minimum Pile Length (ft)	Minimum Cased Section Length (ft)	Uncased Section/ Bond Length (ft.)	Center Bar Size	Grout Strength (psi)
10.75 x 0.545	50	30	50	20	30	#11	4000
	100	65	65	20	45	#18	

The estimated allowable axial compression capacity is based on an ultimate axial capacity with a factor of safety of 2.0, assuming that micropiles will have a center-to-center spacing of at least three pile diameters. If micropiles are spaced more closely, additional evaluation of axial capacity is required. Allowable axial compression capacity is to be checked by load tests.

The allowable axial uplift capacity values consider a factor of safety of 3.0, which will not require uplift load testing. A lower factor of safety may be used to estimate the allowable uplift capacity; however, the design uplift capacity would need to be checked through uplift load testing.

The uplift capacity of a pile group is dependent on the number of piles in the group, the length of piles, the configuration of the piles, cap thickness/dimensions, and soil conditions.

Micropile Lateral Capacity

We used the LPile (v.2022) computer program to evaluate the lateral loading conditions for the 10.75-inch diameter micropiles. In our analyses, we considered both "fixed-head" and "free head" conditions and included a ¼-inch reduction in the micropile casing wall thickness to account for corrosion. Our analysis considers that the pile is subject to the static axial load of 100 kips (50 tons) or 200 kips (100 tons), and that the piles will have center-to-center spacing of at least eight pile diameters. We assigned strength properties based on the soil properties presented in **Table 1** of this report.

The maximum allowable lateral load of a pile per the NYCBC is 1 ton (2 kips), unless verified in the field by a lateral load test. Per the requirements of the NYCBC, the maximum pile deflection under "fixed-head" conditions is about 3/8 inch. In a "free-head" condition, the maximum allowable lateral load is one-half of the nominal load that deflects the pile 1 inch. The results of the lateral analyses are presented below.

Table 3: Lateral Loading Summary for 10.75-inch Diameter Micropile

Allowable Capacity (tons)	Loading Condition	Deflection (in.)	Maximum Shear Load (kips)	Maximum Moment (ft-kips) (fixed head)
50	Fixed-Head	0.375	14.2	56.2
	Free-Head	1.0	5.1	-
100	Fixed-Head	0.375	13.5	52.9
	Free-Head	1.0	4.6	-

We recommend checking the lateral pile capacity in the field by performing load test(s) (if lateral loads exceed 2 kips) in accordance with ASTM D3966 and the NYCBC. Additional recommendations for pile load testing are provided in the Construction Considerations section of this report.

Micropile and Tangent Pile Settlement

Immediate elastic settlement of the micropiles/tangent piles should be anticipated as loads are added and will depend on the magnitude of loads. The settlement can be estimated during the design phase in coordination with the structural engineer but is

expected to be approximately 1/2-inch. The structural engineer should consider the effect of the differential settlement between micropile/tangent pile supported foundations and other foundation elements including site utility connections.

Pile Foundation Alternatives

Alternative drilled foundations, such as auger cast piles or drilled displacement piles may be feasible provided the required capacities can be achieved but must consider the limitations of the installation method, impacts to adjustment structures and the subsurface conditions. A submittal package for any alternative pile foundation, including calculations, shop drawings, and installation procedures would need to be submitted by the Contractor to you, GZA, and the structural engineer for any proposed alternate pile foundation for review and acceptance. Driven piles within 50 feet of the adjacent buildings would produce vibrations that may lead to densification of the underlying sands and settlement of adjacent structures and should not be considered.

Floor Slabs

Floor slabs should be designed and constructed as a monolithic structural floor slab in accordance with the NYCBC. We recommend the cellar slab span between pile caps and be capable of resisting applied uplift from water pressure using the building weight. We recommend a 4-inch-thick mud mat consisting of lean concrete to provide a flat surface for membrane waterproofing below the floor slab. The structural slab may be constructed above the mud mat to resist hydrostatic pressures. We recommend a gravel layer placed above the structural slab to suspend utilities and facilitate dry utility construction. Above the gravel layer and utilities, we recommend a surface wearing slab with the top of the slab equal to the proposed finished floor elevation. The top of the structural slab should be pitched to drain to local sumps to address any leaks in the slab that may become evident over time. Discharges must comply with local, state, and federal regulations.

GZA should be informed if non-typical loading is to be placed on the cellar slab. Non-typical loading includes, but is not limited to, heavy point loads and vibratory loads.

Foundation Depth

In accordance with NYCBC, all new interior shallow foundations must bear a minimum of 12 inches below the surrounding surface. For frost protection, new exterior foundations must be a minimum of 4 feet below the surrounding exterior ground surface. Grade beams may be a minimum of 18 inches below the surrounding exterior ground surface.

Lateral Earth Pressures (Below-Grade Walls)

Permanent below grade walls should be designed to resist long term at-rest earth pressures using the soil parameters in **Table 1**. A uniform horizontal pressure equal to one-half to one-quarter of the anticipated vertical surcharge load should be used for design of permanent and temporary walls where surcharges are anticipated due to vehicular traffic, construction equipment, adjacent footings, etc. The foundation walls must also be designed to resist hydrostatic forces and seismic loading (where applicable). GZA's recommended lateral earth pressures resulting from soil, hydrostatic forces, surcharges, and seismic loadings are presented in **Figure 3 and in Table 4**.

Groundwater Design

Groundwater depth readings were collected from the groundwater observation well in B-01(OW). Stabilized groundwater measurements in the well were at a depth of approximately 11.4 feet, corresponding to an elevation of about El. -3.4. As noted above this groundwater elevation is likely influenced by local pumping and may be closed to El. 0.0 at the time of construction.

Design of the proposed structure should use a design water elevation of El. +11 feet, considering the site location in FEMA flood zone AE.

Waterproofing

We recommend all below-grade foundation walls, including any underpinning or tangent micropile system, and cellar floor slabs be fully waterproofed to reduce the potential for water infiltration caused by groundwater, potential utility breaks (i.e., water main, sewer main, etc.), and extreme storm events. All waterproofing should be designed in accordance with Section 1805 of the NYCBC.

The Contractor installing the waterproofing shall be approved by the waterproofing manufacturer to ensure the waterproofing system has been installed properly. The waterproofing manufacturer should perform laboratory testing to confirm the compatibility of the waterproofing material with the foundation soils and submit a certificate of compliance to the Owner. Waterproofing will need to be carefully planned and installed in sections and in conjunction with all foundation operations to allow for full integrity of the installed waterproofing.

Even with good construction and practices, submerged waterproofed cellars may eventually develop leaks in some cases due to slab cracking or gaps in the membrane. The below grade walls and foundation slab (as noted above) should be designed to address this leakage.

Seismic Design Parameters

Based on the results of our exploration, available information, and in accordance with the NYCBC, the calculated average measured SPT N-values of the top 100 feet of soils fall into the range of Seismic Site Class D which is used for calculation of seismic loading and the corresponding response spectrum as described in Section 1613 of the NYCBC. The recommended seismic design parameters are summarized in **Table 4** below.

Table 4 - Recommended Seismic Design Parameters

Parameter	Value
Mapped Spectral Acceleration Parameter at 0.2-Second Period (S_S)	0.296 g
Mapped Spectral Acceleration Parameter at 1-Second Period (S_1)	0.061 g
Site Coefficient as a function of site class and mapped spectral response acceleration at short periods (F_a)	1.57
Site Coefficient as a function of site class and mapped spectral response acceleration at 1-second period (F_v)	2.40
Maximum Spectral Response Acceleration for short periods (S_{MS})	0.465 g
Maximum Spectral Response Acceleration for 1-second period (S_{M1})	0.146 g
Design Spectral Response Acceleration Parameter at Short Periods (S_{DS})	0.310 g
Design Spectral Response Acceleration Parameter at 1-Second Period (S_{D1})	0.098 g
Adjusted Peak Ground Acceleration (PGA_M)	0.26 g

We plotted SPT N-values normalized to an energy efficiency of 60 percent versus depth to assess whether evaluation of liquefaction was required, pursuant to Section 1816 of the NYCBC. The range of corrected N-values plotted on the screening diagram revealed that an evaluation was required, and therefore, a simplified site-specific analysis was performed.

We performed the analysis using the Boulanger & Idriss 2014 method, considering the corrected SPT N-values, overburden stress, fines content, peak ground acceleration equal to 0.26g, and an estimated earthquake magnitude of 5.75. The results of the simplified liquefaction analysis indicate that only five SPT samples exhibit liquefaction potential, with many of these samples being between soil samples that do not have potential to liquefy. On the basis of the simplified liquefaction analysis, liquefaction is not likely and does not need to be considered for design.

CONSTRUCTION CONSIDERATIONS

Demolition

Based on the results of the subsurface exploration program and the proposed construction, we anticipate that existing utilities, remanent foundations or Fill will be removed from the site prior to beginning construction. Any utilities designated to remain, such as gas, water, electric and sewer connections should be protected during demolition, excavation, and construction activities.

Temporary Support of Excavation (SOE) and Underpinning

Excavations of up to approximately 17 feet below the sidewalk, and 5.6 feet below measured groundwater will be required for the elevator pit and pile caps. Open-cut excavation is not permissible due to geometry constraints from the adjacent streets, abutting properties, and utilities. Therefore, excavation support around the perimeter of the excavation will be necessary.

A more robust and technically prudent method to construct the cellar level would utilize a tangent micropile system to provide lateral support along the perimeter of the project site. Tangent micropile walls will result in some lost cellar space (up to 3-feet on each side). Pre-treatment of the soil under the adjacent foundations and within the footprint of the excavation by means of permeation grouting or similar method prior to the installation of the tangent micropiles and later between the individual tangent micropiles may be required. Groundwater control will be required, and the Contractor should be prepared to implement a dewatering system to maintain groundwater level 1- to 2- feet below the general excavation depth. Internal bracing will be required for excavation support.

Settlement of the adjacent building walls should also be expected during any SOE installation, and/or during excavation due to the proximity of the supported excavation face, which will deflect outwards as excavation proceeds. The Contractor's means and methods will have a significant influence on the magnitude of the settlement. We anticipate settlement of about 1- to 2-inches may occur on abutting building which are supported on shallow foundations with lesser amounts on building that are pile supported, and this effect on the adjacent buildings should be considered by the project team and addressed in any legal agreements.

The settlement estimates as result of SOE installation, ground disturbance, and/or during excavation should be combined with those anticipated during dewatering and discussed at length with the Client, design team and adjacent property owners. The design team should consider settlement associated with dewatering which should be calculated by the dewatering engineer based on the proposed dewatering schedule and SOE system implemented. We would also recommend that any access agreement with these adjacent property owners include documentation of these settlement estimates and address a way forward for repairs if these settlement manifest into building damages or operation issues.

Further clarification on the impacts of the chosen design options on the adjacent buildings should be discussed in the Adjacent Lots/Buildings for Suitable Method of Support Evaluation Report that is required by NYCBC.

Temporary Groundwater Control

Groundwater will need to be lowered 1- to 2- feet below excavation subgrade in advance of excavations below the groundwater table, as demonstrated by measurements of groundwater depth within installed groundwater monitoring well. We recommend that the maximum draw drawdown along the lot lines (SOE) should not exceed 2 feet below the bottom of excavation depth.

Based on the subsurface conditions at the site and required drawdown, a wellpoint system appears to be suitable for construction dewatering for the proposed excavations. Well point systems typically consist of a series of individual dewatering wells installed at regular intervals and connected to a common header pipe. Groundwater is pumped from the screened portion of the wellpoint by applying a vacuum to the system. A single stage wellpoint system is expected for the excavations. A deep well system is also a viable alternative for dewatering and will similarly require design by a qualified and experienced Professional Engineer licensed in the State of New York.

Depending on means and methods, dewatering could cause settlement of existing structures within the zone of influence. The Contractor should also be prepared to remove accumulated rainwater and runoff from local excavations during construction through the use of submersible pumps.

Site and Subgrade Preparation

The cellar slab is expected to be constructed as a monolithic structural slab deriving its support from adjacent pile caps and not the underlying soil. We recommend the final subgrade be free of standing water and proof-rolled to a stable and firm consistency with a minimum of four passes of a vibratory walk behind plate compactor to check integrity. Areas of unstable ground observed during proof-rolling should be over-excavated and backfilled with new compacted Granular Sand/Sand-Gravel Fill placed in accordance with the recommendations provided in **Table 6** of this report.

Approved subgrades should be protected from disturbance during excavation and reparation prior to placing foundation concrete. Conventional excavation equipment may be used to perform the initial excavation to within 6-inches of design subgrade elevations. Final excavation to design subgrade levels should be performed with an excavator equipped with a smooth (toothless) bucket or with "Grade-All" – type equipment.

Fill Material and Compaction

Backfill used to replace unsuitable materials shall consist of Granular Fill compacted to at least 95 percent of the maximum dry density measured by the Modified Proctor test (ASTM D1557). The gradation requirements for the Granular Fill material are presented in **Table 5**. The recommended maximum loose lift thickness and minimum number of passes for compaction equipment are given in **Table 6**.

Excavation

The Owner and the Contractor should make themselves aware of and become familiar with applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) Excavation and Trench Safety Standards. Construction site safety generally is the sole responsibility of the Contractor, who shall also be solely responsible for the means, methods, and sequencing of construction operations. We are providing this information solely as a service to our Client. Under no circumstances should the information provided herein be interpreted to mean that GZA is assuming responsibility for construction site safety or the Contractor's activities, such responsibility is not being implied and shall not be inferred.

The Contractor should be aware that slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulations, such as OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations. Such regulations are strictly enforced and, if they are not followed, the Owner, Contractor, and/or earthwork and utility subcontractors could be liable for substantial penalties.

Evaluation of Adjacent Lots/Buildings for Suitable Method of Support

Pursuant to Section 1817.3 of the NYCBC, an evaluation report assessing the conditions of the adjacent buildings and the subsurface conditions of the construction site and adjacent properties (buildings and yards/open areas) is required. The report shall also identify acceptable method(s) of support, including underpinning or alternate methods of support, for the building areas.

Monitoring of Adjacent Structures

Section 3309.4.3 of the NYCBC requires documentation of the condition of structures prior to beginning excavation or construction on an adjacent site and requires monitoring of adjacent structures during excavation and construction if the excavation depths exceed either five feet or if the excavation exceeds the depth of the adjacent building footings. A Professional Engineer registered in the State of New York must develop a monitoring plan to comply with the requirements of NYCBC Section 3309.16.

The pre-construction condition documentation of adjacent buildings is required prior to the start of excavation at the site. This includes photographing and measuring conditions and defects to provide a quantifiable baseline record prior to construction. Crack gages, vibration monitors and/or survey points should be installed at applicable locations, and baseline values should be obtained or one to two weeks before commencing construction. During construction, crack monitoring readings, vibration level measurements, and optical monitoring/deflections, groundwater depth should be measured throughout excavation and construction until at least the first floor of the superstructure has been completed. This must be performed on behalf of the Client and must be maintained separately from the work performed by the General Contractor.

Pile Installation

The means and methods for installation of the micropiles and tangent micropiles will be the sole responsibility of the Contractor. The installation will need to be carefully planned and executed so as not to cause damage to the adjacent building foundations, subsurface utilities, etc. Piles must be installed in a way that will not cause excessive vibrations or settlement of the existing buildings or structures adjacent to the site.

The Contractor should use methods that contain and circulate the drilling fluid entirely within the steel casing. Downhole hammers and compressed air should not be used.

Pile Load Testing

We recommend a load test program prior to the installation of the production piles to check anticipated tangent and micropile capacities. Two compressive load tests are required to evaluate the axial compressive capacity for each typical micropile and tangent micropile at the project site per the requirements of the NYCBC. Each test pile should be tested to the recommended ultimate axial capacity of two times the design load to evaluate the micropile response to simulated structural loads and to establish bond zone lengths for production piles. The axial static load test should be performed in accordance with ASTM D1143 and the applicable requirements of the NYCBC.

The NYCBC requires lateral load testing for any piles with lateral loads greater than 1 ton. If the lateral load for the micropile is greater than 1 ton, a minimum of two piles must be load tested per the requirements of the NYCBC. The load tests should be performed in accordance with ASTM D3966, Procedure B, with loading increments applied until a measured deflection of 1-inch is observed to evaluate micropile response to simulated structural loads. The lateral load tests should be conducted in accordance with the applicable requirements of the NYCBC. A test pile cannot be used as a production pile.

The allowable uplift capacity for the micropiles considers a factor of safety of 3.0. Therefore, uplift load tests are not required.

The installation Contractor must provide a detailed design for the axial load testing, including the load test location, construction details for the load test frame and hold-down piles, loading and monitoring procedures, and recommended evaluation procedures. An independent, calibrated load cell must be used to measure the load on the pile head; reliance solely on a calibrated jack to measure the load is not acceptable. The detailed design must be signed and sealed by a Professional Engineer registered in New York. GZA should review the design before construction.

Special Inspection Requirements

We recommend that GZA, who is knowledgeable in soils, foundations, and the requirements of the NYCBC be retained to observe subgrade preparation, SOE/Underpinning installation, pile installation and foundation construction. We anticipate that the following NYCBC Special Inspections will be required for work discussed in this report:

- Excavation – Sheeting, Shoring, and Bracing (NYCBC 1705.25.3)
- Underpinning (NYCBC 1705.25.4, NYCBC 1817) (if required)
- Subgrade Inspection (NYCBC 1705.6)

- Deep Foundation Elements (NYCBC 1705.7)

The required "Subsurface Investigations (Borings/Test Pits)" Special Inspection was completed as a part of the subsurface exploration program. Special Inspections must be performed by a Special Inspection Agency retained by the Owner.

Special inspection of pile installation and load testing must be provided by a qualified Professional Engineer in accordance with Section 1705.7 of the NYCBC. During installation of the production piles, the Special Inspector must record the minimum following data:

- Pile Identification
- Equipment used to install the piles
- Pile, bar, and grout material properties
- Installation Start and Finish Time for each pile
- Pile Installation Depth
- Cutoff Elevation and Tip Elevation (to be provided by surveyor)
- Bond length
- Grout Back-Pressure
- Theoretical and Actual Grout Volumes

CLOSING

We appreciate the opportunity to provide our services to you on this project. Should you have any questions, please contact us.

Very truly yours,
GZA GEOENVIRONMENTAL OF NEW YORK

Dharmil S. Patel, P.E.
Senior Project Manager

Douglas S. Roy P.E.
Vice President

Cassandra A. Wetzel, P.E.
Consultant Reviewer

Attachments: Table 5 – Recommended Use and Gradation Criteria for Fill Materials
Table 6 – Suggested Compaction Methods
Figure 1 – Site Location Plan
Figure 2 – Subsurface Exploration Location Plan
Figure 3 – Lateral Earth Pressure Diagram
Appendix A – Geotechnical Limitations
Appendix B – Log Key, Boring Logs, & Rock Core Photo Log
Appendix C – Test Pit Logs and Photo Log
Appendix D – Laboratory Testing Results

APPENDIX

DESIMONE ENGINEERS
PRELIMINARY STRUCTURAL DESGNS

“As-of-Right” 6-Story Commercial Building & Proposed 14-Story Restaurant and Residential Building

DESIMONE

July 8, 2025

Acting Chair Shampa Chandra
New York City Board of Standards and Appeals
22 Reade Street, Main Floor
New York, New York 10007

Re: Preliminary Structural Design
BSA Variance Application
51 Little West 12th Street
Block 645, Lot 21
Manhattan

Dear Acting Chair Chandra and Commissioners:

Re: summary of structural challenges for "As-of-Right" and "proposed" conceptual schemes

The preliminary structural design provided herein was prepared for the two development scenarios being considered for the subject site, 51 Little West 12th Street, Manhattan. The subject site is currently a small, 2,581 square foot infill vacant lot is bordered by a nineteen-story hotel building the north, a one-story commercial building to the east, and a three-story brick building built in 1910 to the west. The subject property is situated within an AE flood zone with base flood elevation of +11 NAVD 88. The small narrow lot size, the high water table, the quality and capacity of the soil, and the adjacency issues all contribute to the challenges of development on the subject site and inform the approach to the structural design of the building and its foundation. The Geotechnical report (Jan 2025) prepared by GZA provides the profile of the subsurface conditions of the subject site and makes recommendations as to the support of excavation, groundwater control, soil improvement, deep foundation piling, monitoring adjacent buildings, and other pertinent considerations.

The two development scenarios consist of: (1) As-of-Right, 6-Story, Commercial Office and Restaurant building with a cellar level, (2) Proposed 14-Story Residential and Restaurant building with a cellar level. The constraints and design challenges for each option are outlined below.

As-of-Right Development Scenario:

Foundation Components:

1. Due to existing ground water levels, a tangent pile wall installation is required around the perimeter site to create a cut-off wall and avoid issues with undermining of adjacent building structures.
2. This will require a 3 foot zone around the cellar perimeter:
    a. 1'-0" for tangent installation
    b. 1'-0" for tangent wall
    c. 1'-0" for permanent foundation wall.

GHVIP RQH#F RQVXOWLQJ #HQJ LQHHULQJ ###473#EUR DGZ D\/#58WK#FOR RU/#QHZ #\RUN/#Q\#43338###WD#.4#545,#B6505544###E1#.4#545,#7;40943;#

3. Due to the narrow nature of the site, primary building supports will be located at building perimeter.
    a. Columns and concrete walls at perimeter as well as perimeter transfer beams and a thickened ground floor slab serve to transfer loads back to the primary foundation walls, down to supporting foundation elements.
4. Elevators:
    a. The building's passenger elevator is restricted to the perimeter of the building.
        i. Due to the location, and the adjacent building concerns, the passenger elevator cannot service cellar level. As such, this elevator pit will stop at ground floor. The second elevator is required to access the cellar level which under both development scenarios contain the prep support area to the restaurant use above.

5. Mini-Caissons: Due to the difficult ground conditions, mini caissons, also known as micropiles provide the deep foundation support, as conventional footings are not possible at the subject site.

Superstructure:

The building will consist of flat plate concrete construction supported on concrete columns and with elevator and stair cores wrapped in concrete. Slabs will typically be 8" construction.

Proposed Development Scenario:

Foundation Components:

The Proposed Plan faces similar concerns to the As-of-Right building. However, due to increased number of proposed floors (14-story vs. 6-Story) and slenderness transfer structure will be thicker and an increased number of micro-caissons will be required to transfer the load down to suitable stratum.

Superstructure:

The building will consist of flat plate concrete construction supported on concrete columns and with elevator and stair cores wrapped in concrete. Slabs will typically be 8" construction.

Under the Proposed Plan, the overall column and lateral system will be more robust given the increased building height and increased number of floors. It is important to note that given the building's narrow footprint, the proposed 14 floors require New York City DOB Peer Review requirements, increasing costs and construction time and may result in modifications of the structural design.

Summary of Challenges:

The profile of the subject site as detailed in the Geo Technical Report and illustrated in the preliminary structure design for both development scenarios demonstrate the challenges that must be addressed in order for any development is to take place on the subject site. The premium costs for development at the subject site are due to the small lot size and configuration, the high water table and potential flooding in an AE flood zone, the poor soil quality, and special preparations to avoid undermining the adjacent structure to the west. The tangent pile wall system is part of a complex foundation that serves not only as a support of excavation but also the structural support that transfers loads at the ground level to then construct the building's superstructure. Although accommodating a cellar level requires more attention, the site conditions and the construction means and methods to address these issues remain the same.

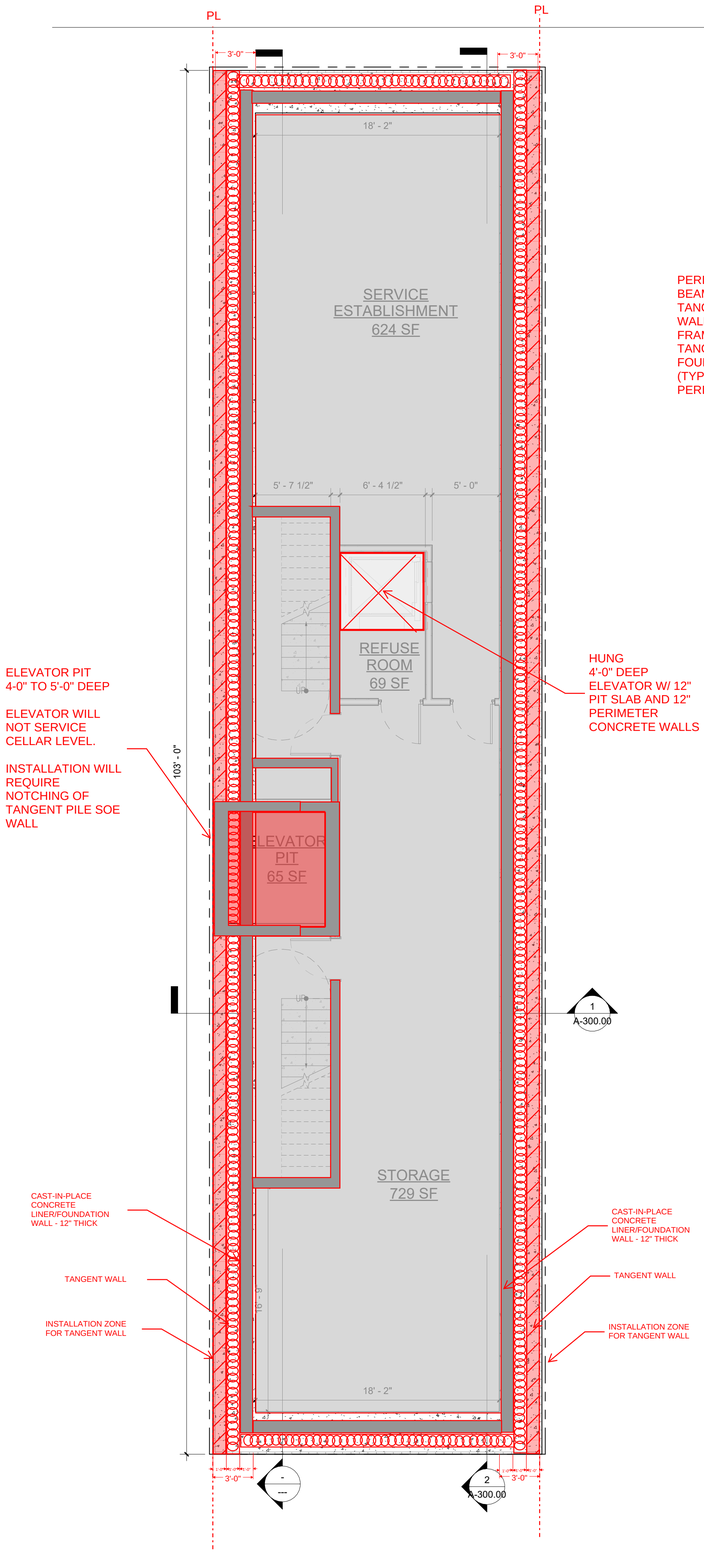
Respectfully submitted,

Rodolfo Medina, PE

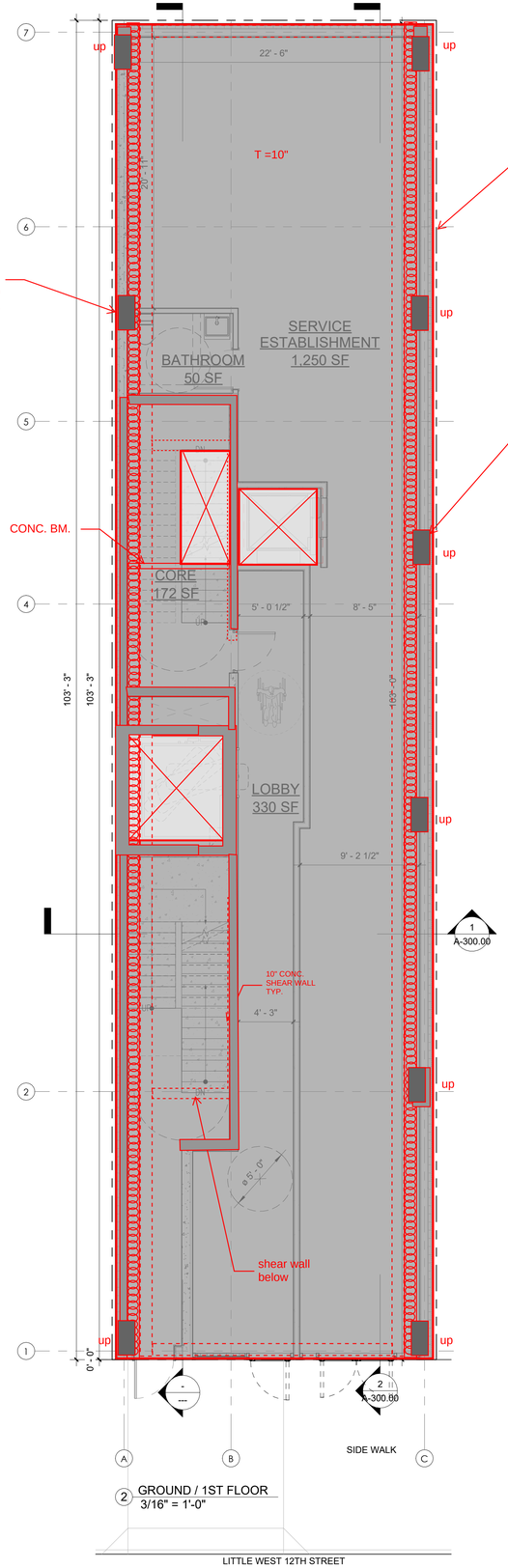
Rodolfo Medina, PE
Associate Principal | Structural
DeSimone Consulting Engineering

Enclosure

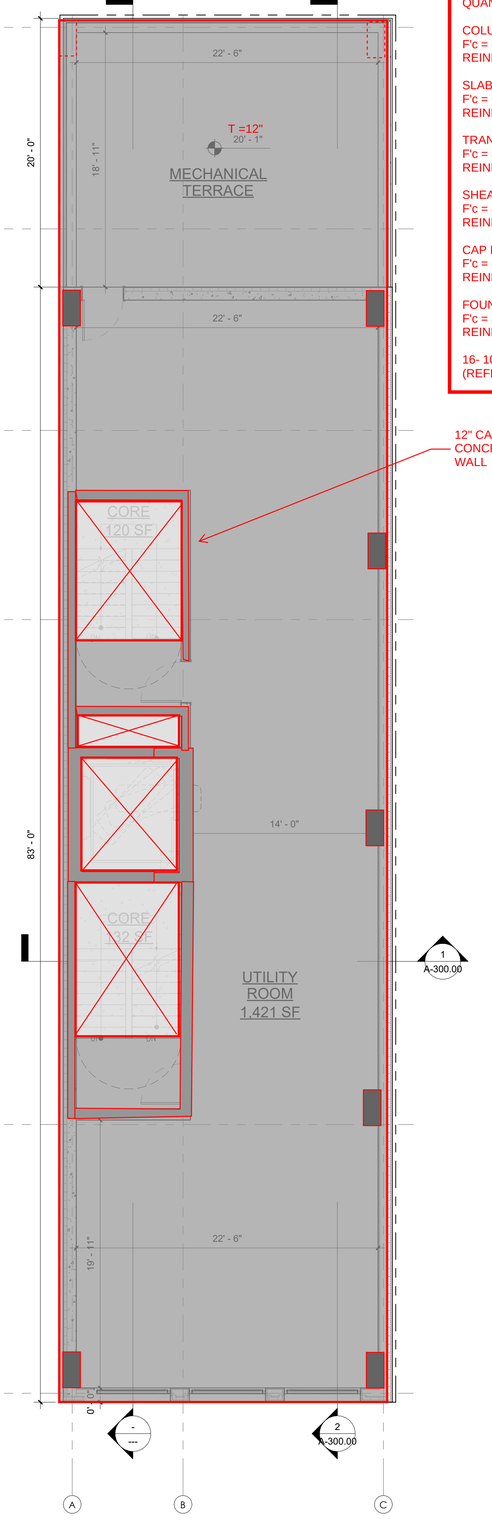
Preliminary Structural Design
“As-of-Right” Development Scenario



1 CELLAR FLOOR
3/16" = 1'-0"



2 GROUND / 1ST FLOOR
3/16" = 1'-0"



3 MECHANICAL FL
3/16" = 1'-0"

QUANTITY ESTIMATE:

COLUMNS:
F'c = 8KSI
REINF = 1PSF

SLABS - TYP. 8" FLOORS
F'c = 6ksi
REINF = 4 PSF

TRANSFER SLAB GROUND
F'c = 8KSI
REINF. = 5PSF

SHEAR WALLS
F'c = 8KSI
REINF. = 3PSF

CAP BEAMS TANGENT WALLS
F'c = 8KSI
REINF = 20 PLF

FOUNDATION SLAB:
F'c = 8KSI
REINF = 7 PSF

16- 100 TON MINI-CAISSONS
(REFER TO GEOTECH REPORT)

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KEY PLAN



CLIENT:
NOVAC NOURY

PROJECT NAME:
51 LITTLE W.12TH ST

PROJECT ADDRESS:
51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

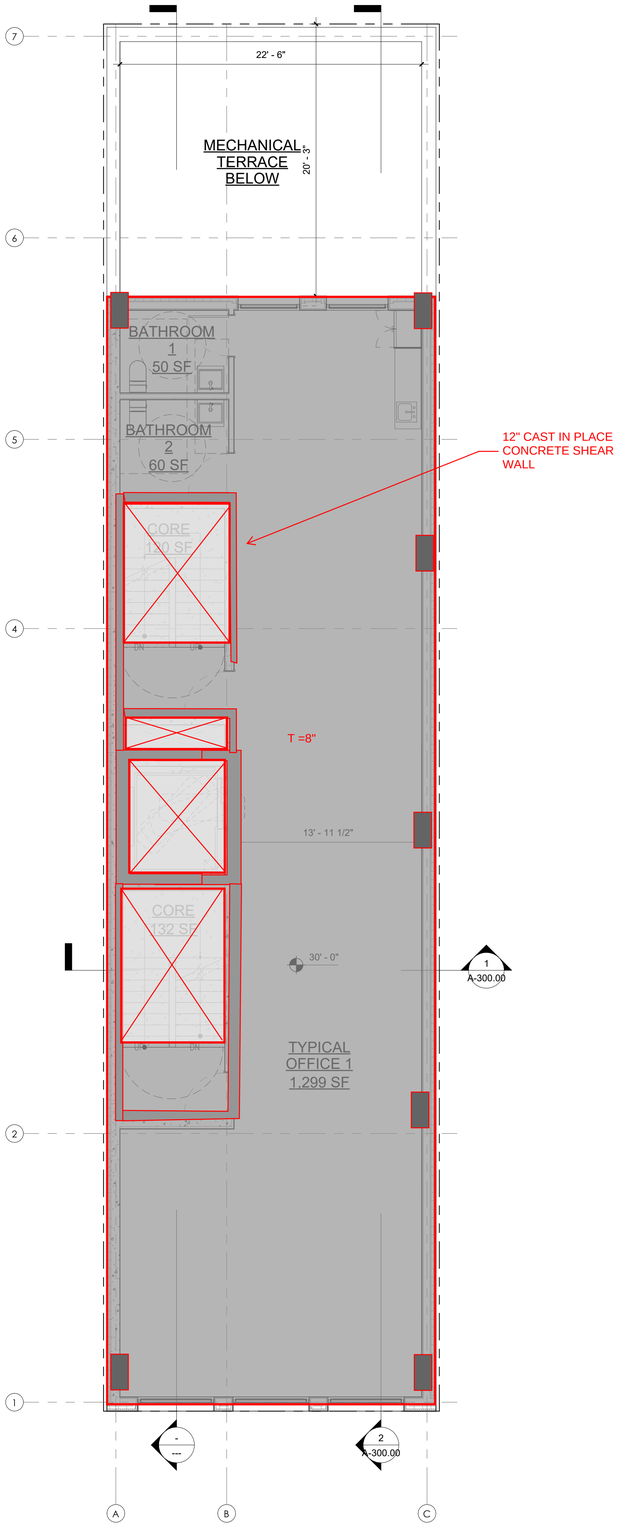
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CELLAR, 1ST, MEZZANINE FL

AS-OF-RIGHT COMMERCIAL

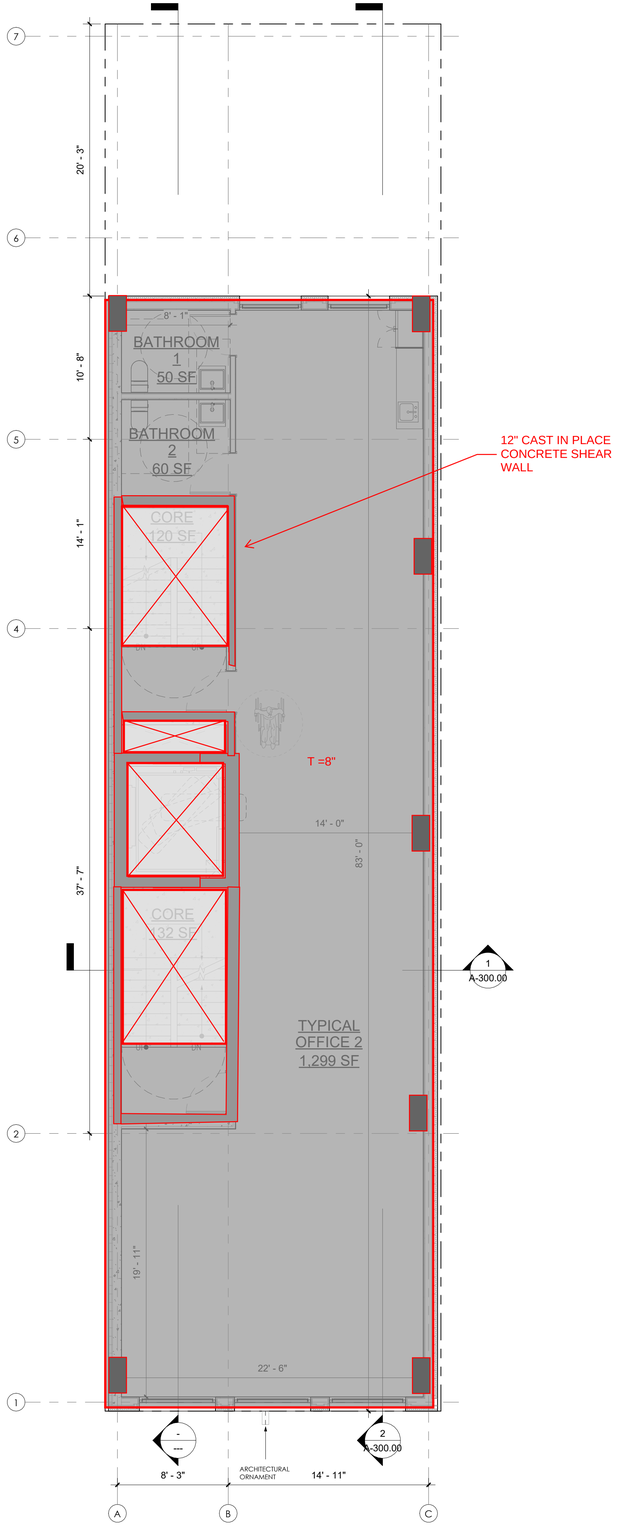
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CHK BY:	Checker
DWG No:	A-100.00

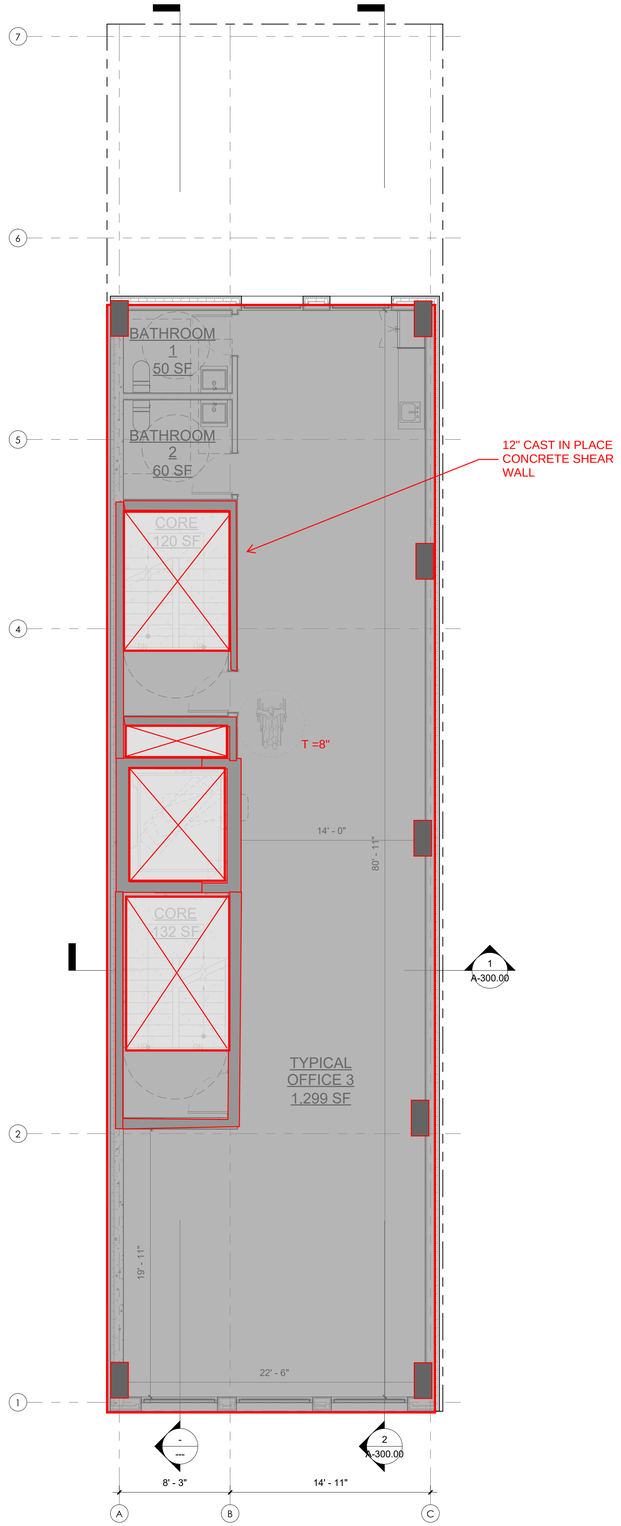
DOB BSCAN STICKER



1 2ND FLOOR
3/16" = 1'-0"



2 3RD FLOOR
3/16" = 1'-0"

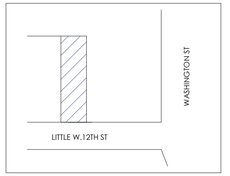


3 4TH FLOOR
3/16" = 1'-0"

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DWG TITLE:

2ND, 3RD, 4TH FLOOR

AS-OF-RIGHT COMMERCIAL

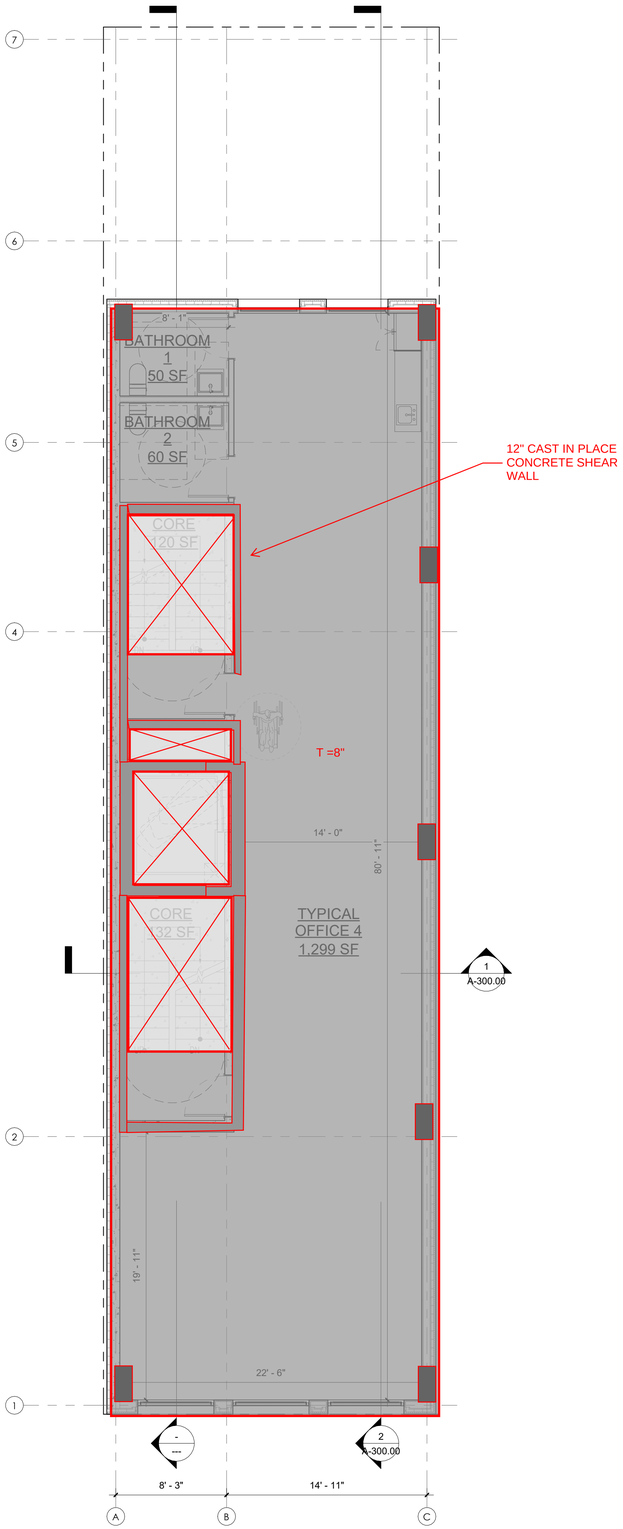
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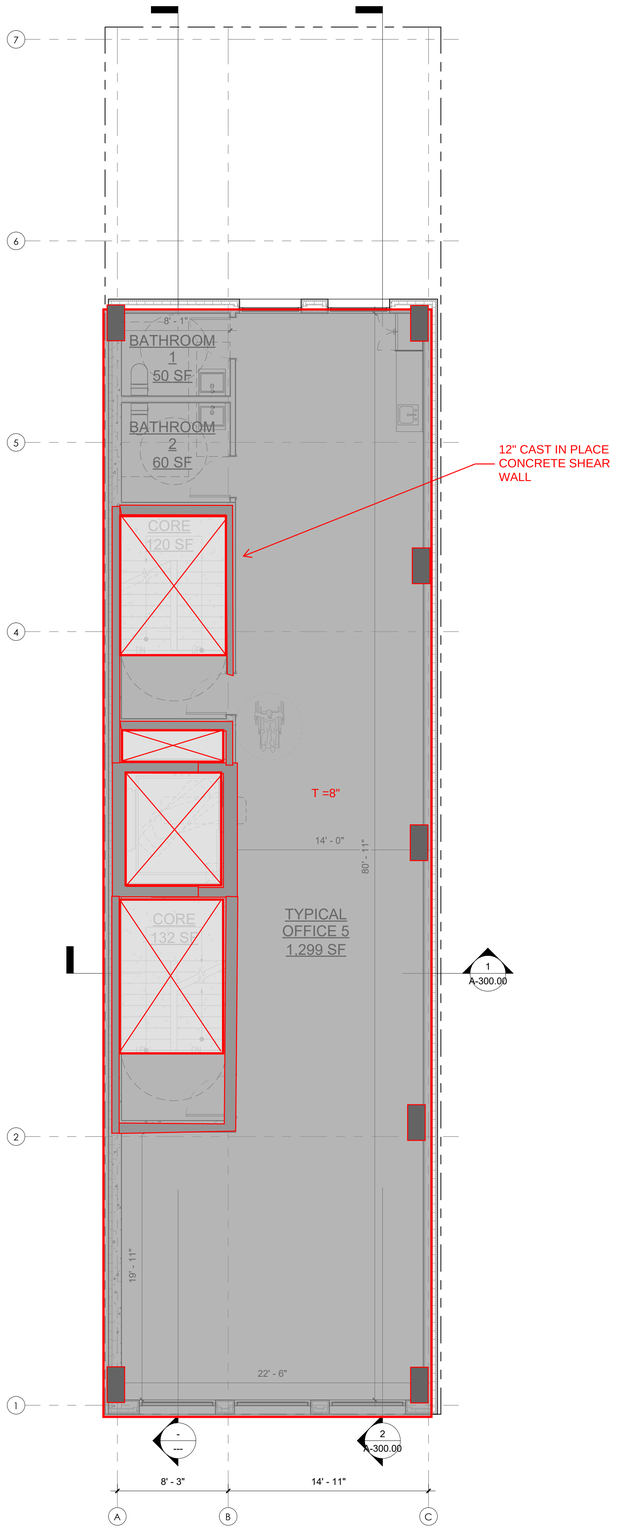
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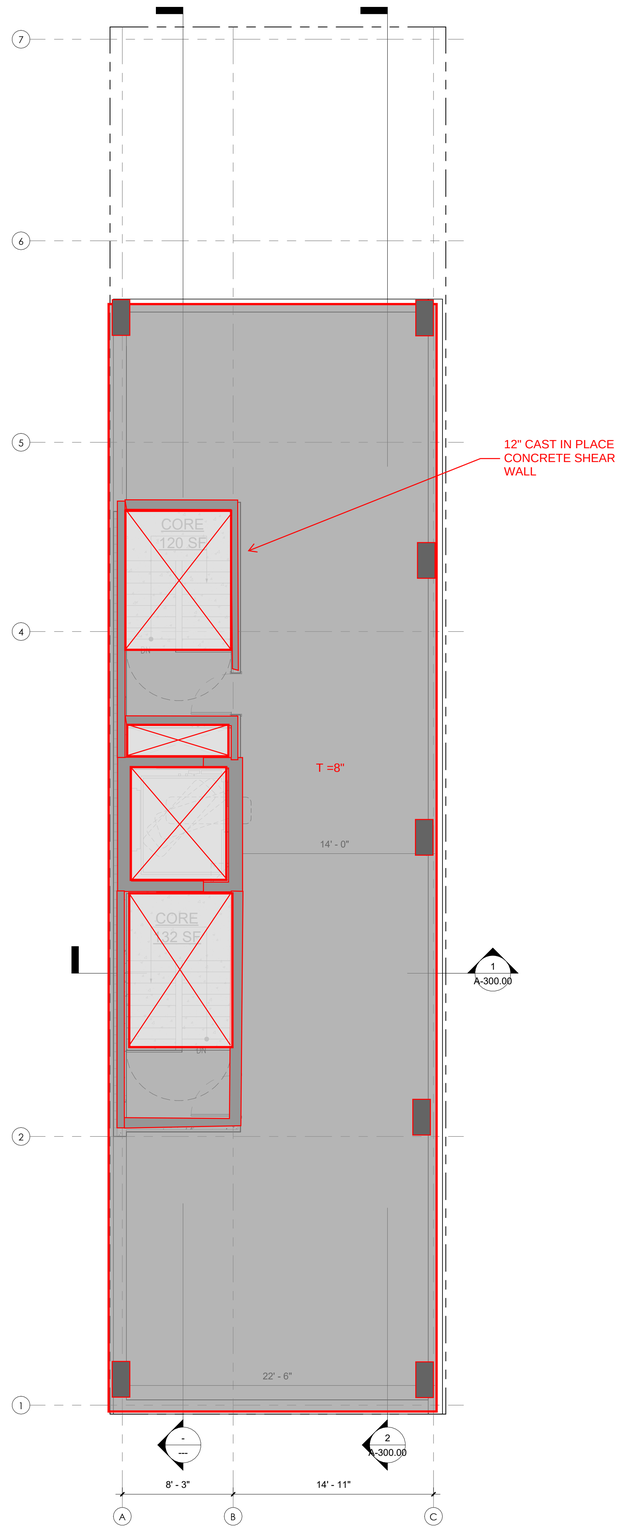
DOB BSCAN STICKER



1 5TH FLOOR
3/16" = 1'-0"



2 6TH FLOOR
3/16" = 1'-0"



3 ROOF FLOOR
3/16" = 1'-0"

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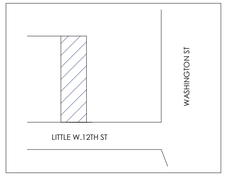
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DWG TITLE:

5TH, 6TH, ROOF PLAN

AS OF RIGHT COMMERCIAL

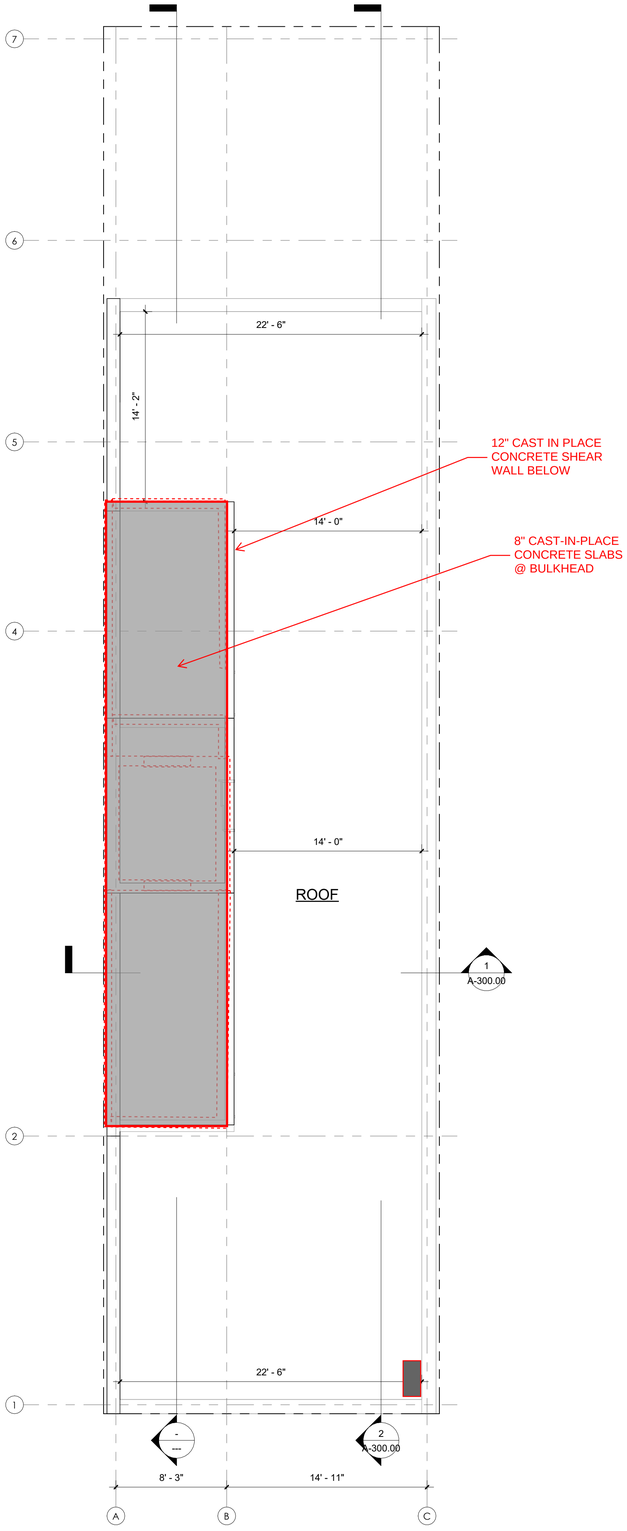
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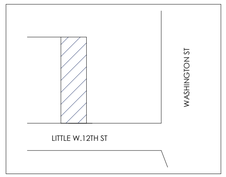


1 BULKHEAD
3/16" = 1'-0"

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DWG TITLE:
BULKHEAD

AS OF RIGHT COMMECIAL

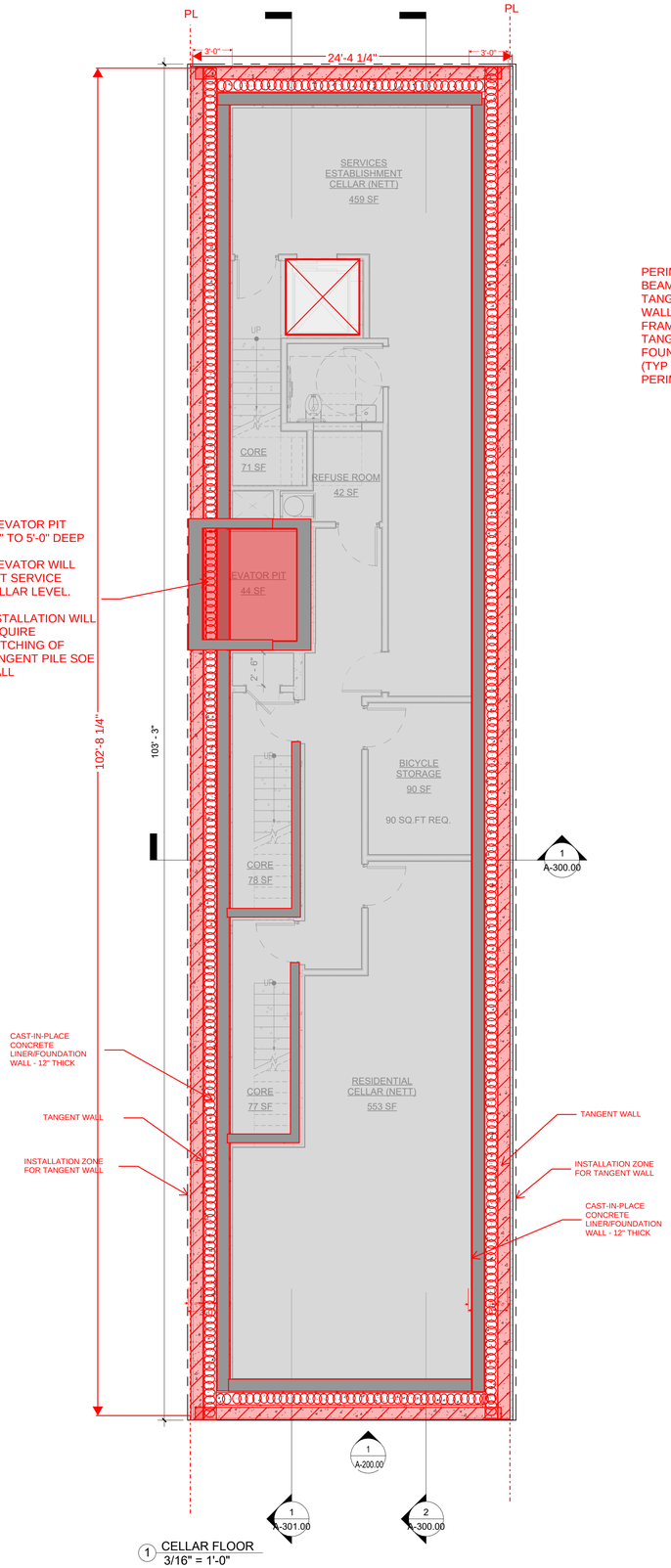
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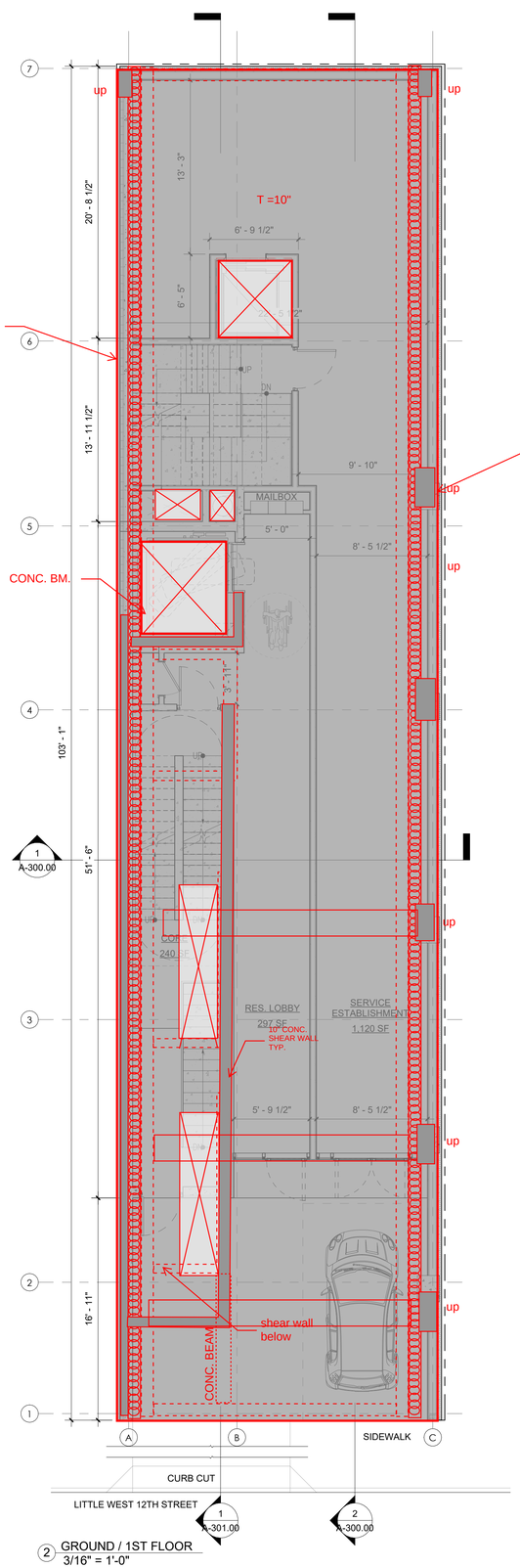
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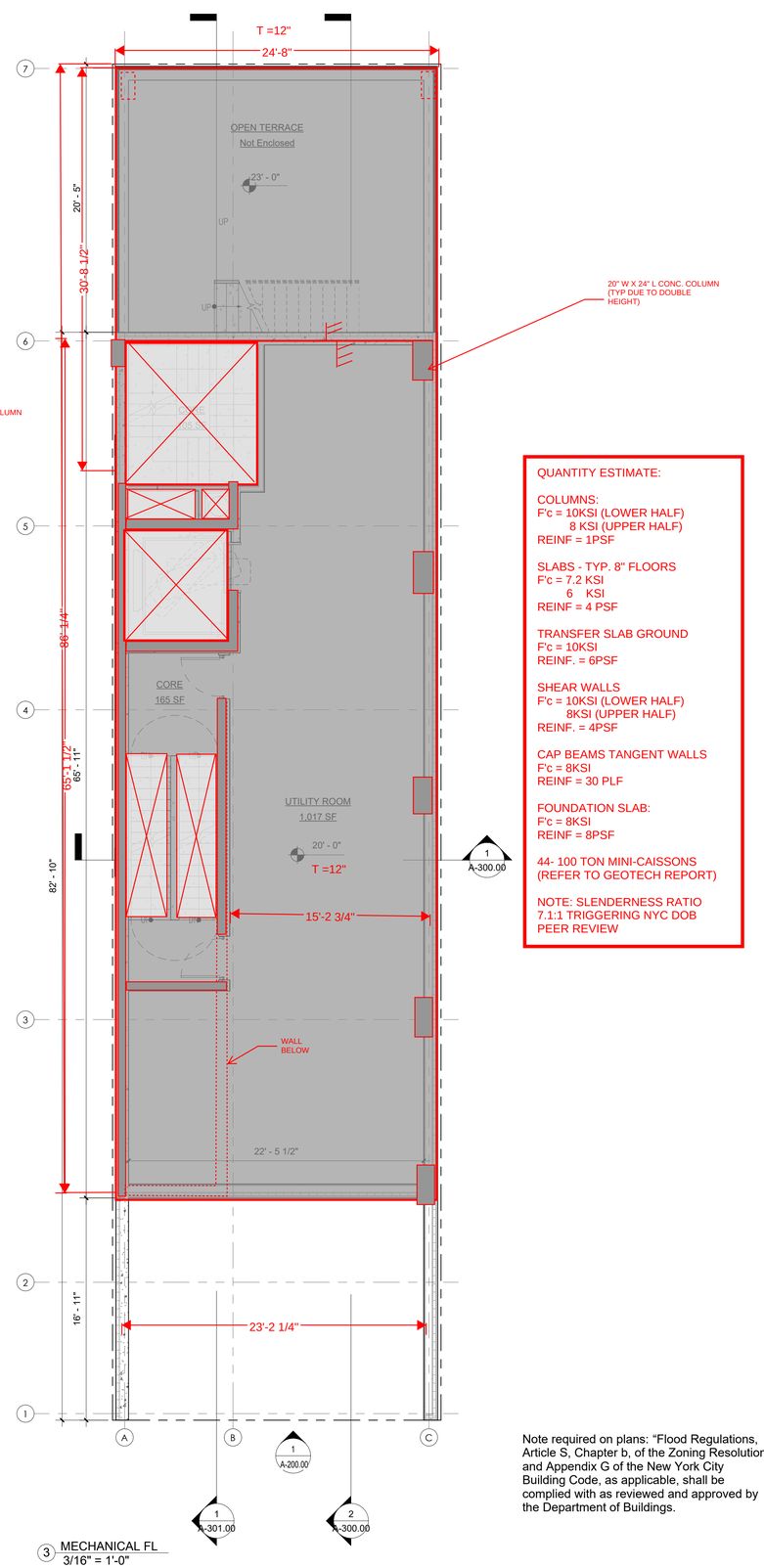
Preliminary Structural Design
Proposed Development Scenario



1 CELLAR FLOOR
3/16" = 1'-0"



2 GROUND / 1ST FLOOR
3/16" = 1'-0"



3 MECHANICAL FL
3/16" = 1'-0"

QUANTITY ESTIMATE:

COLUMNS:
F'c = 10KSI (LOWER HALF)
8 KSI (UPPER HALF)
REINF = 1PSF

SLABS - TYP. 8" FLOORS
F'c = 7.2 KSI
6 KSI
REINF = 4 PSF

TRANSFER SLAB GROUND
F'c = 10KSI
REINF. = 6PSF

SHEAR WALLS
F'c = 10KSI (LOWER HALF)
8KSI (UPPER HALF)
REINF. = 4PSF

CAP BEAMS TANGENT WALLS
F'c = 8KSI
REINF = 30 PLF

FOUNDATION SLAB:
F'c = 8KSI
REINF = 8PSF

44- 100 TON MINI-CAISSONS (REFER TO GEOTECH REPORT)

NOTE: SLENDERNESS RATIO 7.1:1 TRIGGERING NYC DOB PEER REVIEW

Note required on plans: "Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

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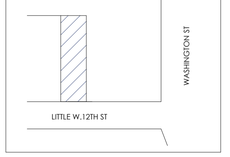
DESIMONE
7-8-2025

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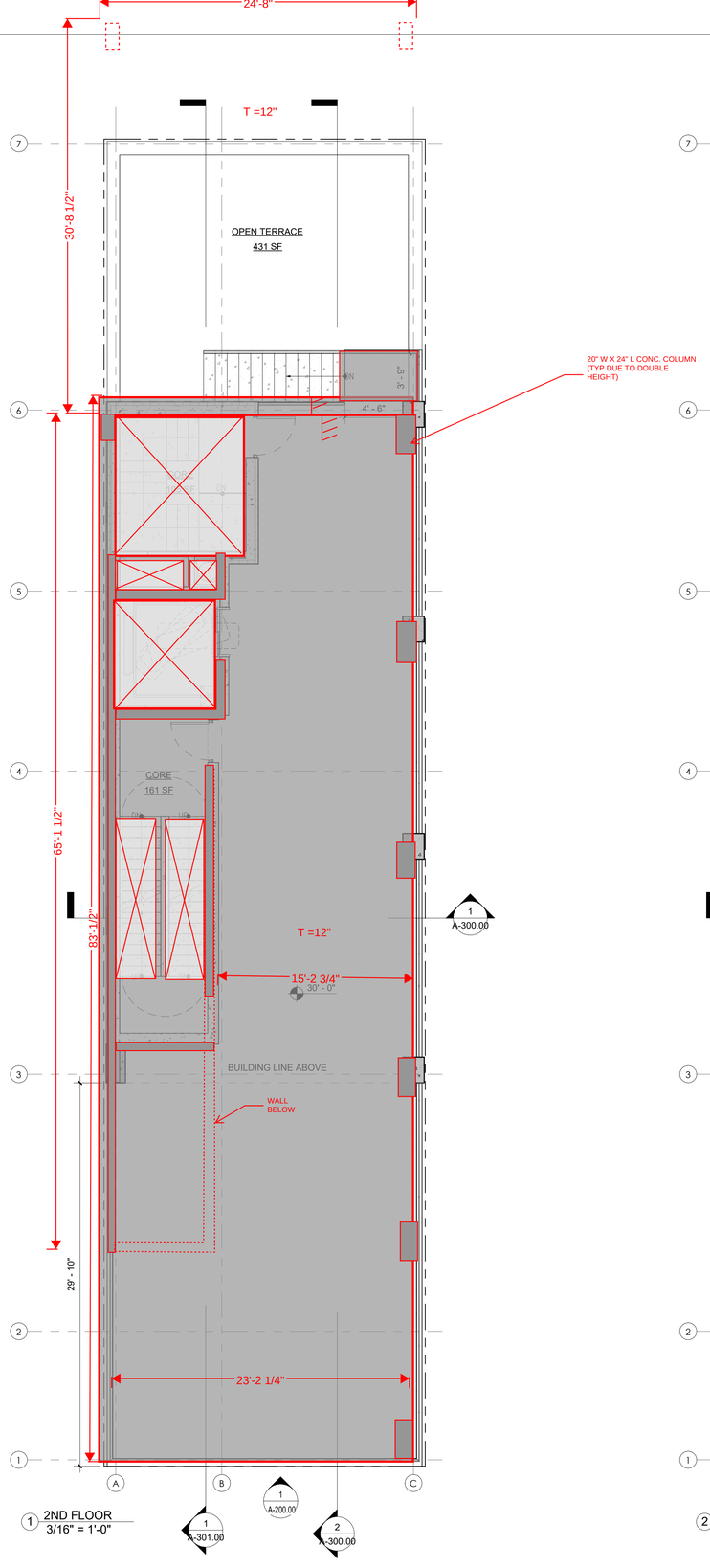
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51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

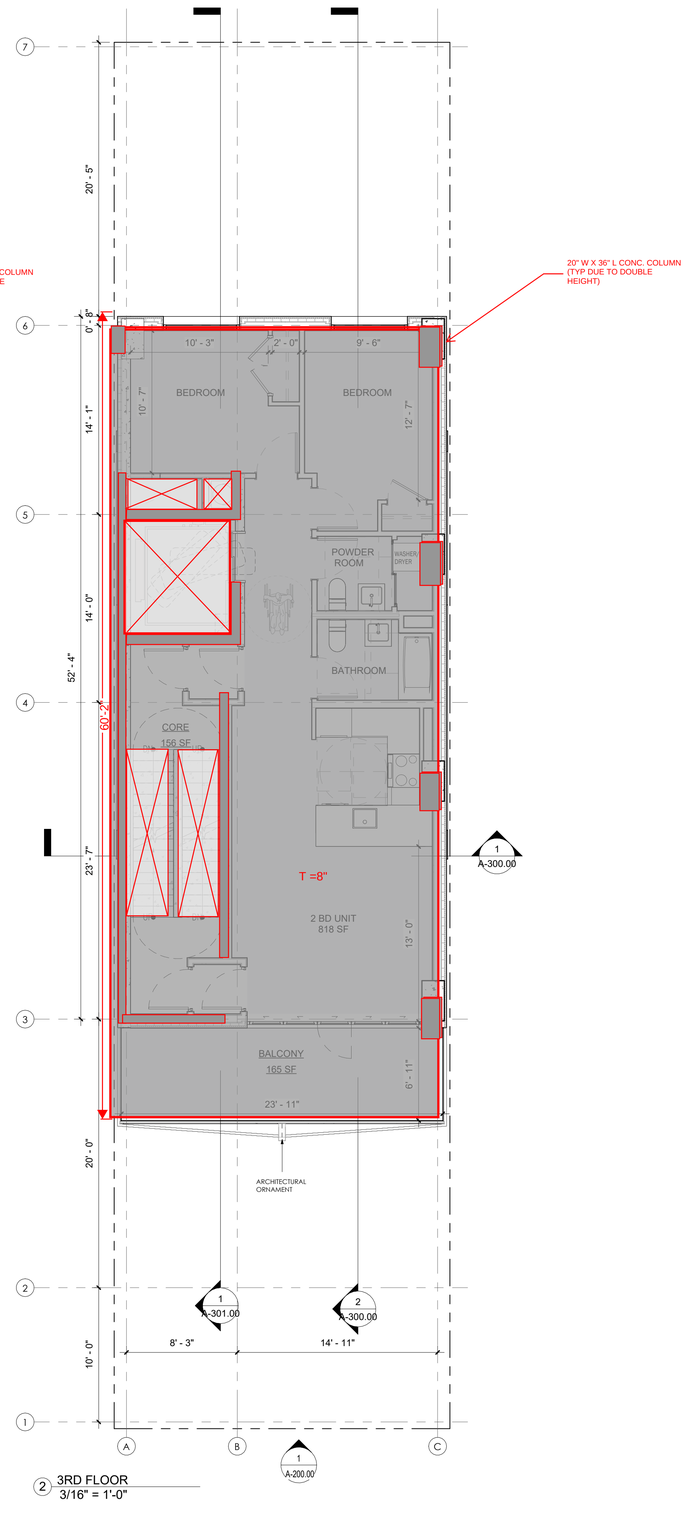
DWG TITLE:
CELLAR, 1ST, MEZZANINE FL

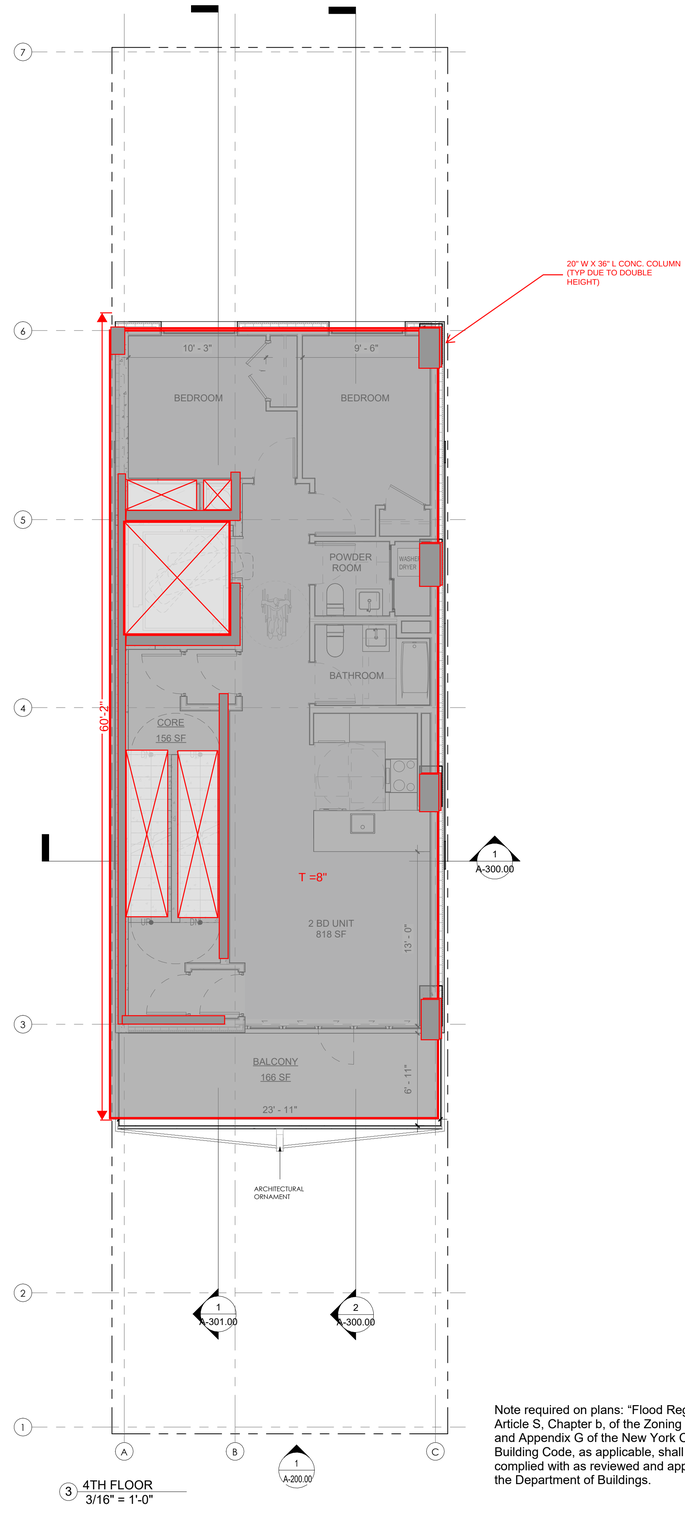
SEAL

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PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-100.00

DOB BSCAN STICKER







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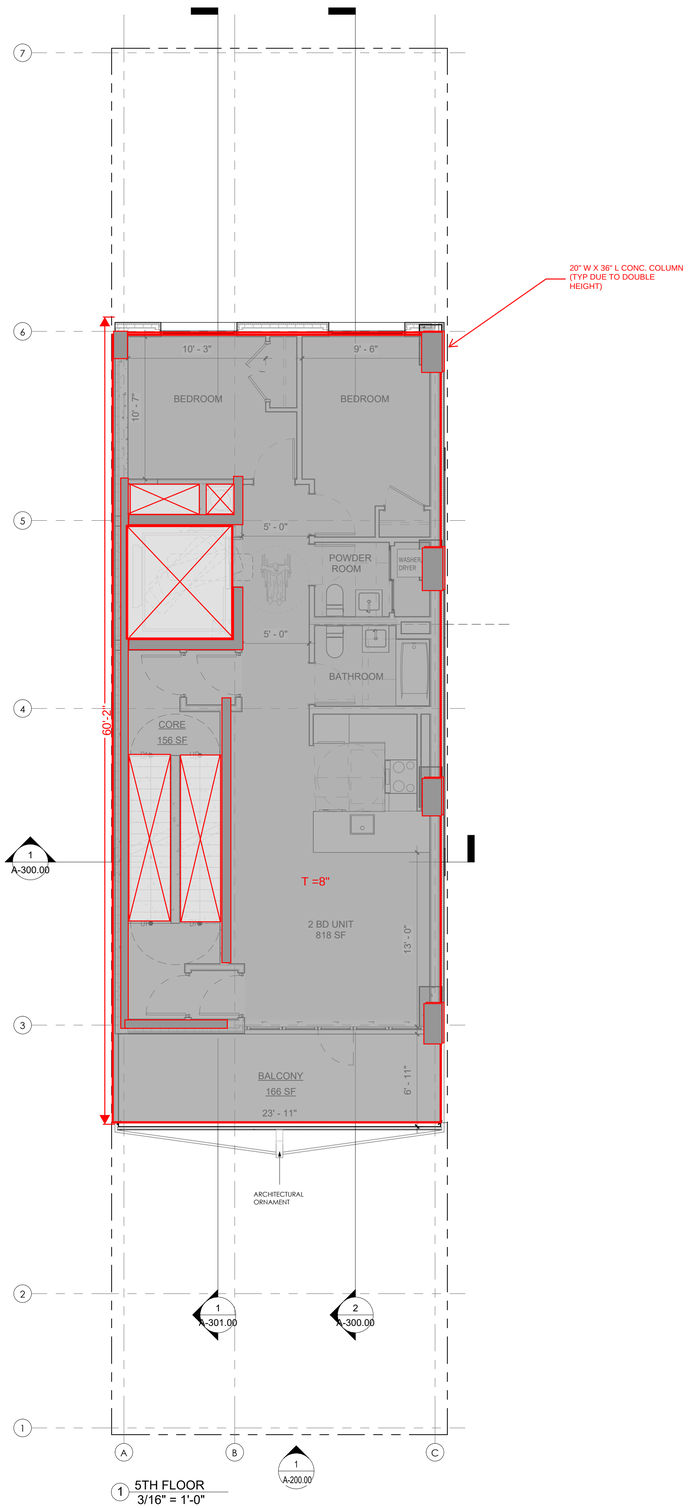
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2ND, 3RD, 4TH FLOOR

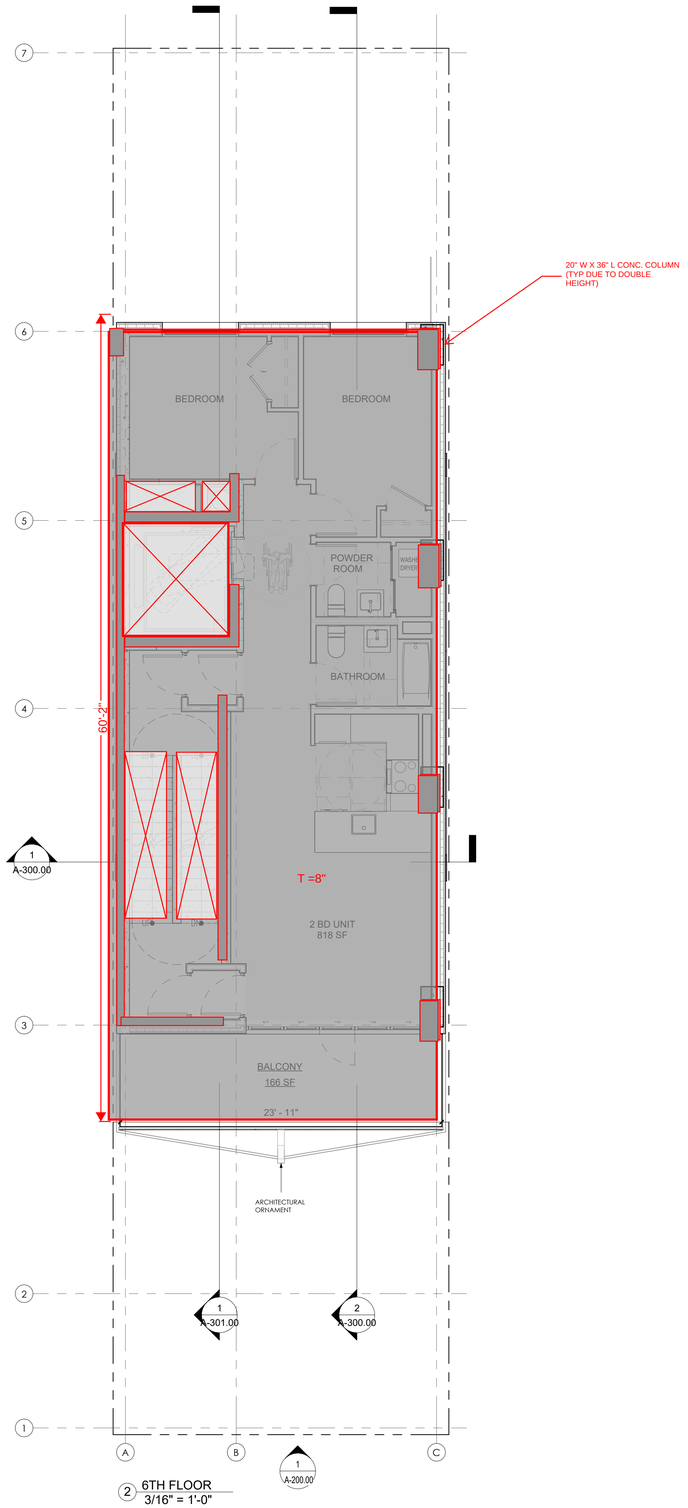
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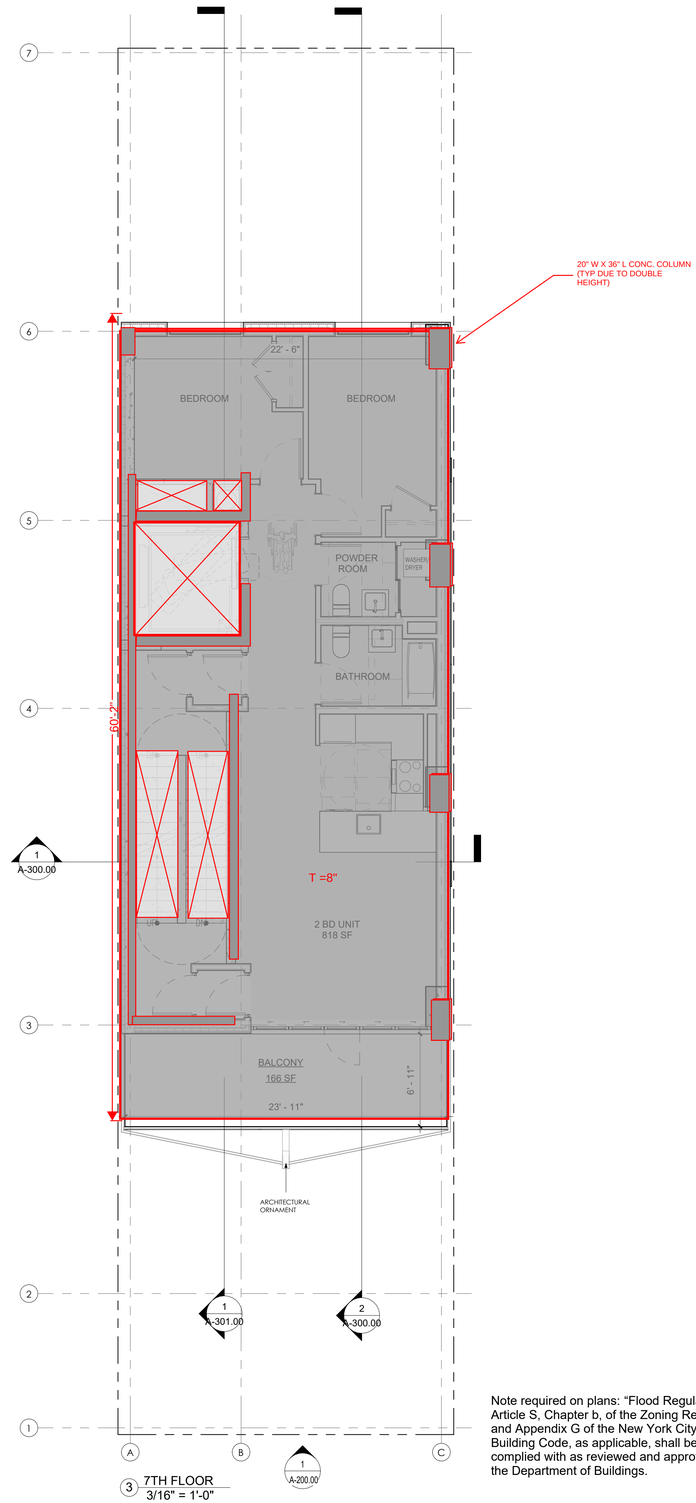
DOB BSCAN STICKER



1 5TH FLOOR
3/16" = 1'-0"



2 6TH FLOOR
3/16" = 1'-0"



3 7TH FLOOR
3/16" = 1'-0"

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DWG TITLE:

5TH, 6TH, 7TH FLOOR PLAN

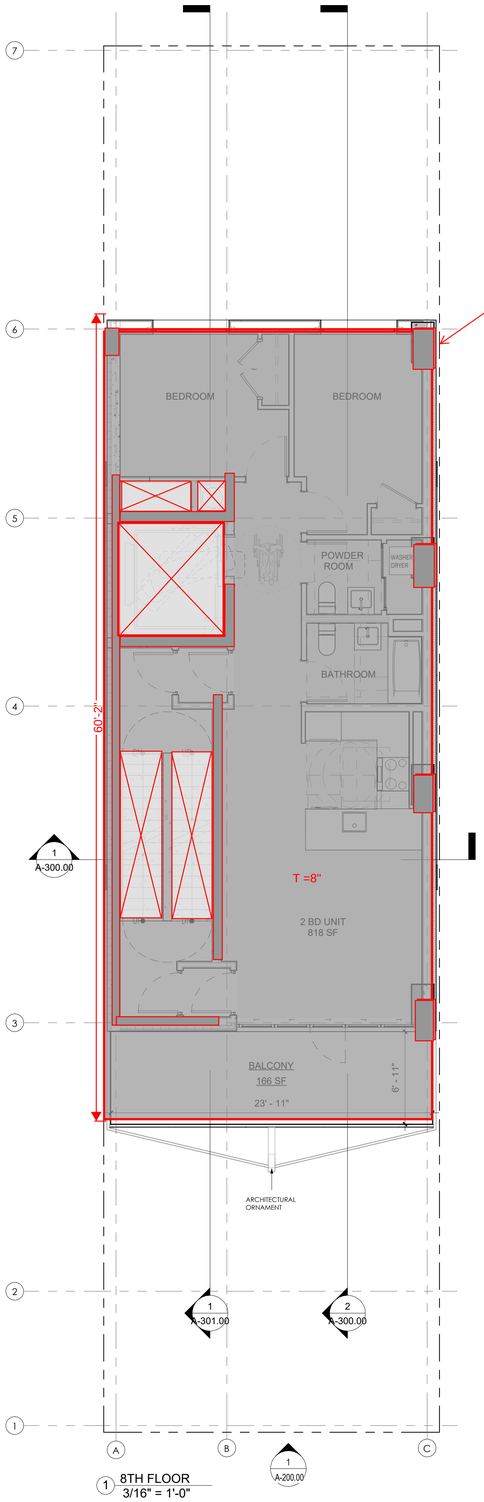
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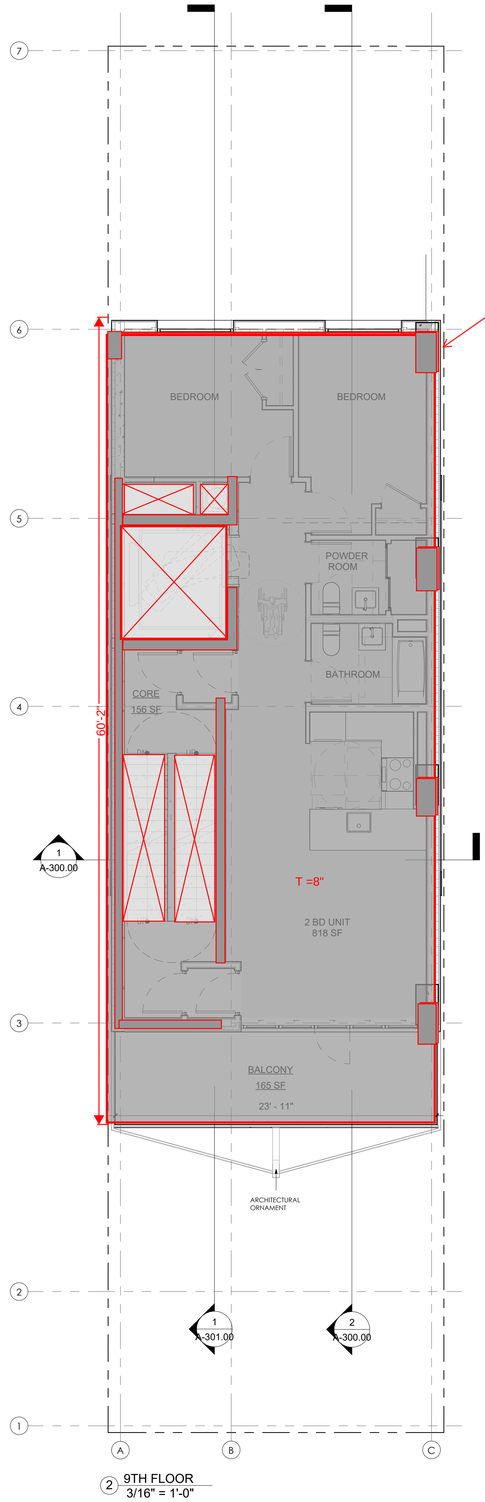
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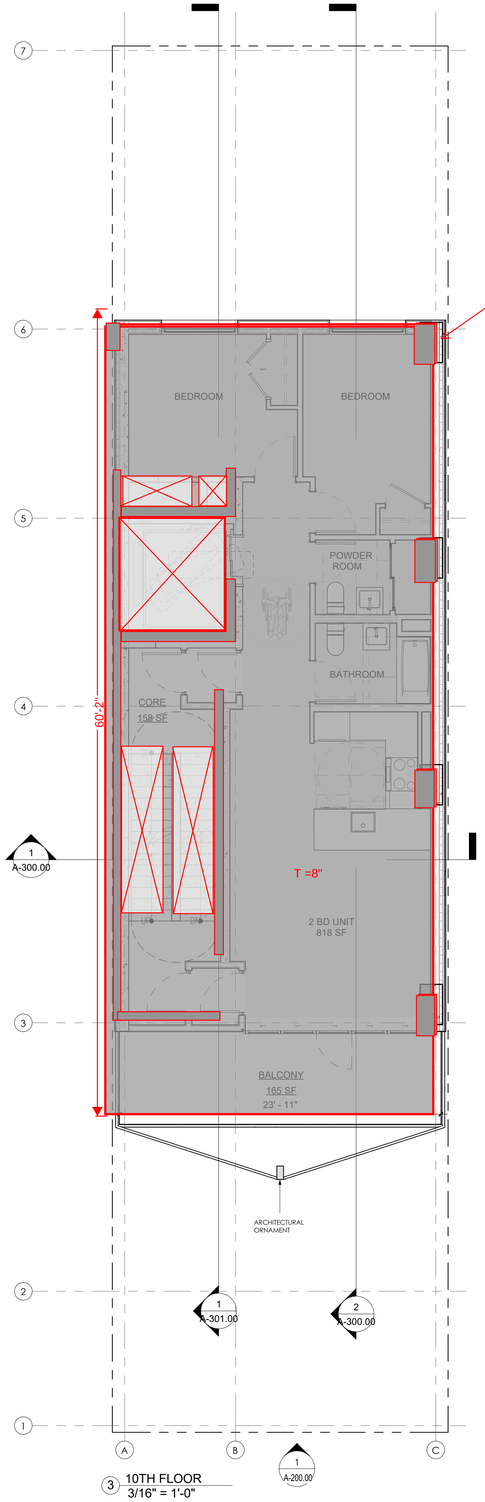
DOB BSCAN STICKER



1 8TH FLOOR
3/16" = 1'-0"



2 9TH FLOOR
3/16" = 1'-0"



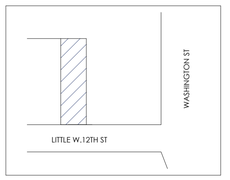
3 10TH FLOOR
3/16" = 1'-0"

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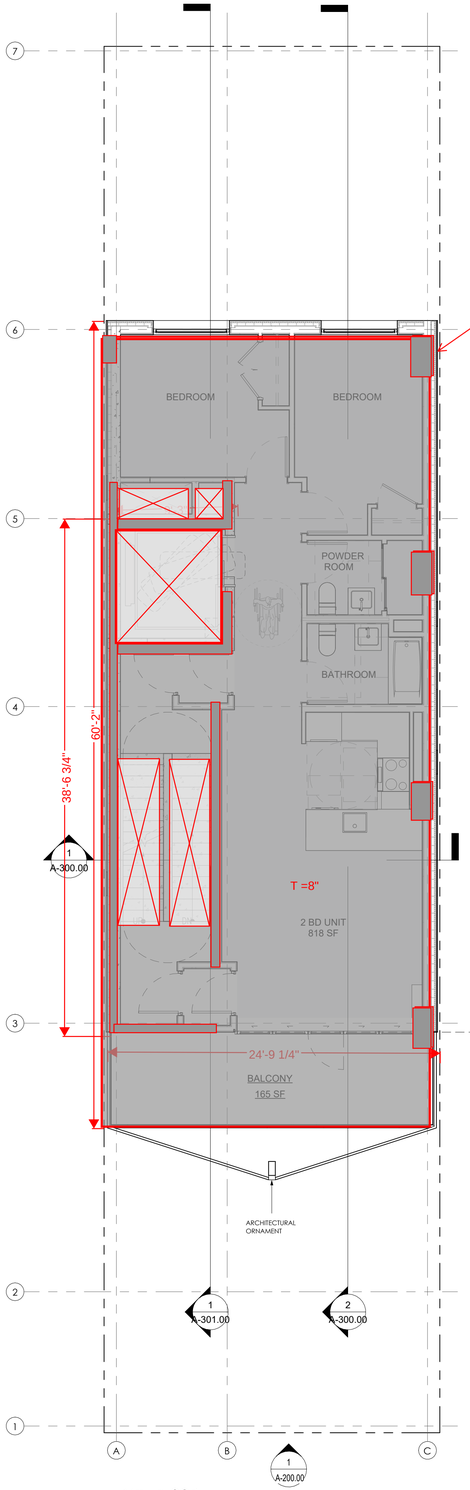
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SEAL

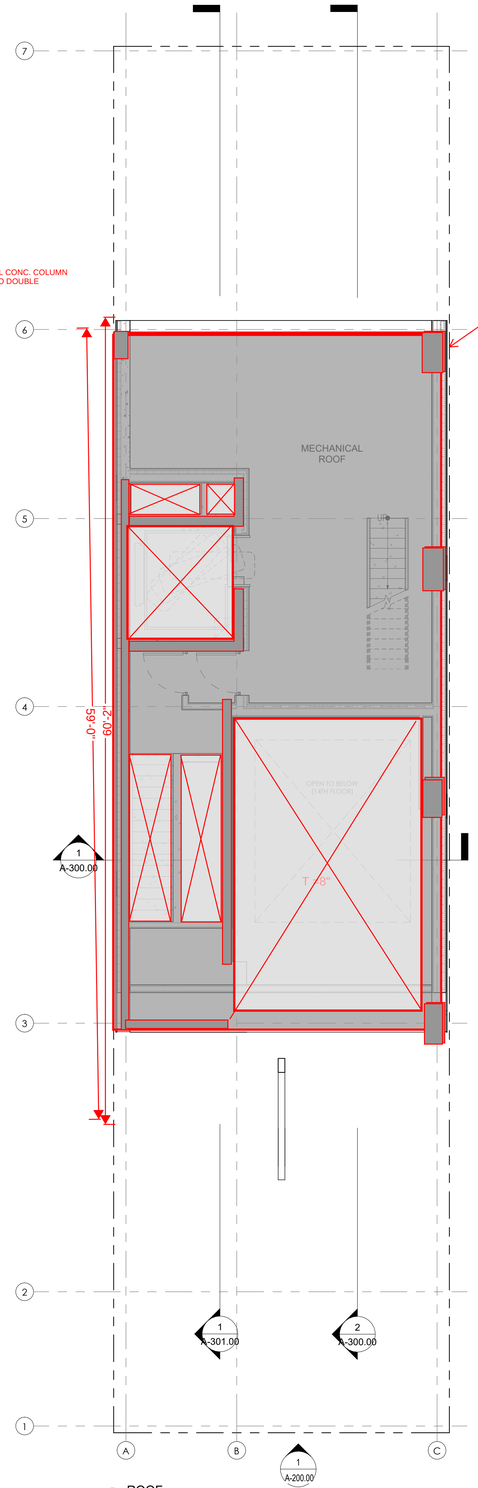
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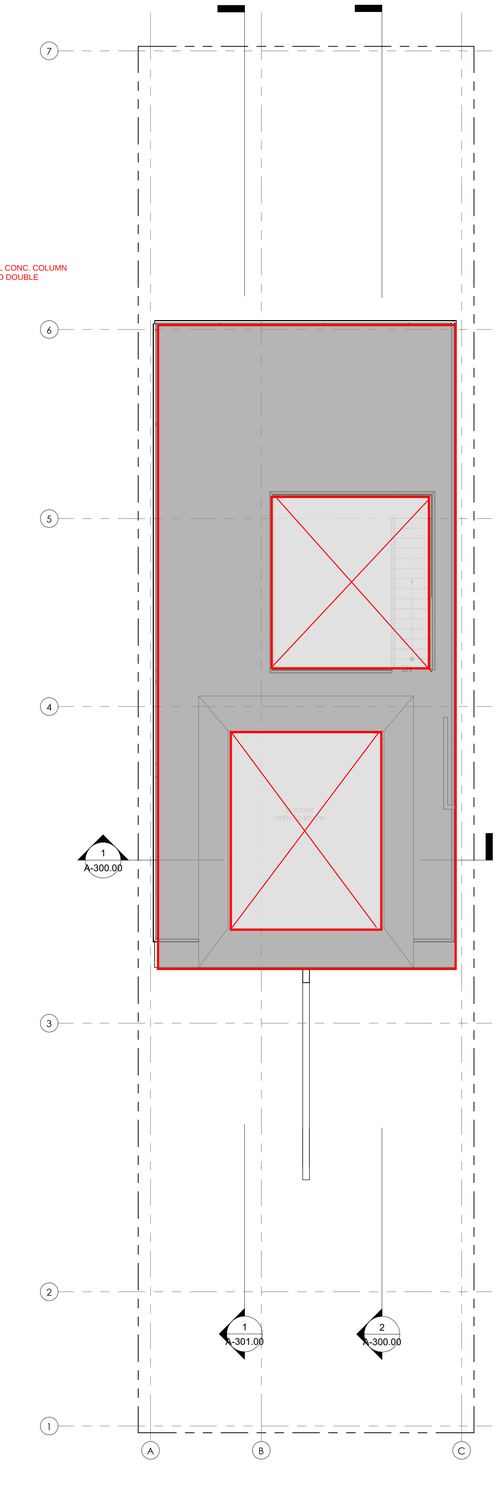
DOB BSCAN STICKER



1 14TH FLOOR
3/16" = 1'-0"



4 ROOF
3/16" = 1'-0"



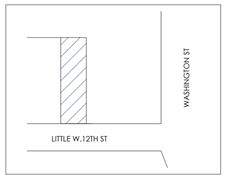
2 BULKHEAD
3/16" = 1'-0"

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NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

14TH, ROOF, BULKHEAD FL PLAN

SEAL

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DWG No:

A-104.00

DOB BSCAN STICKER

APPENDIX

FOUNDATION COST ESTIMATE
CONSULTMAB LLC

As-of-Right and Proposed Development Scenarios

BUDGET REPORT

Premium Cost Estimates: “As-of-Right” Commercial Scenario & Proposed Restaurant and Residential Scenario

51 Little West 12th Street, New York, NY

Prepared for

51 Little West 12th Street, LLC

May & July 2025 **Consultmab, LLC**

Introduction

The development scenarios being considered for a 2,581 square foot vacant site at **51 Little West 12th Street – Manhattan** include:

"As-of-Right" Commercial Office & Restaurant Development – consisting of a 6-story restaurant and commercial office building totaling 14,905 gross square feet of above grade building area. A cellar level of about 2,524 gross square feet is provided. There are two elevators: a service elevator connecting the ground floor restaurant to the cellar level, and a passenger elevator serving the upper floor commercial office tenants.

Proposed Restaurant & Residential Development – consisting of a 14-story building with totaling 20,633 gross square feet of above grade area. A cellar level of about 2,525 gross square feet is provided. There are two elevators: a service elevator connecting the ground floor restaurant to the cellar level, and a passenger elevator serving the upper floor residential tenants.

Premium Costs
The purpose of this budget report is to identify the site conditions that inform the design and construction which lead to **premium costs,** the differential between an unburdened site using conventional construction methods compared to specific means and methods required at the subject site. The report is based on architectural plans prepared by Walter Marin Architects, preliminary structural designs prepared by DeSimone Engineering and site conditions highlighted in the GeoTechnical Engineering report prepared by GZA.

The estimated premium cost of the complex foundation assigned to each development scenario will be presented as an added cost, a separate line item in the financial feasibility report prepared by Barbara J. Cohen-Real Estate & Planning Consultant. The base construction cost for the building's superstructure above grade is detailed in the financial feasibility report and based on the Marshall & Swift Cost Manual representing the cost components of a conventional construction project.

Subject Site Profile: Lot Size and Configuration | Subsurface Conditions | Adjacency Issues

Underlying each development scenario are the following site factors:

- Lot size is only 2,581 square feet with a frontage of 25 feet at Little West 12th Street to a depth of approximately 103 feet. The size and narrowness not only impact the floorplate size and utility for a prospective tenant, but also increases construction time and costs, as work at the site must be done in phases and shifts, and requires specialty equipment to perform the work. The small narrow

site informs the tall, slender building which reflects increases in gravity and lateral loads and stiffness requirements. As such the proposed building would be classified as a “slender building” requiring DOB Peer Review, an adding more time and cost to the development.

- Quality of the soil below the ground surface is unsuitable for support of any structure on shallow foundations and will require deep foundations. Additionally, the soil contains a variety of construction debris that may lead to difficulty during deep foundation and/or excavation support installation.

- The site lies within Flood Zone AE and must consider a design water elevation of El.+11. Groundwater was encountered at shallow depths and a dewatering program will be needed for foundation, cellar, and elevator pit construction.

- The impacts on the adjacent buildings (the eastern foundation wall of 53 Little West 12th Street and western foundation wall of 848 Washington Street) is of concern: (1) Dewatering will likely cause some level of settlement and manifest in cracking of masonry of the adjacent buildings founded on shallow foundations, (2) Underpinning of adjacent buildings will require coordination (legal access agreements) with adjacent property owners and may also require jet grouting due to the excavation below the groundwater table.

Preliminary Structural Design

Based on the above, preliminary structural design drawings were prepared by DeSimone Consulting Engineers for each development scenario. The premium costs are primarily associated with the support of excavation (SOE) and the foundation plan reflective of the subsurface conditions at the subject site. Key components are as follows:

The foundation design is highly tailored to the site’s flood zone classification (FEMA AE), seismic conditions (Site Class D), and poor soil strata (NYCBC Class 7 fill and Class 3 sands). A high groundwater table will require a complex dewatering program

Load bearing capacity of the soil is limited. Therefore, a deep foundation and excavation and management of the uncontrolled fill will be required. The site is a narrow infill parcel surrounded by existing structures with zero-lot-line excavation, requiring a tangent micropile system, which will act as support of excavation and the foundation wall supporting the upper floors. The tangent micropile walls consist of an installation zone for tangent wall, the tangent wall itself and a cast-in-place concrete liner/foundation wall. Together, it totals approximately 3 feet, reducing useable interior space at the cellar level.

It is expected that additional techniques for ground improvement will be necessary. For example, jet grouting strengthens soil by injecting high-pressure cement grout into the

ground. This grout mixes with the surrounding soil, creating a solidified column or barrier that can enhance soil strength, reduce permeability, and control groundwater.

In sum, due to the unique subsurface risks and engineered solutions required at this site, the foundation and SOE costs constitute a significant, atypical premium not reflected in the Marshall & Swift base building cost model. Therefore, the premium cost estimate provided herein, based on actual engineering documentation (e.g., GZA GeoTechnical report and DeSimone structural strategy) is required to isolate these additional costs which contribute: to the economically infeasible "as-of-right" commercial scenario, and to supporting the request for a variance inherent in the proposed restaurant and residential development scenario.

General Assumptions

1. Based on basic construction material and standard finishes are included,
2. Based on a construction start by the 3rd quarter of 2025.
3. Based on a 3 to 5 months construction schedule for the foundation. This duration doesn't include the time for site remediation and removal of hazardous materials, if any.
4. Based on non-union labor rates.
5. Does not include any construction and design contingencies.
6. Does not include site remediation / removal of hazardous materials and associated cost.
7. Does not include night work, premium time or weekend work.

The following items are excluded from the budget report:

a. Surveying of property
b. Sub-surface investigation and testing, coring, boring
c. Asbestos or Lead Paint Abatement
d. New waste management systems
e. Remediation (soil or groundwater contamination)
f. New stormwater management systems
g. Independent testing and inspection
h. Engineering inspection, if required by governmental agencies
i. Structural or seismic monitoring
j. Temporary decking or sidewalk shed
k. Permanent dewatering system
l. Architect, Engineer, Consultant fees
m. Site security (during construction)
n. Finishes at the retail or office spaces, nor residential fixtures.

Foundation Cost Estimate
“As-of-Right” Development Scenario

51 Little West Street, New York, NY (AOR)

Prepared by Consultmab, LLC

CSI Code	ITEM	DESCRIPTION	Quant	Unit	Unit Price Mat. / Equip.	Total Mat. / Equip.	BREAKDOWN Unit Price Labor	Total Labor	Total Unit price	Total
2.1		DEMOLITION / CUTTING / PROTECTION								$50,000
2.2		SITE WORK UTILITIES / SITE CONCRETE / ASPHALT PAVEMENT / LANDSCAPING								$0
3.1		EXCAVATION / CONCRETE FOUNDATION								$1,168,452

Total trades	$1,218,452
construction and design contingencies - NIC	$0
General conditions 10 %	$121,845
Insurance 4.5 %	$54,830
Total	**$1,395,127**

51 Little West Street, New York, NY (AOR)

Prepared by Consultmab, LLC

CSI						BREAKDOWN				
			Quant	Unit	Unit Price	Total	Unit Price	Total	Total	Total
Code	ITEM	DESCRIPTION			Mat. / Equip.	Mat. / Equip.	Labor	Labor	Unit price	
2.1		DEMOLITION / CUTTING / PROTECTION								
	1	Erosion control - silt fence	1	LS	1,500.00	1,500	3,000	3,000	4,500	$4,500
	2	Erosion control - truck pad	1	LS	2,000	2,000	3,500	3,500	5,500	$5,500
	3	Mobilization & site preparation	1	LS		0		0	40,000	$40,000
	4									
		SUBTOTAL								$50,000
2.2		SITE WORK UTILITIES / SITE CONCRETE / ASPHALT PAVEMENT / LANDSCAPING								
	1	Remove and replace sidewalk curb	n/a			0		0	0	$0
	2	Remove and replace concrete sidewalk	n/a			0		0	0	$0
	3	Pavement marking	n/a			0		0	0	$0
	4	Utility trenching, site utilities	n/a			0		0	0	$0
	5	Misc. works at bldg. entry	n/a			0		0	0	$0
	6	Landscaping - bldg. entry planters	n/a			0		0	0	$0
	7	Planters	n/a			0		0	0	$0
	8	New trees	n/a			0		0	0	$0
		SUBTOTAL								$0
3.1		EXCAVATION / CONCRETE FOUNDATION								
	1	Rock excavation (Not included)								
	2	Grade beams for new demising partition - N/A				0		0	0	$0
	3	Install Groundwater Control (Wellpoints)	1	LS	24,000	24,000	19,000	19,000	43,000	$43,000
	4	Excavation to subgrade (incl. disposal) - 15ft height	1,400	CY	173	242,200	60	84,000	233	$326,200
	5	Tangent micropiles - 83 ea x 35 ft	2,905	LF	103	299,215	37	107,485	140	$406,700
	6	Micropile Installation (16 load-bearing piles) x 55 ft	880	LF	163	143,440	65	57,200	228	$200,640
	7	Cap Beam & Liner Wall Forming and Pouring	130	CY	300	39,000	923	119,990	1,223	$158,990
	8	Foundation Slab 2520 SF x 12 "	93	CY	160	14,880	194	18,042	354	$32,922
	9	Elevator Pit & Waterproofing incl. in Marshall & Swift				0		0	0	$0
									0	
	12									
		SUBTOTAL								$1,168,452

Foundation Cost Estimate
Proposed Development Scenario

Building Data

		SF	
a.)	Cellar full lot	2,525	SF
b.)	1st Flr (setback car on site	2,102	SF
c.)	Mech Mezz	1,648	SF
d.)	2nd Flr - terrace alone	475	SF
e.)	3rd Flr	1,299	SF
f.)	4th Flr	1,299	SF
g.)	5th Flr	1,299	SF
h.)	6th Flr	1,299	SF
i.)	7th Flr	1,299	SF
j.)	8th Flr	1,299	SF
k.)	9th Flr	1,299	SF
l.)	10th Fl	1,299	SF
m.)	11th Flr	1,299	SF
n.)	12th Flr	1,299	SF
o.)	13th Flr	1,299	SF
p.)	14th Flr	1,299	SF
q.)	Mechanical Roof	820	SF
r.)	Total Above grade SF-Proposed	20,633	SF
s.)	Total Proposed-Include Cellar	23,158	SF

Summary Cost Estimate

2.1	DEMOLITION / CUTTING / PROTECTION	$50,000
2.2	SITE WORK UTILITIES / SITE CONCRETE / ASPHALT PAVEMENT / LANDSCAPING	$0
3.1	EXCAVATION / CONCRETE FOUNDATION	$1,519,572

Total trades	$1,569,572
construction and design contingencies - NIC	$0
General conditions 10 %	$156,957
Insurance 4.5 %	$70,631
Total	**$1,797,160**

List of Drawings and Documents

- Proposed Drawings from Marin Architects dated 10/10/24
- Concept Layouts from Desimone dated 7/7/25
- GZA Report dated 1/30/25

51 Little West Street, New York, NY (Proposed Residential)

Prepared by Consultmab, LLC

CSI Code	ITEM	DESCRIPTION	Length / Height	Width and or Thickness / Depth	Quant	Unit	Unit Price Mat. / Equip.	Total Mat. / Equip.	BREAKDOWN Unit Price Labor	Total Labor	Total Unit price	Total
2.1		DEMOLITION / CUTTING / PROTECTION										$50,000
2.2		SITE WORK UTILITIES / SITE CONCRETE / ASPHALT PAVEMENT / LANDSCAPING										$0
3.1		EXCAVATION / CONCRETE FOUNDATION										$1,519,572

Total trades	$1,569,572
construction and design contingencies - NIC	$0
General conditions 10 %	$156,957
Insurance 4.5 %	$70,631
Total	**$1,797,160**

51 Little West Street, New York, NY (Proposed Residential)

Prepared by Consultmab, LLC

CSI Code	ITEM	DESCRIPTION	Length / Height	Width and or Thickness / Depth	Quant	Unit	Unit Price Mat. / Equip.	Total Mat. / Equip.	BREAKDOWN Unit Price Labor	Total Labor	Total Unit price	Total
2.1		DEMOLITION / CUTTING / PROTECTION										
	1	Erosion control - silt fence			1	LS	1,500.00	1,500	3,000	3,000	4,500	$4,500
	2	Erosion control - truck pad			1	LS	2,000	2,000	3,500	3,500	5,500	$5,500
	3	Mobilization & site preparation			1	LS		0		0	40,000	$40,000
	4							0		0	0	$0
	5							0		0	0	$0
	6							0		0	0	$0
		SUBTOTAL										$50,000
2.2		SITE WORK UTILITIES / SITE CONCRETE / ASPHALT PAVEMENT / LANDSCAPING										
	1	Remove and replace sidewalk curb			n/a			0		0	0	$0
	2	Remove and replace concrete sidewalk	240	10	n/a			0		0	0	$0
	3	Pavement marking			n/a			0		0	0	$0
	4	Utility trenching, site utilities			n/a			0		0	0	$0
	5	Misc. works at bldg. entry			n/a			0		0	0	$0
	6	Landscaping - bldg. entry planters			n/a			0		0	0	$0
	7	Planters			n/a			0		0	0	$0
	8	New trees			n/a			0		0	0	$0
	9											
	10							0		0	0	$0
	11							0		0	0	$0
		SUBTOTAL										$0
3.1		EXCAVATION / CONCRETE FOUNDATION										
	1	Rock excavation (Not included)									0	
	2	Grade beams for new demising partition - N/A	853 LF	3 SF				0		0	0	$0
	3	Install Groundwater Control (Wellpoints)			1	LS	24,000	24,000	19,000	19,000	43,000	$43,000
	4	Excavation to subgrade (incl. disposal) - 15ft height			1,400	CY	173	242,200	60	84,000	233	$326,200
	5	Tangent micropiles - 83 ea x 35 ft			2,905	LF	103	299,215	37	107,485	140	$406,700
	6	Micropile Installation (44 load-bearing piles) x 55 ft			2,420	LF	163	394,460	65	157,300	228	$551,760
	7	Cap Beam & Liner Wall Forming and Pouring			130	CY	300	39,000	923	119,990	1,223	$158,990
	8	Foundation Slab 2520 SF x 12 "			93	CY	160	14,880	194	18,042	354	$32,922
	9	Elevator Pit & Waterproofing incl. in Marshall & Swift						0		0	0	$0
	10	Underpinning - N/A						0		0	0	$0
	11	Rock excavation (Not included)										
	12											
	13							0		0	0	$0
		SUBTOTAL										$1,519,572

APPENDIX
DEVELOPMENT COST ESTIMATES

Marshall & Swift Valuation Cost Manual

“As-of-Right” Scenario

DEVELOPMENT COST ESTIMATES

Based on Marshall & Swift Valuation Service

As-of-Right Commercial Development Scenario

		Avg. Class B Commercial Office Bldg 6-Story	MS Manual Pages
Base Cost Per SF *		**$293.00**	Section 15, page 17 - Nov 2023
	Cellar Adj.	Incl. in Premium Foundation Cost	See ConsultMAB & DeSimone
	First Flr Restaurant Adj. (Shell)	($10.05)	Section 15, page 26 - May 2024
	Add 2nd Elevator Adj	$6.29	Section 15, page 17 - Nov 2023
	Add Elevator Stop to Cellar Adj	$0.86	Section 15, page 36 - Nov 2023
	Sprinklers-Wet System	$5.92	Section 15, page 37 - Nov 2023
Total Base Cost Per SF *		**$296.02**	* Costs are for above grade area.
Façade Area Adjustment		110.0%	Section 15, page 38 - Nov 2023
Bldg. Height Adjustment		101.5%	Section 15, page 17 - Nov 2023
Floor Height Adjustment		97.7%	Section 15, page 38 - Nov 2023
Geographic Multiplier		133.0%	Section 99, page 9 - Apr 2025
Inflation Factor		102.0%	Section 99, page 3 - June 2025
Total Cost per SF *		**$438.06**	* Costs are for above grade area.

* Costs are for above grade area.

Total Above Grade SF	**14,905**
MS Total Cost	**$6,529,225**

OFFICE BUILDINGS (344)

CLASS	TYPE	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT	COST Sq. M.	COST Cu. Ft.	COST Sq. Ft.
A	Excellent	Best metal or stone, brick or block backup, solar glass	Plaster, best veneers, vinyl wall coverings, vinyl, terrazzo, carpet	*Luminous ceilings, many outlets, many private restrooms	Hot and chilled water (zoned)	4348.62	33.65	404.00
	Good	Good metal and solar glass, face brick, precast concrete panels	Drywall or plaster, some wall cover, acoustic tile, vinyl tile, carpet	*Good fluorescent, high intensity lighting, good restrooms	Hot and chilled water (zoned)	3444.45	26.66	320.00
	Average	Brick, concrete or metal and glass panels, little trim	Average partitions, acoustic tile, vinyl composition, some extras	*Average intensity fluorescent lighting, average restrooms	Warm and cool air (zoned)	2594.10	20.08	241.00
	Low cost	Minimum-cost walls and fenestration, little trim	Drywall, acoustic ceilings, asphalt tile, few partitions	*Minimum office lighting and plumbing	Warm and cool air (zoned)	2066.67	15.99	192.00
B	Excellent	Best metal or stone, brick or block backup, tinted glass	Plaster, best veneers, vinyl wall coverings, vinyl tile, terrazzo	*Luminous ceilings, many outlets, many private restrooms	Hot and chilled water (zoned)	4004.17	30.99	372.00
	Good	Good metal and solar glass, face brick, precast concrete panels	Drywall/plaster, some wall cover, acoustic tile, vinyl tile, carpet	*Good fluorescent, high intensity lighting, good restrooms	Hot and chilled water (zoned)	3153.82	24.41	293.00
	Average	Brick, concrete or metal and glass panels, little trim	Average partitions, acoustic tile, vinyl composition, some extras	*Average intensity fluorescent lighting, average restrooms	Warm and cool air (zoned)	2357.29	18.24	219.00
	Low cost	Minimum-cost walls and fenestration, little trim	Drywall, acoustic ceilings, asphalt tile, few partitions	*Minimum office lighting and plumbing	Warm and cool air (zoned)	1862.15	14.41	173.00
C	Excellent	Steel frame, masonry and glass, stone ornamentation, top quality	Plaster, paneling, carpet and terrazzo, suspended ceilings	*Best fluorescent ceiling panels, tiled restrooms, good fixtures	Warm and cool air (zoned)	3412.16	26.41	317.00
	Good	Steel frame or bearing walls, brick/ conc. panels, some ornamentation	Plaster or drywall, good partitions, acoustic tile, carpet and vinyl	*Good fluorescent lighting, good restrooms and fixtures	Package A.C.	2378.82	18.41	221.00
	Average	Steel or concrete frame, or bearing walls, some trim	Paint, drywall partitions, acoustic tile, vinyl composition	*Fluorescent lighting, adequate outlets and plumbing	Forced air	1689.93	13.08	157.00
	Low cost	Masonry bearing walls, light rafters, very plain	Paint, few low-cost partitions, acoustic tile, asphalt tile	Minimum office lighting and plumbing	Wall furnace	1140.97	8.83	106.00
D	Excellent	Studs or steel columns, bar or web joists, brick or stone veneer, EIFS	Best plaster, paneling, carpet and vinyl tile	*Fluorescent panels, many outlets, good tiled restrooms	Warm and cool air (zoned)	3250.70	25.16	302.00
	Good	Best stucco on good frame, brick or stone trim, good front	Plaster or drywall, good partitions, acoustic tile, carpet and vinyl	*Good fluorescent lighting, good restrooms and fixtures	Package A.C.	2260.42	17.49	210.00
	Average	Stucco or wood siding on wood or steel studs, some trim	Drywall, acoustic tile, low-cost carpet or vinyl composition	*Adequate lighting and plumbing	Forced air	1603.82	12.41	149.00
	Low cost	Light stucco or siding on wood or steel studs, very plain	Drywall, few partitions, acoustic tile, asphalt tile	Minimum lighting and plumbing	Wall furnace	1071.01	8.29	99.50
DPOLE	Good	Good metal panels, fenestration, some brick or stone trim	Plaster or drywall, good partitions, acoustic tile, carpet and vinyl	*Good fluorescent lighting, good restrooms and fixtures	Package A.C.	2131.25	16.49	198.00
	Average	Pole frame, insulated metal panels, some ornamentation	Drywall, acoustic tile, low-cost carpet or vinyl composition	Adequate lighting and plumbing	Forced air	1453.13	11.25	135.00
	Low cost	Pole frame, finished interior, some insulation	Drywall, few partitions, acoustic tile, asphalt tile	Minimum lighting and plumbing	Wall furnace	984.90	7.62	91.50
S	Good	Good sandwich panels and fenestration, some brick or stone	Plaster or drywall, good partitions, acoustic tile, carpet and vinyl	*Good fluorescent lighting, good restrooms and fixtures	Package A.C.	2185.07	16.91	203.00
	Average	Insulated wall or sandwich panels, adequate fenestration	Drywall, acoustic tile, low-cost carpet or vinyl composition	Adequate lighting and plumbing	Forced air	1506.95	11.66	140.00
	Low cost	Steel or aluminum on light frame, finished interior, some insulation	Drywall, few partitions, acoustic tile, asphalt tile	Minimum lighting and plumbing	Wall furnace	1017.19	7.87	94.50

MULTISTORY BUILDINGS – Add .5% (1/2%) for each story, over three, above ground, to all base costs, including basements but excluding mezzanines, up to 30 stories; over 30 add .4% (4/10%) for each additional story.

SPRINKLERS – Systems are not included. Costs should be added from Page 37.

BALCONIES – Exterior balconies see Page 37, or they may be computed from the Segregated Costs.

CANOPIES – For large entrance marquees or carport canopies, see Page 37.

***ELEVATORS** – Base costs of buildings marked with an asterisk (*) include elevator costs. If the subject building has no elevators, deduct the following from the base costs for buildings on this page. See Notes on Page 19.

		Sq. M.	Sq. Ft.		Sq.M.	Sq.Ft
Classes A & B	Excellent	189.98	17.65	Average	88.69	8.24
	Good	129.71	12.05	Low cost	60.60	5.63
Classes C/D/S	Excellent	95.91	8.91	Average	34.77	3.23
	Good	57.69	5.36			

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OFFICES, MEDICAL AND PUBLIC BUILDINGS

REFINEMENTS

EXTERIOR BALCONIES

Balcony costs include the supporting structure, decking and rails. Apply costs to the balcony area.

	LOW	AVG.	GOOD	EXCL.
Concrete	31.75	41.00	53.00	68.50
Steel	29.75	40.50	54.50	75.00
Wood	25.25	33.75	45.00	60.00
Add for ornate finishes, balustrades	27.50	33.75	41.75	51.00
Add for roofs or awnings	15.15	20.10	26.75	35.50

CANOPIES

This is the cantilevered portion of a building that extends over an entrance. The distance that the canopy is cantilevered should be considered when selecting a rank.

	LOW	AVG.	GOOD	EXCL.
Wood Frame	39.00	48.75	60.00	75.00
Light false-mansard	21.45	26.75	33.00	41.25
Steel Frame	47.75	60.00	76.00	96.00
Light false-mansard	26.25	33.00	41.75	53.00

MISCELLANEOUS EQUPMENT

Apply to total square feet of building area, if required. These costs vary greatly, and the following typical cost ranges should be used with caution. Built-in equipment which is normally included under the general contract is included in the base structure cost.

	LOW	AVG.	GOOD	EXCL.
Bank equipment, counters, vault doors, etc	43.00	59.00	81.00	112.00
Jail equipment, cell blocks, locking devices, etc	24.75	41.00	65.00	101.00
police stations	3.94	6.52	10.35	16.20
Hospital equipment, Groups II and III	38.50	66.50	109.00	170.00
Hospital pneumatic conveyor system	5.02	5.89	6.90	8.06
Library equipment, bookstacks, etc	20.00	35.75	59.00	93.50

SPRINKLERS

Sprinkler costs include all costs for the system and supply lines, but not tanks, towers or high-pressure pumps. The square foot costs listed are based on the total area of sprinkler system installation on a single main connection including its prorated share of contractors' overhead and profit and architects' fees. For a more specific cost, see Section 45 or 53. Sprinklers should not be modified for size or shape. To convert square foot costs to square meter costs, multiply by 10.764.

	WET SYSTEMS				DRY SYSTEMS			
Coverage	Low	Avg.	Good	Excl.	Low	Avg.	Good	Excl.
1500 square foot	6.24	7.41	8.80	10.45	8.08	9.60	11.40	13.55
2,000	5.94	7.04	8.34	9.89	7.67	9.10	10.80	12.80
3,000	5.56	6.58	7.78	9.20	7.15	8.46	10.00	11.85
5,000	5.17	6.09	7.16	8.43	6.58	7.75	9.13	10.75
10,000	4.65	5.45	6.38	7.47	5.89	6.90	8.07	9.45
15,000	4.32	5.06	5.92	6.93	5.47	6.39	7.48	8.74
20,000	4.14	4.83	5.64	6.58	5.23	6.10	7.12	8.30
30,000	3.91	4.54	5.27	6.11	4.88	5.67	6.59	7.66
50,000	3.61	4.17	4.83	5.58	4.47	5.18	6.00	6.96
75,000	3.39	3.91	4.51	5.20	4.19	4.84	5.58	6.44
100,000	3.26	3.75	4.31	4.95	4.00	4.61	5.31	6.11
125,000	3.12	3.58	4.12	4.73	3.84	4.42	5.08	5.84
150,000	3.06	3.51	4.03	4.62	3.75	4.30	4.94	5.67
200,000	2.91	3.33	3.81	4.36	3.58	4.09	4.67	5.34
250,000	2.80	3.21	3.67	4.21	3.43	3.93	4.50	5.15
300,000	2.74	3.13	3.57	4.08	3.34	3.81	4.35	4.96
400,000	2.63	2.99	3.40	3.87	3.20	3.64	4.14	4.71
500,000	2.52	2.87	3.27	3.72	3.06	3.48	3.95	4.49

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CALCULATOR METHOD

OFFICES, MEDICAL AND PUBLIC BUILDINGS
FLOOR AREA – PERIMETER MULTIPLIERS

AVERAGE FLOOR AREA		M.	AVERAGE PERIMETER																M.	AVERAGE FLOOR AREA	
Sq. M.	Sq. Ft.	FT.	38 125	46 150	53 175	61 200	76 250	91 300	122 400	152 500	183 600	213 700	244 800	305 1000	366 1200	427 1400	488 1600	549 1800	610 2000	FT.	Sq. Ft.	Sq. M.
93	1,000		1.168	1.235	1.299	1.364	1.494	1.624	1.884	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		1,000	93
139	1,500		1.061	1.105	1.146	1.191	1.277	1.364	1.537	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		1,500	139
186	2,000		1.007	1.040	1.072	1.105	1.168	1.235	1.364	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		2,000	186
232	2,500		-----	1.000	1.027	1.052	1.105	1.155	1.259	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		2,500	232
279	3,000		-----	.975	.997	1.018	1.061	1.105	1.191	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		3,000	279
372	4,000		-----	-----	.958	.975	1.007	1.040	1.105	1.168	-----	-----	-----	-----	-----	-----	-----	-----	-----		4,000	372
465	5,000		-----	-----	.936	.949	.975	1.000	1.052	1.105	1.155	-----	-----	-----	-----	-----	-----	-----	-----		5,000	465
557	6,000		-----	-----	-----	.932	.952	.975	1.018	1.061	1.105	1.146	-----	-----	-----	-----	-----	-----	-----		6,000	557
743	8,000		-----	-----	-----	-----	.926	.942	.975	1.007	1.040	1.072	1.105	-----	-----	-----	-----	-----	-----		8,000	743
929	10,000		-----	-----	-----	-----	.910	.923	.949	.975	1.000	1.027	1.052	1.105	1.155	-----	-----	-----	-----		10,000	929
1,115	12,000		-----	-----	-----	-----	-----	.910	.932	.952	.975	.997	1.018	1.061	1.105	1.146	-----	-----	-----		12,000	1,115
1,301	14,000		-----	-----	-----	-----	-----	.900	.920	.938	.956	.975	.993	1.030	1.067	1.105	1.140	-----	-----		14,000	1,301
1,486	16,000		-----	-----	-----	-----	-----	-----	.910	.926	.942	.958	.975	1.007	1.040	1.075	1.105	-----	-----		16,000	1,486
1,672	18,000		-----	-----	-----	-----	-----	-----	.903	.918	.932	.946	.960	.990	1.018	1.046	1.076	1.105	-----		18,000	1,672
1,858	20,000		-----	-----	-----	-----	-----	-----	-----	.910	.923	.936	.949	.975	1.000	1.027	1.052	1.078	1.105		20,000	1,858
2,323	25,000		-----	-----	-----	-----	-----	-----	-----	.897	.908	.918	.928	.948	.969	.990	1.011	1.032	1.052		25,000	2,323
2,787	30,000		-----	-----	-----	-----	-----	-----	-----	-----	.897	.906	.915	.932	.949	.965	.983	1.000	1.018		30,000	2,787
3,252	35,000		-----	-----	-----	-----	-----	-----	-----	-----	-----	.897	.904	.919	.934	.949	.963	.978	.993		35,000	3,252
3,716	40,000		-----	-----	-----	-----	-----	-----	-----	-----	-----	.890	.897	.910	.923	.936	.949	.962	.975		40,000	3,716
4,645	50,000		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.887	.897	.908	.918	.928	.938	.948		50,000	4,645
6,968	75,000		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.873	.879	.885	.892	.900	.908	.915		75,000	6,968
9,290	100,000		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.866	.871	.876	.881	.887	.892	.897		100,000	9,290

NOTE: For small buildings, enter the table by doubling the average floor area and doubling the perimeter. For larger buildings, take half the area and half the perimeter.

STORY HEIGHT MULTIPLIERS

Multiply base cost by following multipliers for any variation in average story height from the base of 12 feet (3.66 meters). For extremely high-pitched roofs (see Section 10), use the height of the eaves plus one-half the height from the eaves to the ridge as the effective height. In some buildings or for a complete facility average, it is better to compute the total cubage and divide by the total square footage of floor area to get an effective height to use.

AVERAGE WALL HEIGHT		SQUARE FOOT OR SQUARE METER MULTIPLIER	CUBIC FOOT MULTIPLIER	AVERAGE WALL HEIGHT		SQUARE FOOT OR SQUARE METER MULTIPLIER	CUBIC FOOT MULTIPLIER	AVERAGE WALL HEIGHT		SQUARE FOOT OR SQUARE METER MULTIPLIER	CUBIC FOOT MULTIPLIER
(M.)	(FT.)			(M.)	(FT.)			(M.)	(FT.)		
2.44	8	.900	1.350	3.96	13	1.023	.944	6.10	20	1.184	.710
2.74	9	.928	1.237	4.27	14	1.046	.897	7.31	24	1.276	.638
3.05	10	.953	1.144	4.57	15	1.069	.855	8.53	28	1.367	.586
3.35	11	.977	1.066	4.88	16	1.092	.819	9.75	32	1.459	.547
3.66	12	1.000 (base)	1.000	5.49	18	1.138	.758	10.97	36	1.552	.517

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CALCULATOR METHOD

RESTAURANTS (350)

CLASS	TYPE	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	*HEAT	COST Sq. M.	COST Cu. Ft.	COST Sq. Ft.
A-B	Excellent	Stone, face brick, best metal walls, usually part of a building	Best plaster and paneling, highly ornamental, carpeted, deluxe quality	Special lighting fixtures and effects, deluxe restrooms	Complete H.V.A.C.	4434.73	34.32	412.00
	Good	Concrete, metal/glass or masonry panels, usually part of a building	Plaster with enamel & vinyl, carpet & vinyl flooring, decorated interior	Good lighting and outlets, good plumbing and restrooms	Complete H.V.A.C.	3315.28	25.66	308.00
	Average	Brick or concrete, usually part of a building	Plaster or drywall, acoustic tile, carpet, ceramic, rubber, or vinyl comp. tile	Adequate lighting outlets, adequate plumbing	Complete H.V.A.C.	2497.22	19.33	232.00
C	Excellent	Individual design, highly ornamental exterior	High-quality detail, best acoustics, carpeted, deluxe quality	Special lighting effects, tiled restrooms, good fixtures	Complete H.V.A.C.	4079.52	31.57	379.00
	Very good	Individual design, brick, good metal and glass, ornamentation	Typically best chain restaurants, carpeted lounge and dining room	Good lighting/restrooms with good-quality fixtures and tile	Complete H.V.A.C.	3164.59	24.49	294.00
	Good	Brick, concrete or metal and glass panels, ornamentation	Typical chain restaurant or coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2464.93	19.08	229.00
	Average	Brick, block, tilt-up, plain building, stock plans	Typical neighborhood restaurant, vinyl composition, small kitchen	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1915.97	14.83	178.00
	Low cost	Cheap brick or block, very plain, low-cost front	Low-cost short order cafe, minimum finish, asphalt tile	Minimum lighting and outlets, minimum plumbing	Forced air and ventilation	1388.54	10.75	129.00
D	Excellent	Individual design, highly ornamental exterior, stone veneer	High-quality detail, best acoustics, carpeted, deluxe quality	Special lighting effects, tiled restrooms, good fixtures	Complete H.V.A.C.	3918.06	30.32	364.00
	Very good	Individual design, brick veneer, good metal and glass, ornamentation	Typically best chain restaurants, carpeted lounge and dining room	Good fixtures, good restrooms w/good-quality fixtures and tile	Complete H.V.A.C.	2992.36	23.16	278.00
	Good	Stucco or siding, metal and glass, some ornamentation	Typical chain restaurant or coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2303.47	17.83	214.00
	Average	Stucco or siding, plain building and front, stock plans	Typical neighborhood restaurant, vinyl composition, small kitchen	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1776.04	13.74	165.00
	Low cost	Cheap stucco or siding, very plain	Low-cost short order cafe, min. finish	Minimum lighting and plumbing	Forced air/vent.	1259.38	9.75	117.00
DPOLE	Low cost	Pole frame, good metal panels, lined and insulated, plain front	Low-cost short order cafe, minimum finish, asphalt tile	Minimum lighting and outlets, minimum plumbing	Forced air and ventilation	1173.27	9.08	109.00
S	Good	Insulated sandwich panels, metal and glass, some ornamentation	Comparable to typical chain coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2325.00	17.99	216.00
	Average	Insulated panels, metal and glass, little ornamentation	Typical neighborhood coffee shop, vinyl comp., some ceramic or pavers	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1743.75	13.49	162.00
	Low cost	Finished interior, some front	Low-cost finish, asphalt tile	Minimum lighting and plumbing	Forced air/vent.	1205.56	9.33	112.00

BASEMENTS AND MEZZANINES

A-B	Basement, finished	Plaster interior	Finished ceiling and floors, banquet, service functions	Adequate lighting/plumbing, restrooms, utility rooms	Low-cost complete H.V.A.C.	1668.40	12.91	155.00
	Mezzanine, open	Not included	Open, finished floors, plaster soffit, minimum work stations	Adequate lighting, minimum plumbing	Included in building cost	645.83	-----	60.00
CDS	Basement, finished	†Plaster or drywall interior	Finished ceiling and floors, banquet, service functions	Adequate lighting/plumbing, restrooms, utility rooms	Forced air and ventilation	1108.68	8.58	103.00
	Bsmt. storage	†Painted interior, outside entry	Paint only, some partitions	Adequate lighting, drains	None	535.50	4.14	49.75
	Mezzanine, open	Not included	Open, finished floors and soffit, minimum work stations	Adequate lighting, minimum plumbing	Included in building cost	449.39	-----	41.75

†For fire-resistant Type I basements, with concrete slab separation under Class C, D or S units, add $ 8.66 per square foot ($93.22 per square meter). *Adjust for heat from table on following page.
NOTES: For other basement types, see Page 30.

MULTISTORY BUILDINGS

Add 0.5% (1/2%) for each story over three, above ground, to all base costs, including basements but excluding mezzanines, up to 30 stories. Over 30 stories, add 0.4% (4/10%) for each additional story.

BALCONIES

To determine the cost for exterior balconies use one of the following: Page 40 in this section; compute from the Segregated Costs in Section 43; or from Unit-In-Place Costs in Section 66.

MEZZANINES

Do not use story height or area/perimeter multipliers with mezzanine costs.

SPRINKLERS

Sprinkler systems are not included. Costs should be added from Page 40.

ELEVATORS

Elevators are not included. Costs should be added from Page 39. Add for dumbwaiters from Section 58.

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CURRENT COST MULTIPLIERS

These multipliers bring costs from preceding pages up to date. Also apply Local Multipliers, Section 99, Pages 5 through 10.

CALCULATOR COST SECTIONS

(Effective Date of Cost Pages)		11 (11/24)	12 (8/24)	13 (5/24)	14 (2/24)	15 (11/23)	16 (8/23)	17 (5/25)	18 (2/25)
EASTERN	A	1.05	1.05	1.04	1.03	1.05	1.07	1.03	1.06
	B	1.06	1.06	1.03	1.05	1.02	1.03	1.03	1.05
	C	1.03	1.02	1.05	1.04	1.06	1.06	1.04	1.01
	D	1.02	1.03	1.03	1.02	1.02	1.03	1.00	1.01
	S	1.07	1.06	1.05	1.04	1.06	1.03	1.00	1.06
CENTRAL	A	1.00	0.99	0.99	1.00	1.01	1.03	0.97	0.98
	B	0.99	1.00	0.99	1.00	1.02	1.00	0.96	0.97
	C	1.00	1.00	1.01	1.00	1.01	0.99	0.97	0.98
	D	0.98	1.00	1.00	1.00	1.03	1.02	0.96	0.99
	S	0.96	0.99	0.96	1.00	0.99	0.98	0.98	0.97
WESTERN	A	0.99	1.04	1.06	1.08	1.07	1.06	1.00	0.98
	B	1.00	1.02	1.07	1.05	1.06	1.07	1.03	1.00
	C	1.01	1.05	1.03	1.07	1.05	1.06	1.01	1.04
	D	1.04	1.03	1.04	1.06	1.03	1.02	1.05	1.03
	S	1.01	1.01	1.06	1.05	1.04	1.08	1.03	0.99

SEGREGATED COST SECTIONS

(Effective Date of Cost Pages)		41 (12/24)	42 (9/24)	43 (6/24)	44 (3/24)	45 (12/23)	46 (9/23)	47 (6/25)	48 (3/25)
EASTERN	A	1.05	1.05	1.04	1.03	1.05	1.07	1.03	1.06
	B	1.06	1.06	1.03	1.05	1.02	1.03	1.03	1.05
	C	1.03	1.02	1.05	1.04	1.06	1.06	1.04	1.01
	D	1.02	1.03	1.03	1.02	1.02	1.03	1.00	1.01
	S	1.07	1.06	1.05	1.04	1.06	1.03	1.00	1.06
CENTRAL	A	1.00	0.99	0.99	1.00	1.01	1.03	0.97	0.98
	B	0.99	1.00	0.99	1.00	1.02	1.00	0.96	0.97
	C	1.00	1.00	1.01	1.00	1.01	0.99	0.97	0.98
	D	0.98	1.00	1.00	1.00	1.03	1.02	0.96	0.99
	S	0.96	0.99	0.96	1.00	0.99	0.98	0.98	0.97
WESTERN	A	0.99	1.04	1.06	1.08	1.07	1.06	1.00	0.98
	B	1.00	1.02	1.07	1.05	1.06	1.07	1.03	1.00
	C	1.01	1.05	1.03	1.07	1.05	1.06	1.01	1.04
	D	1.04	1.03	1.04	1.06	1.03	1.02	1.05	1.03
	S	1.01	1.01	1.06	1.05	1.04	1.08	1.03	0.99

UNIT-IN-PLACE COST SECTIONS (51 – 70)

Sec.	Page	Date		Eastern	Central	Western
51 -	2-3	(3/25)	Concrete Foundations	1.02	0.99	1.03
51 -	4	(3/25)	Pilings	1.02	0.98	1.03
51 -	7-8	(3/25)	Steel and Concrete Frame	1.02	0.98	1.03
51 -	3,7	(3/25)	Wood Foundations, Frame	0.99	0.99	1.05
52 -	1-4, 6	(3/25)	Interior Construction	1.00	1.00	1.03
52 -	5	(3/25)	Bank Vaults and Equipment	1.03	0.97	1.02
53 -	1-8	(6/25)	Heating, Cooling & Ventilating	1.00	0.98	1.03
53 -	9-12	(6/25)	Plumbing, Fire Protection, etc.	1.01	0.96	1.04
54 -	1-6	(6/25)	Electrical, Security	0.99	1.03	0.99
55 -	3-7	(8/23)	Wall Costs	1.03	1.00	1.08
56 -	1-2	(8/23)	Stained Glass	1.03	1.01	1.06
56 -	3-6	(8/23)	Storefronts	1.03	1.01	1.06
56 -	7	(8/23)	Stonework	1.01	1.02	1.08
56 -	8	(8/23)	Columns, Stone & Concrete	1.01	1.02	1.08
56 -	8	(8/23)	Columns, Wood & Aluminum	1.01	1.00	1.06
57 -	1-6	(9/23)	Roofs	1.02	1.02	1.06
58 -	1	(9/23)	Cold Storage	1.02	1.00	1.08
58 -	2-8	(9/23)	Elevators, Conveying Systems	1.05	1.02	1.07
61 -	1-8	(12/24)	Tanks	1.00	0.99	1.04
62 -	1	(6/24)	Industrial Pumps & Boilers	1.03	0.94	1.09
62 -	2-3, 6	(6/24)	Piping	1.03	0.94	1.09
62 -	4	(6/24)	Electrical Motors	1.03	0.94	1.09
62 -	5	(6/24)	Steel Stacks, Chutes	1.03	0.94	1.09
62 -	5	(6/24)	Masonry & Concrete Chimneys	1.02	0.97	1.08
62 -	6	(6/24)	Compactors, Incinerators	1.03	0.94	1.09
63 -	1-4	(9/24)	Trailer and Mfg. Housing Parks	0.99	1.00	1.07
63 -	5-10	(9/24)	Manufactured Housing	1.00	1.00	1.05
64 -	1-6	(3/24)	Service Stations, Car Washes	1.05	1.00	1.03
64 -	7-9	(3/24)	Prefabricated Metal Structures	1.03	0.98	1.07
64 -	7-8	(3/24)	Prefab. Wood & Air Structures	1.02	1.01	1.05
65 -	1-12	(3/24)	Equipment Costs	1.02	1.02	1.04
66 -	1	(12/23)	Subdivision Costs	1.03	1.00	1.07
66 -	2-9	(12/23)	Yard Improvements	1.02	0.99	1.08
66 -	10-11	(12/23)	Demolition & Remediation	1.01	1.01	1.07
67 -	1-2	(12/23)	Golf Courses	1.01	1.03	1.05
67 -	3-7	(12/23)	Recreational Facilities	1.01	1.01	1.07
70 -	1-32	(1/25)	Green Section	0.99	0.99	1.05

This page supersedes the May 2025 Green Supplement.

The data included on this page becomes obsolete after update delivery, scheduled for July 2025.

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LOCAL MULTIPLIERS

Apply to costs brought up-to-date from preceding pages. Do not apply to Section 98 or any other indexes.

UNITED STATES

CLASS	A	B	C	D	S
NEW JERSEY	1.18	1.20	1.19	1.20	1.20
Asbury Park	1.08	1.10	1.09	1.10	1.12
Atlantic City	1.20	1.23	1.23	1.26	1.24
Bayonne	1.21	1.23	1.21	1.22	1.21
Camden	1.14	1.15	1.14	1.14	1.14
Clifton	1.20	1.22	1.21	1.21	1.22
East Orange	1.21	1.23	1.22	1.23	1.22
Edison	1.21	1.23	1.22	1.23	1.22
Elizabeth	1.24	1.25	1.23	1.25	1.24
Fairlawn	1.21	1.23	1.21	1.22	1.23
Hackensack	1.20	1.23	1.21	1.22	1.23
Irvington	1.24	1.26	1.25	1.27	1.26
Jersey City	1.22	1.24	1.21	1.23	1.22
Lakewood	1.06	1.10	1.09	1.10	1.10
Morristown	1.22	1.24	1.23	1.25	1.24
New Brunswick	1.21	1.23	1.22	1.23	1.22
Newark	1.25	1.27	1.26	1.29	1.27
Passaic	1.20	1.22	1.21	1.21	1.22
Paterson	1.21	1.23	1.21	1.22	1.23
Plainfield	1.11	1.12	1.12	1.12	1.12
Somerville	1.19	1.21	1.21	1.20	1.22
Teaneck	1.20	1.23	1.21	1.22	1.22
Trenton	1.18	1.20	1.19	1.21	1.19
Vineland	1.11	1.12	1.13	1.14	1.14
West Orange	1.21	1.22	1.21	1.22	1.20
NEW MEXICO	0.92	0.93	0.93	0.93	0.93
Alamogordo	0.87	0.90	0.90	0.86	0.89
Albuquerque	0.92	0.92	0.93	0.92	0.93
Carlsbad	0.88	0.91	0.91	0.91	0.90
Clovis	0.95	0.96	0.95	0.95	0.93
Farmington	0.93	0.96	0.96	0.95	0.95
Gallup	0.89	0.89	0.90	0.90	0.92
Hobbs	0.87	0.91	0.91	0.91	0.89
Las Cruces	0.91	0.94	0.94	0.92	0.96
Los Alamos	0.94	0.93	0.95	0.96	0.95
Portales	0.88	0.87	0.85	0.86	0.87
Roswell	0.93	0.93	0.95	0.94	0.95
Santa Fe	0.93	0.93	0.95	0.95	0.94
Taos	1.04	1.04	1.05	1.06	1.05
NEW YORK	1.03	1.05	1.06	1.07	1.06
Albany	1.04	1.08	1.10	1.11	1.09
Amsterdam	1.03	1.06	1.08	1.10	1.07
Auburn	1.00	1.02	1.00	1.02	1.01
Binghamton	1.00	1.01	0.99	1.00	1.00
Buffalo	1.10	1.09	1.11	1.11	1.10
Elmira	0.96	0.99	0.99	1.00	0.98
Ithaca	0.97	0.98	1.00	1.00	0.99
Jamestown	1.00	1.00	1.03	1.01	1.01
Kingston	1.09	1.14	1.13	1.15	1.14
Niagara Falls	1.10	1.08	1.08	1.09	1.09
Plattsburgh	0.98	0.98	0.99	1.02	1.01
Poughkeepsie	1.09	1.13	1.13	1.16	1.13
Rochester	1.06	1.11	1.09	1.08	1.08
Rome	1.02	1.04	1.03	1.06	1.03
Schenectady	1.04	1.06	1.07	1.10	1.08
Syracuse	1.09	1.10	1.09	1.09	1.12
Troy	1.06	1.10	1.12	1.12	1.11
Utica	1.02	1.04	1.04	1.06	1.03
Watertown	0.99	1.01	0.99	1.01	1.00
NEW YORK CITY AREA	1.30	1.31	1.31	1.34	1.35
Bronx	1.32	1.32	1.33	1.37	1.37
Brooklyn	1.30	1.31	1.33	1.35	1.36
Manhattan	1.32	1.33	1.33	1.36	1.37
Nassau County	1.31	1.32	1.33	1.35	1.36
Orange County	1.18	1.20	1.20	1.20	1.23
Putnam County	1.20	1.19	1.21	1.23	1.24
Queens	1.30	1.32	1.32	1.34	1.35
Rockland County	1.21	1.22	1.23	1.24	1.24
Staten Island	1.24	1.25	1.24	1.27	1.28
Suffolk County	1.33	1.34	1.35	1.37	1.38
Westchester County	1.21	1.22	1.22	1.25	1.26
Yonkers	1.33	1.34	1.34	1.37	1.37
NORTH CAROLINA	0.94	0.94	0.92	0.93	0.94
Asheville	0.95	0.95	0.94	0.93	0.95
Charlotte	0.96	0.97	0.95	0.95	0.97
Durham	1.01	0.99	0.96	0.98	1.00
Fayetteville	0.94	0.94	0.92	0.92	0.93
Gastonia	0.98	0.97	0.99	0.96	0.98
Goldsboro	0.94	0.92	0.90	0.91	0.93
Greensboro	0.92	0.91	0.91	0.92	0.93
Greenville	0.89	0.90	0.88	0.89	0.89
Hickory	0.89	0.90	0.90	0.90	0.89
Jacksonville	0.91	0.90	0.88	0.88	0.90
Raleigh	1.01	0.99	0.96	0.98	1.00
Rocky Mount	0.93	0.95	0.91	0.93	0.92
Wilmington	0.95	0.92	0.92	0.93	0.94
Winston-Salem	0.91	0.91	0.91	0.88	0.89
NORTH DAKOTA	0.98	1.02	1.00	0.99	1.03
Bismarck	0.98	1.03	1.00	1.00	1.02
Fargo	0.98	0.98	0.99	0.96	1.00
Grand Forks	0.97	1.02	1.00	0.98	1.02
Jamestown	0.98	1.03	1.01	0.99	1.03
Mandan	0.98	1.03	1.00	1.00	1.02
Minot	1.00	1.02	1.00	0.98	1.04
Williston	1.00	1.03	1.02	0.99	1.05
OHIO	0.99	0.99	0.98	0.97	0.99
Akron	0.97	0.98	0.99	0.99	0.98
Canton	0.95	0.97	0.96	0.96	0.96
Cincinnati	1.00	1.00	0.99	0.98	1.01
Cleveland	1.01	1.02	1.03	1.01	1.03
Columbus	1.04	1.02	1.01	1.00	1.01
Dayton	0.98	0.97	0.99	0.98	0.97
East Liverpool	1.03	1.05	1.06	1.02	1.03
Hamilton	0.96	0.94	0.96	0.94	0.95
OHIO (Continued)					
Lima	0.94	0.96	0.95	0.93	0.94
Lorain County	0.98	1.00	1.01	1.00	1.01
Mansfield	0.98	0.99	0.95	0.95	0.97
Marion	0.98	0.99	0.95	0.95	0.97
Middletown	0.96	0.94	0.94	0.94	0.95
Newark	0.99	0.99	0.98	0.97	0.98
Portsmouth	0.90	0.88	0.88	0.87	0.90
Springfield	0.98	0.96	0.96	0.97	0.98
Toledo	1.02	1.03	1.03	1.03	1.05
Youngstown	1.03	1.05	1.02	1.00	1.04
OKLAHOMA	0.91	0.93	0.92	0.92	0.91
Ardmore	0.93	0.92	0.93	0.91	0.92
Bartlesville	0.87	0.88	0.88	0.88	0.88
Enid	0.87	0.90	0.90	0.90	0.90
Lawton	0.86	0.88	0.87	0.85	0.85
Norman	0.97	0.99	0.98	0.97	0.96
Oklahoma City	0.97	0.99	0.98	0.97	0.96
Tulsa	0.91	0.92	0.92	0.93	0.92
OREGON	1.06	1.10	1.08	1.08	1.10
Albany	1.06	1.09	1.08	1.06	1.09
Altamont	1.04	1.06	1.05	1.04	1.08
Astoria	1.04	1.08	1.06	1.05	1.07
Bend	1.08	1.12	1.12	1.13	1.12
Coos Bay	1.04	1.07	1.06	1.07	1.09
Corvallis	1.06	1.09	1.08	1.06	1.08
Eugene	1.10	1.15	1.14	1.13	1.16
Grants Pass	1.04	1.08	1.06	1.05	1.10
Klamath Falls	1.04	1.07	1.05	1.05	1.09
Medford	1.05	1.10	1.09	1.08	1.11
North Bend	1.04	1.07	1.06	1.08	1.09
Pendleton	1.11	1.11	1.10	1.12	1.11
Portland	1.11	1.13	1.13	1.11	1.11
Roseburg	1.04	1.07	1.04	1.04	1.10
Salem	1.08	1.12	1.10	1.09	1.10
Springfield	1.03	1.05	1.05	1.05	1.09
The Dalles	1.09	1.13	1.10	1.08	1.11
PENNSYLVANIA	1.07	1.09	1.07	1.08	1.07
Allentown	1.10	1.14	1.10	1.13	1.08
Altoona	1.09	1.12	1.08	1.08	1.09
Bethlehem	1.07	1.12	1.07	1.10	1.07
Easton	1.05	1.10	1.06	1.08	1.04
Erie	1.07	1.07	1.07	1.05	1.05
Harrisburg	1.01	1.07	1.04	1.02	1.04
Johnstown	1.06	1.07	1.06	1.05	1.04
Lancaster	1.06	1.06	1.04	1.04	1.04
Norristown	1.19	1.20	1.20	1.22	1.20
Philadelphia	1.17	1.19	1.20	1.22	1.20
Pittsburgh	1.09	1.12	1.09	1.09	1.10
Reading	1.07	1.12	1.08	1.08	1.05
Scranton	1.03	1.02	1.02	1.02	1.03
State College	1.02	1.04	1.03	1.02	1.03
Wilkes-Barre	1.02	1.05	1.05	1.03	1.05
Williamsport	1.03	1.05	1.03	1.03	1.07
York	1.03	1.07	1.04	1.03	1.06

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APPENDIX
DEVELOPMENT COST ESTIMATES

Marshall & Swift Valuation Cost Manual

Proposed Scenario

DEVELOPMENT COST ESTIMATES

Proposed Restaurant and Residential Development Scenario

Based on Marshall & Swift Valuation Service

		Good Class B **High Rise Residential & Retail** **Luxury 14-story**	**MS Cost Manual Pages**
Base Cost Per SF		**$357.00**	Section 11, page 18 - Nov 2024
	Cellar Adj.	Incl. in Premium Foundation Cost	See ConsultMAB & DeSimone
	First Flr Restaurant Adj. (Shell)	($10.60)	Section 15, page 26 - May 2024
	Add 2nd Elevator Adj.	$4.54	Section 11, page 35 - Nov 2024
	Add Stop Elevator Adj.	$0.62	Section 11, page 35 - Nov 2024
	Sprinklers Adj.	$5.53	Section 11, page 35 - Nov 2024
	Paved Front Yard Parking Area Adj.	$0.07	Section 66, page 2 - Dec 2023
	Balconies Adj.	$5.57	Section 11, page 35 - Nov 2024
	Outdoor Terrace (Adjacent Highline 2nd flr & Mech flr Terrace) Adj.	$0.67	Section 57, page 4 - Sept 2023
Total Base Cost Per SF *		**$363.39**	* Costs are for above grade area.
Façade Area Adjustment		107.0%	Section 11, page 36 - Nov 2024
Bldg. Height Adjustment		105.5%	Section 11, page 18 - Nov 2024
Floor Height Adjustment		102.7%	Section 11, page 36 - Nov 2024
Geographic Multiplier		133.0%	Section 99, page 9 - Apr 2025
Inflation Factor		106.0%	Section 99, page 3 - June 2025
Total Cost per SF *		**$593.93**	* Costs are for above grade area.
Total Gross Above Grade Bldg Area (SF)		**20,633**	
MS Total Cost		**$12,254,657**	
Total Bldg SF incl Cellar		**23,158**	
	$/SF	**$529.18**	

APARTMENTS, HOTELS AND CLUBS

GENERAL INFORMATION

Calculator Costs are averages of final costs including architects' fees and contractors' overhead and profit, sales taxes, permit fees and insurance during construction. Interest on interim construction financing is also included, but not financing costs, real estate taxes or brokers' commissions (see Section 1 for complete list). They do not represent any building illustrated, except as the building is included in the averages. Refinements to the average costs for type of heating, built-in appliances, fireplaces, sprinklers, basement, elevator stops, area/perimeter ratio and story height are given at the end of the section, and adjustments for elevators and number of stories are on the cost pages. Exterior balconies are not included in the basic building costs and must be added separately. Current and Local Cost Multipliers are given in Section 99.

DESCRIPTIONS

The abbreviated descriptions given in the tables show some of the items generally found in buildings of the class, quality and occupancy listed. They are merely indicative of many buildings in this cost classification, and are not meant to be building specifications.

CONSTRUCTION

Buildings are divided into five construction classes: A, B, C, D and S, as described in Section 1. In each class there will be variations and sub-classes, but for purposes of pricing, the major elements of the building should be considered in entering the tables. Thus, if a building which is otherwise a Class B has a steel truss roof, the costs for the Class B building will still be representative. Interpolations may be made if the appraiser feels the building overlaps two classes, or the Segregated Costs in Section 41 may be used for adjustments.

OCCUPANCY

Dormitories include college and boarding school residence halls, interns' and nurses' quarters and armed services bachelor officers' and NCO quarters. They generally have a lounge and frequently have dining facilities and built-in features not found in apartments. For migrant labor dormitories or bunkhouses, see Section 17.

High-rise Apartment costs are averages for multiple dwelling units of three or more floors, with kitchen facilities. For buildings of one or two stories and newer three-story buildings of lightweight residential-type construction, use Multiple Residence Costs, Section 12. **Luxury Apartments** are listed separately and include the high-end, owner-occupied condominiums and resort time-share facilities. Although apartments built as condominiums sometimes are required by building and zoning codes to have certain items not required for rental units, basically, "condominium" is a type of ownership and not a type of construction, and the apartment costs are valid. There can be extra developers' or soft costs related to a type of ownership, which are not considered in this manual. See Section 1.

Basement costs include finish compatible with the type of basement, including stairs and ramps as necessary, and must be refined for size, shape and height. Add elevator stops from the refinement page.

Hotels are multiple sleeping units and lobby, of three or more floors, without individual kitchen facilities. The costs are separated by the type and amount of common-use or support facilities available. **Full-service** hotels will have meeting, ballroom, banquet and dining and lounge facilities commensurate with the class and quality. **Limited-service** hotels will have little or no space designed for large groups or formal dining. Where the first floor is divided entirely into retail stores and shops, that floor should be priced from Section 13. For one- to three-story buildings of light residential-type construction, Class C, D or S, use the motel costs in Section 12. Swimming pools should be added from Section 66. For separate convention facilities, see Section 16.

Mezzanine costs do not include exterior wall or heating, which are included in the building cost refinement for wall height. Elevator stops can be added from the refinement page.

City Clubs are private hotels with dining, gymnasium and library facilities. Swimming pools should be added from Section 66.

Homes for the Elderly include assistance living congregate housing for the elderly, of three or more floors, typically consisting of one- or two-room suites, normally with limited individual and common kitchen and dining areas, lounges, nursing and therapy rooms. For apartments, multiple residences (senior and assisted living), single-family residences, duplexes, separate clubhouses, etc., in so-called senior citizen developments, use the section for the proper type of occupancy. Skilled nursing facilities or convalescent hospitals are found in Section 15.

Group Care Homes are small congregate care or special needs buildings that are more family or residential style in character than convalescent hospitals, and include intermediate-care facilities for the physically challenged or mentally handicapped, substance abusers, battering victims, emergency homeless and other like groups. Therapy rooms or lounges and administrative rooms commensurate with the quality are included.

Mortuaries or funeral homes include chapels, stained glass and laboratories commensurate with the general quality. Generally, the better funeral homes may include some living area. Vehicular garages should be priced from Section 12 or 14 as appropriate.

Fraternity Houses or sorority facilities have kitchen, dining and lounge rooms, and are more family style in character than dormitories.

Rectories or convents are buildings of residential type with some additional plumbing and kitchen facilities for the additional unrelated numbers of occupants. The better qualities may include small office, meeting and/or chapel rooms.

Rooming or Boarding Houses can be more commercial style in character than rectories, and provide minimum living quarters for transient occupancy.

High-rise Row Houses are all common wall dwellings over three stories. For three-story or less units, see Section 12.

Clubhouses are general-purpose recreation or activity buildings, usually with light kitchen facilities, a large general-use room and multiple restrooms. They will often have stages, and the better quality clubs will merge into the fraternal or auditorium occupancies found in Section 16. Large gymnasium-type facilities can be priced from Section 18 or community recreation centers or fellowship halls, Section 16.

Senior Centers are municipal-type clubhouses for senior citizens, which generally have multiple meeting and recreation rooms and full kitchen facilities.

Country Clubs are specialized clubhouses designed mainly for entertainment and have few, if any, sleeping rooms. Generally, the better clubs will have ballroom, bar, banquet and pro shop facilities, as well as locker and shower rooms. For snack bars, see Section 13. Golf cart storage, see Section 17.

Recreational Enclosures are structures designed to specifically shelter swimming facilities from the elements. Pool costs are not included, and must be added from Section 66. The lowest pre-engineered structures are light-residential patio-style enclosures only, while the better qualities are typical of hotel/motel-type facilities with ancillary restroom, exercise or lounge finishes commensurate with the quality level. Natatoriums should be priced from Section 18.

Health Clubs or spas are designed as small physical fitness facilities typically 2,000 to 6,000 square feet, with limited exercise and conditioning areas. Generally, the better resort luxury day spa facilities can be much larger and will have a snack bar, massage and steam room and sauna facilities, as well as locker and shower rooms concentrating on day spa personal services. Whirlpool baths, swimming pools and sport courts are not included. Large gymnasium-type fitness centers with sports courts, rinks, running tracks, etc. should be priced from either Section 16 or Section 18, gymnasiums.

Separate restroom and bathhouse facilities should be priced from Section 12 or 18.

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LUXURY APARTMENTS (HIGH-RISE) (984)

CLASS	TYPE	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT	COST Sq. M.	COST Cu. Ft.	COST Sq. Ft.
A	Good	Best metal or stone, brick or block backup, solar glass, best lobby	Finest interior detail, hardwoods, ceramic, custom carpet, built-ins	*Electrical/plumbing, fine fixtures, more than one bath per bedroom	Hot and chilled water (zoned)	4348.62	40.40	404.00
	Average	Good metal and solar glass, face brick, precast concrete panels, EIFS	Good interior detail, carpet, ceramic tile, some vinyl and fine hardwood	*Electrical/plumbing, fine fixtures, one full bath per bedroom	Hot and chilled water (zoned)	3487.50	32.40	324.00
B	Good	Best metal or stone, brick or block backup, solar glass, best lobby	Finest interior detail, hardwoods, ceramic, custom carpet, built-ins	*Electrical/plumbing, fine fixtures, more than one bath per bedroom	Hot and chilled water (zoned)	3842.71	35.70	357.00
	Average	Good metal and solar glass, face brick, precast concrete panels, EIFS	Good interior detail, carpet, ceramic tile, some vinyl and fine hardwood	*Electrical/plumbing, fine fixtures, one full bath per bedroom	Hot and chilled water (zoned)	3100.00	28.80	288.00
C	Excellent	Best stones, metal, solar glass, highly ornamented lobby	Best interior detail, hardwoods, ceramic, carpet, built-ins	*Electrical/plumbing, fine fixtures, more than one bath per bedroom	Hot and chilled water (zoned)	3821.18	35.50	355.00
	Good	Good masonry and glass, good ornamentation and lobby	Good interior detail, sheet vinyl, ceramic tile/carpet, paneling, fine hardwood	*Electrical/plumbing, extra fixtures, one full bath per bedroom	Warm and cool air (zoned)	2992.36	27.80	278.00
	Average	Stone, brick, metal and glass, individual design, good lobby	Good plaster, paneling/paper, vinyl, carpeting or hardwood, some extras	*Electrical/plumbing, fine fixtures, one full bath per bedroom	Warm and cool air (zoned)	2443.41	22.70	227.00
D MASONRY VENEER	Excellent	Best brick or stone veneer, highly ornamental lobby	Best interior detail, hardwoods, ceramic, carpet, built-ins	*Electrical/plumbing, fine fixtures, more than one bath per bedroom	Hot and chilled water (zoned)	3735.07	34.70	347.00
	Good	Good veneers and trim, good ornamentation and lobby	Good interior detail, sheet vinyl, ceramic tile/carpet, paneling, fine hardwood	*Electrical/plumbing, extra fixtures, more than one bath per bedroom	Warm and cool air (zoned)	2927.78	27.20	272.00
	Average	Face brick or stone veneer, individual design, good lobby	Good plaster, paneling/paper, vinyl, carpeting or hardwood, some extras	*Electrical/plumbing, good fixtures, one bath per bedroom	Warm and cool air (zoned)	2378.82	22.10	221.00
D	Excellent	Best EIFS, stone trim, highly ornamental lobby	Best interior detail, hardwoods, ceramic, carpet, built-ins	*Electrical/plumbing, fine fixtures, more than one bath per bedroom	Hot and chilled water (zoned)	3670.49	34.10	341.00
	Good	Good EIFS or sidings, good ornamentation and lobby	Good interior detail, sheet vinyl, ceramic tile/carpet, paneling, fine hardwood	*Electrical/plumbing, extra fixtures, more than one bath per bedroom	Warm and cool air (zoned)	2863.20	26.60	266.00
	Average	Good stucco or siding, brick and stone trim, good lobby	Good plaster, paneling/paper, vinyl, carpeting or hardwood, some extras	*Electrical/plumbing, good fixtures, one bath per bedroom	Warm and cool air (zoned)	2325.00	21.60	216.00

NOTES: Fireplaces, balconies and canopies, are not included, see Pages 34 - 35.

BUILT-IN APPLIANCES – May be computed from Section 12, the Segregated Costs, Section 42, or from the Unit-in-Place Costs.

For load-bearing sports court or swimming roof, add $8.43 per square foot of roof ($90.74 per square meter). For pools or courts, see Sections 66 and 67.

For differentiation in our pricing system, high-rise apartments are three stories and above, while low-rise garden apartments of light residential-type construction are referred to as multiple residences up to three stories and are priced from Section 12.

For individual timeshare lock-off efficiency suites, add $1710.00 to $3100.00 per unit.

For utility and parking basements, see Page 19.

For parking structures, see Section 14; underbuilding levels, Section 15.

For mechanical penthouses, see Section 15.

MULTISTORY BUILDINGS – Add .5% (1/2%) for each story, over three, aboveground, to all base costs, including basements but excluding mezzanines, up to 30 stories; over 30 add .4% (4/10%) for each additional story.

SPRINKLERS – Systems are not included. Costs should be added from Page 35.

***ELEVATORS** – Building costs marked with an asterisk (*) include elevators. If elevators are not included in your subject property, deduct the following from the base costs on this page which are so marked. For buildings not marked, or for basement stops, add costs from Page 35.

LUXURY APARTMENTS

CLASSES A and B	Sq. M.	Sq. Ft.
Good	139.93	13.00
Average	122.71	11.40

CLASSES C	Sq. M.	Sq. Ft.
Excellent	93.65	8.70
Good	82.77	7.69
Average	73.41	6.82

CLASSES D	Sq. M.	Sq. Ft.
Excellent	82.77	7.69
Good	73.41	6.82
Average	64.58	6.00

DORMITORIES

CLASSES A and B	Sq. M.	Sq. Ft.
Excellent	117.86	10.95
Very Good	102.36	9.51
Good	87.94	8.17
Average	67.38	6.26
Low Cost	51.24	4.76

CLASSES C and D	Sq. M.	Sq. Ft.
Excellent	72.55	6.74
Very Good	63.61	5.91
Good	55.76	5.18

NOTE: Care must be exercised when using square foot elevator costs. Small dormitory buildings may have only one elevator and/or handicap lift regardless of size, where a normal range or area served is not feasible for low-rise applications.

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ELEVATORS

Lump-sum cost per elevator plus the cost per stop or landing including the ground level. Use the cost per stop for basement and mezzanine stops. See Section 58 for more detailed costs, for observation elevators and for dumbwaiter costs.

TYPE	LOW	AVG.	GOOD	EXCL.
Base cost, passenger, two- to three story	67500.00	79500.00	93750.00	110000.00
four- to seven - story	117000.00	135000.00	154000.00	177000.00
eight-story and over	180000.00	228000.00	287000.00	363000.00
add, cost per stop	9700.00	11100.00	12800.00	14700.00
Freight, base cost, two to three stories	51000.00	67500.00	89000.00	118000.00
four stories and over	100000.00	126000.00	160000.00	202000.00
add, cost per stop, manual doors	12900.00	14100.00	15300.00	16700.00
power doors	22400.00	24400.00	26600.00	29000.00
Escalators, each stairway	260000.00	276000.00	294000.00	312000.00
Vertical wheelchair lifts, each	17200.00	22300.00	29000.00	37600.00

EXTERIOR BALCONIES

Balcony costs include the supporting structure, decking and rails. Apply costs to the balcony area.

	LOW	AVG.	GOOD	EXCL.
Concrete	34.50	44.00	56.50	72.00
Steel	32.25	43.25	58.00	76.50
Wood	30.50	40.00	53.00	69.50
Add for finishes, balustrades	30.00	36.75	45.00	55.00
Add for roofs or awnings	15.55	20.70	27.50	36.50

CANOPIES

This is the cantilevered portion of a building that extends over an entrance. The distance that the canopy is cantilevered should be considered when selecting a rank.

	LOW	AVG.	GOOD	EXCL.
Wood frame	38.50	47.75	59.00	72.50
Light false-mansard	19.30	23.90	29.50	36.25
Steel frame	45.25	56.50	71.00	89.00
Light false-mansard	22.65	28.25	35.50	44.50

SPRINKLERS

Sprinkler costs include all costs for the system and supply lines, but not tanks, towers, or high-pressure pumps. The square foot costs listed are based on the total area of sprinkler system installation on a single main connection including its prorated share of contractors' overhead and profit and architects' fees. For a more specific cost, see Section 41 or 53. For double sprinkler systems with heads both above and below a ceiling, use sprinklered area and 1.6 times the listed cost. Small intricate installations (i.e., Group Care Homes) may run twice the averages as shown. Sprinklers should not be modified for size or shape. For square meter cost, mulitiply square foot cost by 10.764.

COVERAGE Square Feet	WET SYSTEMS LOW	AVG.	GOOD	EXCL.	DRY SYSTEMS LOW	AVG.	GOOD	EXCL
1,500	5.81	6.91	8.22	9.77	7.55	8.98	10.70	12.70
3,000	5.22	6.18	7.33	8.68	6.73	7.98	9.45	11.20
5,000	4.83	5.70	6.72	7.92	6.18	7.29	8.60	10.15
10,000	4.35	5.10	5.98	7.02	5.52	6.47	7.59	8.90
15,000	4.09	4.78	5.59	6.54	5.17	6.05	7.08	8.28
20,000	3.93	4.58	5.33	6.20	4.94	5.75	6.70	7.81
30,000	3.64	4.24	4.94	5.76	4.59	5.35	6.23	7.26
40,000	3.53	4.09	4.75	5.51	4.40	5.11	5.93	6.88
50,000	3.41	3.95	4.58	5.31	4.27	4.94	5.71	6.60
75,000	3.19	3.69	4.26	4.93	3.96	4.58	5.29	6.12
100,000	3.04	3.51	4.05	4.67	3.78	4.36	5.03	5.80
125,000	2.96	3.40	3.91	4.49	3.64	4.19	4.82	5.54
150,000	2.87	3.30	3.79	4.35	3.53	4.06	4.66	5.36
200,000	2.74	3.14	3.60	4.12	3.35	3.85	4.43	5.09
300,000	2.59	2.97	3.40	3.90	3.19	3.64	4.15	4.73
400,000	2.46	2.81	3.21	3.67	3.01	3.44	3.93	4.49
500,000	2.38	2.71	3.10	3.53	2.90	3.31	3.77	4.30

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CALCULATOR METHOD

APARTMENTS, HOTELS AND CLUBS
REFINEMENTS
FLOOR AREA/PERIMETER MULTIPLIERS

AVERAGE FLOOR AREA		M.	AVERAGE PERIMETER															M.	AVERAGE FLOOR AREA	
Sq. M.	Sq. Ft.	FT.	49	55	61	76	91	107	122	152	183	213	244	305	366	427	488	610	FT.	Sq. Ft.	Sq. M.
			160	180	200	250	300	350	400	500	600	700	800	1000	1200	1400	1600	2000			
139	1,500		1.099	1.133	1.165	1.247	1.329	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		1,500	139
186	2,000		1.034	1.059	1.083	1.143	1.206	1.267	1.329	-----	-----	-----	-----	-----	-----	-----	-----	-----		2,000	186
232	2,500		.992	1.012	1.034	1.083	1.133	1.181	1.231	1.329	-----	-----	-----	-----	-----	-----	-----	-----		2,500	232
279	3,000		.967	.984	1.000	1.042	1.083	1.123	1.165	1.247	1.329	-----	-----	-----	-----	-----	-----	-----		3,000	279
372	4,000		.935	.947	.959	.989	1.021	1.052	1.083	1.143	1.206	1.268	1.329	-----	-----	-----	-----	-----		4,000	372
465	5,000		-----	.926	.935	.959	.984	1.009	1.034	1.083	1.133	1.181	1.231	1.329	-----	-----	-----	-----		5,000	465
557	6,000		-----	-----	.917	.938	.959	.980	1.000	1.042	1.083	1.123	1.165	1.247	1.329	-----	-----	-----		6,000	557
650	7,000		-----	-----	-----	.924	.942	.959	.977	1.011	1.047	1.083	1.118	1.188	1.257	1.329	-----	-----		7,000	650
743	8,000		-----	-----	-----	.913	.929	.944	.959	.989	1.021	1.052	1.083	1.143	1.206	1.268	1.329	-----		8,000	743
836	9,000		-----	-----	-----	-----	.917	.932	.945	.973	1.000	1.028	1.056	1.110	1.165	1.220	1.274	-----		9,000	836
929	10,000		-----	-----	-----	-----	.910	.922	.935	.959	.984	1.009	1.034	1.083	1.133	1.181	1.231	1.329		10,000	929
1,115	12,000		-----	-----	-----	-----	-----	.907	.917	.938	.959	.980	1.000	1.042	1.083	1.123	1.165	1.247		12,000	1,115
1,301	14,000		-----	-----	-----	-----	-----	-----	.906	.924	.942	.959	.977	1.011	1.047	1.083	1.118	1.188		14,000	1,301
1,486	16,000		-----	-----	-----	-----	-----	-----	.898	.913	.929	.944	.959	.989	1.021	1.052	1.083	1.144		16,000	1,486
1,672	18,000		-----	-----	-----	-----	-----	-----	.890	.904	.917	.932	.945	.973	1.000	1.028	1.056	1.110		18,000	1,672
1,858	20,000		-----	-----	-----	-----	-----	-----	.885	.898	.910	.922	.935	.959	.984	1.009	1.034	1.083		20,000	1,858
2,230	24,000		-----	-----	-----	-----	-----	-----	-----	.886	.896	.907	.917	.938	.959	.980	1.000	1.042		24,000	2,230
2,601	28,000		-----	-----	-----	-----	-----	-----	-----	.880	.888	.898	.906	.924	.942	.959	.977	1.011		28,000	2,601
2,973	32,000		-----	-----	-----	-----	-----	-----	-----	.874	.882	.889	.898	.913	.928	.944	.959	.989		32,000	2,973
3,344	36,000		-----	-----	-----	-----	-----	-----	-----	.870	.877	.883	.890	.904	.917	.932	.945	.973		36,000	3,344
3,716	40,000		-----	-----	-----	-----	-----	-----	-----	.866	.873	.879	.885	.898	.910	.922	.935	.959		40,000	3,716

STORY HEIGHT MULTIPLIERS

Multiply the base cost by the following multipliers for any variation in average story height from the base of 10 feet (3.05 meters).

AVERAGE WALL HEIGHT		SQUARE FOOT OR SQUARE METER MULTIPLIER	CUBIC FOOT MULTIPLIER	AVERAGE WALL HEIGHT		SQUARE FOOT OR SQUARE METER MULTIPLIER	CUBIC FOOT MULTIPLIER
(M.)	(FT.)			(M.)	(FT.)		
2.13	7	.922	1.317	4.57	15	1.144	.763
2.44	8	.947	1.184	4.88	16	1.175	.734
2.74	9	.973	1.081	5.18	17	1.207	.711
3.05	10	1.000 (base)	1.000	5.49	18	1.240	.689
3.35	11	1.027	.934	5.79	19	1.274	.671
3.66	12	1.055	.879	6.10	20	1.309	.655
3.96	13	1.084	.834	6.71	22	1.381	.628
4.27	14	1.114	.796	7.31	24	1.458	.608

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CALCULATOR METHOD

RESTAURANTS (350)

CLASS	TYPE	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	*HEAT	COST Sq. M.	COST Cu. Ft.	COST Sq. Ft.
A-B	Excellent	Stone, face brick, best metal walls, usually part of a building	Best plaster and paneling, highly ornamental, carpeted, deluxe quality	Special lighting fixtures and effects, deluxe restrooms	Complete H.V.A.C.	4434.73	34.32	412.00
	Good	Concrete, metal/glass or masonry panels, usually part of a building	Plaster with enamel & vinyl, carpet & vinyl flooring, decorated interior	Good lighting and outlets, good plumbing and restrooms	Complete H.V.A.C.	3315.28	25.66	308.00
	Average	Brick or concrete, usually part of a building	Plaster or drywall, acoustic tile, carpet, ceramic, rubber, or vinyl comp. tile	Adequate lighting outlets, adequate plumbing	Complete H.V.A.C.	2497.22	19.33	232.00
C	Excellent	Individual design, highly ornamental exterior	High-quality detail, best acoustics, carpeted, deluxe quality	Special lighting effects, tiled restrooms, good fixtures	Complete H.V.A.C.	4079.52	31.57	379.00
	Very good	Individual design, brick, good metal and glass, ornamentation	Typically best chain restaurants, carpeted lounge and dining room	Good lighting/restrooms with good-quality fixtures and tile	Complete H.V.A.C.	3164.59	24.49	294.00
	Good	Brick, concrete or metal and glass panels, ornamentation	Typical chain restaurant or coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2464.93	19.08	229.00
	Average	Brick, block, tilt-up, plain building, stock plans	Typical neighborhood restaurant, vinyl composition, small kitchen	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1915.97	14.83	178.00
	Low cost	Cheap brick or block, very plain, low-cost front	Low-cost short order cafe, minimum finish, asphalt tile	Minimum lighting and outlets, minimum plumbing	Forced air and ventilation	1388.54	10.75	129.00
D	Excellent	Individual design, highly ornamental exterior, stone veneer	High-quality detail, best acoustics, carpeted, deluxe quality	Special lighting effects, tiled restrooms, good fixtures	Complete H.V.A.C.	3918.06	30.32	364.00
	Very good	Individual design, brick veneer, good metal and glass, ornamentation	Typically best chain restaurants, carpeted lounge and dining room	Good fixtures, good restrooms w/good-quality fixtures and tile	Complete H.V.A.C.	2992.36	23.16	278.00
	Good	Stucco or siding, metal and glass, some ornamentation	Typical chain restaurant or coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2303.47	17.83	214.00
	Average	Stucco or siding, plain building and front, stock plans	Typical neighborhood restaurant, vinyl composition, small kitchen	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1776.04	13.74	165.00
	Low cost	Cheap stucco or siding, very plain	Low-cost short order cafe, min. finish	Minimum lighting and plumbing	Forced air/vent.	1259.38	9.75	117.00
DPOLE	Low cost	Pole frame, good metal panels, lined and insulated, plain front	Low-cost short order cafe, minimum finish, asphalt tile	Minimum lighting and outlets, minimum plumbing	Forced air and ventilation	1173.27	9.08	109.00
S	Good	Insulated sandwich panels, metal and glass, some ornamentation	Comparable to typical chain coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2325.00	17.99	216.00
	Average	Insulated panels, metal and glass, little ornamentation	Typical neighborhood coffee shop, vinyl comp., some ceramic or pavers	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1743.75	13.49	162.00
	Low cost	Finished interior, some front	Low-cost finish, asphalt tile	Minimum lighting and plumbing	Forced air/vent.	1205.56	9.33	112.00

BASEMENTS AND MEZZANINES

A-B	Basement, finished	Plaster interior	Finished ceiling and floors, banquet, service functions	Adequate lighting/plumbing, restrooms, utility rooms	Low-cost complete H.V.A.C.	1668.40	12.91	155.00
	Mezzanine, open	Not included	Open, finished floors, plaster soffit, minimum work stations	Adequate lighting, minimum plumbing	Included in building cost	645.83	-----	60.00
CDS	Basement, finished	†Plaster or drywall interior	Finished ceiling and floors, banquet, service functions	Adequate lighting/plumbing, restrooms, utility rooms	Forced air and ventilation	1108.68	8.58	103.00
	Bsmt. storage	†Painted interior, outside entry	Paint only, some partitions	Adequate lighting, drains	None	535.50	4.14	49.75
	Mezzanine, open	Not included	Open, finished floors and soffit, minimum work stations	Adequate lighting, minimum plumbing	Included in building cost	449.39	-----	41.75

†For fire-resistant Type I basements, with concrete slab separation under Class C, D or S units, add $ 8.66 per square foot ($93.22 per square meter). *Adjust for heat from table on following page.
NOTES: For other basement types, see Page 30.

MULTISTORY BUILDINGS

Add 0.5% (1/2%) for each story over three, above ground, to all base costs, including basements but excluding mezzanines, up to 30 stories. Over 30 stories, add 0.4% (4/10%) for each additional story.

BALCONIES

To determine the cost for exterior balconies use one of the following: Page 40 in this section; compute from the Segregated Costs in Section 43; or from Unit-In-Place Costs in Section 66.

MEZZANINES

Do not use story height or area/perimeter multipliers with mezzanine costs.

SPRINKLERS

Sprinkler systems are not included. Costs should be added from Page 40.

ELEVATORS

Elevators are not included. Costs should be added from Page 39. Add for dumbwaiters from Section 58.

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ROOFS

ROOF DECKS AND SHEATHING

(Per square foot of decking or sheathing)

TYPE	COST RANGE
Concrete: hollow precast plank	11.65 – 18.40
Lift slab	13.85 – 21.70
Lightweight channels, 2" - 3"	9.47 – 14.35
Plank, 2" - 3" T&G	10.75 – 14.35
Reinforced slab, 4" - 6"	14.20 – 22.50
Topping, 1 3/4" - 2 1/2" foamed concrete	2.07 – 4.34
lightweight concrete, reinforced, 2" - 3"	4.59 – 6.18
Prestressed tees or double tees	12.60 – 20.90
Fiberboard, prefinished one side, 2" T&G	4.59 – 6.52
3" T&G	6.11 – 7.62
Gypsum: 2" plank with metal edge	6.52 – 10.20
2"-3" poured over gypsum board	5.11 – 7.11
2"-3" poured over fiberglass	6.11 – 7.69
Steel:18 gauge, corrugated or crimped	4.24 – 8.21
26 gauge	2.82 – 5.66
Cellular	10.85 – 19.50
Tectum, 2", prefinished one side	6.43 – 8.75
Wood sheathing: 5/16" plywood	1.56 – 1.93
3/8" plywood	1.71 – 2.18
1/2" plywood	1.90 – 2.49
5/8" plywood	2.24 – 3.05
3/4" plywood	2.63 – 3.35
1 1/8" plywood, T&G	4.00 – 5.43
1" spaced board	1.78 – 3.15
1" solid board	2.78 – 4.25
1" T&G	2.87 – 4.63
2" T&G	4.77 – 8.06
3" T&G	7.97 – 11.85
2" plank	4.62 – 9.31
3" plank	7.74 – 13.15
for oriented strand - waferboard, deduct	0.12 – 0.26
for fire-treated wood, add	0.66 – 1.21
Wood Stresskin sandwich panels	9.31 – 20.45

ROOF COVER

Cost per square foot of roof area, including typical flashing, valleys and underlayment as required by the roofing type. Extremely steep or cut-up roofs may be 20% above the high end of the range. For vertical or mansard applications, add 20%. Curved panels, add 1.49 to 4.18.

Aluminum, sheet, corrugated, crimped or tile panels preformed, light (.0175" - .024" thick)	3.34 – 6.09
heavy (.032" - .050" thick) including prefab lock and seam	5.68 – 8.83
formed seam, flat or standing	5.86 – 14.60
batten seam	6.84 – 16.60
shingles	4.44 – 9.56
Built-up, 2-ply	1.75 – 2.80
3-ply	2.06 – 3.44
4-ply	2.41 – 3.99
5-ply	2.87 – 4.97
add for gravel or small rock	0.40 – 0.63
add for large rock	0.47 – 0.79
Cement fiber, shingles	4.49 – 9.72
corrugated or sheet (Transite)	3.87 – 15.60
Composition, roll	1.10 – 2.46
Composition shingle, light, to 235#	1.96 – 3.38

ROOF COVER

(Continued)

TYPE	COST RANGE
heavy, over 235# or laminated	2.50 – 5.91
Copper, flat or standing seam	14.00 – 26.00
batten seam	15.30 – 28.00
shingles	14.25 – 19.95
Elastomeric, single ply	3.59 – 10.50
reinforced sheet or spray fluid coat	6.50 – 12.60
Fiberglass, corrugated or sheet	2.35 – 4.44
structural or FRP panels over 8 oz.	4.44 – 11.30
Modified bitumen, single ply	3.68 – 10.85
reinforced sheet	6.09 – 12.35
Slate (red slate, add 100%)	8.75 – 18.70
Steel, corrugated, crimped or tile panels, galvanized preformed, light (30 - 26 gauge)	2.35 – 5.93
heavy (24 - 18 gauge) including prefab lock and seam	5.02 – 8.68
formed seam, flat or standing	5.34 – 13.30
batten seam	6.50 – 15.35
shingles	4.25 – 9.31
add for porcelain enamel finish	4.00 – 6.84
add for sandwich panels	4.59 – 15.75
add for interior metal liner	2.35 – 4.25
add for stainless steel	4.18 – 8.61
Terne, flat or standing seam	13.05 – 24.05
batten seam	14.10 – 26.00
Tile, clay	7.11 – 21.05
concrete	6.00 – 11.10
plastic or rubber	5.18 – 9.31
Wood, shakes	4.34 – 8.06
shingles	4.00 – 7.36
fiber shingles	2.52 – 5.27
add for fire-resistant finish	0.66 – 1.34
Roof walkways	6.50 – 8.75
Bird spikes, per linear foot	4.44 – 15.60

INSULATION

(Per square foot of insulated area)

Aluminum foil, single ply	R- 5 - R- 9	0.49 – 0.59
add, per additional ply		0.19 – 0.31
Expanded mica, 3 1/2"	R- 7 - R- 9	1.75 – 2.46
Fiberboard, 1/2" wood	R- 1 - R- 2	1.34 – 1.56
1"	R - 2 - R- 3	1.57 – 2.15
2"	R- 5 - R- 6	2.49 – 3.21
Fiberglass or rock wool: For blown-in, use appropriate batt R-value plus 20%.		
1" board	R- 3 - R- 4	1.91 – 2.91
2" board	R- 7 - R- 8	2.85 – 4.10
batts or roll, 2 1/2"	R- 7 - R- 9	0.88 – 1.24
3 1/2"	R-11 - R-13	1.02 – 1.34
6"	R-19 - R-22	1.41 – 1.90
9"	R-28 - R-30	1.93 – 2.60
12"	R-36 - R-38	2.53 – 3.40
add for vinyl–faced or wire support		0.28 – 0.54
add for colored band support		0.41 – 0.82
Foamglass, 1" board	R - 2 - R- 3	4.53 – 5.40
2" board	R- 4 - R- 6	5.66 – 7.14
3" board	R- 7 - R- 8	7.41 – 8.75
Polyurethane, 1" board	R- 7 - R- 8	2.35 – 2.93
2" board	R-14 - R-17	3.07 – 4.34
3" board	R-22 - R-25	4.38 – 5.27
Polystyrene, 1" board	R- 5 - R- 6	1.77 – 2.49
2" board	R-10 - R-12	2.66 – 3.49

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YARD IMPROVEMENTS

PAVING – DECKING

Typical costs per square foot, except as otherwise specified. For paved areas of 750 square feet, deduct 10%; 2,000 square feet, deduct 20%. Over 3,000 square feet, use Subdivision costs. Small separate pours of 100 square feet or less may run 25% higher. Hand mixed and spread could cost 75% more.

For complete plaza cost, see Open Malls, Section 13.

	COST RANGE		
2" asphalt on 2" base	2.87	–	4.24
add per additional inch	0.67	–	0.85
2" aggregate base	0.93	–	1.60
add per additional inch	0.22	–	0.32
4" concrete, unreinforced	6.42	–	9.58
add or deduct per inch of variation	0.58	–	0.85
add for mesh reinforcing	0.58	–	1.52
bar reinforcing	0.67	–	3.38
exposed aggregate	1.09	–	4.24
brick ribbons	1.44	–	4.74
detectable warning surface (ADA), stamped	3.38	–	7.42
decorative pattern finish, stamped	7.61	–	15.00
surface formed	6.17	–	11.40
thin–set synthetic overlay	9.33	–	20.80
color or grits	0.93	–	2.03
epoxy with stone or shell	6.68	–	9.48
salt finish (cool deck)	0.58	–	1.01
deck channel drain and grate, per lin. ft.	20.80	–	81.00
catch basins, small, up to 24", each	376.00	–	750.00
4" sand base	1.44	–	2.03
4" gravel base	1.60	–	2.22
add or deduct per inch of variation	0.31	–	0.39
add for 1" stone dust base	0.32	–	0.53
Open grid blocks for grass on sand base	9.33	–	12.75
Asphalt block pavers on concrete base*	12.30	–	20.25
Brick on concrete base, grouted, flat*	16.20	–	26.25
on edge	22.90	–	39.00
Concrete pavers on concrete base*	13.90	–	22.90
Flagstone on concrete base, grouted*	18.15	–	32.75
Tile, quarry on concrete base*	16.20	–	23.50
*For sand bed in place of concrete, deduct	4.05	–	7.42
Snow melting, including controls, electric	17.70	–	21.35
hydronic, large areas (excluding heat source)	9.33	–	25.00
Wood, on grade (posts, beams and joists not included)			
2" x 4" flat	8.55	–	13.90
2" x 4" on edge	13.00	–	20.80
Steps on ground, per lin. ft. of tread, brick on concrete	64.50	–	132.00
concrete	49.25	–	82.50
Approach apron, concrete	7.42	–	12.30
Concrete curb, 4" 6", per lin. foot	17.05	–	26.50
Concrete sidewalk	6.84	–	10.35
Handicap ramps, sidewalks (retrofit, add 400%)	9.96	–	15.60
buildings, concrete (remodel, add 200%)	29.25	–	59.50
add for railing, per lin. ft.	55.50	–	78.00
wood	38.25	–	55.50
add for railing, per lin. ft.	21.95	–	46.75

for portable ramps, see Section 58.

For synthetic surfaces, pathways, see Section 67. Special stone paving, see Section 56.

RAISED PATIO DECKS

Typical cost ranges per square foot of deck area, including supports. For custom installations with complex shapes, built-in planters and seats can run 50% to 100% more.

TYPE	≤ 25 Sq. Ft.	50 Sq. Ft.	100 Sq. Ft.	≥ 300 Sq. Ft.
Decks:				
softwood, fir, pine, etc.	39.50 – 47.50	28.75 – 34.75	21.05 – 26.00	12.80 – 16.40
cedar, redwood or metal	53.00 – 63.50	40.50 – 49.50	30.75 – 38.25	20.25 – 25.25
Railings:				
softwood, fir, pine, etc.	12.45 – 15.60	8.42 – 10.55	5.79 – 6.73	2.96 – 3.82
cedar, redwood or metal	17.50 – 21.70	12.45 – 14.95	8.42 – 10.35	4.85 – 5.79
Steps:				
softwood, fir, pine, etc.	11.65 – 14.25	5.85 – 7.35	3.15 – 3.69	0.96 – 1.31
cedar, redwood or metal	17.15 – 21.30	8.63 – 10.65	4.35 – 5.32	1.50 – 1.81

For each foot of height above 3 feet, increase costs by 5%.
For treated softwoods increase cost by 25%.
For wood polymer composite, add 30% to softwood costs.
For vinyl and tropical hardwoods, add 15% to cedar/redwood costs.

PATIO ROOF

(Typical costs per square foot of covered area, including supports)

TYPE	COST RANGE		
Awning, fabric	16.65	–	37.50
Aluminum or steel, baked enamel	11.25	–	20.80
Fiberglass or screen only	8.06	–	15.00
Wood, including built–up, composition	13.30	–	32.00
Open lattice, metal, vinyl or wood	9.10	–	27.75
Architectural columns, open lattice or trellis	37.50	–	128.00
Picnic shelters	24.85	–	63.00
Add for insulated metal panels	5.40	–	7.42
Add for lighting fixtures, each	123.00	–	338.00

For Carports, see Section 63 or Section 12.
For small Prefabricated Storage Structures, see Section 63 or Section 17.

PATIO ENCLOSURES

Typical cost ranges per linear foot of wall, 84" high, including one exterior door. Use high end of range for insulated panels or knee walls. Add for roof above.

Glassine windows or decorative wood with screen	116.00	–	203.00
Acrylic windows	195.00	–	241.00
Screened only, fiberglass	39.00	–	64.00
steel or aluminum	63.00	–	82.50
bronze	81.00	–	122.00
Add for extra door, each	150.00	–	300.00

GAZEBOS: Typical cost each for 8' to 20' wood units including minimal foundation but excluding floors.

Standard	4950.00	–	26100.00
Deluxe	23200.00	–	62750.00

For Solar rooms and greenhouses, see Section 64. Pool enclosures, see Section 67.

TEMPLES: Typical cost each, 8' to 12' high (to bottom of dome) cast stone units with top ring up to 12' in diameter.

Cost does not include floors or other ornamentation	25700.00	–	69250.00
Add for fiberglass dome	7500.00	–	13300.00
Add for masonry paver floor with no steps	5200.00	–	10400.00
Add for floor with steps	5850.00	–	13300.00

PAVILIONS: Typical cost each for cast stone units 38600.00 – 93250.00

For individual stone columns, see Section 56. For finials, urns, statuaries, see Page 7.

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CURRENT COST MULTIPLIERS

These multipliers bring costs from preceding pages up to date. Also apply Local Multipliers, Section 99, Pages 5 through 10.

CALCULATOR COST SECTIONS

(Effective Date of Cost Pages)		11 (11/24)	12 (8/24)	13 (5/24)	14 (2/24)	15 (11/23)	16 (8/23)	17 (5/25)	18 (2/25)
EASTERN	A	1.05	1.05	1.04	1.03	1.05	1.07	1.03	1.06
	B	1.06	1.06	1.03	1.05	1.02	1.03	1.03	1.05
	C	1.03	1.02	1.05	1.04	1.06	1.06	1.04	1.01
	D	1.02	1.03	1.03	1.02	1.02	1.03	1.00	1.01
	S	1.07	1.06	1.05	1.04	1.06	1.03	1.00	1.06
CENTRAL	A	1.00	0.99	0.99	1.00	1.01	1.03	0.97	0.98
	B	0.99	1.00	0.99	1.00	1.02	1.00	0.96	0.97
	C	1.00	1.00	1.01	1.00	1.01	0.99	0.97	0.98
	D	0.98	1.00	1.00	1.00	1.03	1.02	0.96	0.99
	S	0.96	0.99	0.96	1.00	0.99	0.98	0.98	0.97
WESTERN	A	0.99	1.04	1.06	1.08	1.07	1.06	1.00	0.98
	B	1.00	1.02	1.07	1.05	1.06	1.07	1.03	1.00
	C	1.01	1.05	1.03	1.07	1.05	1.06	1.01	1.04
	D	1.04	1.03	1.04	1.06	1.03	1.02	1.05	1.03
	S	1.01	1.01	1.06	1.05	1.04	1.08	1.03	0.99

SEGREGATED COST SECTIONS

(Effective Date of Cost Pages)		41 (12/24)	42 (9/24)	43 (6/24)	44 (3/24)	45 (12/23)	46 (9/23)	47 (6/25)	48 (3/25)
EASTERN	A	1.05	1.05	1.04	1.03	1.05	1.07	1.03	1.06
	B	1.06	1.06	1.03	1.05	1.02	1.03	1.03	1.05
	C	1.03	1.02	1.05	1.04	1.06	1.06	1.04	1.01
	D	1.02	1.03	1.03	1.02	1.02	1.03	1.00	1.01
	S	1.07	1.06	1.05	1.04	1.06	1.03	1.00	1.06
CENTRAL	A	1.00	0.99	0.99	1.00	1.01	1.03	0.97	0.98
	B	0.99	1.00	0.99	1.00	1.02	1.00	0.96	0.97
	C	1.00	1.00	1.01	1.00	1.01	0.99	0.97	0.98
	D	0.98	1.00	1.00	1.00	1.03	1.02	0.96	0.99
	S	0.96	0.99	0.96	1.00	0.99	0.98	0.98	0.97
WESTERN	A	0.99	1.04	1.06	1.08	1.07	1.06	1.00	0.98
	B	1.00	1.02	1.07	1.05	1.06	1.07	1.03	1.00
	C	1.01	1.05	1.03	1.07	1.05	1.06	1.01	1.04
	D	1.04	1.03	1.04	1.06	1.03	1.02	1.05	1.03
	S	1.01	1.01	1.06	1.05	1.04	1.08	1.03	0.99

UNIT-IN-PLACE COST SECTIONS (51 – 70)

Sec.	Page	Date		Eastern	Central	Western
51 -	2-3	(3/25)	Concrete Foundations	1.02	0.99	1.03
51 -	4	(3/25)	Pilings	1.02	0.98	1.03
51 -	7-8	(3/25)	Steel and Concrete Frame	1.02	0.98	1.03
51 -	3,7	(3/25)	Wood Foundations, Frame	0.99	0.99	1.05
52 -	1-4, 6	(3/25)	Interior Construction	1.00	1.00	1.03
52 -	5	(3/25)	Bank Vaults and Equipment	1.03	0.97	1.02
53 -	1-8	(6/25)	Heating, Cooling & Ventilating	1.00	0.98	1.03
53 -	9-12	(6/25)	Plumbing, Fire Protection, etc.	1.01	0.96	1.04
54 -	1-6	(6/25)	Electrical, Security	0.99	1.03	0.99
55 -	3-7	(8/23)	Wall Costs	1.03	1.00	1.08
56 -	1-2	(8/23)	Stained Glass	1.03	1.01	1.06
56 -	3-6	(8/23)	Storefronts	1.03	1.01	1.06
56 -	7	(8/23)	Stonework	1.01	1.02	1.08
56 -	8	(8/23)	Columns, Stone & Concrete	1.01	1.02	1.08
56 -	8	(8/23)	Columns, Wood & Aluminum	1.01	1.00	1.06
57 -	1-6	(9/23)	Roofs	1.02	1.02	1.06
58 -	1	(9/23)	Cold Storage	1.02	1.00	1.08
58 -	2-8	(9/23)	Elevators, Conveying Systems	1.05	1.02	1.07
61 -	1-8	(12/24)	Tanks	1.00	0.99	1.04
62 -	1	(6/24)	Industrial Pumps & Boilers	1.03	0.94	1.09
62 -	2-3, 6	(6/24)	Piping	1.03	0.94	1.09
62 -	4	(6/24)	Electrical Motors	1.03	0.94	1.09
62 -	5	(6/24)	Steel Stacks, Chutes	1.03	0.94	1.09
62 -	5	(6/24)	Masonry & Concrete Chimneys	1.02	0.97	1.08
62 -	6	(6/24)	Compactors, Incinerators	1.03	0.94	1.09
63 -	1-4	(9/24)	Trailer and Mfg. Housing Parks	0.99	1.00	1.07
63 -	5-10	(9/24)	Manufactured Housing	1.00	1.00	1.05
64 -	1-6	(3/24)	Service Stations, Car Washes	1.05	1.00	1.03
64 -	7-9	(3/24)	Prefabricated Metal Structures	1.03	0.98	1.07
64 -	7-8	(3/24)	Prefab. Wood & Air Structures	1.02	1.01	1.05
65 -	1-12	(3/24)	Equipment Costs	1.02	1.02	1.04
66 -	1	(12/23)	Subdivision Costs	1.03	1.00	1.07
66 -	2-9	(12/23)	Yard Improvements	1.02	0.99	1.08
66 -	10-11	(12/23)	Demolition & Remediation	1.01	1.01	1.07
67 -	1-2	(12/23)	Golf Courses	1.01	1.03	1.05
67 -	3-7	(12/23)	Recreational Facilities	1.01	1.01	1.07
70 -	1-32	(1/25)	Green Section	0.99	0.99	1.05

This page supersedes the May 2025 Green Supplement.

The data included on this page becomes obsolete after update delivery, scheduled for July 2025.

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LOCAL MULTIPLIERS

Apply to costs brought up-to-date from preceding pages. Do not apply to Section 98 or any other indexes.

UNITED STATES

CLASS	A	B	C	D	S
NEW JERSEY	1.18	1.20	1.19	1.20	1.20
Asbury Park	1.08	1.10	1.09	1.10	1.12
Atlantic City	1.20	1.23	1.23	1.26	1.24
Bayonne	1.21	1.23	1.21	1.22	1.21
Camden	1.14	1.15	1.14	1.14	1.14
Clifton	1.20	1.22	1.21	1.21	1.22
East Orange	1.21	1.23	1.22	1.23	1.22
Edison	1.21	1.23	1.22	1.23	1.22
Elizabeth	1.24	1.25	1.23	1.25	1.24
Fairlawn	1.21	1.23	1.21	1.22	1.23
Hackensack	1.20	1.23	1.21	1.22	1.23
Irvington	1.24	1.26	1.25	1.27	1.26
Jersey City	1.22	1.24	1.21	1.23	1.22
Lakewood	1.06	1.10	1.09	1.10	1.10
Morristown	1.22	1.24	1.23	1.25	1.24
New Brunswick	1.21	1.23	1.22	1.23	1.22
Newark	1.25	1.27	1.26	1.29	1.27
Passaic	1.20	1.22	1.21	1.21	1.22
Paterson	1.21	1.23	1.21	1.22	1.23
Plainfield	1.11	1.12	1.12	1.12	1.12
Somerville	1.19	1.21	1.21	1.20	1.22
Teaneck	1.20	1.23	1.21	1.22	1.22
Trenton	1.18	1.20	1.19	1.21	1.19
Vineland	1.11	1.12	1.13	1.14	1.14
West Orange	1.21	1.22	1.21	1.22	1.20
NEW MEXICO	0.92	0.93	0.93	0.93	0.93
Alamogordo	0.87	0.90	0.90	0.86	0.89
Albuquerque	0.92	0.92	0.93	0.92	0.93
Carlsbad	0.88	0.91	0.91	0.91	0.90
Clovis	0.95	0.96	0.95	0.95	0.93
Farmington	0.93	0.96	0.96	0.95	0.95
Gallup	0.89	0.89	0.90	0.90	0.92
Hobbs	0.87	0.91	0.91	0.91	0.89
Las Cruces	0.91	0.94	0.94	0.92	0.96
Los Alamos	0.94	0.93	0.95	0.96	0.95
Portales	0.88	0.87	0.85	0.86	0.87
Roswell	0.93	0.93	0.95	0.94	0.95
Santa Fe	0.93	0.93	0.95	0.95	0.94
Taos	1.04	1.04	1.05	1.06	1.05
NEW YORK	1.03	1.05	1.06	1.07	1.06
Albany	1.04	1.08	1.10	1.11	1.09
Amsterdam	1.03	1.06	1.08	1.10	1.07
Auburn	1.00	1.02	1.00	1.02	1.01
Binghamton	1.00	1.01	0.99	1.00	1.00
Buffalo	1.10	1.09	1.11	1.11	1.10
Elmira	0.96	0.99	0.99	1.00	0.98
Ithaca	0.97	0.98	1.00	1.00	0.99
Jamestown	1.00	1.00	1.03	1.01	1.01
Kingston	1.09	1.14	1.13	1.15	1.14
Niagara Falls	1.10	1.08	1.08	1.09	1.09
Plattsburgh	0.98	0.98	0.99	1.02	1.01
Poughkeepsie	1.09	1.13	1.13	1.16	1.13
Rochester	1.06	1.11	1.09	1.08	1.08
Rome	1.02	1.04	1.03	1.06	1.03
Schenectady	1.04	1.06	1.07	1.10	1.08
Syracuse	1.09	1.10	1.09	1.09	1.12
Troy	1.06	1.10	1.12	1.12	1.11
Utica	1.02	1.04	1.04	1.06	1.03
Watertown	0.99	1.01	0.99	1.01	1.00
NEW YORK CITY AREA	1.30	1.31	1.31	1.34	1.35
Bronx	1.32	1.32	1.33	1.37	1.37
Brooklyn	1.30	1.31	1.33	1.35	1.36
Manhattan	1.32	1.33	1.33	1.36	1.37
Nassau County	1.31	1.32	1.33	1.35	1.36
Orange County	1.18	1.20	1.20	1.20	1.23
Putnam County	1.20	1.19	1.21	1.23	1.24
Queens	1.30	1.32	1.32	1.34	1.35
Rockland County	1.21	1.22	1.23	1.24	1.24
Staten Island	1.24	1.25	1.24	1.27	1.28
Suffolk County	1.33	1.34	1.35	1.37	1.38
Westchester County	1.21	1.22	1.22	1.25	1.26
Yonkers	1.33	1.34	1.34	1.37	1.37
NORTH CAROLINA	0.94	0.94	0.92	0.93	0.94
Asheville	0.95	0.95	0.94	0.93	0.95
Charlotte	0.96	0.97	0.95	0.95	0.97
Durham	1.01	0.99	0.96	0.98	1.00
Fayetteville	0.94	0.94	0.92	0.92	0.93
Gastonia	0.98	0.97	0.99	0.96	0.98
Goldsboro	0.94	0.92	0.90	0.91	0.93
Greensboro	0.92	0.91	0.91	0.92	0.93
Greenville	0.89	0.90	0.88	0.89	0.89
Hickory	0.89	0.90	0.90	0.90	0.89
Jacksonville	0.91	0.90	0.88	0.88	0.90
Raleigh	1.01	0.99	0.96	0.98	1.00
Rocky Mount	0.93	0.95	0.91	0.93	0.92
Wilmington	0.95	0.92	0.92	0.93	0.94
Winston-Salem	0.91	0.91	0.91	0.88	0.89
NORTH DAKOTA	0.98	1.02	1.00	0.99	1.03
Bismarck	0.98	1.03	1.00	1.00	1.02
Fargo	0.98	0.98	0.99	0.96	1.00
Grand Forks	0.97	1.02	1.00	0.98	1.02
Jamestown	0.98	1.03	1.01	0.99	1.03
Mandan	0.98	1.03	1.00	1.00	1.02
Minot	1.00	1.02	1.00	0.98	1.04
Williston	1.00	1.03	1.02	0.99	1.05
OHIO	0.99	0.99	0.98	0.97	0.99
Akron	0.97	0.98	0.99	0.99	0.98
Canton	0.95	0.97	0.96	0.96	0.96
Cincinnati	1.00	1.00	0.99	0.98	1.01
Cleveland	1.01	1.02	1.03	1.01	1.03
Columbus	1.04	1.02	1.01	1.00	1.01
Dayton	0.98	0.97	0.99	0.98	0.97
East Liverpool	1.03	1.05	1.06	1.02	1.03
Hamilton	0.96	0.94	0.96	0.94	0.95
OHIO (Continued)					
Lima	0.94	0.96	0.95	0.93	0.94
Lorain County	0.98	1.00	1.01	1.00	1.01
Mansfield	0.98	0.99	0.95	0.95	0.97
Marion	0.98	0.99	0.95	0.95	0.97
Middletown	0.96	0.94	0.94	0.94	0.95
Newark	0.99	0.99	0.98	0.97	0.98
Portsmouth	0.90	0.88	0.88	0.87	0.90
Springfield	0.98	0.96	0.96	0.97	0.98
Toledo	1.02	1.03	1.03	1.03	1.05
Youngstown	1.03	1.05	1.02	1.00	1.04
OKLAHOMA	0.91	0.93	0.92	0.92	0.91
Ardmore	0.93	0.92	0.93	0.91	0.92
Bartlesville	0.87	0.88	0.88	0.88	0.88
Enid	0.87	0.90	0.90	0.90	0.90
Lawton	0.86	0.88	0.87	0.85	0.85
Norman	0.97	0.99	0.98	0.97	0.96
Oklahoma City	0.97	0.99	0.98	0.97	0.96
Tulsa	0.91	0.92	0.92	0.93	0.92
OREGON	1.06	1.10	1.08	1.08	1.10
Albany	1.06	1.09	1.08	1.06	1.09
Altamont	1.04	1.06	1.05	1.04	1.08
Astoria	1.04	1.08	1.06	1.05	1.07
Bend	1.08	1.12	1.12	1.13	1.12
Coos Bay	1.04	1.07	1.06	1.07	1.09
Corvallis	1.06	1.09	1.08	1.06	1.08
Eugene	1.10	1.15	1.14	1.13	1.16
Grants Pass	1.04	1.08	1.06	1.05	1.10
Klamath Falls	1.04	1.07	1.05	1.05	1.09
Medford	1.05	1.10	1.09	1.08	1.11
North Bend	1.04	1.07	1.06	1.08	1.09
Pendleton	1.11	1.11	1.10	1.12	1.11
Portland	1.11	1.13	1.13	1.11	1.11
Roseburg	1.04	1.07	1.04	1.04	1.10
Salem	1.08	1.12	1.10	1.09	1.10
Springfield	1.03	1.05	1.05	1.05	1.09
The Dalles	1.09	1.13	1.10	1.08	1.11
PENNSYLVANIA	1.07	1.09	1.07	1.08	1.07
Allentown	1.10	1.14	1.10	1.13	1.08
Altoona	1.09	1.12	1.08	1.08	1.09
Bethlehem	1.07	1.12	1.07	1.10	1.07
Easton	1.05	1.10	1.06	1.08	1.04
Erie	1.07	1.07	1.07	1.05	1.05
Harrisburg	1.01	1.07	1.04	1.02	1.04
Johnstown	1.06	1.07	1.06	1.05	1.04
Lancaster	1.06	1.06	1.04	1.04	1.04
Norristown	1.19	1.20	1.20	1.22	1.20
Philadelphia	1.17	1.19	1.20	1.22	1.20
Pittsburgh	1.09	1.12	1.09	1.09	1.10
Reading	1.07	1.12	1.08	1.08	1.05
Scranton	1.03	1.02	1.02	1.02	1.03
State College	1.02	1.04	1.03	1.02	1.03
Wilkes-Barre	1.02	1.05	1.05	1.03	1.05
Williamsport	1.03	1.05	1.03	1.03	1.07
York	1.03	1.07	1.04	1.03	1.06

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APPENDIX

DOUGLAS ELLIMAN REPORT – 1ST QTR 2025 – MANHATTAN

Elliman Report

Q1-2025 Manhattan, NY Sales

Co-Op & Condo Dashboard

YEAR-OVER-YEAR

+ 11.0%
Prices
Median Sales Price

- 1.7 mos
Pace
Months of Supply

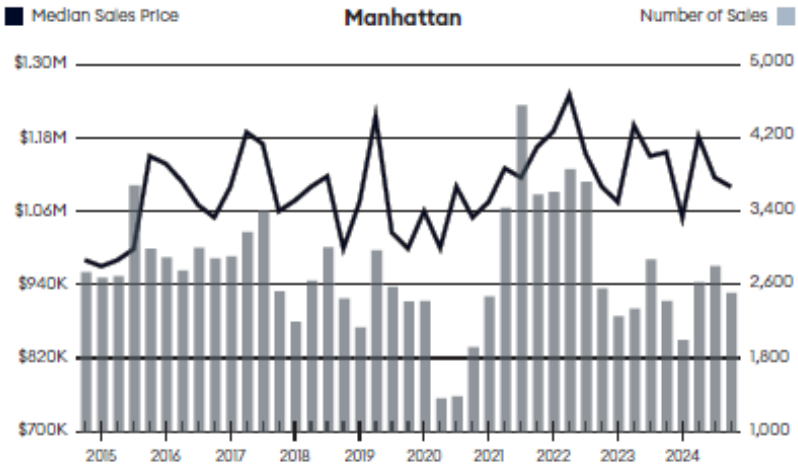
+ 28.8%
Sales
Closed Sales

+ 7.5%
Inventory
Total Inventory

+ 17 days
Marketing Time
Days on Market

= 0.0%
Negotiability
Listing Discount

- Sales surged annually as listing inventory showed a more modest gain
- All price trend indicators posted sharp gains as the sales mix shifted larger
- Purchase mortgage sales rose at twice the annual rate as cash sales



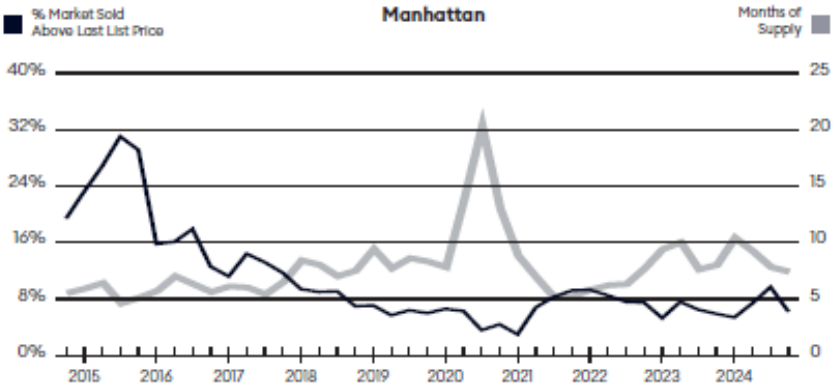
Manhattan Matrix	Q1-2025	%Δ (QTR)	Q4-2024	%Δ (YR)	Q1-2024
Average Sales Price	$2,236,193	7.1%	$2,087,958	21.1%	$1,846,391
Average Price Per Sq Ft	$1,704	0.4%	$1,697	9.8%	$1,552
Median Sales Price	$1,165,000	5.9%	$1,100,000	11.0%	$1,049,399
New Development	$2,380,000	-2.0%	$2,427,500	13.3%	$2,100,000
Re-Sale	$1,035,000	7.2%	$965,285	6.2%	$975,000
Number of Sales (Closed)	2,560	2.6%	2,496	28.8%	1,988
Days on Market (From Last List Date)	90	15.4%	78	23.3%	73
Listing Discount (From Last List Price)	6.6%		9.2%		6.6%
Listing Inventory	7,399	20.1%	6,161	7.5%	6,885
Months of Supply	8.7	17.6%	7.4	-16.3%	10.4
Year-to-Date	**Q1-2025**	**%Δ (QTR)**	**Q4-2024**	**%Δ (YR)**	**Q1-2024**
Average Sales Price (YTD)	$2,236,193	N/A	N/A	21.1%	$1,846,391
Average Price per Sq Ft (YTD)	$1,704	N/A	N/A	9.8%	$1,552
Median Sales Price (YTD)	$1,165,000	N/A	N/A	11.0%	$1,049,399
Number of Sales (YTD)	2,560	N/A	N/A	28.8%	1,988

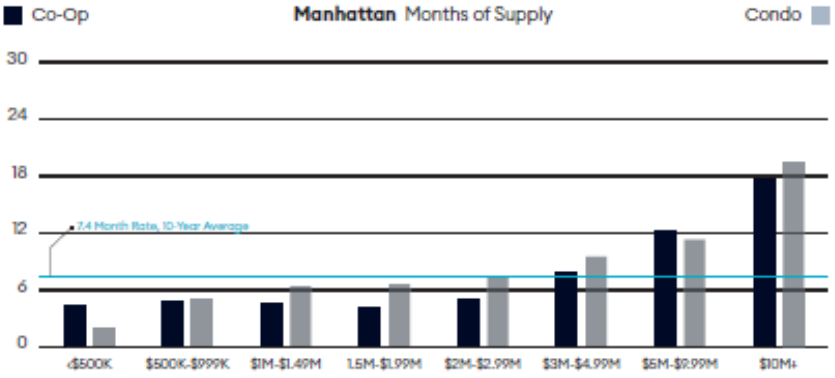
Early last year, consumers paused as market participants anticipated a sharp drop in mortgage rates, which did not occur. The market underperformance during the same period the previous year, combined with improved activity this quarter, skewed many metrics much higher. Although sales surged by 28.8% annually to 2,560, they only surpassed the decade average for the first quarter by 1.1%. Just after New Year's Eve, I stated that 2025 would be "The Year of Getting Back to Normal," and this is what I meant. The 7.5% rise in listing inventory was more modest, mainly due to elevated sales levels. Supply is now 12.6% above the decade average for the first quarter. With sales increasing faster than listing inventory, the market pace quickened. The months of

Douglas Elliman

Prepared by Miller Samuel Real Estate Appraisers & Consultants

supply–referring to the time needed to sell all listing inventory at the current sales rate–was at 8.7 months, indicating a 16.3% faster pace compared to the previous year's quarter and a little slower than the first quarter decade average of 8 months. The listing discount, representing the average percentage difference from the last asking price, was 6.6%, unchanged from the same period the previous year and significantly above the fourth quarter decade average of 5.4%. A similar pattern was observed over the past few quarters, suggesting that sellers are becoming more aware of current market conditions. The market share of cash purchases was 58%, remaining well above the long-time 50% average. However, financed sales increased at twice the rate of cash purchases caused by the modest decrease in mortgage rates over the past few months. Financed sales rose by 40.4% year over year, while cash purchases grew by 21.8% during the same period. Sales over $3 million were approximately 90% cash, while sales priced lower had a reduced market share of cash buyers. The market share of bidding wars stood at 5.4%, unchanged from the same period last year. In a relatively balanced market, bidding war market shares for Manhattan typically range between 5% and 7%, far lower than the outlying suburbs. When bidding wars occurred, the average premium paid was 3.7% above the asking price. The average monthly maintenance for a co-op sale was $2,974, representing an 8.8% annual increase to $2.51 per square foot per month. The average monthly common charge plus real estate tax for a condo reached its second consecutive record, rising by 16.3% annually to $4,802, or $3.28 per square foot per month. The luxury market, representing the top ten percent of total sales starting at $4,400,000, recorded a luxury median price of $6,870,875, an increase of 18.5% from the same quarter last year. The luxury average price per square foot rose 16% to $3,173, marking the first time this price indicator exceeded $3,000 per square foot in five years. The luxury average sales price surged 36.9% to a new high of $10,304,419, primarily aided by an 18.1% jump in average sales size to 3,248 square feet. One of the drivers of price growth was the 24.1% decline in luxury listing inventory to 1,236 for the third consecutive decline. The market share of new development sales that closed in the quarter was 12.8%, sharply up from 9.7% in the previous year's quarter and closely aligned with the 13% first-quarter average for the decade. Sales of new development units surged 69.4% year over year, just shy of the first quarter average for the decade of 342. New development price metrics continued to rise annually, propelled by an 11.4% shift to larger units averaging 1,542 square feet. The median sales price for new development sales was $2,380,000, up 13.3% annually.





Re-Sales

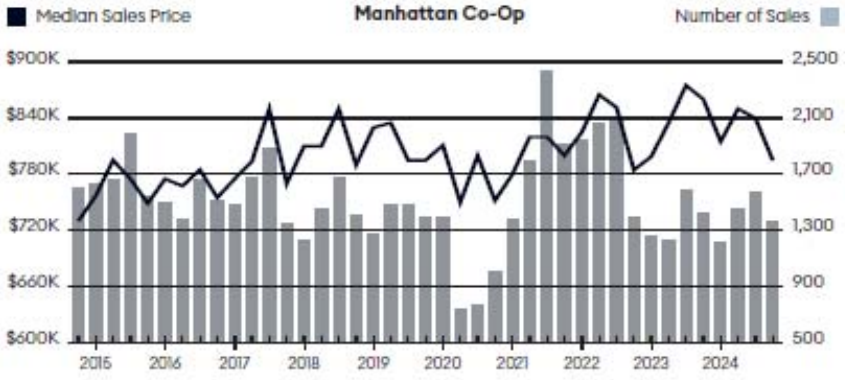
- **Sales expanded year over year at triple the rate of listing inventory**
- **Price trend indicators rose year over year, yet bidding wars remained at modest levels**
- **More high-end sales pushed overall annual price trends higher**

Re-Sales Matrix	Q1-2025	%Δ (qm)	Q4-2024	%Δ (ym)	Q1-2024
Average Sales Price	$1,985,022	15.4%	$1,720,614	17.1%	$1,694,929
Average Price per Sq Ft	$1,553	6.3%	$1,461	7.1%	$1,450
Median Sales Price	$1,035,000	7.2%	$965,285	6.2%	$975,000
Number of Sales (Closed)	2,233	4.4%	2,138	24.4%	1,795
Days on Market (From Last List Date)	90	18.4%	76	23.3%	73
Listing Discount (From Last List Price)	6.4%		9.7%		6.6%
Listing Inventory	6,234	25.4%	4,970	7.7%	5,786
Months of Supply	8.4	20.0%	7.0	-13.4%	9.7
Sales Share of Overall Market	87.2%		85.7%		90.3%

This sub-category analyzes all co-op & condo re-sales available. The data is also contained within the co-op & condo markets presented.

Co-Op

- Sales expanded faster year over year than listing inventory
- All price trend indicators increased year over year
- Bidding war market share expanded annually



Co-op Mix	Sales Share	Median Sales Price
Studio	17.1%	$433,000
1-Bedroom	34.8%	$700,000
2-Bedroom	29.6%	$1,225,000
3-Bedroom	13.1%	$1,999,000
4+ Bedroom	5.4%	$4,338,188

Co-Op Matrix	Q1-2025	%Δ (qtr)	Q4-2024	%Δ (yr)	Q1-2024
Average Sales Price	$1,517,507	12.9%	$1,344,702	15.7%	$1,311,351
Average Price per Sq Ft	$1,278	3.4%	$1,236	3.9%	$1,230
Median Sales Price	$849,500	6.9%	$795,000	4.2%	$815,000
Number of Sales (Closed)	1,413	3.5%	1,365	16.7%	1,211
Days on Market (From Last List Date)	89	15.6%	77	21.9%	73
Listing Discount (From Last List Price)	6.5%		11.3%		5.6%
Listing Inventory	3,449	23.4%	2,795	4.3%	3,307
Months of Supply	7.3	19.7%	6.1	-11.0%	8.2

Condo

- Sales expanded faster year over year than listing inventory
- All price trend indicators increased year over year
- Approximately nine out of ten sales above $3 million were cash purchases

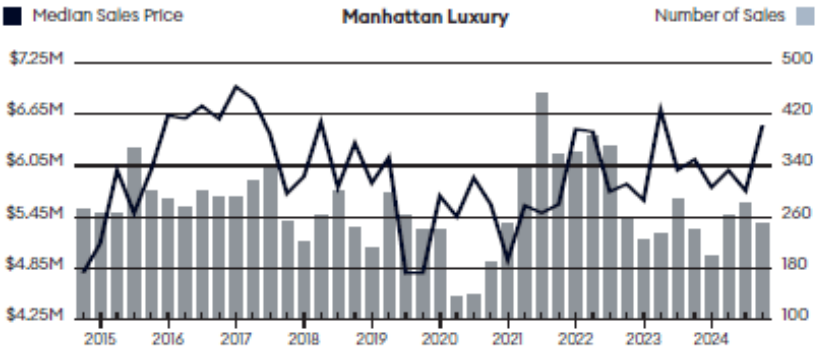


Condo Mix	Sales Share	Median Sales Price
Studio	10.7%	$710,000
1-Bedroom	30.9%	$1,055,000
2-Bedroom	31.7%	$2,100,000
3-Bedroom	18.8%	$4,000,000
4+ Bedroom	7.8%	$7,999,625

Condo Matrix	Q1-2025	%Δ (qtr)	Q4-2024	%Δ (yr)	Q1-2024
Average Sales Price	$3,121,548	4.6%	$2,984,992	16.5%	$2,680,281
Average Price per Sq Ft	$2,130	0.1%	$2,127	9.9%	$1,939
Median Sales Price	$1,725,000	3.6%	$1,665,000	5.7%	$1,632,000
Number of Sales (Closed)	1,147	1.4%	1,131	47.6%	777
Days on Market (From Last List Date)	90	12.5%	80	21.6%	74
Listing Discount (From Last List Price)	6.6%		6.9%		7.4%
Listing Inventory	3,950	17.3%	3,366	10.4%	3,578
Months of Supply	10.3	15.7%	8.9	-25.4%	13.8

Luxury

- Luxury price trend indicators pressed higher annually than the overall market
- Luxury listing inventory, both resales and new development, declined year over year
- Luxury price threshold reached its highest level in nearly two years as it moved further from the overall market

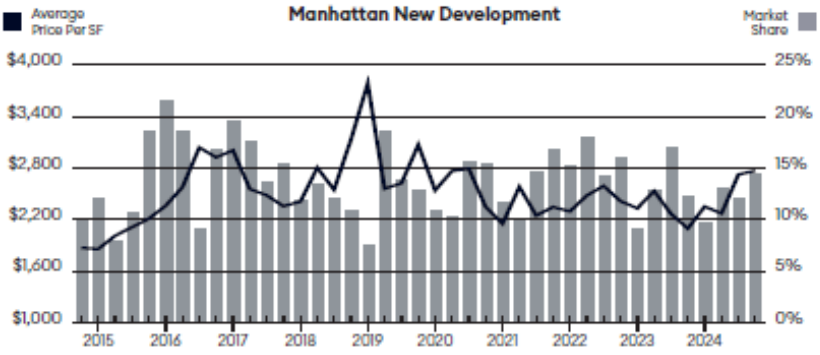


Luxury Mix	Sales Share	Median Sales Price
Co-ops	55.0%	$3,947,500
Condos	45.0%	$13,533,128
New Dev.	33.3%	$7,506,763
Re-Sales	66.7%	$5,900,000

Luxury Matrix (Top 10% of Sales)	Q1-2025	%Δ (QTR)	Q4-2024	%Δ (YR)	Q1-2024
Average Sales Price	$10,304,419	9.6%	$9,398,232	36.9%	$7,526,989
Average Price per Sq Ft	$3,173	6.9%	$2,968	16.0%	$2,736
Median Sales Price	$6,870,875	5.3%	$6,525,000	18.5%	$5,800,000
Number of Sales (Closed)	258	3.2%	250	29.6%	199
Days on Market (From Last List Date)	113	-8.9%	124	-2.6%	116
Listing Discount (From Last List Price)	8.8%		8.6%		9.4%
Listing Inventory	1,236	-3.8%	1,285	-24.1%	1,628
Months of Supply	14.4	-6.5%	15.4	-41.2%	24.5
Entry Price Threshold	$4,400,000	8.6%	$4,050,000	19.7%	$3,675,000

New Development

- Sales surged annually at a much greater rate than resales, especially sales exceeding $5 million
- Average sales size grew annually at its second-fastest rate in over four years
- Market share of new development sales aligned with the decade average for the first quarter



New Development Mix	Sales Share	YoY% Sales Change
< $1M	15.6%	54.5%
$1M - $3M	46.8%	36.6%
> $3M	37.6%	156.3%

New Development Matrix	Q1-2025	%Δ (QTR)	Q4-2024	%Δ (YR)	Q1-2024
Average Sales Price	$3,951,377	-7.7%	$4,281,763	21.4%	$3,255,063
Average Price per Sq Ft	$2,563	-7.4%	$2,769	9.0%	$2,352
Median Sales Price	$2,380,000	-2.0%	$2,427,500	13.3%	$2,100,000
Number of Sales (Closed)	327	-8.7%	358	69.4%	193
Days on Market (From Last List Date)	88	-14.6%	103	6.0%	83
Listing Discount (From Last List Price)	7.5%		5.4%		6.6%
Listing Inventory	1,165	-2.2%	1,191	6.0%	1,099
Months of Supply	10.7	7.0%	10.0	-37.4%	17.1
Sales Share of Overall Market	12.8%		14.3%		9.7%

Questions or comments? Email report author
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APPENDIX

THE CORCORAN REPORT – 1ST QTR 2025 – MANHATAN
[SELECTED PAGES]

The Corcoran Report

1Q | 2025 | MANHATTAN

corcoran

Overview

Closed Sales

2,682

+14% YEAR OVER YEAR
-2% QUARTER OVER QUARTER

Closings rose 14% annually, the most significant annual increase since Second Quarter 2022.

Contracts Signed

2,934

+3% YEAR OVER YEAR
+4% QUARTER OVER QUARTER

Signed contracts rose 3% annually, the fourth consecutive year-over-year gain in deal activity.

Days on Market

117

-8% YEAR OVER YEAR
0% QUARTER OVER QUARTER

Days on market fell for the third consecutive quarter to its lowest first-quarter average in three years.

Inventory

6,217

-1% YEAR OVER YEAR
+5% QUARTER OVER QUARTER

Strong contract activity, a drop in new listings, and few new develop 1% year-over-year.

Median Price

$1.175M

+12% YEAR OVER YEAR
+7% QUARTER OVER QUARTER

Median price rose 12% annually due to stronger activity for large residences compared to last year.

Average PPSF

$1,858

+9% YEAR OVER YEAR
-5% QUARTER OVER QUARTER

Average price per square foot rose for the first time in seven quarters, up 9% annually thanks to strong luxury market activity.

First Quarter 2025 was a promising start to the year for the Manhattan real estate market. Despite jitters around demand, the economy, and a constant influx of breaking news, Manhattan experienced stronger sales, lower supply, and shorter marketing times than this time last year.

For just the fourth time in 20 years, all key demand indicators improved in First Quarter 2025. The number of closings surged 14% to nearly 2,700 sales, the greatest annual percentage gain in three years. With prices also rising, sales volume grew 39% year-over-year to $6.05 billion. Signed contracts rose annually for the fourth consecutive quarter, up 3% to 2,934 deals—just below the ten-year first-quarter average of 3,000 contracts. With stronger demand and lower supply, the pace at which contracts were inked also accelerated versus 2024. Days on market fell year-over-year for the third quarter in a row, down ten days (9%) to 117.

Inventory continued to decline this quarter as the higher number of sales combined with fewer new listings. As of mid-March, about 6,200 listings were active in Manhattan, a 1% annual drop. In First Quarter 2025, new listings fell versus last year to an 11-year low (excluding 2020) of just 4,529, approximately 500 (12%) fewer than a typical first quarter. Plus, there is far less new development coming to market: compared to a year ago, 71% fewer sponsor units commenced sales. As a result, First Quarter 2025 had the second lowest first quarter for Manhattan listed inventory in nine years.

Manhattan prices are now squarely improving thanks to growing demand, shrinking inventory, and a robust luxury market. This quarter, marketwide price statistics increased significantly versus 2024: median price rose 12% to $1.175M and average price per square foot grew 9% to $1,858, returning to 2021-2022 levels. Impressively, First Quarter 2025 was just the third time in a decade—and first time since mortgage rates spiked in 2022—that price statistics were level with or higher than the year before for both the Manhattan market overall and for each product type.

In all, First Quarter 2025 built upon last year's momentum, delivering a solid start to the year that will hopefully serve as a firm foundation for the rest of 2025. However, this quarter also faced challenges such as volatile financial markets, increasing political anxiety, and lack of supply in high-demand areas, all of which have the potential shift market trends.

Pamela Liebman

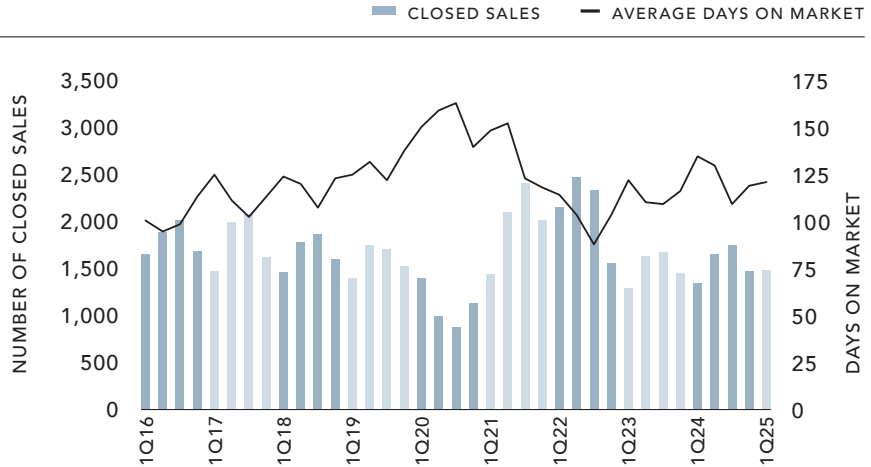
President & CEO

SALES | PAGE 3
INVENTORY | PAGE 6
PRICES | PAGE 8
NEIGHBORHOODS | PAGE 10

Resale Co-op Sales

	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
SALES	1,468	1,337	10%	1,459	1%
MARKET SHARE	55%	57%	-2%	53%	2%
DAYS ON MARKET	114	123	-8%	115	-1%

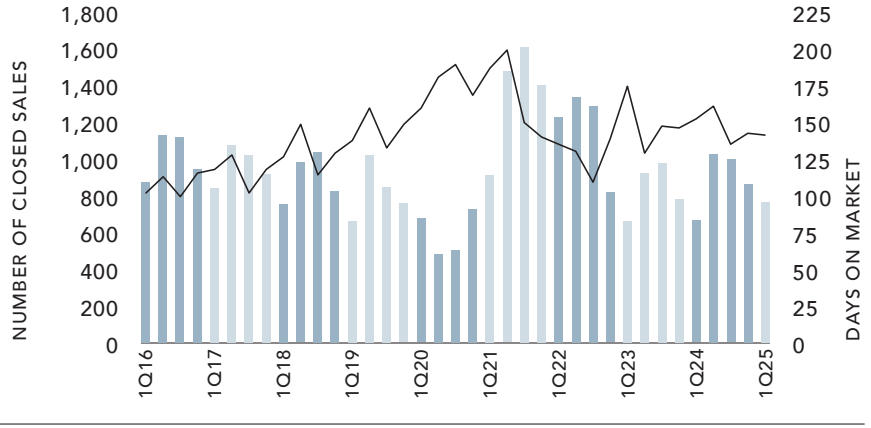
Resale co-op sales rose year-over-year for the fifth consecutive quarter, up 10% to 1,468 closings. Unlike last quarter, larger and higher-priced sales drove the annual increase. Versus 2024, the number of sales climbed 3% under $1M and 22% over $1M. Similarly, studio and one-bedroom co-op transactions were level with last year, whereas two and three+ bedroom closings increased 23% annually.



Resale Condo Sales

	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
SALES	771	672	15%	872	-12%
MARKET SHARE	29%	29%	0%	32%	-3%
DAYS ON MARKET	124	138	-10%	122	2%

Resale condo sales also improved annually for the fifth consecutive quarter, up 15% to 771 closings. As with co-ops, higher-end resale condos propelled the gain. Compared to last year, closings rose just 2% under $2M but 42% over $2M. Likewise, two and three+ bedroom sales rose 24% year-over-year, while studios and one bedroom closings together increased just 3% annually.

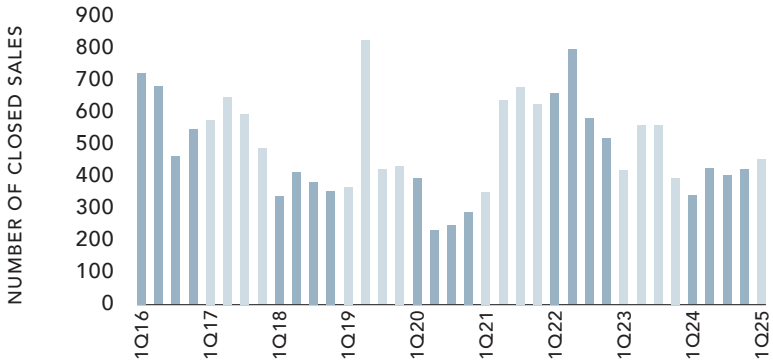


New Development Sales

	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
SALES	444	334	33%	415	7%
MARKET SHARE	17%	14%	3%	15%	2%

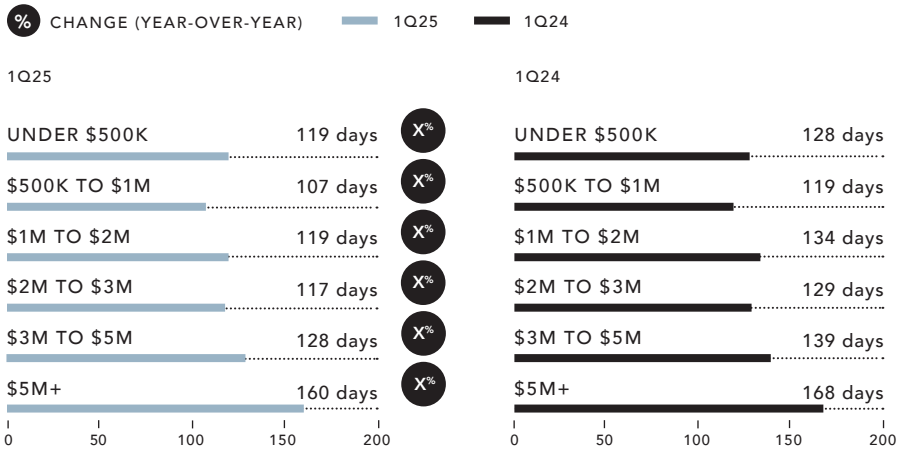
First Quarter 2025 had about 450 new development closings, up 33% annually—the largest annual gain in 13 quarters. A high number of closings at recently completed new developments, such as Monogram New York, 155 West 68th Street, 50 West 66th Street, and 517 West 29th Street, plus continued momentum at Downtown towers like One High Line, drove the gain.

Note: New development sales are excluded from days on market statistics because some units appear to have sold the same day as the list date or are held off the market for long periods of time.



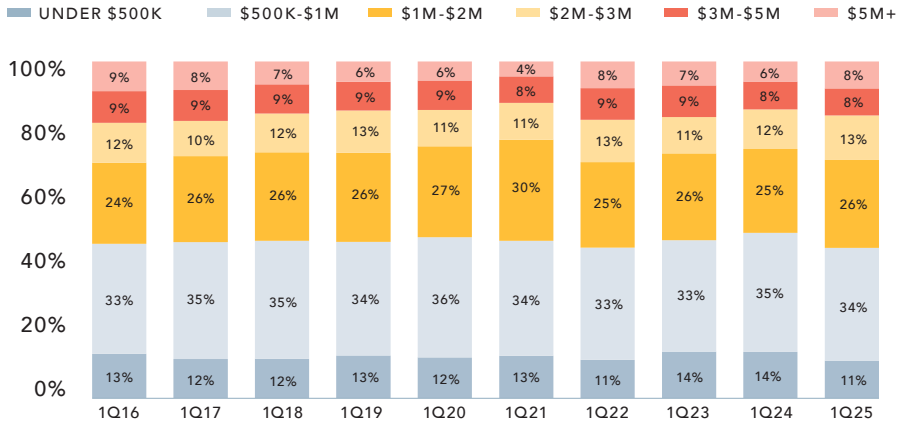
Sales

Days on Market by Price Range



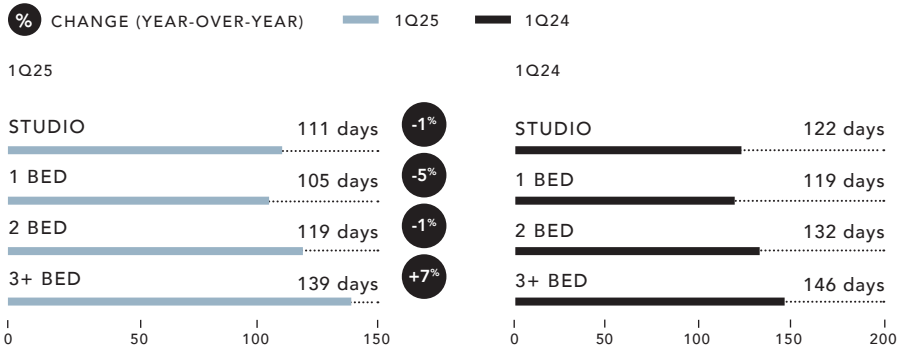
Marketing times fell annually at all price points. Versus 2024, days on market under $2M declined by about two weeks (9%), while marketing times over $2M moderated by roughly nine days (7%).

Market Share by Price Range



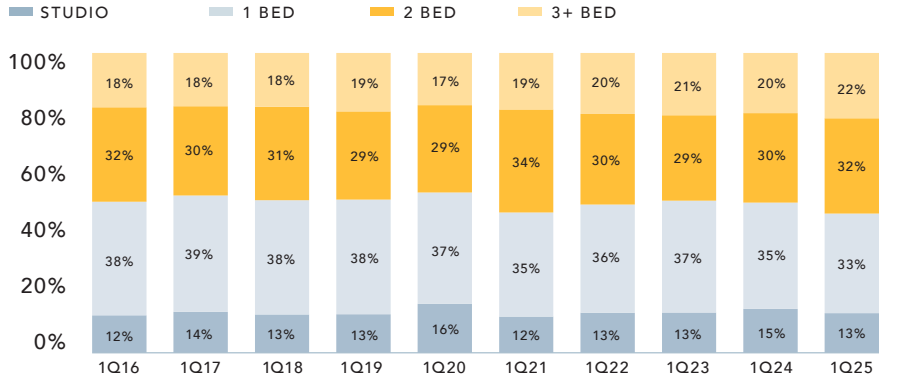
First Quarter 2025 saw notable shifts in market share by price point. Compared to 2024, the market under $1M lost 5% in market share; $1M to $2M closings gained 2% of market share; $3M to $5M market share was level; and the market over $5M reached an eight-year high of 8%, up 2% annually.

Days on Market by Bedroom Type



Days on market declined year-over-year for all bedroom types for the first time since 2021. In line with stronger activity for larger residences this quarter, the number of days by which marketing times declined generally increased by bedroom type.

Market Share by Bedroom Type



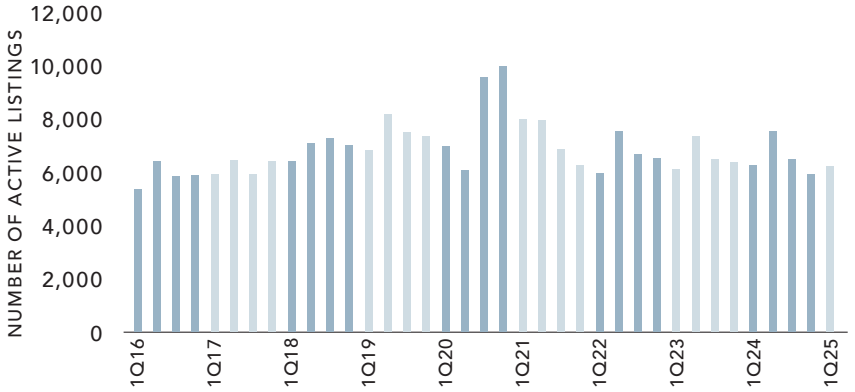
Versus 2024, studios lost 1.5% in market share; one bedrooms ceded 2% of their market share; two bedrooms gained 2% in market share; three+ bedroom market share rose just under 2% annually.

Due to rounding, percentages may not equal 100.

Inventory

- Listed inventory declined 1% annually to a three-year low of 6,217 active listings.
- Just over 4,500 new listings hit the market in First Quarter 2025, a less than 1% annual decrease. This was the lowest number of new listings of any first quarter in 11 years.
- Robust contract activity and limited new development introductions drove the number of active listings down compared to a year ago.
- Annual shifts in listed inventory differed by price. Active listings rose 5% annually under $2M, where increases in contract activity were less significant. Listed inventory over $5M fell 9% thanks to robust gains in deal activity, including a 15% drop over $5M, the largest drop in five years.
- Shifts in listed inventory by unit type mirrored those by price. Versus 2024, studio listings rose 11%, one-bedroom listings grew 7%, two bedroom supply was level, and three+ bedroom listings fell 12%.

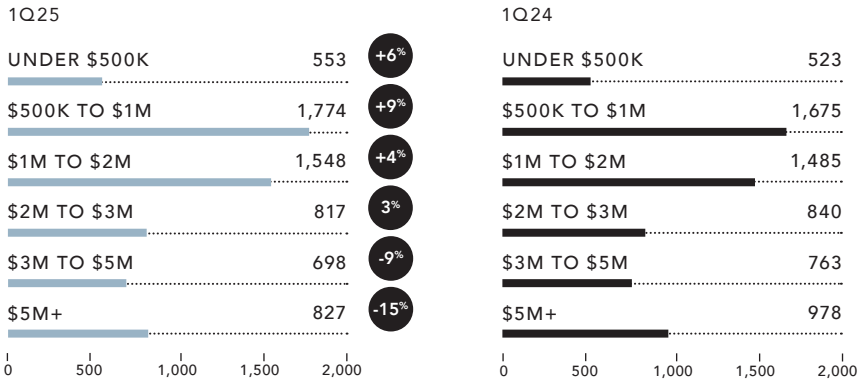
	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
INVENTORY	6,217	6,264	-1%	5,900	5%
NEW LISTINGS	4,529	4,540	0%	3,195	42%



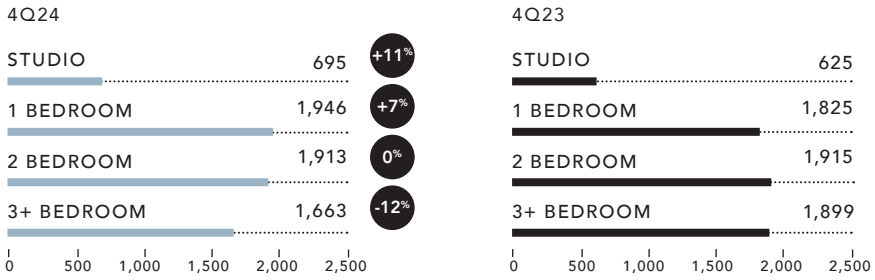
Breakdown of Active Listings

% CHANGE (YEAR-OVER-YEAR) 1Q25 1Q24

BY PRICE RANGE



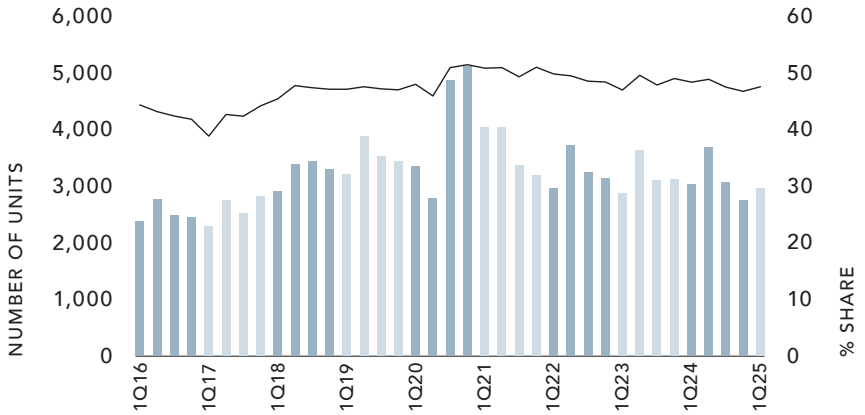
BY BEDROOM TYPE



Resale Co-op Inventory

	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
INVENTORY	2,958	3,029	-2%	2,760	7%
MARKET SHARE	48%	48%	0%	47%	1%

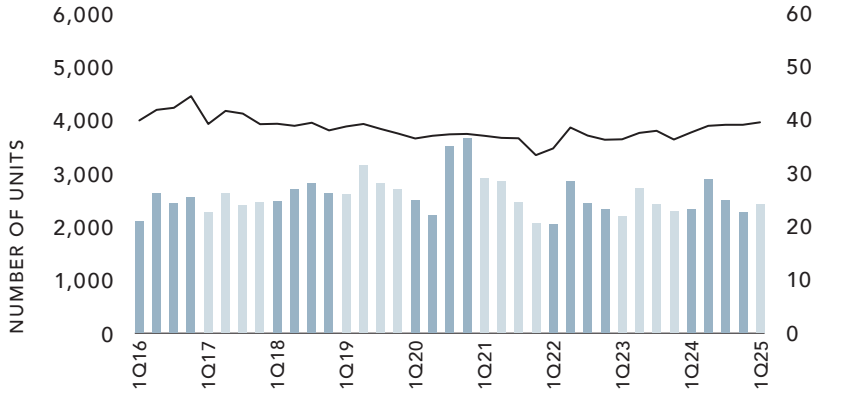
Resale co-op inventory fell 2% annually to 2,958 active listings, a three-year first-quarter low. Listed inventory rose 3% year-over-year under $2M. Active listings over $2M dropped 16% annually.



Resale Condo Inventory

	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
INVENTORY	2,440	2,343	4%	2,290	7%
MARKET SHARE	39%	37%	2%	39%	0%

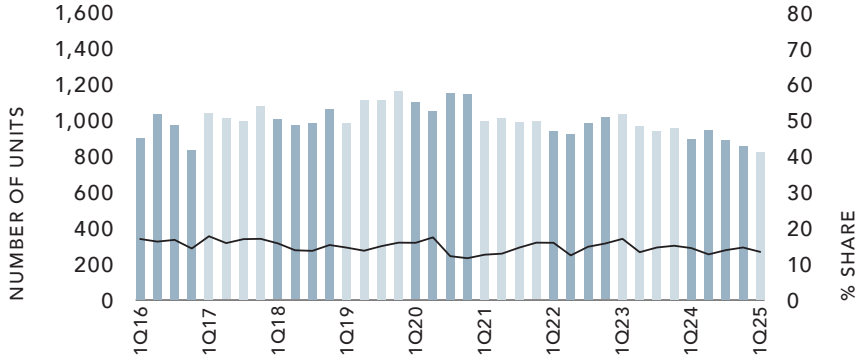
Resale condo inventory rose 4% annually to its highest first-quarter level since 2021. A 10% annual jump in active listings under $3M drove the gain, as listed inventory over $3M fell 2% year-over-year.



New Development Inventory

	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
INVENTORY	819	892	-8%	850	-4%
MARKET SHARE	13%	14%	-1%	14%	-1%
NEW UNIT LAUNCHES	116	400	-71%	110	-5%

New development active listings fell 8% annually to 819 units, the lowest fourth-quarter total since 2015. Developments that launched sales in First Quarter 2025 contained just 116 units, a 71% year-over-year decline.



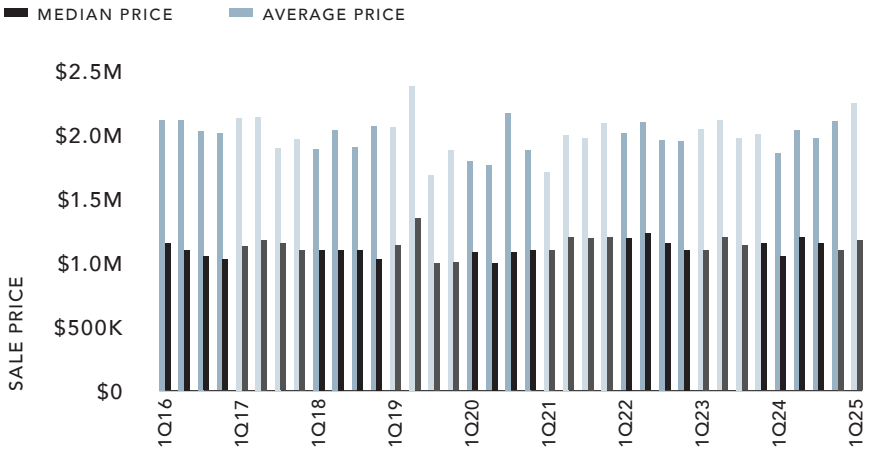
Prices

- First Quarter 2025 Manhattan price statistics saw across-the-board annual increases, as First Quarter 2024 marketwide average and median price and price per square foot figures were all at their lowest levels since First Quarter 2021.
- Median price at $1.175M rose 12% versus 2024's three-year low of $1.050M. Versus a year ago, closing activity shifted to larger apartments and more expensive submarkets, driving the increase.
- Average price increased annually for the second consecutive quarter, jumping 21% to $2.254M. The year-over-year percentage increase in the number of sales above $2M was double that of the overall market, causing the spike.
- After seven consecutive quarters with year-over-year declines, price per square foot statistics finally increased year-over-year, but by more moderate annual percentages than average and median sale price figures.
- In First Quarter 2025, the number of sales over $1,500 per square foot climbed 48% annually, driving median and average price per square foot up 2% and 9% annually to $1,858 and $1,316, respectively.
- Resale co-op price figures grew year-over-year. Versus last year, median price rose 8% to $845K and average price per square foot increased 16% to a record high of $1,298. Resale co-op pricing was boosted by strong improvements in the number of closings in close proximity to Central Park.
- This quarter saw the highest-priced resale co-op since 2022: 960 Fifth Avenue 12th Floor for $53.5M.

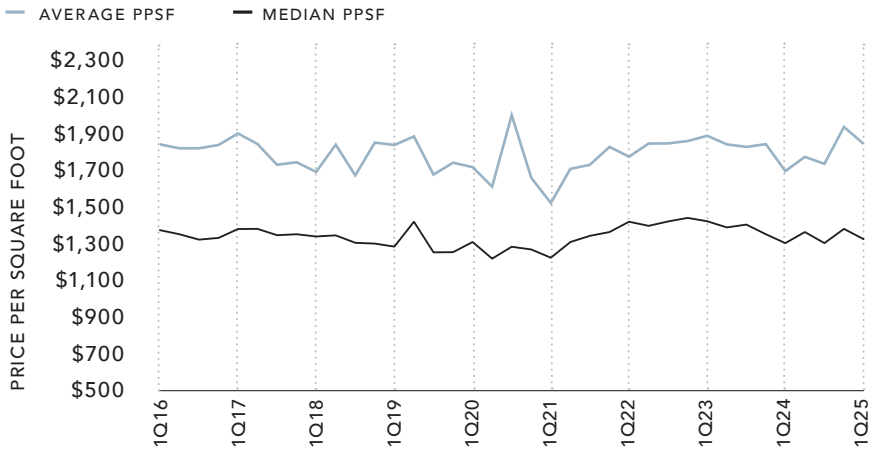
	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
MEDIAN PRICE	$1.175M	$1.050M	12%	$1.100M	7%
AVERAGE PRICE	$2.254M	$1.859M	21%	$2.109M	7%
MEDIAN PPSF	$1,316	$1,294	2%	$1,375	-4%
AVERAGE PPSF	$1,858	$1,703	9%	$1,954	-5%

- Resale condo price figures hit record highs. Versus 2024, median price rose 18% to $1.595M and average price per square foot grew 19% to $2,000. The number of resale condo closings over $2M rose at nearly three times the rate of the overall resale condo market in First Quarter 2025, driving the increases.
- First Quarter 2025's top two closings were resale condos: 220 Central Park South 45th Floor for $82.5M ($12,517 PSF) and 150 Charles 9A for $60M ($10,274 PSF), Downtown's highest-price sale ever.
- New development price statistics increased minimally year-over-year in First Quarter 2025. Median price at $2.355M was essentially unchanged versus 2024 and average price per square foot rose just 1% to $2,404. Although this quarter saw an influx of closings at prime buildings such as 50 West 66th Street and Giorgio Armani Residences (760 Madison), there were simultaneously fewer closings along 57th Street and near the Downtown waterfront, thereby moderating changes in price statistics.

Median and Average Price

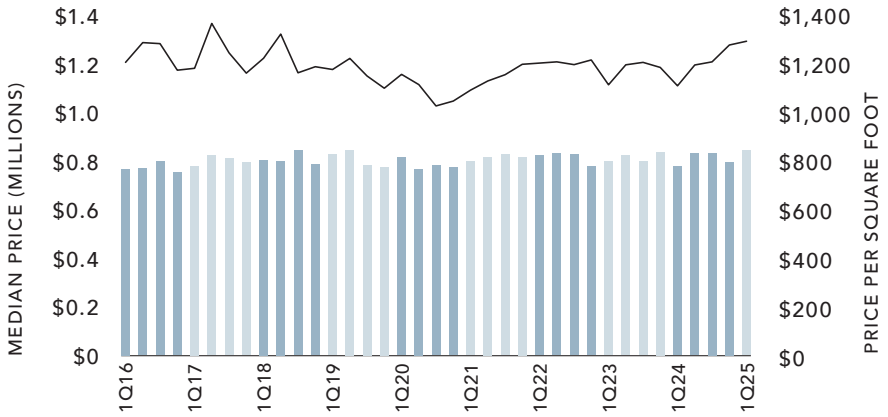


Price Per Square Foot



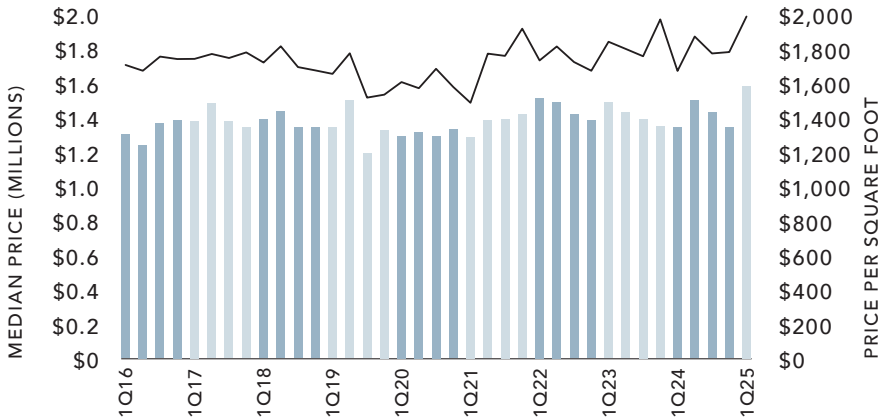
Resale Co-op Prices

PRICES	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
MEDIAN PRICE	$845K	$780K	8%	$799K	6%
AVERAGE PRICE	$1.504M	$1.258M	20%	$1.334M	13%
MEDIAN PPSF	$1,000	$944	6%	$976	2%
AVERAGE PPSF	$1,298	$1,115	16%	$1,273	2%
MEDIAN PRICE BY BEDROOM					
STUDIO	$440K	$412K	7%	$425K	4%
1 BEDROOM	$695K	$677K	3%	$670K	4%
2 BEDROOM	$1.210M	$1.150M	5%	$1.275M	-5%
3+ BEDROOM	$2.250M	$2.390M	-6%	$2.550M	-12%



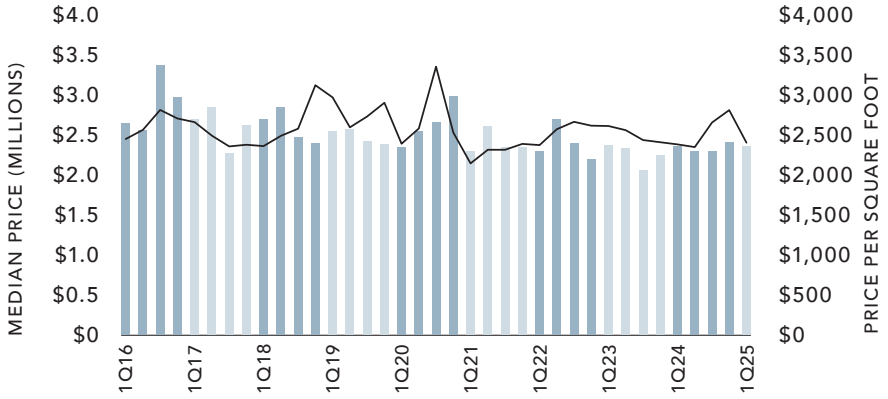
Resale Condo Prices

PRICES	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
MEDIAN PRICE	$1.595M	$1.350M	18%	$1.350M	18%
AVERAGE PRICE	$2.820M	$2.195M	28%	$2.302M	23%
MEDIAN PPSF	$1,410	$1,319	7%	$1,382	2%
AVERAGE PPSF	$2,000	$1,682	19%	$1,792	12%
MEDIAN PRICE BY BEDROOM					
STUDIO	$600K	$627K	-4%	$624K	-4%
1 BEDROOM	$993K	$960K	3%	$950K	5%
2 BEDROOM	$1.855M	$1.710M	8%	$1.800M	3%
3+ BEDROOM	$4.078M	$3.525M	16%	$3.750M	9%

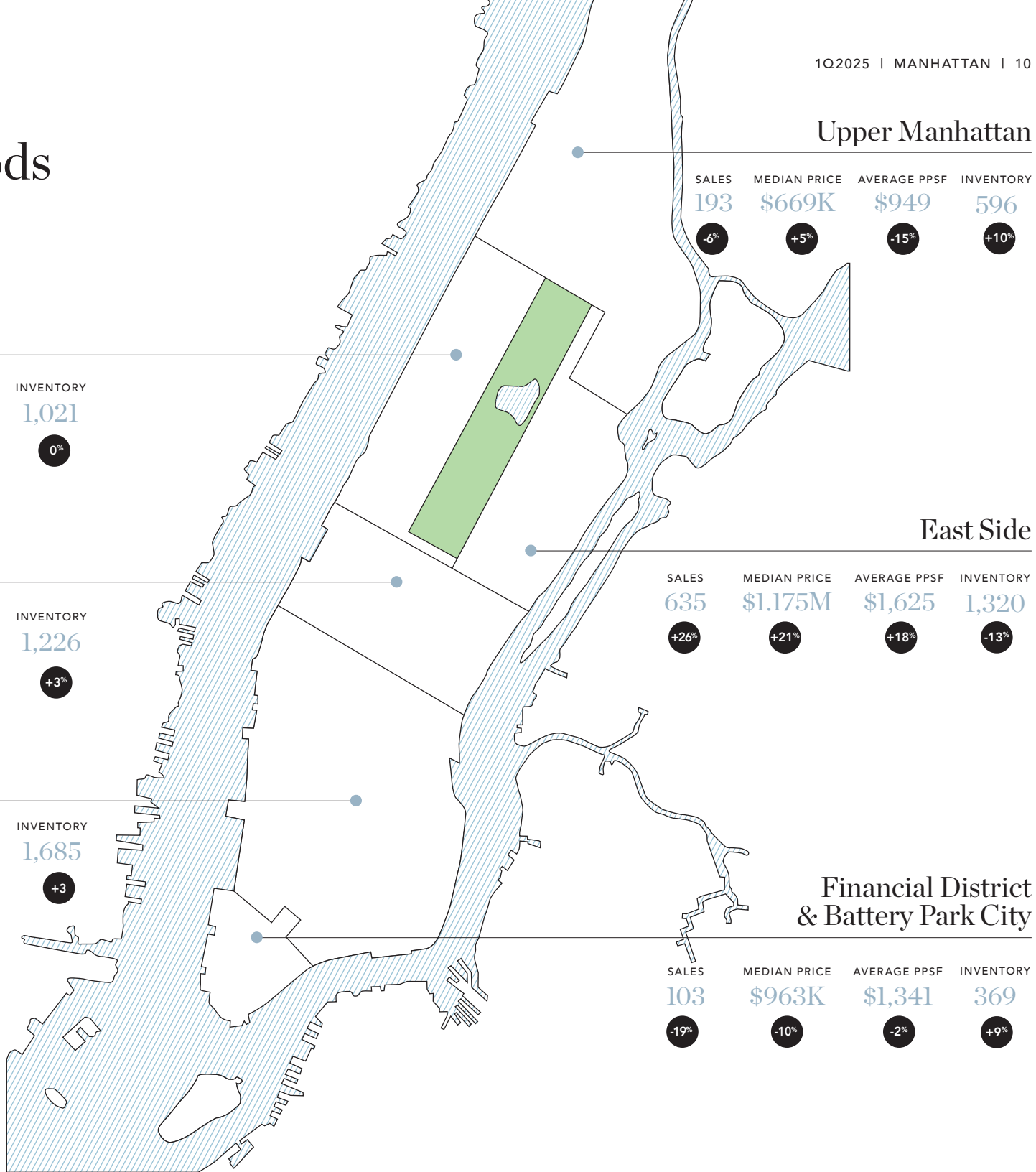


New Development Prices

PRICES	1Q25	1Q24	%CHG (YR)	4Q24	%CHG (QTR)
MEDIAN PRICE	$2.355M	$2.363M	0%	$2.410M	-2%
AVERAGE PRICE	$3.752M	$3.592M	4%	$4.430M	-15%
MEDIAN PPSF	$1,914	$1,876	2%	$2,059	-7%
AVERAGE PPSF	$2,404	$2,384	1%	$2,809	-14%
MEDIAN PRICE BY BEDROOM					
STUDIO	$812K	$768K	6%	$940K	-14%
1 BEDROOM	$1.245M	$1.400M	-11%	$1.250M	0%
2 BEDROOM	$2.495M	$2.300M	8%	$2.485M	0%
3+ BEDROOM	$5.750M	$4.400M	31%	$6.095M	-6%



Neighborhoods



Upper Manhattan

SALES	MEDIAN PRICE	AVERAGE PPSF	INVENTORY
193	$669K	$949	596
-6%	+5%	-15%	+10%

West Side

SALES	MEDIAN PRICE	AVERAGE PPSF	INVENTORY
594	$1.315M	$2,176	1,021
+30%	+16%	+26%	0%

East Side

SALES	MEDIAN PRICE	AVERAGE PPSF	INVENTORY
635	$1.175M	$1,625	1,320
+26%	+21%	+18%	-13%

Midtown

SALES	MEDIAN PRICE	AVERAGE PPSF	INVENTORY
372	$990K	$1,365	1,226
-3%	+14%	-26%	+3%

Downtown

SALES	MEDIAN PRICE	AVERAGE PPSF	INVENTORY
785	$1.500M	$2,177	1,685
+18%	+4%	+9%	+3

Financial District & Battery Park City

SALES	MEDIAN PRICE	AVERAGE PPSF	INVENTORY
103	$963K	$1,341	369
-19%	-10%	-2%	+9%

% CHANGE (YEAR-OVER-YEAR)



21 East 10th Street | $4,850,000 | Web# 23305037

Downtown

- After ten quarters with annual declines, Downtown sales have now risen for two consecutive quarters. Closings were up 18% to 785 sales.
- Versus 2024, resale co-op and new development sales improved, but the number of resale condo closings declined nearly 10% due to limited inventory.
- Active listings increased a minimal 3% annually to just under 1,700 units, still a historically low figure.
- Downtown median price rose 4% annually to $1.500M due to a year-over-year increase in the market share of two and three+ bedroom transactions as well as a drop in the share of sales under $750K.
- Average price per square foot rose 9% annually to $2,177 as the number of sales over $10M—nearly all of which were also over $3,000 per square foot—doubled compared to a year ago.
- The 150 Charles 9A closing for $60M ($10,274 per square foot) overtook 503 West 24th Street's $59M penthouse closing from 2018 to become Downtown's highest-priced apartment sale ever.

Sales

785

+18% YEAR OVER YEAR

Market Share of Sales

29%

+1% YEAR OVER YEAR

Inventory

1,685

+3% YEAR OVER YEAR

Days on Market

115

0% YEAR OVER YEAR

Median Price

$1.50M

+4% YEAR OVER YEAR

Average PPSF

$2,177

+9% YEAR OVER YEAR

Downtown Prices by Property Type

% CHANGE (YEAR-OVER-YEAR)

	RESALE CO-OP			RESALE CONDO			NEW DEVELOPMENT		
	1Q25		1Q24	1Q25		1Q24	1Q25		1Q24
MEDIAN PRICE	$935K	+7%	$875K	$2.300M	-1%	$2.319M	$2.950M	0%	$2.951M
AVERAGE PRICE	$1.316M	+8%	$1.217M	$3.861M	+15%	$3.344M	$4.462M	+11%	$4.015M
MEDIAN PPSF	$1,275	+6%	$1,199	$1,696	-1%	$1,705	$2,155	-1%	$2,175
AVERAGE PPSF	$1,477	+20%	$1,228	$2,280	+14%	$2,003	$2,618	+6%	$2,463

Downtown Median Price by Bedroom

% CHANGE (YEAR-OVER-YEAR)

RESALE CO-OP

1Q25			1Q24	
STUDIO	$539K	+4%	$520K	
1 BEDROOM	$786K	0%	$789K	
2 BEDROOM	$1.706M	+28%	$1.338M	
3+ BEDROOM	$2.444M	-24%	$3.200M	

RESALE CONDO

1Q25			1Q24	
STUDIO	$673K	-1%	$681K	
1 BEDROOM	$1.310M	0%	$1.315M	
2 BEDROOM	$2.431M	-3%	$2.505M	
3+ BEDROOM	$4.995M	-9%	$5.500M	

NEW DEVELOPMENT

1Q25			1Q24	
STUDIO	$875K	+13%	$774K	
1 BEDROOM	$1.535M	-21%	$1.947M	
2 BEDROOM	$3.322M	+18%	$2.811M	
3+ BEDROOM	$7.921M	+34%	$5.925M	

Methodology

The Corcoran Report was Manhattan's very first market study of residential sale trends. For 40 years, we have pioneered making this information available to you and your customers in a straightforward and easy-to-understand way.

METRICS

PREVIOUS QUARTER statistics for sales and prices are revised in the subsequent report once data are available for the full quarter period.

CLOSED AND CONTRACTS SIGNED figures for the current quarter are based on reported transactions at the time the report is prepared and projected through the end of the quarter taking into account typical seasonality.

DAYS ON MARKET averages how long a unit takes to sell and is calculated from subtracting list date from contract date. Units on the market longer than three years and shorter than one day are considered outliers and removed from the data to prevent significant skewing. New developments are excluded because many available, unsold units are held off the market for long periods of time.

AVERAGE PRICE PER SQUARE FOOT is the average price divided by the average square footage. In prior Corcoran Reports this was calculated as an average of all prices per square foot, which gives a number less skewed by high price sales and more similar to a median price per square foot. The two metrics are now separated to give more insight to market dynamics.

MEDIAN PRICE AND PRICE PER SQUARE FOOT are the middle or midpoint price where half of sales fall below and half fall above this number.

INVENTORY is a count of all currently listed units and is measured two weeks before the end of the quarter. It does not include unlisted yet unsold units in new developments ("shadow" inventory).

SOURCE

Figures in this report are based on publicly reported closed sales information via the Automated City Register Information System (ACRIS) and the REBNY Listing System (RLS).

DISCLAIMER

Real estate agents affiliated with The Corcoran Group are independent contractors and are not employees of The Corcoran Group. The Corcoran Group is a licensed real estate broker located at 590 Madison Ave, NY, NY 10022. All material presented herein is intended for information purposes only and has been compiled from sources deemed reliable. Though information is believed to be correct, it is presented subject to errors, omissions, changes or withdrawal notice.

THE FOLLOWING MEMBERS OF THE CORCORAN GROUP MADE SIGNIFICANT CONTRIBUTIONS TO THIS REPORT:

Lexi Entel | Kristy Hoffman | Geoffrey Martell | Ryan Schleis

APPENDIX
REALTYRATES.COM

RealtyRates.com INVESTOR SURVEY - 2nd Quarter 2025*							
OFFICE - ALL TYPES							
Item	**Input**						**OAR**
Minimum							
Spread Over 10-Year Treasury	1.07%	**DCR Technique**		1.10	0.060835	0.80	**5.35**
Debt Coverage Ratio	1.10	**Band of Investment Technique**					
Interest Rate	5.37%	Mortgage		80%	0.060835	0.048668	
Amortization	40	Equity		20%	0.072150	0.014430	
Mortgage Constant	0.060835	OAR					**6.31**
Loan-to-Value Ratio	80%	**Surveyed Rates**					**5.93**
Equity Dividend Rate	7.22%						
Maximum							
Spread Over 10-Year Treasury	6.72%	**DCR Technique**		2.15	0.136542	0.50	**14.68**
Debt Coverage Ratio	2.15	**Band of Investment Technique**					
Interest Rate	11.02%	Mortgage		50%	0.136542	0.068271	
Amortization	15	Equity		50%	0.154225	0.077113	
Mortgage Constant	0.136542	OAR					**14.54**
Loan-to-Value Ratio	50%	**Surveyed Rates**					**13.67**
Equity Dividend Rate	15.42%						
Average							
Spread Over 10-Year Treasury	3.40%	**DCR Technique**		1.63	0.085514	0.68	**9.39**
Debt Coverage Ratio	1.63	**Band of Investment Technique**					
Interest Rate	7.70%	Mortgage		68%	0.085514	0.057722	
Amortization	30	Equity		33%	0.117291	0.038120	
Mortgage Constant	0.085514	OAR					**9.58**
Loan-to-Value Ratio	67.5%	**Surveyed Rates**					**9.70**
Equity Dividend Rate	11.73%						

*1st Quarter 2025 Data

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RealtyRates.com INVESTOR SURVEY - 2nd Quarter 2025*							
OFFICE - CENTRAL BUSINESS DISTRICT							
Item	**Input**						**OAR**
Minimum							
Spread Over 10-Year Treasury	1.27%	**DCR Technique**		1.35	0.068663	0.65	**6.03**
Debt Coverage Ratio	1.35	**Band of Investment Technique**					
Interest Rate	5.57%	Mortgage		65%	0.068663	0.044631	
Amortization	30	Equity		35%	0.074150	0.025953	
Mortgage Constant	0.068663	OAR					**7.06**
Loan-to-Value Ratio	65%	**Surveyed Rates**					**6.63**
Equity Dividend Rate	7.42%						
Maximum							
Spread Over 10-Year Treasury	6.72%	**DCR Technique**		2.15	0.136542	0.50	**14.68**
Debt Coverage Ratio	2.15	**Band of Investment Technique**					
Interest Rate	11.02%	Mortgage		50%	0.136542	0.068271	
Amortization	15	Equity		50%	0.154225	0.077113	
Mortgage Constant	0.136542	OAR					**14.54**
Loan-to-Value Ratio	50%	**Surveyed Rates**					**13.67**
Equity Dividend Rate	15.42%						
Average							
Spread Over 10-Year Treasury	4.00%	**DCR Technique**		1.75	0.098245	0.58	**9.89**
Debt Coverage Ratio	1.75	**Band of Investment Technique**					
Interest Rate	8.30%	Mortgage		58%	0.098245	0.056491	
Amortization	23	Equity		43%	0.110184	0.046828	
Mortgage Constant	0.098245	OAR					**10.33**
Loan-to-Value Ratio	58%	**Surveyed Rates**					**9.88**
Equity Dividend Rate	11.02%						

*1st Quarter 2025 Data

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RealtyRates.com INVESTOR SURVEY - 2nd Quarter 2025*							
RESTAURANTS - ALL TYPES							
Item	**Input**						**OAR**
Minimum							
Spread Over 10-Year Treasury	1.55%	**DCR Technique**		1.10	0.070808	0.80	**6.23**
Debt Coverage Ratio	1.10	**Band of Investment Technique**					
Interest Rate	5.85%	Mortgage		80%	0.070808	0.056647	
Amortization	30	Equity		20%	0.102870	0.020574	
Mortgage Constant	0.070808	OAR					**7.72**
Loan-to-Value Ratio	80%	**Surveyed Rates**					**6.26**
Equity Dividend Rate	10.29%						
Maximum							
Spread Over 10-Year Treasury	11.82%	**DCR Technique**		2.15	0.177249	0.50	**19.07**
Debt Coverage Ratio	2.15	**Band of Investment Technique**					
Interest Rate	16.12%	Mortgage		50%	0.177249	0.088625	
Amortization	15	Equity		50%	0.199260	0.099630	
Mortgage Constant	0.177249	OAR					**18.83**
Loan-to-Value Ratio	50%	**Surveyed Rates**					**17.70**
Equity Dividend Rate	19.93%						
Average							
Spread Over 10-Year Treasury	5.44%	**DCR Technique**		1.55	0.110286	0.66	**11.28**
Debt Coverage Ratio	1.55	**Band of Investment Technique**					
Interest Rate	9.74%	Mortgage		66%	0.110286	0.072659	
Amortization	22	Equity		34%	0.155885	0.053184	
Mortgage Constant	0.110286	OAR					**12.58**
Loan-to-Value Ratio	65.9%	**Surveyed Rates**					**12.76**
Equity Dividend Rate	15.6%						

*1st Quarter 2025 Data

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RealtyRates.com INVESTOR SURVEY - 2nd Quarter 2025*							
RESTAURANTS - FULL SERVICE							
Item	**Input**						**OAR**
Minimum							
Spread Over 10-Year Treasury	1.75%	**DCR Technique**		1.35	0.086332	0.65	**7.58**
Debt Coverage Ratio	1.35	**Band of Investment Technique**					
Interest Rate	6.05%	Mortgage		65%	0.086332	0.056116	
Amortization	20	Equity		35%	0.104870	0.036705	
Mortgage Constant	0.086332	OAR					**9.28**
Loan-to-Value Ratio	65%	**Surveyed Rates**					**8.91**
Equity Dividend Rate	10.49%						
Maximum							
Spread Over 10-Year Treasury	11.82%	**DCR Technique**		2.15	0.177249	0.50	**19.07**
Debt Coverage Ratio	2.15	**Band of Investment Technique**					
Interest Rate	16.12%	Mortgage		50%	0.177249	0.088625	
Amortization	15	Equity		50%	0.199260	0.099630	
Mortgage Constant	0.177249	OAR					**18.83**
Loan-to-Value Ratio	50%	**Surveyed Rates**					**17.70**
Equity Dividend Rate	19.93%						
Average							
Spread Over 10-Year Treasury	6.79%	**DCR Technique**		1.75	0.129658	0.58	**13.05**
Debt Coverage Ratio	1.75	**Band of Investment Technique**					
Interest Rate	11.09%	Mortgage		58%	0.129658	0.074553	
Amortization	18	Equity		43%	0.147346	0.062622	
Mortgage Constant	0.129658	OAR					**13.72**
Loan-to-Value Ratio	58%	**Surveyed Rates**					**14.33**
Equity Dividend Rate	14.73%						

*1st Quarter 2025 Data

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APPENDIX
QUALIFICATIONS

Barbara J. Cohen
Real Estate & Planning Consultant

PO Box 1285 • New York, New York 10156
917.562.4290 • bjcohen@att.net

PROFILE

With almost 30 years of professional experience in real estate development, Business Improvement Districts (BID), community planning and small business assistance, Barbara J. Cohen Real Estate & Planning Consultant has provided professional services to a range of both private and public sector clients. The hands-on approach and long–standing reputation ensures the highest quality of technical expertise and professional judgment.

EXPERIENCE

FINANCIAL FEASIBILITY STUDIES
NYC BOARD OF STANDARDS & APPEALS

As Senior Associate at Robert B. Pauls LLC, economic analysis reports were prepared for numerous variance applications to the BSA and testimony was provided to support the application request.

Transition and continuity from Robert Pauls to Barbara J. Cohen is complete and past and current projects have been brought to fruition and new ones are underway.

BUSINESS IMPROVEMENT DISTRICT (BID)
PLANNING & DEVELOPMENT

On behalf of neighborhood organizations and stakeholders seeking BID formation, expansion, or start-up of governance and operations, Barbara J. Cohen has a proven track record demonstrated by the formation of the Pitkin Avenue BID (1993), Glen Cove BID (1996), Belmont Avenue BID (2008), SoHo Broadway BID (2013); Hudson Yards | Hell's Kitchen Alliance (2013); Greater JFK BID (2016)

ADVISORY BID SERVICES: • Pitkin Avenue BID (Executive Director) • Lower East Side BID (Proposed Expansion) • HUB-Third Avenue BID (Amended District Plan) • Alliance For Downtown New York (Developed/Implemented Storefront Improvement Program) • Village Alliance BID (Property Database, Market Demographics, Shopper Survey) • Garment District Alliance (Economic Profile; Storefront Improvement Program); Alliance for Coney Island (BID Formation)

COMMUNITY PLANNING

Provide urban planning expertise to a variety of organizations to implement their strategies and goals.

CLIENTS INCLUDE: Sutton Area Community-Manhattan • Bay Ridge Development Corporation – Brooklyn • Church-Schenectady Merchants Assn., Brooklyn • Phipps Houses, New York City • Journal of American Planning Assn. • Center for Building Conservation, New York City • NYC Landmarks Preservation Commission • F. L. Olmsted National Historic Site, Brookline, MA.

SMALL BUSINESS ASSISTANCE

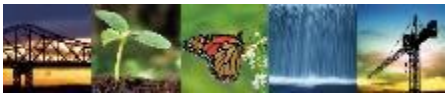
Con Edison – Brooklyn: Developed, implemented, and tabulated a survey of small business owners in over 30 retail districts throughout Brooklyn in an effort to improve and expand customer outreach activities.

Coalition for Electrical Safety – NYC: On behalf of a consortium of electrical trade groups and industry-related safety organizations, prepared a white paper, "NYC's Proposed Self Certification of Electrical Contractors: A Threat to Public Safety" to comment on a public policy proposal.

Small Business Clients: Guidance to individual firms in overall business organization and finance, specializing in the full range of bookkeeping tasks utilizing Quickbooks accounting software. Clients include: AJW Ltd.; Balancing the Executive Life; MetroHort Group; APM Model Management; Stooz Records Inc.; Terry Design & Construction; Beat Street Productions.

EDUCATION

CUNY HUNTER COLLEGE • Master's Degree in Urban Planning (Public Service Fellow)
SUNY BUFFALO • B. A. in Architectural History with an emphasis in Historic Preservation



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www.gza.com

January 30, 2025
GZA Project No.: 41.0163381.00

Mr. Novac Noury
51 Little West 12th Street
New York, New York 10014

Re: Geotechnical Engineering Report
51 Little West 12th Street
New York, New York 10014



Dear Mr. Noury,

GZA GeoEnvironmental of New York (GZA) is pleased to submit this geotechnical engineering report for the proposed development at 51 Little West 12th Street in New York, New York (Site).

SCOPE OF SERVICES

Our services were performed in accordance with our proposal number 41.P000374.25R1, and are subject to the terms of our agreement and the limitations presented in **Appendix A**.

Our scope of services consisted of performing a subsurface exploration program, geotechnical engineering analyses of the subsurface conditions encountered at the site, and preparation of this engineering report summarizing our observations and geotechnical recommendations.

Elevations in this report are in feet and are referenced to the North American Vertical Datum of 1988 (NAVD 88), unless otherwise noted. This geotechnical report meets the general requirements in Section 1803 of 2022 New York City Building Code (NYCBC) for the proposed work referenced herein.

PROJECT BACKGROUND

Our understanding of the project is based on our email correspondences, subsurface exploration program described herein, and the following documents:

- Draft BSA Plans for the Site, prepared by Marin Architects, dated October 10, 2024;
- "As-of-Right" Architectural Drawings, prepared by Marin Architects, dated October 10, 2024; and
- Property Survey prepared by Kaba Land Surveying P.C., surveyed on May 24, 2024.

The Site is located at 51 Little West 12th Street in New York, New York, identified on tax maps as Block 645, Lot 21, New York City Department of Buildings (NYCDOB) BIN# 1091846, and is a vacant lot with a footprint area of approximately 2,581 square feet (sf). The property is bounded by a nineteen-story building to the north (North portion of 848 Washington Street) and a one-story building to the east (East portion of 848 Washington Street), a three-story building with a cellar to the west (53 Little West 12th Street), and Little West 12th Street sidewalk to the south.

At the time of this report preparation, a topographic site survey was not available. We have assumed that the existing ground surface elevation at the site is approximately El. +8, based on available topographic maps. A Site Location Map is included as **Figure 1**.

Proposed Construction

Based on the Draft BSA Plans, the proposed development may consist of the construction of a 10-story residential building with a full lot cellar level. This design scheme will be referred to as Option 1. The "As-of-Right" drawings depict the proposed development as a six-story commercial building with a full lot cellar level, retail space on a portion of the ground floor, and mechanical spaces and offices on the upper floors. This design scheme will be referred to as Option 2.

The proposed cellar in both options will have a finished floor elevation of approximately El. -1.0 (about 9 feet below the existing curb elevation), and a footprint area of approximately 2,520 sf. Both options also feature an elevator that extends to the cellar level which typically have pits that extend 5 feet below the cellar slab. We have assumed the foundation system could be up to 3 feet thick resulting an excavation depth of approximately 12 feet below existing curb with localized excavation of up to 17 feet at the elevator pit.

HISTORICAL SUBSURFACE INFORMATION

To check for former marshes or streams in the Site vicinity, we referred to the Sanitary & Topographic Map of the City and Island of New York prepared by Egbert L. Viele. A portion of that map is included here, showing that the project site lies within an area of reclaimed land from the Hudson River. With historic development, the Hudson River marsh and shoreline were extended west by backfilling and raising grades to develop the street grid.



SUBSURFACE EXPLORATION PROGRAM

We conducted a subsurface exploration to evaluate the subsurface materials underlying the project site in accordance with requirements of Section 1803 of the 2022 NYCBC, which consisted of two test borings, five test pits, and geotechnical laboratory testing of selected soil samples. **Figure 2** shows the approximate boring and test pit locations. The boring logs, log key, well log, and rock core log are included in **Appendix B**. Test pit sketches and photographic logs are included in **Appendix C**. Geotechnical laboratory test results are included in **Appendix D**.

You/Client retained PG Environmental Services, Inc. (PGES) of Hauppauge, New York to advance the test borings and test pits at the site between December 26 and 31, 2024. PGES performed the work under the observation of our field representative as described below.

Test Borings

PGES advanced two test borings (identified as B-01[OW] and B-02) using a Geoprobe with mud-rotary drilling techniques and steel casing. The borings were advanced from the existing grade to depths ranging from approximately 99.3 to 100.1 feet. Soil samples were visually classified in the field by our field representative in accordance with the Modified Burmister Soil Classification System. Standard Penetration Tests (SPT) were performed at two-foot intervals during drilling within the top 22 feet and generally at five-foot intervals thereafter in general accordance with ASTM D-1586. A 140-pound automatic hammer was used to drive the split spoon sampler through a distance of 24 inches for each SPT sample. The number of blows required to drive the split spoon sampler from 6 to 18 inches is the SPT N-value, a commonly used indicator of soil density and consistency. The SPT N-values and hammer blows at various depths are recorded on the boring log as well as the Modified Burmister description and the NYCBC Class of Materials for each stratum.

Rock coring was performed in boring B-01(OW) using an NX-size double tube core barrel with a diamond bit. Recovered rock cores were described using a modified International Society for Rock Mechanics (ISRM) system. The rock description, core sample recovery, and the Rock Quality Designation (RQD) for each core run are recorded on the boring logs. Rock recovery is the length of the core recovered divided by the length of the core expressed as a percentage. RQD is defined as the sum of the length of recovered intact rock greater than four inches in length between natural breaks, expressed as a percentage of the total core run. RQD is an indication of the relative frequency of jointing or natural fracturing of the bedrock.

A 1.5-inch PVC temporary groundwater observation well was installed in test boring B-01(OW) to a depth of about 30 feet below ground surface (bgs). The screen interval was at a depth between 20 and 30 feet bgs corresponding to between approximately El. -12 and El. -22. Boring B-02 was backfilled with soil cuttings upon completion of drilling.

Test Pits

GZA observed test pits TP-01 through TP-05 which were excavated by PGES along the perimeter of the property line to expose existing adjacent foundations. GZA's field representative documented the test pits and prepared sketches of the exposed conditions. Dimensions were obtained using a tape measure. Upon completion of documentation, the test pits were backfilled with excavated material.

Soil Laboratory Testing Program

Selected soil samples were sent to Thielsch Engineering of Cranston, Rhode Island for laboratory testing to check our soil descriptions and provide data used in the development of our recommendations. Soil testing included Sieve Analysis (ASTM D-6913), Hydrometer Testing (ASTM D-7928), and Water Content Testing (ASTM D-2216). Laboratory test results are included in **Appendix D**.

SUBSURFACE CONDITIONS

Generalized Subsurface Stratigraphy

Based on the results of GZA's exploration program, the subsurface conditions at the site generally consist of the following, in order of increasing depth from existing grade.

Fill (NYCBC Class 7) – Fill was encountered at the ground surface in all borings and test pits. The Fill extends to depths ranging between approximately 18 and 20 feet bgs and consists of various shades of brown fine to coarse sand or gravel containing up to 50 percent sand, 35 percent silt or silt and clay, and up to 10 percent construction debris such as concrete and brick fragments. Former building foundations, including legacy timber piles or foundation debris is likely located within this Fill layer. Within boring B-02, gravel became wedged within the tip of the split spoon for the sample taken between 14 feet and 16 feet bgs. SPT N-values for tests performed in the Fill ranged from 7 blows per foot (bpf) to split spoon refusal, indicating a variable soil density.

Upper Sand (NYCBC Class 6) – An Upper Sand stratum consisting of primarily red-brown fine to coarse sand with up to 35 percent silt or silt and clay, and varying amounts of gravel and seashells was encountered in both test borings. The Upper Sand stratum extends

to a depth of about 26 feet in test boring B-01(OW) and 33.5 feet in B-02. SPT N-values for tests performed in the Upper Sand stratum ranged from 7 bpf and 28 bpf, averaging 14 bpf. This stratum was generally looser than the Lower Sand stratum encountered deeper in the borings, as described below.

Clayey Silt (NYCBC 5a/5b) – A Clayey Silt stratum (discontinuous) was encountered below the Upper Sand in boring B-01(OW) and was approximately 5 feet thick, extending from approximately El. -18 to El. -23. This stratum generally consisted of gray Clayey Silt containing up to 35 percent sand, and up to 10 percent seashells. The measured SPT N-value of 12 bpf indicates a stiff soil condition. Based on our experience in the vicinity of the Site, this stratum can be discontinuous and can vary in thickness and may be encountered within various sections of the site.

Lower Sand (NYCBC 3a/3b) – A Lower Sand stratum was encountered below the Clayey Silt in boring B-01(OW) and below the Upper Sand in B-02. This stratum was approximately 59 feet to 61.5 feet thick. The Lower Sand generally consisted of red-brown fine to coarse sand up to 50 percent silt or clayey silt, 10 percent gravel, and varying amounts of mica. Lab results indicated that sample S-16 within B-01(OW) (sampled between 50 to 52 feet bgs) consisted of clayey silt with up to 50 percent fine to medium sand. Measured SPT N-values generally varied from 11 bpf to 42 bpf, with an average of 23 bpf, indicating a medium dense condition throughout the soil material.

Decomposed Rock (Class 1d) – A Decomposed Rock stratum was encountered below the Lower Sand stratum in both borings. The Decomposed Rock stratum was encountered at a depth of about 90 feet bgs within B-01(OW), and 95 feet bgs within B-02. Split spoon samples taken within this stratum encountered refusal, indicating a very dense condition.

Bedrock (NYCBC Class 1b/1d) – Bedrock was encountered below the Decomposed Rock in B-01(OW) at a depth of about 94.7 feet, corresponding to a top of rock elevation of approximately El. -86.7 at this boring location. The Bedrock consisted of moderately hard and moderate to moderately severe weathered Manhattan Schist and was observed to have very close to close horizontal to sub-horizontal fractures. Recovery and RQD in the rock cores recovered at B-01(OW) were 0 percent and 83 percent.

Test Pit Observations

A brief description of our observations of test pits TP-01 to TP-05 is summarized below.

Test Pit TP-01: Test Pit TP-01 was excavated along the western property line (adjacent to the three-story portion of 53 Little West 12th Street) to a depth of approximately 10 feet bgs. The foundation wall of 53 Little West 12th Street is parged with an approximately 1/2 -inch-thick layer of concrete and transitioned to a mortared stone rubble. The foundation wall extended to approximately 9.2 feet bgs and is supported on a 6-inch-thick poured concrete footing which protruded 8-inches east of the wall face. A steel bar was used to probe up to 2 feet west of the wall face and did not encounter resistance. The excavated soil within the test pit consisted of brown, fine to coarse sand with some silt, little gravel, and miscellaneous concrete and brick fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-02: Test Pit TP-02 was excavated along the eastern property line (adjacent to 848 Washington Street) to a depth of approximately 10.1 feet bgs. The western concrete wall of 848 Washington Street protrudes approximately 8 inches west of the wall face about 13 inches bgs for a distance of 25 inches. An approximately 6-inch-thick poured concrete slab was observed below the protrusion, followed by an 8-inch-thick layer of gray sand. A 2-foot-thick section of brick was below the gray sand (likely a remnant perimeter wall). The brick was supported by 14 inches of stone which protrudes an additional 10- to 20- inches west. Following the stone layer, a 47-inch-thick stone rubble wall was observed to be supported by a 6-inch-thick concrete footing. This footing protrudes about 8-inches west of the wall face. A 3-foot probe below the footing did not encounter resistance. The excavated soil within the test pit consisted of brown, fine to coarse sand with some silt, little silt, and miscellaneous brick and concrete fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-03: Test Pit TP-03 was excavated along the western property line (adjacent to the two-story portion of 53 Little West 12th Street, and about 40 feet north of TP-01) to a depth of approximately 6 feet bgs. The eastern foundation wall of 53 Little West 12th Street is parged with an approximately 1/2 -inch-thick layer of concrete and protrudes approximately 6 inches east at the ground

surface. The wall extends about 2 feet below the ground surface and is supported by a 4-inch-thick poured concrete slab that protrudes another 10 inches east. The slab was underlain by about 8 inches of Fill material and followed by another 4-inch-thick poured concrete slab. A steel bar was used to probe up to 2 feet west of the wall face at a depth of about 5 feet bgs and did not encounter resistance. The excavated soil within the test pit consisted of various shades of brown or black, fine to coarse sand with varying amount of silt and gravel, and miscellaneous cinders and brick fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-04: Test Pit TP-04 was excavated along the eastern property line (adjacent to 848 Washington Street) to a depth of about 11.3 feet bgs. The western concrete wall of 848 Washington Street is supported by a brick wall at a depth of approximately 18 inches bgs. The brick wall protrudes approximately 8- to 10- inches west of the wall face over a distance of 28 inches. This brick wall extends to a depth of about 11 feet bgs. and is supported by a 4-inch-thick concrete footing that protrudes an additional 13-inches west of the brick wall face. The excavated soil within the test pit consisted of various shades of brown, fine to coarse sand with varying amount of silt and gravel, and miscellaneous cinders, brick, and porcelain fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-05: TP-05 was excavated at the northern portion of the site immediately south of a 4-inch-thick concrete slab. The test pit extended to a depth of approximately 4.5 feet bgs. The north side of the test pit exposed an approximately 26-inch-thick brick wall bearing on cementitious soil. To the west of the brick wall, a concrete mass was observed at a depth of about 26-inches below the top of slab, below the cementitious soil. The vertical and western extents of the brick wall and concrete mass were not observed in the excavation due to time constraints. The excavated soil within the test pit consisted of orange, fine to coarse sand with some gravel, little silt, and some miscellaneous brick and root fragments (Fill). Groundwater was not encountered within the test pit excavation.

Groundwater

A groundwater observation well was installed in Boring B-01(OW) to a depth of approximately 30 feet below existing grade. The average measured depth to groundwater within the observation well during the time of our exploration was about 11.4 feet below existing grade, corresponding to about El. -3.4. Groundwater observations were made within the observation well over three days. Groundwater well construction details and water depth readings are provided on the well log in **Appendix B**. Groundwater was not observed within the test pit excavation given the excavations were only open for a short period of time. Local pumping from adjacent buildings may be impacting the groundwater elevations, as we would expect that the groundwater would typically be at EL. 0 in this area.

Groundwater depths are expected to vary seasonally throughout the year depending on many factors, including precipitation and surface water infiltration, local pumping, utility leakage, and other factors different from those existing at the time the observations were made. Groundwater levels at the time of construction may differ from those presented herein.

Flood Elevation

Based on the Preliminary Flood Insurance Rate Map (FIRM) number 3604970182G, dated December 5, 2013 (after Post-Tropical Cyclone Sandy), the site appears to be within Area AE with a Base Flood Elevation of El. +11. Therefore, pursuant to NYCBC the design flood elevation must be considered in design.

GEOTECHNICAL ENGINEERING RECOMMENDATIONS

Our recommendations are based on our review of the documents noted above, and the subsurface conditions encountered during the exploration. Recommendations may require revisions if the scope of the proposed construction differs from that described herein, or if additional relevant information becomes available.

Key Geotechnical Issues

We have identified the following key geotechnical issues that should be considered by the Client, designers, and Contractor:

- The Fill stratum present below the existing ground surface is unsuitable for support of the proposed structure on shallow foundations and will require deep foundations.
- The Fill stratum contains construction debris, including, legacy timber piles, foundation debris, brick, porcelain, concrete, and cinders, and may lead to difficulty during deep foundation and/or excavation support installation.
- Groundwater was encountered at shallow depths and a dewatering program will likely be needed for foundation, cellar, and elevator pit construction. The dewatering will likely cause some level of settlement and manifest in cracking of masonry of the adjacent buildings founded on shallow foundations.
- The site lies within Flood Zone AE shown on the preliminary FIRM maps and must consider a design water elevation of El. +11.
- Depending on the final geometry and construction configuration, underpinning of the eastern foundation wall of 53 Little West 12th Street and western foundation wall of 848 Washington Street may be necessary for proposed below-grade construction. Underpinning of adjacent buildings will require coordination (legal access agreements) with adjacent property owners and may also require jet grouting due to the excavation below the groundwater table. Additionally, underpinning, support of excavation installation, and the required excavation that will cause some impacts (settlement, cracking) to the abutting buildings.

Geotechnical Design Parameters

Based on the results of our exploration, the following soil design parameters provided in **Table 1** below can be used in design of foundations and construction works such as excavation shoring, if required.

Table 1 – Recommended Soil Design Parameters

Stratum	Total Unit Weight (pcf)	Effective Unit Weight [1] (pcf)	Angle of Internal Friction (deg)	Cohesion (psf)	Coefficient of Friction (soil/concrete)	Earth Pressure Coefficients [4]		
						K_a	K_p	K_o
Compacted Granular Fill	125	62.6	32	-	0.45	0.31	3.3	0.47
Fill (7)	120	57.6	30	-	0.3	0.33	3.0	0.5
Upper Sand (6)	120	57.6	32	-	0.45	0.31	3.3	0.47
Lower Sand (3a/3b)	125	62.6	30	-	0.34	0.33	3.0	0.5
Clayey Silt (5b)	110	47.6	-	1,500	-	-	-	-
Decomposed Rock (1d)	135	72.6	38	-	0.6	0.24	4.2	0.38

Table 1 Notes:

[1] Effective unit weights should be used below the groundwater table in permanent design.

[2] Active and passive earth pressures may be computed using Rankine or Coulomb earth pressure theory.

[3] Surcharge and seismic loading should be included in accordance with the NYCBC.

[4] Refer to the Lateral Earth Pressure section below for additional information.

Foundation Recommendations

Based on the subsurface conditions observed in the test pits and test borings, we recommend that the proposed structure for both design options be supported on a deep foundation system consisting of micropiles bearing in the Lower Sand (NYCBC 3b or better) stratum. Micropiles will support both axial compression and buoyancy forces and can be utilized to transfer the proposed building loads to the Sand.

It is our understanding that both design options include construction of a cellar level with a finished floor elevation of approximately El. -1 (9 feet below existing sidewalk elevation). Deeper excavations of up to 17 feet below the sidewalk, and approximately 5.6 feet below measured groundwater will be required for the elevator pit and pile caps. Underpinning of adjacent building foundations to the bottom of excavation may be complicated by groundwater. To facilitate excavations within dry conditions, jet grout underpinning could be utilized. However, due to the cost, adjacent property legal agreements, extensive dewatering that would be required for excavation, and the impacts to adjacent building foundation from settlement, we recommend against using underpinning.

Our recommended, but still with risk of settlement of the surrounding buildings based on the Contractor's related means and methods, is to utilize tangent micropiles bearing in the Lower Sand stratum. The tangent micropiles can act both as a support of excavation (SOE) system and as foundation elements for the new cellar foundation walls. Installed from the existing site grade, the tangent micropiles would resist a portion of both lateral earth and groundwater pressure, as well as permanent vertical and uplift loads. A liner wall system (designed by others) would be needed inboard of the tangent micropiles to resist permanent groundwater and seismic loads and to allow for the installation of insulation, drainage, and waterproofing between the liner wall and inside of the tangent micropiles. The use of a tangent micropile system will require that these walls be installed inboard of the property line by up to 3 feet, reducing the new cellar footprint. This tangent micropile system can also be used with a soil grouting program to reduce possible settlement of adjacent structures and the groundwater volume that would need to be dewatered and discharged to the sewer system during construction.

Tangent Micropiles

Tangent micropiles are constructed by rotating a steel casing into the ground until it reaches the design tip elevation in a suitable bearing stratum. Soil is removed within the casing with a low-pressure internal water flush and/or using an auger within the casing, followed by injecting a cement grout through a tremie tube to the bottom of the excavation. Tangent micropiles would be installed from the existing ground surface, spaced adjacent to each other without overlapping, forming a relatively continuous wall with minor gaps between each pile.

Tangent micropiles along the perimeter of the property will function as the temporary support of excavation (SOE) and will carry some of the permanent lateral loads. The allowable axial capacities of the tangent micropiles can be determined during the design phase in coordination with structural engineer once foundation loads and proposed cellar geometry is determined. Axial compression and uplift capacity can be achieved at select tangent piles by drilling an additional grouted bond zone below the steel cased section of the pile with a center bar to allow for load transfer, similar to micropiles discussed later in this report. Sacrificial tangent micropiles will need to be installed and tested to check the various loading conditions per NYCDOB requirements. This tangent micropile system would be designed as part of the Support of Excavation process.

Micropiles

Micropiles (similar to tangent micropiles) are drilled grouted piles that transfer structural loads into a suitable bearing stratum. A bond zone is constructed in the bearing stratum where the grout is in contact with the surrounding soil. Above the bond zone, the grout is contained in a permanent steel casing. A full length, high-strength steel bar is placed in the center of each micropile. The grout-soil bond is enhanced through pressurization of the fluid grout immediately upon placement or through post-grouting, where additional grout is pumped into the micropile after the initial grout is set to compact the surrounding soil.

We recommend 10.75-inch diameter micropiles with a casing thickness of 0.545 inches designed for allowable axial loads of 100 kips (50 tons) and 200 kips (100 tons) for supporting the proposed structure. The micropiles should be permanently cased to a depth of 20 feet below the final excavation elevation. The micropiles should be constructed with Grade 75, threaded steel bar over its full length and minimum 4,000 psi cement grout. Centralizers spaced every 10 feet and placed within the top 5 feet of the pile should be attached to the steel bar. Each micropile shall be pressure-grouted through the casing during casing removal. The minimum bond zone is summarized in **Table 2**.

The allowable uplift capacity of the micropiles will vary depending on the length of the pile and structural capacity. The estimated allowable uplift capacities are summarized in **Table 2**.

Table 2: Micropile Summary Table

Micropile Dimensions (in.)	Allowable Compression Capacity (tons)	Allowable Uplift Capacity (tons)	Minimum Pile Length (ft)	Minimum Cased Section Length (ft)	Uncased Section/ Bond Length (ft.)	Center Bar Size	Grout Strength (psi)
10.75 x 0.545	50	30	50	20	30	#11	4000
	100	65	65	20	45	#18	

The estimated allowable axial compression capacity is based on an ultimate axial capacity with a factor of safety of 2.0, assuming that micropiles will have a center-to-center spacing of at least three pile diameters. If micropiles are spaced more closely, additional evaluation of axial capacity is required. Allowable axial compression capacity is to be checked by load tests.

The allowable axial uplift capacity values consider a factor of safety of 3.0, which will not require uplift load testing. A lower factor of safety may be used to estimate the allowable uplift capacity; however, the design uplift capacity would need to be checked through uplift load testing.

The uplift capacity of a pile group is dependent on the number of piles in the group, the length of piles, the configuration of the piles, cap thickness/dimensions, and soil conditions.

Micropile Lateral Capacity

We used the LPile (v.2022) computer program to evaluate the lateral loading conditions for the 10.75-inch diameter micropiles. In our analyses, we considered both "fixed-head" and "free head" conditions and included a ¼-inch reduction in the micropile casing wall thickness to account for corrosion. Our analysis considers that the pile is subject to the static axial load of 100 kips (50 tons) or 200 kips (100 tons), and that the piles will have center-to-center spacing of at least eight pile diameters. We assigned strength properties based on the soil properties presented in **Table 1** of this report.

The maximum allowable lateral load of a pile per the NYCBC is 1 ton (2 kips), unless verified in the field by a lateral load test. Per the requirements of the NYCBC, the maximum pile deflection under "fixed-head" conditions is about 3/8 inch. In a "free-head" condition, the maximum allowable lateral load is one-half of the nominal load that deflects the pile 1 inch. The results of the lateral analyses are presented below.

Table 3: Lateral Loading Summary for 10.75-inch Diameter Micropile

Allowable Capacity (tons)	Loading Condition	Deflection (in.)	Maximum Shear Load (kips)	Maximum Moment (ft-kips) (fixed head)
50	Fixed-Head	0.375	14.2	56.2
	Free-Head	1.0	5.1	-
100	Fixed-Head	0.375	13.5	52.9
	Free-Head	1.0	4.6	-

We recommend checking the lateral pile capacity in the field by performing load test(s) (if lateral loads exceed 2 kips) in accordance with ASTM D3966 and the NYCBC. Additional recommendations for pile load testing are provided in the Construction Considerations section of this report.

Micropile and Tangent Pile Settlement

Immediate elastic settlement of the micropiles/tangent piles should be anticipated as loads are added and will depend on the magnitude of loads. The settlement can be estimated during the design phase in coordination with the structural engineer but is

expected to be approximately 1/2-inch. The structural engineer should consider the effect of the differential settlement between micropile/tangent pile supported foundations and other foundation elements including site utility connections.

Pile Foundation Alternatives

Alternative drilled foundations, such as auger cast piles or drilled displacement piles may be feasible provided the required capacities can be achieved but must consider the limitations of the installation method, impacts to adjustment structures and the subsurface conditions. A submittal package for any alternative pile foundation, including calculations, shop drawings, and installation procedures would need to be submitted by the Contractor to you, GZA, and the structural engineer for any proposed alternate pile foundation for review and acceptance. Driven piles within 50 feet of the adjacent buildings would produce vibrations that may lead to densification of the underlying sands and settlement of adjacent structures and should not be considered.

Floor Slabs

Floor slabs should be designed and constructed as a monolithic structural floor slab in accordance with the NYCBC. We recommend the cellar slab span between pile caps and be capable of resisting applied uplift from water pressure using the building weight. We recommend a 4-inch-thick mud mat consisting of lean concrete to provide a flat surface for membrane waterproofing below the floor slab. The structural slab may be constructed above the mud mat to resist hydrostatic pressures. We recommend a gravel layer placed above the structural slab to suspend utilities and facilitate dry utility construction. Above the gravel layer and utilities, we recommend a surface wearing slab with the top of the slab equal to the proposed finished floor elevation. The top of the structural slab should be pitched to drain to local sumps to address any leaks in the slab that may become evident over time. Discharges must comply with local, state, and federal regulations.

GZA should be informed if non-typical loading is to be placed on the cellar slab. Non-typical loading includes, but is not limited to, heavy point loads and vibratory loads.

Foundation Depth

In accordance with NYCBC, all new interior shallow foundations must bear a minimum of 12 inches below the surrounding surface. For frost protection, new exterior foundations must be a minimum of 4 feet below the surrounding exterior ground surface. Grade beams may be a minimum of 18 inches below the surrounding exterior ground surface.

Lateral Earth Pressures (Below-Grade Walls)

Permanent below grade walls should be designed to resist long term at-rest earth pressures using the soil parameters in **Table 1**. A uniform horizontal pressure equal to one-half to one-quarter of the anticipated vertical surcharge load should be used for design of permanent and temporary walls where surcharges are anticipated due to vehicular traffic, construction equipment, adjacent footings, etc. The foundation walls must also be designed to resist hydrostatic forces and seismic loading (where applicable). GZA's recommended lateral earth pressures resulting from soil, hydrostatic forces, surcharges, and seismic loadings are presented in **Figure 3 and in Table 4**.

Groundwater Design

Groundwater depth readings were collected from the groundwater observation well in B-01(OW). Stabilized groundwater measurements in the well were at a depth of approximately 11.4 feet, corresponding to an elevation of about El. -3.4. As noted above this groundwater elevation is likely influenced by local pumping and may be closed to El. 0.0 at the time of construction.

Design of the proposed structure should use a design water elevation of El. +11 feet, considering the site location in FEMA flood zone AE.

Waterproofing

We recommend all below-grade foundation walls, including any underpinning or tangent micropile system, and cellar floor slabs be fully waterproofed to reduce the potential for water infiltration caused by groundwater, potential utility breaks (i.e., water main, sewer main, etc.), and extreme storm events. All waterproofing should be designed in accordance with Section 1805 of the NYCBC.

The Contractor installing the waterproofing shall be approved by the waterproofing manufacturer to ensure the waterproofing system has been installed properly. The waterproofing manufacturer should perform laboratory testing to confirm the compatibility of the waterproofing material with the foundation soils and submit a certificate of compliance to the Owner. Waterproofing will need to be carefully planned and installed in sections and in conjunction with all foundation operations to allow for full integrity of the installed waterproofing.

Even with good construction and practices, submerged waterproofed cellars may eventually develop leaks in some cases due to slab cracking or gaps in the membrane. The below grade walls and foundation slab (as noted above) should be designed to address this leakage.

Seismic Design Parameters

Based on the results of our exploration, available information, and in accordance with the NYCBC, the calculated average measured SPT N-values of the top 100 feet of soils fall into the range of Seismic Site Class D which is used for calculation of seismic loading and the corresponding response spectrum as described in Section 1613 of the NYCBC. The recommended seismic design parameters are summarized in **Table 4** below.

Table 4 - Recommended Seismic Design Parameters

Parameter	Value
Mapped Spectral Acceleration Parameter at 0.2-Second Period (S_S)	0.296 g
Mapped Spectral Acceleration Parameter at 1-Second Period (S_1)	0.061 g
Site Coefficient as a function of site class and mapped spectral response acceleration at short periods (F_a)	1.57
Site Coefficient as a function of site class and mapped spectral response acceleration at 1-second period (F_v)	2.40
Maximum Spectral Response Acceleration for short periods (S_{MS})	0.465 g
Maximum Spectral Response Acceleration for 1-second period (S_{M1})	0.146 g
Design Spectral Response Acceleration Parameter at Short Periods (S_{DS})	0.310 g
Design Spectral Response Acceleration Parameter at 1-Second Period (S_{D1})	0.098 g
Adjusted Peak Ground Acceleration (PGA_M)	0.26 g

We plotted SPT N-values normalized to an energy efficiency of 60 percent versus depth to assess whether evaluation of liquefaction was required, pursuant to Section 1816 of the NYCBC. The range of corrected N-values plotted on the screening diagram revealed that an evaluation was required, and therefore, a simplified site-specific analysis was performed.

We performed the analysis using the Boulanger & Idriss 2014 method, considering the corrected SPT N-values, overburden stress, fines content, peak ground acceleration equal to 0.26g, and an estimated earthquake magnitude of 5.75. The results of the simplified liquefaction analysis indicate that only five SPT samples exhibit liquefaction potential, with many of these samples being between soil samples that do not have potential to liquefy. On the basis of the simplified liquefaction analysis, liquefaction is not likely and does not need to be considered for design.

CONSTRUCTION CONSIDERATIONS

Demolition

Based on the results of the subsurface exploration program and the proposed construction, we anticipate that existing utilities, remanent foundations or Fill will be removed from the site prior to beginning construction. Any utilities designated to remain, such as gas, water, electric and sewer connections should be protected during demolition, excavation, and construction activities.

Temporary Support of Excavation (SOE) and Underpinning

Excavations of up to approximately 17 feet below the sidewalk, and 5.6 feet below measured groundwater will be required for the elevator pit and pile caps. Open-cut excavation is not permissible due to geometry constraints from the adjacent streets, abutting properties, and utilities. Therefore, excavation support around the perimeter of the excavation will be necessary.

A more robust and technically prudent method to construct the cellar level would utilize a tangent micropile system to provide lateral support along the perimeter of the project site. Tangent micropile walls will result in some lost cellar space (up to 3-feet on each side). Pre-treatment of the soil under the adjacent foundations and within the footprint of the excavation by means of permeation grouting or similar method prior to the installation of the tangent micropiles and later between the individual tangent micropiles may be required. Groundwater control will be required, and the Contractor should be prepared to implement a dewatering system to maintain groundwater level 1- to 2- feet below the general excavation depth. Internal bracing will be required for excavation support.

Settlement of the adjacent building walls should also be expected during any SOE installation, and/or during excavation due to the proximity of the supported excavation face, which will deflect outwards as excavation proceeds. The Contractor's means and methods will have a significant influence on the magnitude of the settlement. We anticipate settlement of about 1- to 2-inches may occur on abutting building which are supported on shallow foundations with lesser amounts on building that are pile supported, and this effect on the adjacent buildings should be considered by the project team and addressed in any legal agreements.

The settlement estimates as result of SOE installation, ground disturbance, and/or during excavation should be combined with those anticipated during dewatering and discussed at length with the Client, design team and adjacent property owners. The design team should consider settlement associated with dewatering which should be calculated by the dewatering engineer based on the proposed dewatering schedule and SOE system implemented. We would also recommend that any access agreement with these adjacent property owners include documentation of these settlement estimates and address a way forward for repairs if these settlement manifest into building damages or operation issues.

Further clarification on the impacts of the chosen design options on the adjacent buildings should be discussed in the Adjacent Lots/Buildings for Suitable Method of Support Evaluation Report that is required by NYCBC.

Temporary Groundwater Control

Groundwater will need to be lowered 1- to 2- feet below excavation subgrade in advance of excavations below the groundwater table, as demonstrated by measurements of groundwater depth within installed groundwater monitoring well. We recommend that the maximum draw drawdown along the lot lines (SOE) should not exceed 2 feet below the bottom of excavation depth.

Based on the subsurface conditions at the site and required drawdown, a wellpoint system appears to be suitable for construction dewatering for the proposed excavations. Well point systems typically consist of a series of individual dewatering wells installed at regular intervals and connected to a common header pipe. Groundwater is pumped from the screened portion of the wellpoint by applying a vacuum to the system. A single stage wellpoint system is expected for the excavations. A deep well system is also a viable alternative for dewatering and will similarly require design by a qualified and experienced Professional Engineer licensed in the State of New York.

Depending on means and methods, dewatering could cause settlement of existing structures within the zone of influence. The Contractor should also be prepared to remove accumulated rainwater and runoff from local excavations during construction through the use of submersible pumps.

Site and Subgrade Preparation

The cellar slab is expected to be constructed as a monolithic structural slab deriving its support from adjacent pile caps and not the underlying soil. We recommend the final subgrade be free of standing water and proof-rolled to a stable and firm consistency with a minimum of four passes of a vibratory walk behind plate compactor to check integrity. Areas of unstable ground observed during proof-rolling should be over-excavated and backfilled with new compacted Granular Sand/Sand-Gravel Fill placed in accordance with the recommendations provided in **Table 6** of this report.

Approved subgrades should be protected from disturbance during excavation and reparation prior to placing foundation concrete. Conventional excavation equipment may be used to perform the initial excavation to within 6-inches of design subgrade elevations. Final excavation to design subgrade levels should be performed with an excavator equipped with a smooth (toothless) bucket or with "Grade-All" – type equipment.

Fill Material and Compaction

Backfill used to replace unsuitable materials shall consist of Granular Fill compacted to at least 95 percent of the maximum dry density measured by the Modified Proctor test (ASTM D1557). The gradation requirements for the Granular Fill material are presented in **Table 5**. The recommended maximum loose lift thickness and minimum number of passes for compaction equipment are given in **Table 6**.

Excavation

The Owner and the Contractor should make themselves aware of and become familiar with applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) Excavation and Trench Safety Standards. Construction site safety generally is the sole responsibility of the Contractor, who shall also be solely responsible for the means, methods, and sequencing of construction operations. We are providing this information solely as a service to our Client. Under no circumstances should the information provided herein be interpreted to mean that GZA is assuming responsibility for construction site safety or the Contractor's activities, such responsibility is not being implied and shall not be inferred.

The Contractor should be aware that slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulations, such as OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations. Such regulations are strictly enforced and, if they are not followed, the Owner, Contractor, and/or earthwork and utility subcontractors could be liable for substantial penalties.

Evaluation of Adjacent Lots/Buildings for Suitable Method of Support

Pursuant to Section 1817.3 of the NYCBC, an evaluation report assessing the conditions of the adjacent buildings and the subsurface conditions of the construction site and adjacent properties (buildings and yards/open areas) is required. The report shall also identify acceptable method(s) of support, including underpinning or alternate methods of support, for the building areas.

Monitoring of Adjacent Structures

Section 3309.4.3 of the NYCBC requires documentation of the condition of structures prior to beginning excavation or construction on an adjacent site and requires monitoring of adjacent structures during excavation and construction if the excavation depths exceed either five feet or if the excavation exceeds the depth of the adjacent building footings. A Professional Engineer registered in the State of New York must develop a monitoring plan to comply with the requirements of NYCBC Section 3309.16.

The pre-construction condition documentation of adjacent buildings is required prior to the start of excavation at the site. This includes photographing and measuring conditions and defects to provide a quantifiable baseline record prior to construction. Crack gages, vibration monitors and/or survey points should be installed at applicable locations, and baseline values should be obtained or one to two weeks before commencing construction. During construction, crack monitoring readings, vibration level measurements, and optical monitoring/deflections, groundwater depth should be measured throughout excavation and construction until at least the first floor of the superstructure has been completed. This must be performed on behalf of the Client and must be maintained separately from the work performed by the General Contractor.

Pile Installation

The means and methods for installation of the micropiles and tangent micropiles will be the sole responsibility of the Contractor. The installation will need to be carefully planned and executed so as not to cause damage to the adjacent building foundations, subsurface utilities, etc. Piles must be installed in a way that will not cause excessive vibrations or settlement of the existing buildings or structures adjacent to the site.

The Contractor should use methods that contain and circulate the drilling fluid entirely within the steel casing. Downhole hammers and compressed air should not be used.

Pile Load Testing

We recommend a load test program prior to the installation of the production piles to check anticipated tangent and micropile capacities. Two compressive load tests are required to evaluate the axial compressive capacity for each typical micropile and tangent micropile at the project site per the requirements of the NYCBC. Each test pile should be tested to the recommended ultimate axial capacity of two times the design load to evaluate the micropile response to simulated structural loads and to establish bond zone lengths for production piles. The axial static load test should be performed in accordance with ASTM D1143 and the applicable requirements of the NYCBC.

The NYCBC requires lateral load testing for any piles with lateral loads greater than 1 ton. If the lateral load for the micropile is greater than 1 ton, a minimum of two piles must be load tested per the requirements of the NYCBC. The load tests should be performed in accordance with ASTM D3966, Procedure B, with loading increments applied until a measured deflection of 1-inch is observed to evaluate micropile response to simulated structural loads. The lateral load tests should be conducted in accordance with the applicable requirements of the NYCBC. A test pile cannot be used as a production pile.

The allowable uplift capacity for the micropiles considers a factor of safety of 3.0. Therefore, uplift load tests are not required.

The installation Contractor must provide a detailed design for the axial load testing, including the load test location, construction details for the load test frame and hold-down piles, loading and monitoring procedures, and recommended evaluation procedures. An independent, calibrated load cell must be used to measure the load on the pile head; reliance solely on a calibrated jack to measure the load is not acceptable. The detailed design must be signed and sealed by a Professional Engineer registered in New York. GZA should review the design before construction.

Special Inspection Requirements

We recommend that GZA, who is knowledgeable in soils, foundations, and the requirements of the NYCBC be retained to observe subgrade preparation, SOE/Underpinning installation, pile installation and foundation construction. We anticipate that the following NYCBC Special Inspections will be required for work discussed in this report:

- Excavation – Sheeting, Shoring, and Bracing (NYCBC 1705.25.3)
- Underpinning (NYCBC 1705.25.4, NYCBC 1817) (if required)
- Subgrade Inspection (NYCBC 1705.6)

- Deep Foundation Elements (NYCBC 1705.7)

The required "Subsurface Investigations (Borings/Test Pits)" Special Inspection was completed as a part of the subsurface exploration program. Special Inspections must be performed by a Special Inspection Agency retained by the Owner.

Special inspection of pile installation and load testing must be provided by a qualified Professional Engineer in accordance with Section 1705.7 of the NYCBC. During installation of the production piles, the Special Inspector must record the minimum following data:

- Pile Identification
- Equipment used to install the piles
- Pile, bar, and grout material properties
- Installation Start and Finish Time for each pile
- Pile Installation Depth
- Cutoff Elevation and Tip Elevation (to be provided by surveyor)
- Bond length
- Grout Back-Pressure
- Theoretical and Actual Grout Volumes

CLOSING

We appreciate the opportunity to provide our services to you on this project. Should you have any questions, please contact us.

Very truly yours,
GZA GEOENVIRONMENTAL OF NEW YORK

Dharmil S. Patel, P.E.
Senior Project Manager

Douglas S. Roy P.E.
Vice President

Cassandra A. Wetzel, P.E.
Consultant Reviewer

Attachments: Table 5 – Recommended Use and Gradation Criteria for Fill Materials
Table 6 – Suggested Compaction Methods
Figure 1 – Site Location Plan
Figure 2 – Subsurface Exploration Location Plan
Figure 3 – Lateral Earth Pressure Diagram
Appendix A – Geotechnical Limitations
Appendix B – Log Key, Boring Logs, & Rock Core Photo Log
Appendix C – Test Pit Logs and Photo Log
Appendix D – Laboratory Testing Results

TABLES

Table 5: Recommended Use and Gradation Criteria for Fill Materials

USE OF FILL MATERIAL

Granular Fill:	Below footings and slab base course, and 3 feet laterally behind walls provided that amount passing Sieve No. 200 is less than 8 percent.
Sand-Gravel:	Slab base course and 3 feet laterally behind walls
Crushed Stone:	Drain line backfill and foundation protective layer. Crushed stone should be wrapped in non-woven filter fabric.

GRADATION REQUIREMENTS

Sieve Size	Percent Finer by Weight
Granular Fill	Shall be free from ice and snow, roots, sod, rubbish and other deleterious or organic matter. Granular Fill shall conform to the following gradation requirements:
2/3 of the loose lift thickness	100
No. 10	30 – 95
No. 40	10 – 70
No. 200	*0 – 15 *0 – 8 where used behind walls
Sand-Gravel	Shall consist of durable sand and gravel and shall be free from ice and snow, roots, sod, rubbish and other deleterious or organic matter. Sand-Gravel shall conform to the following gradation requirements:
3 inch	100
½ inch	50 – 85
No. 4	40 – 75
No. 40	10 – 35
No. 200	0 – 8
Crushed Stone	Shall consist of durable crushed rock or durable crushed gravel stone and shall be free from ice and snow, roots, sod, rubbish and other deleterious or organic matter or material. Crushed Stone shall conform to the following gradation requirements:
1 inch	100
¾ inch	90 – 100
½ inch	10 – 50
3/8 inch	0 – 20
No. 4	0 – 5
No. 200	0 – 1

Table 6: Compaction Methods

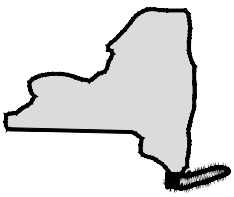
Compaction Method	Max. Stone Size*	Maximum Loose Lift Thickness		Minimum Number of Passes	
		Below Structures and Pavement	Less Critical Area	Below Structures and Pavement	Less Critical Area
GRANULAR FILL, SAND-GRAVEL FILL, CRUSHED STONE					
Hand-operated vibratory plate or light roller in confined areas	4”	6”	8”	4	4
Hand-operated vibratory drum rollers weighing at least 1,000# in confined areas	6”	10”	12”	4	4
Light vibratory drum roller Min. weight at drum 3000# Min dynamic force 10,000#	8”	12”	18”	4	4
Medium vibratory drum roller Min. weight at drum 10,000# Min dynamic force 20,000#	8”	18”	24”	6	6

* Indicates not to exceed more than 2/3 the lift thickness

FIGURES



NEW YORK



QUADRANGLE LOCATION

SOURCE:

USGS TOPOGRAPHIC MAPS: JERSEY CITY AND BROOKLYN, NJ AND NY (2023). CONTOUR INTERVAL 10FT., NAVD-1988, ORIGINAL SCALE 1:24,000 (1IN.=2,000FT.).

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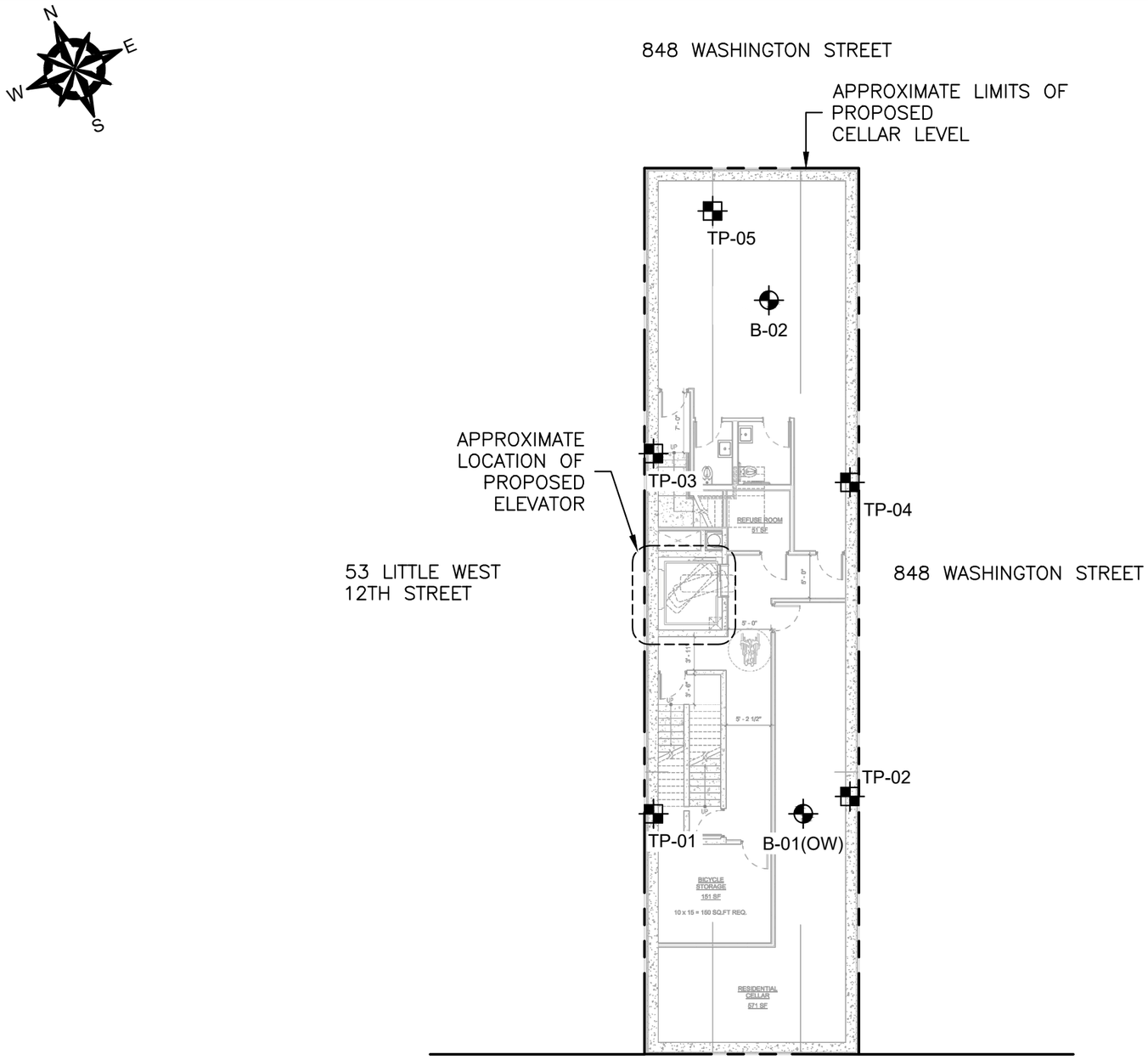
PREPARED BY:
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PREPARED FOR:
NOVAC NOURY
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NEW YORK, NY 10014

SITE LOCATION MAP

PROJ MGR: DSP	REVIEWED BY: DS	CHECKED BY: DSR	FIGURE 1
DESIGNED BY: ND	DRAWN BY: ND	SCALE: AS SHOWN	
DATE: JANUARY, 2025	PROJECT NO. 41.0163381.00	REVISION NO. -	SHEET NO. 1 OF 2

© 2025 – GZA GeoEnvironmental of NY.
GZA–J:\Active 163300 to 163399\163381.00 – 51 Little W 12th – Geotechnical\Drawings\GZA CAD\41.0163381.00 – 51 Little W 12th – Report Figures.dwg [FIG 1 8.5x11] December 30, 2024 – 5:14pm nicholas.deflorio



GENERAL NOTES

1. BASE MAP DEVELOPED FROM DRAWING TITLED TITLE SURVEY, PREPARED BY KABA SURVEYING, ORIGINAL SCALE 1"=20', DATED MAY 24, 2024, AND ARCHITECTURAL FILING SET (SHEET A–100), PREPARED BY MARIN ARCHITECTS, ORIGINAL SCALE $\frac{3}{16}$"=1', DATED FEBRUARY 10, 2023.
2. EXPLORATION LOCATIONS SHOWN ARE BASED ON TAPE MEASUREMENTS FROM TOPOGRAPHICAL FEATURES. THE LOCATIONS SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

LEGEND

- APPROXIMATE SITE BOUNDARY
- APPROXIMATE LOCATION OF PROPOSED ELEVATOR
- TP-0X — APPROXIMATE TEST PIT LOCATION
- B-0X — APPROXIMATE TEST BORING LOCATION (OW) INDICATES OBSERVATION WELL INSTALLED IN BORING

0 7.5 15 30

SCALE IN FEET

NO.	ISSUE/DESCRIPTION	BY	DATE

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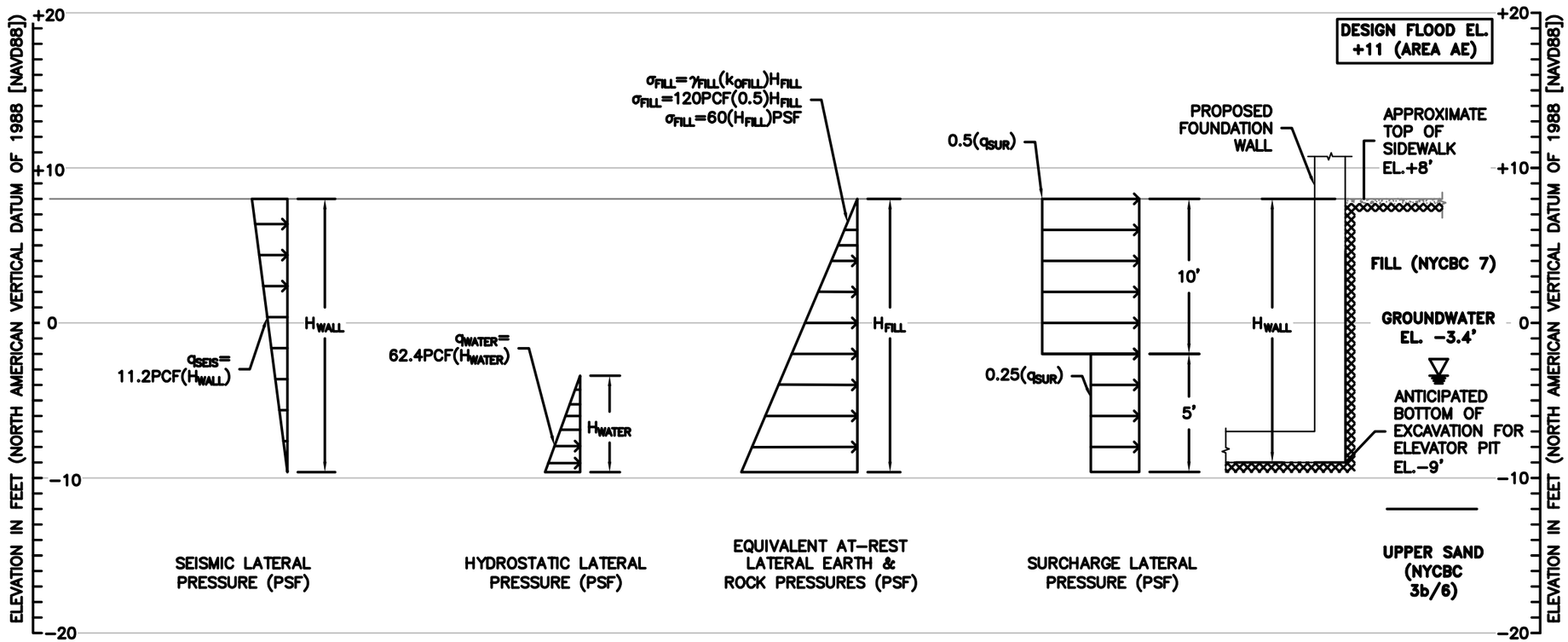
EXPLORATION LOCATION PLAN

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PROJ MGR: DSP	REVIEWED BY: DSP	CHECKED BY: DSR	FIGURE 2
DESIGNED BY: ND	DRAWN BY: ND	SCALE: 1"=15'	
DATE: JANUARY, 2025	PROJECT NO. 41.0163381.00	REVISION NO. -	SHEET NO. 2 OF 2

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GZA–J:\Active 163300 to 163399\163381.00 – 51 Little W 12th – Geotechnical\Drawings\GZA CAD\41.0163381.00 – 51 Little W 12th – Report Figures.dwg [FIG 2 – 17x11] January 14, 2025 – 4:51pm nicholas.deflorio



NOTES:

1. DRAWING REPRESENTS ANTICIPATED LATERAL EARTH PRESSURES BASED ON PROPOSED FOUNDATION WALL CONSTRUCTION AT THE ELEVATOR PIT.
2. APPROXIMATE SURFACE ELEVATIONS ARE ESTIMATED BASED ON ONLINE TOPOGRAPHIC DATA.
3. TYPICAL SECTION SHOWN IS FOR WESTERN FOUNDATION WALL FROM ARCHITECTURAL DRAWINGS, SHEET NO. A-301.00, PREPARED BY MARIN ARCHITECTS, DATED FEBRUARY 10, 2023.
4. ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

NO.	ISSUE/DESCRIPTION	BY	DATE

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LATERAL EARTH PRESSURE DIAGRAM

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PROJ MGR: DSP	REVIEWED BY: DSP	CHECKED BY: DSR	FIGURE 3
DESIGNED BY: ND	DRAWN BY: ND	SCALE: NTS	
DATE: JANUARY, 2025	PROJECT NO. 41.0163381.00	REVISION NO. -	SHEET NO. 3 OF 3

©2025 – GZA GeoEnvironmental, Inc. GZA–J:\Active 163300 to 163399\163381.00 – 51 Little W 12th – Geotechnical\Drawings\GZA CAD\41.0163381.00 – Lateral Earth Pressures – Report Figure.dwg [LPD] January

APPENDIX A
GEOTECHNICAL LIMITATIONS

USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) prepared this report on behalf of, and for the exclusive use of our Client for the stated purpose(s) and location(s) identified in the Proposal for Services and/or Report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not expressly identified in the contract documents, for any use, without our prior written permission, shall be at that party's sole risk, and without any liability to GZA.

STANDARD OF CARE

2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in Proposal for Services and/or Report, and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the limited data gathered during the course of our work. If conditions other than those described in this report are found at the subject location(s), or the design has been altered in any way, GZA shall be so notified and afforded the opportunity to revise the report,as appropriate, to reflect the unanticipated changed conditions .

3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made.

4. In conducting our work, GZA relied upon certain information made available by public agencies, Client and/or others. GZA did not attempt to independently verify the accuracy or completeness of that information. Inconsistencies in this information which we have noted, if any, are discussed in the Report.

SUBSURFACE CONDITIONS

5. The generalized soil profile(s) provided in our Report are based on widely-spaced subsurface explorations and are intended only to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and were based on our assessment of subsurface conditions. The composition of strata, and the transitions between strata, may be more variable and more complex than indicated. For more specific information on soil conditions at a specific location refer to the exploration logs. The nature and extent of variations between these explorations may not become evident until further exploration or construction. If variations or other latent conditions then become evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. In preparing this report, GZA relied on certain information provided by the Client, state and local officials, and other parties referenced therein which were made available to GZA at the time of our evaluation. GZA did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this evaluation.

7. Water level readings have been made in test holes (as described in this Report) and monitoring wells at the specified times and under the stated conditions. These data have been reviewed and interpretations have been made in this Report. Fluctuations in the level of the groundwater however occur due to temporal or spatial variations in areal recharge rates, soil heterogeneities, the presence of subsurface utilities, and/or natural or artificially induced perturbations. The water table encountered in the course of the work may differ from that indicated in the Report.

8. GZA's services did not include an assessment of the presence of oil or hazardous materials at the property. Consequently, we did not consider the potential impacts (if any) that contaminants in soil or groundwater may have on construction activities, or the use of structures on the property.

9. Recommendations for foundation drainage, waterproofing, and moisture control address the conventional geotechnical engineering aspects of seepage control. These recommendations may not preclude an environment that allows the infestation of mold or other biological pollutants.

COMPLIANCE WITH CODES AND REGULATIONS

10. We used reasonable care in identifying and interpreting applicable codes and regulations. These codes and regulations are subject to various, and possibly contradictory, interpretations. Compliance with codes and regulations by other parties is beyond our control.

COST ESTIMATES

11. Unless otherwise stated, our cost estimates are only for comparative and general planning purposes. These estimates may involve approximate quantity evaluations. Note that these quantity estimates are not intended to be sufficiently accurate to develop construction bids, or to predict the actual cost of work addressed in this Report. Further, since we have no control over either when the work will take place or the labor and material costs required to plan and execute the anticipated work, our cost estimates were made by relying on our experience, the experience of others, and other sources of readily available information. Actual costs may vary over time and could be significantly more, or less, than stated in the Report.

ADDITIONAL SERVICES

12. GZA recommends that we be retained to provide services during any future: site observations, design, implementation activities, construction and/or property development/redevelopment. This will allow us the opportunity to: i) observe conditions and compliance with our design concepts and opinions; ii) allow for changes in the event that conditions are other than anticipated; iii) provide modifications to our design; and iv) assess the consequences of changes in technologies and/or regulations.

APPENDIX B
LOG KEY, BORING LOGS, GROUNDWATER OBSERVATION WELL LOG
& ROCK CORE PHOTO LOG

LOG KEY

GZA
Geo Environmental, Inc.
Engineers and Scientists

BURMISTER SOIL CLASSIFICATION (INORGANIC)

COMPONENT	NAME	PROPORTIONAL TERM	PERCENT BY WEIGHT
MAJOR	GRAVEL, SAND, FINES*		>50
Minor	Gravel, Sand, Fines*	and	35 - 50
		some	20-35
		little	10-20
		trace	0-10

*See identification of fines table.

IDENTIFICATION OF FINES

Material	PI	Atterberg Thread Dia.
SILT	0	Cannot Roll
Clayey SILT	1-5	1/4"
SILT & CLAY	5-10	1/8"
CLAY & SILT	10-20	1/16"
Silty CLAY	20-40	1/32"
CLAY	>40	1/64"

GRADATION DESIGNATION	PROPORTION OF COMPONENT
Fine to coarse	All fractions > 10%
Medium to coarse	<10% fine
Fine to medium	<10% coarse
Coarse	<10% fine and medium
Medium	<10% coarse and fine
Fine	<10% coarse and medium

PLASTIC SOILS

Consistency	Blows/Ft. SPT N-Value
Very Soft	< 2
Soft	2 - 4
Medium Stiff	4 - 8
Stiff	8 - 15
Very Stiff	15 - 30
Hard	>30

GRAVEL & SAND

Density	Blows/Ft. SPT N-Value
Very Loose	< 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	> 50

BURMISTER SOIL CLASSIFICATION (ORGANIC)

Fibrous PEAT (Pt) - Lightweight, spongy, mostly visible organic matter, water squeezes readily from sample. Typically near top of deposit.
Fine Grained PEAT (Pt) - Lightweight, spongy, little visible organic matter, water squeezes reqdily from sample. Typically below fibrous peat.
Organic Silt (OL) - Typically gray to dark gray, often has strong H2S odor. Typically contains shells or shell fragments. Lightweight. Usually found near coastal regions. May contain wide range of sand fractions.
Organic Clay (OH) - Typically gray to dark gray, high plasticity. Usually found near coastal regions. May contain wide range of sand fractions. Need organic content test for final identification.

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS) (ASTM D 2487)

MAJOR DIVISIONS			Group Symbols
Coarse Grained Soils More than 50% of material larger than No. 200 sieve.	Gravel More than 50% larger than No. 4 sieve.	Clean Gravels (Little or no fines)	GW GP
		Gravels with Fines (Appreciable amount of fines)	GM GC
	Sand More than 50% smaller than No. 4 sieve.	Clean Sands (Little or no fines)	SW SP
		Sands with Fines (Appreciable amount of fines)	SM SC
Fine Grained Soils More than 50% of material smaller than No. 200 sieve.		Silts and Clays Liquid Limit <50	ML CL
		Silts and Clays Liquid Limit >50	OL MH CH OH
		Highly Organic Soils	Pt

ABBREVIATIONS

MR = Mud Rotary
HSA = Hollow Stem Auger
SSA = Solid Stem Auger
SS = Split Spoon Sampler
U = Undisturbed Sample (Shelby Tube)
MC = Modified California Sampler
V = Vibracore
M = Macrocore

USCS = Unified Soil Classification System (ASTM D2487)
NYCBC = New York City Building Code
WOR = Weight of Rods
WOH= Weight of Hammer
SPT = Standard Penetration Test (ASTM D1586)
N-Value = Cumulative number of uncorrected blows for the middle two six-inch intervals (blows/foot).

Tv = Field Vane Shear Test (Torvane)
PP = Pocket Penetrometer
PI = Plasticity Index
MC = Moisture Content
CO = Consolidation
UC = Unconfined Compression Test
SI = Sieve Analysis
DS = Direct Shear
PID = Photoionization Detector
ppm = Parts Per Million
REC = Recovery
RQD = Rock Quality Designation
▼ = Measured Water Level

TEST BORING LOG

GZA GeoEnvironmental of New York
Engineers and Scientists

Novac Noury
51 Little West 12th Street
New York, NY 10014

EXPLORATION NO.: B-01 (OW)
SHEET: 1 of 4
PROJECT NO: 41.0163381.00
REVIEWED BY: D. Patel

Logged By: S. Santos
Drilling Co.: PG Environmental Sevices
Foreman: Oscar
Date Start: 12/24/2024 **Finish:** 12/26/2024

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Mud Rotary

Boring Location: See Plan
Stationing (ft.): **Offset (ft.):**
Ground Surface Elevation (ft.): 8
Final Boring Depth (ft.): 99.3

H. Datum:
V. Datum: NAVD88
Northing:
Easting:

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5"/4"

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: NX

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab. Time
See	Well	Record	

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	Blows 6-18 In	Sample Description and Identification (Modified Burmister Procedure)	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)
		S-1	0.0-2.0	24	15	2 5 6 6	11	S-1: Medium dense, brown, fine to coarse SAND, little Silt, trace gravel, trace brick fragments.					
		S-2	2.0-4.0	24	18	5 5 7 6	12	S-2: Medium dense, brown, fine to coarse SAND, some Silt, little Gravel, trace brick fragments.					
5		S-3	4.0-6.0	24	9	4 4 6 6	10	S-3: Medium dense, brown, fine to coarse SAND, little Silt.					
		S-4	6.0-8.0	24	24	5 5 8 8	13	S-4: Medium dense, brown, fine to coarse SAND, some Silt, little Gravel, brick fragments.					
		S-5	8.0-10.0	15	11	21 12 50/3"	R	S-5: Very dense, brown, fine to coarse SAND, some Gravel, trace Silt, trace concrete and brick fragments.				FILL (7)	
10		S-6	10.0-12.0	24	6	6 5 3 2	8	S-6: Loose, brown, fine to coarse SAND, some Silt, little Gravel.					
		S-7	12.0-14.0	24	9	2 6 3 2	9	S-7: Loose, brown, fine to coarse SAND, some Silt, some Gravel.					
15		S-8	14.0-16.0	24	7	5 4 3 9	7	S-8: Loose, brown, fine to coarse SAND, some Silt, little Gravel.					
		S-9	16.0-18.0	24	5	0 4 2 2	6	S-9: No Recovery			18		-10.0
		S-10	18.0-20.0	24	14	4 4 6 5	10	S-10: Top 9": Loose, brown, fine to coarse SAND, some Silt, little Gravel.					
20		S-11	20.0-22.0	24	10	8 8 8 12	16	Bottom 5": Loose, gray, fine to medium SAND, little Clayey Silt. S-11: Medium dense, brown, fine to medium SAND, some Silt & Clay, some Gravel, trace shells.				UPPER SAND (3b/6)	
25									1		26		-18.0
30									2			CLAYEY SILT (5b)	

REMARKS

1 - Stratum divide estimated based on drill cuttings.
2 - Rig chatter during roller bit advancement to 30 feet.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: B-01 (OW)

GZA TEMPLATE TEST BORING - GZA 2016_01_26.GDT - 1/30/25 16:02 - J:\GINT PROJECT DATABASES\41.0163300\41.0163381.00 .GPJ

TEST BORING LOG

GZA GeoEnvironmental of New York
Engineers and Scientists

Novac Noury
51 Little West 12th Street
New York, NY 10014

EXPLORATION NO.: B-01 (OW)
SHEET: 2 of 4
PROJECT NO: 41.0163381.00
REVIEWED BY: D. Patel

Logged By: S. Santos
Drilling Co.: PG Environmental Sevices
Foreman: Oscar
Date Start: 12/24/2024 **Finish:** 12/26/2024

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Mud Rotary

Boring Location: See Plan
Stationing (ft.): **Offset (ft.):**
Ground Surface Elevation (ft.): 8
Final Boring Depth (ft.): 99.3

H. Datum:
V. Datum: NAVD88
Northing:
Easting:

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5"/4"

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: NX

Groundwater Depth (ft.)			
Date	**Time**	**Water Depth**	**Stab. Time**
See	Well	Record	

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	Blows 6-18 In	Sample Description and Identification (Modified Burmister Procedure)	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)
		S-12	30.0-32.0	24	24	7 5 7 7	12	S-12: Top 12": Stiff, gray, Clayey SILT, some fine to medium Sand, trace shells. Bottom 12": Medium dense, red-brown, fine to medium SAND, some Silt, trace Gravel.			31		-23.0
35		S-13	35.0-37.0	24	16	5 6 7 7	13	S-13: Medium dense, red-brown, fine to medium SAND, some Silt.					
40		S-14	40.0-42.0	24	24	5 10 7 10	17	S-14: Medium dense, red-brown, fine SAND, some Clayey Silt.					
45		S-15	45.0-47.0	24	20	8 9 11 12	20	S-15: Medium dense, red-brown, fine to medium SAND, some Silt.				LOWER SAND (3a/3b)	
50		S-16	50.0-52.0	24	24	11 16 20 18	36	S-16: Dense, red-brown, fine to medium SAND and Clayey SILT.					
55		S-17	55.0-57.0	24	24	10 9 9 12	18	S-17: Medium dense, red-brown, fine to medium SAND, some Silt.					
60													

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: B-01 (OW)

GZA TEMPLATE TEST BORING - GZA 2016_01_26.GDT - 1/30/25 16:02 - J:\GINT PROJECT DATABASES\41.0163300\41.0163381.00 .GPJ

TEST BORING LOG

GZA GeoEnvironmental of New York
Engineers and Scientists

Novac Noury
51 Little West 12th Street
New York, NY 10014

EXPLORATION NO.: B-01 (OW)
SHEET: 3 of 4
PROJECT NO: 41.0163381.00
REVIEWED BY: D. Patel

Logged By: S. Santos
Drilling Co.: PG Environmental Sevices
Foreman: Oscar
Date Start: 12/24/2024 **Finish:** 12/26/2024

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Mud Rotary

Boring Location: See Plan
Stationing (ft.): **Offset (ft.):**
Ground Surface Elevation (ft.): 8
Final Boring Depth (ft.): 99.3

H. Datum:
V. Datum: NAVD88
Northing:
Easting:

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5"/4"

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: NX

Groundwater Depth (ft.)			
Date	**Time**	**Water Depth**	**Stab. Time**
See	Well	Record	

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (per 6 in.)	Sample Blows 6-18 In	Sample Description and Identification (Modified Burmister Procedure)	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)
		S-18	60.0-62.0	24	24	13 14 15 14	29	S-18: Medium dense, red-brown, fine to medium SAND, some Silt.					
65		S-19	65.0-67.0	24	23	10 17 16 15	33	S-19: Dense, red-brown, fine to medium SAND, trace Silt.					
70		S-20	70.0-72.0	24	21	10 14 14 13	28	S-20: Medium dense, red-brown, fine to medium SAND, some Silt, occasional mica fragments.					
75		S-21	75.0-77.0	24	17	9 12 13 14	25	S-21: Medium dense, red-brown, fine to medium SAND, some Silt, occasional mica fragments.				LOWER SAND (3a/3b)	
80		S-22	80.0-82.0	24	21	12 13 17 20	30	S-22: Dense, red-brown, fine to medium SAND, some Silt, occasional mica fragments.					
85		S-23	85.0-87.0	24	24	14 19 23 25	42	S-23: Dense, red-brown, fine to medium SAND, some Silt, occasional mica fragments.					
90											90		-82.0

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: B-01 (OW)

GZA TEMPLATE TEST BORING - GZA 2016_01_26.GDT - 1/30/25 16:02 - J:\GINT PROJECT DATABASES\41.0163300\41.0163381.00 .GPJ

TEST BORING LOG

GZA GeoEnvironmental of New York
Engineers and Scientists

Novac Noury
51 Little West 12th Street
New York, NY 10014

EXPLORATION NO.: B-01 (OW)
SHEET: 4 of 4
PROJECT NO: 41.0163381.00
REVIEWED BY: D. Patel

Logged By: S. Santos
Drilling Co.: PG Environmental Sevices
Foreman: Oscar
Date Start: 12/24/2024 **Finish:** 12/26/2024

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Mud Rotary

Boring Location: See Plan
Stationing (ft.): **Offset (ft.):**
Ground Surface Elevation (ft.): 8
Final Boring Depth (ft.): 99.3

H. Datum:
V. Datum: NAVD88
Northing:
Easting:

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5"/4"

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: NX

Groundwater Depth (ft.)			
Date	**Time**	**Water Depth**	**Stab. Time**
See	Well	Record	

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Sample Pen. (in)	Sample Rec. (in)	Sample Blows (per 6 in.)	Sample Blows 6-18 In	Sample Description and Identification (Modified Burmister Procedure)	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)
		S-24	90.0-92.0	13	13	20 26 50/1"	R	S-24: Very dense, red-brown, fine to coarse SAND, some Silt, trace decomposed rock fragments.				DECOMPOSED ROCK (1d)	
95	3:55	R-1	94.7-97.3	32	32	REC=100% RQD=0%		R-1: Moderately hard, moderate to moderately severe weathering, gray-black, fine to medium grained MANHATTAN SCHIST, with close to very close fractures, horizontally to subhorizontally dipping fractures.	3		94.7		-86.7
	4:29								4				
	4:23											BEDROCK (1d/1b)	
	4:30	R-2	97.3-99.3	24	24	REC=100% RQD=83%		R-2: Moderately hard, moderate weathering, gray-black, medium to fine grained MANHATTAN SCHIST, with closely spaced, horizontally to subhorizontally dipping fractures.	5		99.3		-91.3
100	4:02							End of exploration at 99.3 feet.	6				
105													
110													
115													
120													

REMARKS

3 - Driller unable to advance roller bit beyond approximately 94.7 feet.
4 - Rock core barrel jammed at approximately 97.7 feet.
5 - Rock core barrel jammed at approximately 99 feet.
6 - Groundwater observation well installed at approximately 30 feet. Refer to well construction log for additional information.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: B-01 (OW)

GZA TEMPLATE TEST BORING - GZA 2016_01_26.GDT - 1/30/25 16:02 - J:\GINT PROJECT DATABASES\41.0163300\41.0163381.00 .GPJ

TEST BORING LOG

GZA GeoEnvironmental of New York
Engineers and Scientists

Novac Noury
51 Little West 12th Street
New York, NY 10014

EXPLORATION NO.: B-02
SHEET: 1 of 4
PROJECT NO: 41.0163381.00
REVIEWED BY: D. Patel

Logged By: A. Amador
Drilling Co.: PG Environmental Sevices
Foreman: Oscar
Date Start: 12/27/2024 **Finish:** 12/27/2024

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Mud Rotary

Boring Location: See Plan
Stationing (ft.): **Offset (ft.):**
Ground Surface Elevation (ft.): 8
Final Boring Depth (ft.): 100.1

H. Datum:
V. Datum: NAVD88
Northing:
Easting:

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5"/4"

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: N/A

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab. Time
12/27/2024	9:17am	12	During Drilling

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	Blows 6-18 In	Sample Description and Identification (Modified Burmister Procedure)	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)
		S-1	0.0-2.0	24	20	3 6 8 8	14	S-1: Medium dense, brown-gray, fine to coarse SAND, little Silt, trace Gravel, trace brick fragments.					
		S-2	2.0-4.0	24	15	8 9 11 28	20	S-2: Medium dense, brown-gray, fine to coarse SAND, little Gravel, little Silt, trace concrete fragments.					
5		S-3	4.0-6.0	24	13	27 13 10 8	23	S-3: Medium dense, brown-gray, fine to coarse SAND, little Gravel, little Silt, trace concrete fragments.					
		S-4	6.0-8.0	24	7	10 9 6 7	15	S-4: Medium dense, brown, fine to medium SAND, little Gravel, little Silt.					
		S-5	8.0-10.0	24	15	6 3 4 7	7	S-5: Loose, brown, fine to coarse SAND, little Gravel, little Silt.					
10		S-6	10.0-12.0	24	12	11 10 8 9	18	S-6: Medium dense, brown, fine to coarse GRAVEL and fine to coarse SAND, little Silt.				FILL (7)	
		S-7	12.0-14.0	24	5	11 10 11 8	21	S-7: Medium dense, brown, fine to coarse SAND some Silt, some Gravel.					
15		S-8	14.0-16.0	24	0	5 7 7 7	14	S-8: No Recovery.	1				
		S-9	16.0-18.0	24	13	11 12 9 4	21	S-9: Medium dense, brown, fine to coarse SAND, some Gravel, some Silt.					
		S-10	18.0-20.0	24	5	4 2 4 12	6	S-10: Loose, brown, fine to medium SAND, some Silt, little Gravel.					
20		S-11	20.0-22.0	24	11	14 17 11 10	28	S-11: Medium dense, brown, fine to coarse SAND, some Gravel, trace Silt.			20		-12.0
25		S-12	25.0-27.0	24	17	3 3 4 4	7	S-12: Loose, red-brown, fine to medium SAND some Silt, trace Gravel, trace mica fragments.				UPPER SAND (3b/6)	
30													

REMARKS

1 - 2-inch gravel in tip of split spoon.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: B-02

GZA TEMPLATE TEST BORING - GZA 2016_01_26.GDT - 1/30/25 16:02 - J:\GINT PROJECT DATABASES\41.0163300\41.0163381.00 .GPJ

TEST BORING LOG

GZA GeoEnvironmental of New York
Engineers and Scientists

Novac Noury
51 Little West 12th Street
New York, NY 10014

EXPLORATION NO.: B-02
SHEET: 2 of 4
PROJECT NO: 41.0163381.00
REVIEWED BY: D. Patel

Logged By: A. Amador
Drilling Co.: PG Environmental Sevices
Foreman: Oscar
Date Start: 12/27/2024 **Finish:** 12/27/2024

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Mud Rotary

Boring Location: See Plan
Stationing (ft.): **Offset (ft.):**
Ground Surface Elevation (ft.): 8
Final Boring Depth (ft.): 100.1

H. Datum:
V. Datum: NAVD88
Northing:
Easting:

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5"/4"

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: N/A

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab. Time
12/27/2024	9:17am	12	During Drilling

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	Blows 6-18 In	Sample Description and Identification (Modified Burmister Procedure)	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)
		S-13	30.0-32.0	24	18	3 3 4 7	7	S-13: Loose, red-brown, fine SAND, some Silt, trace Gravel, trace mica fragments.				UPPER SAND (3b/6)	
											33.5		-25.5
35		S-14	35.0-37.0	24	16	3 6 5 7	11	S-14: Medium dense, red-brown, fine to medium SAND, little Silt, trace mica fragments.					
40		S-15	40.0-42.0	24	23	4 6 8 9	14	S-15: Medium dense, red-brown, fine to medium SAND, some Silt, trace mica fragments.					
45		S-16	45.0-47.0	24	24	6 6 10 8	16	S-16: Medium dense, red-brown, fine to medium SAND, some Silt, trace mica fragments.				LOWER SAND (3a/3b)	
50		S-17	50.0-52.0	24	18	5 6 6 8	12	S-17: Medium dense, red-brown, fine to medium SAND, little Silt, trace mica fragments.					
55		S-18	55.0-57.0	24	15	5 7 6 7	13	S-18: Medium dense, red-brown, fine to medium SAND, little Silt, trace Gravel trace mica fragments.					
60													

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: B-02

GZA TEMPLATE TEST BORING - GZA 2016_01_26.GDT - 1/30/25 16:02 - J:\GINT PROJECT DATABASES\41.0163300\41.0163381.00 .GPJ

TEST BORING LOG

GZA GeoEnvironmental of New York
Engineers and Scientists

Novac Noury
51 Little West 12th Street
New York, NY 10014

EXPLORATION NO.: B-02
SHEET: 3 of 4
PROJECT NO: 41.0163381.00
REVIEWED BY: D. Patel

Logged By: A. Amador
Drilling Co.: PG Environmental Sevices
Foreman: Oscar
Date Start: 12/27/2024 **Finish:** 12/27/2024

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Mud Rotary

Boring Location: See Plan
Stationing (ft.): **Offset (ft.):**
Ground Surface Elevation (ft.): 8
Final Boring Depth (ft.): 100.1

H. Datum:
V. Datum: NAVD88
Northing:
Easting:

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5"/4"

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: N/A

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab. Time
12/27/2024	9:17am	12	During Drilling

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	Blows 6-18 In	Sample Description and Identification (Modified Burmister Procedure)	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)
		S-19	60.0-62.0	24	23	6 9 10 12	19	S-19: Medium dense, red-brown, fine SAND and Clayey SILT, trace mica fragments.					
65		S-20	65.0-67.0	24	16	11 10 10 9	20	S-20: Medium dense, red-brown, fine to medium SAND, little Silt, trace mica fragments.					
70		S-21	70.0-72.0	24	24	8 10 11 15	21	S-21: Medium dense, red-brown, fine to medium SAND, little Silt, trace mica fragments.					
75		S-22	75.0-77.0	24	20	9 11 11 14	22	S-22: Medium dense, red-brown, fine to medium SAND, little Silt, trace mica fragments.				LOWER SAND (3a/3b)	
80		S-23	80.0-82.0	24	21	13 15 17 18	32	S-23: Dense, red-brown, fine to medium SAND, little Silt, trace mica fragments.					
85		S-24	85.0-87.0	24	23	21 20 22 24	42	S-24: Dense, red-brown, fine to medium SAND, some Silt, trace Gravel, trace mica fragments.					
90													

REMARKS

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

Exploration No.: B-02

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TEST BORING LOG

GZA GeoEnvironmental of New York
Engineers and Scientists

Novac Noury
51 Little West 12th Street
New York, NY 10014

EXPLORATION NO.: B-02
SHEET: 4 of 4
PROJECT NO: 41.0163381.00
REVIEWED BY: D. Patel

Logged By: A. Amador
Drilling Co.: PG Environmental Sevices
Foreman: Oscar
Date Start: 12/27/2024 **Finish:** 12/27/2024

Type of Rig: Geoprobe
Rig Model: 7822DT
Drilling Method: Mud Rotary

Boring Location: See Plan
Stationing (ft.): **Offset (ft.):**
Ground Surface Elevation (ft.): 8
Final Boring Depth (ft.): 100.1

H. Datum:
V. Datum: NAVD88
Northing:
Easting:

Hammer Type: Automatic Hammer
Hammer Weight (lb.): 140
Hammer Fall (in.): 30
Auger or Casing O.D./I.D Dia (in.): 4.5"/4"

Sampler Type: SS
Sampler O.D. (in.): 2.0
Sampler Length (in.): 24
Rock Core Size: N/A

Groundwater Depth (ft.)

Date	Time	Water Depth	Stab. Time
12/27/2024	9:17am	12	During Drilling

Depth (ft)	Casing Blows/ Core Rate	Sample No.	Sample Depth (ft.)	Pen. (in)	Rec. (in)	Blows (per 6 in.)	Blows 6-18 In	Sample Description and Identification (Modified Burmister Procedure)	Remark	Field Test Data	Stratum Depth (ft.)	Stratum Description	Stratum Elev. (ft.)
		S-25	90.0-92.0	24	20	16 24 28 34	52	S-25: Very dense, red-brown, fine to medium SAND, some Silt, trace Gravel, trace mica fragments.				LOWER SAND (3a/3b)	
95		S-26	95.0-95.1	1	1	50/1"	R	S-26: Very dense, gray, fine to medium SAND, little Silt, trace decomposed rock fragments.	2		95	DECOMPOSED ROCK (1d)	-87.0
100		S-27	100.0-100.1	1	1	50/1"	R	S-27: Very dense, gray, fine to coarse SAND, some Silt, some mica fragments.	3		100.1		-92.1
								End of exploration at 100.1 feet.					
105													
110													
115													
120													

REMARKS

2 - Difficulty drilling observed between approximately 98 feet to 100 feet bgs.
3 - Upon completion of drilling, borehole was backfilled with soil cuttings.

See Log Key for exploration of sample description and identification procedures. Stratification lines represent approximate boundaries between soil and bedrock types. Actual transitions may be gradual. Water level readings have been made at the times and under the conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the times the measurements were made.

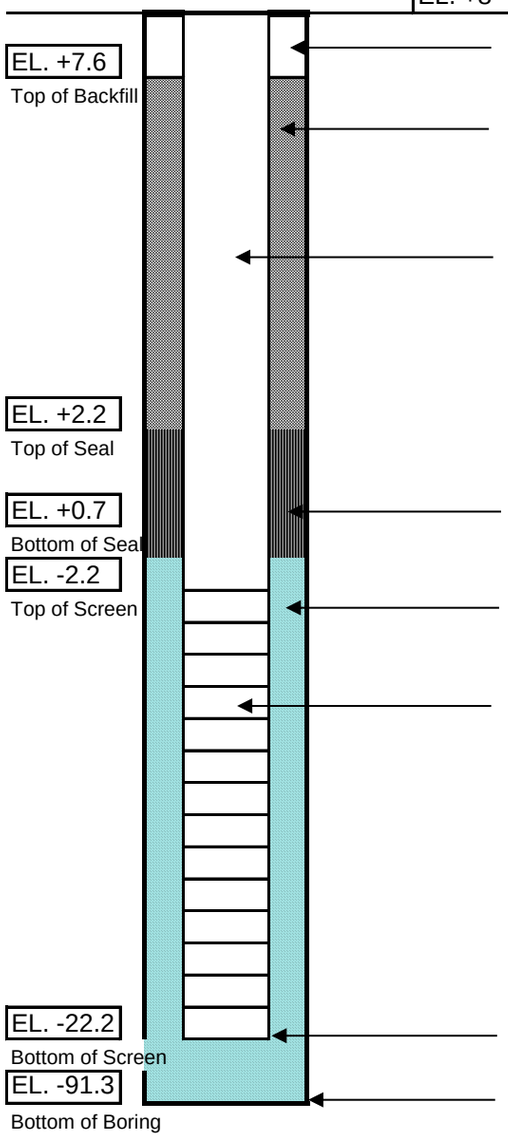
Exploration No.: B-02

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GZA GEOENVIRONMENTAL, INC.
Engineers and Scientists

Well No. B-01 (OW)

Project: 51 Little West 12th St New York, NY	Well Installation Log	Page 1 of 1		
Project No.: 41.0163381.00	Contractor: GZA	Water Levels		
Surface Elevation: +8'	Driller: PG Environmental	Date	Time	Depth
Top of PVC Casing Elevation: +7.8'	GZA Rep: Allan Amador	12/27/2024	7:20AM	11.5ft
		12/27/2024	2:58PM	11.7ft
		12/30/2024	9:20AM	11.2ft
Datum: NAVD88	Date of Completion: 12/27/2024	12/30/2024	12:50PM	11.4ft



Borehole diameter (in.): 4"

I.D.	2.000	inches
O.D.	2.375	inches
Slot size	1.500	inches
Type	PVC	

Rock Core Photo Log

Client:	51 Little West 12th Street New York, NY 10014	Project No.
Novac Noury		41.0163381.00



Boring	Depth	Run Summary	Recovery	RQD
B-01	94.7-97.3 feet	R-1 – 32 inches	32 inches (100%)	0 inches (0%)
B-01	97.3-99.3 feet	R-2 – 24 inches	24 inches (100%)	20 inches (83%)

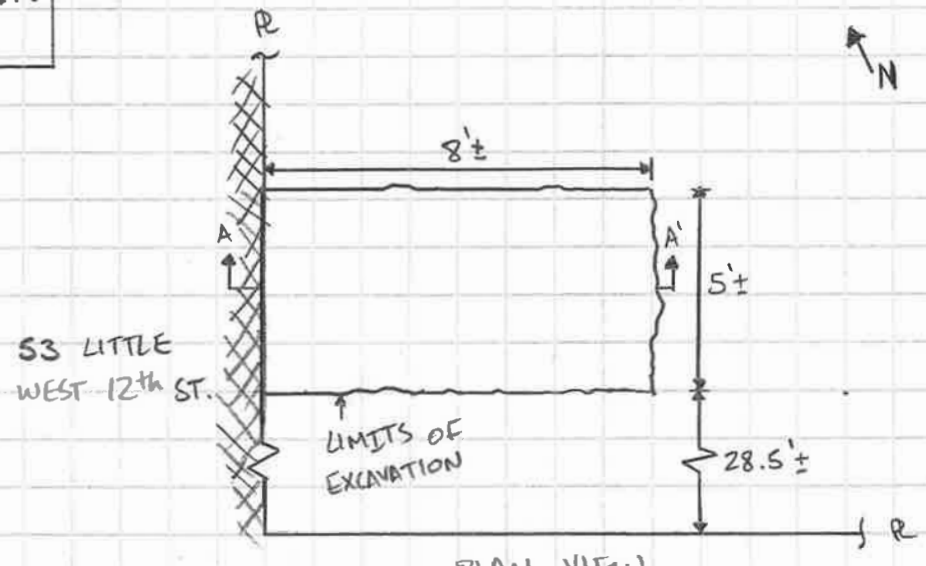
APPENDIX C
TEST PIT LOGS AND PHOTO LOG

GZA
GeoEnvironmental, Inc.
of New York
104 West 29th Street, 10th Floor
New York, NY 10001
(212) 594-8140
Fax (212) 279-8180
http://www.gza.com

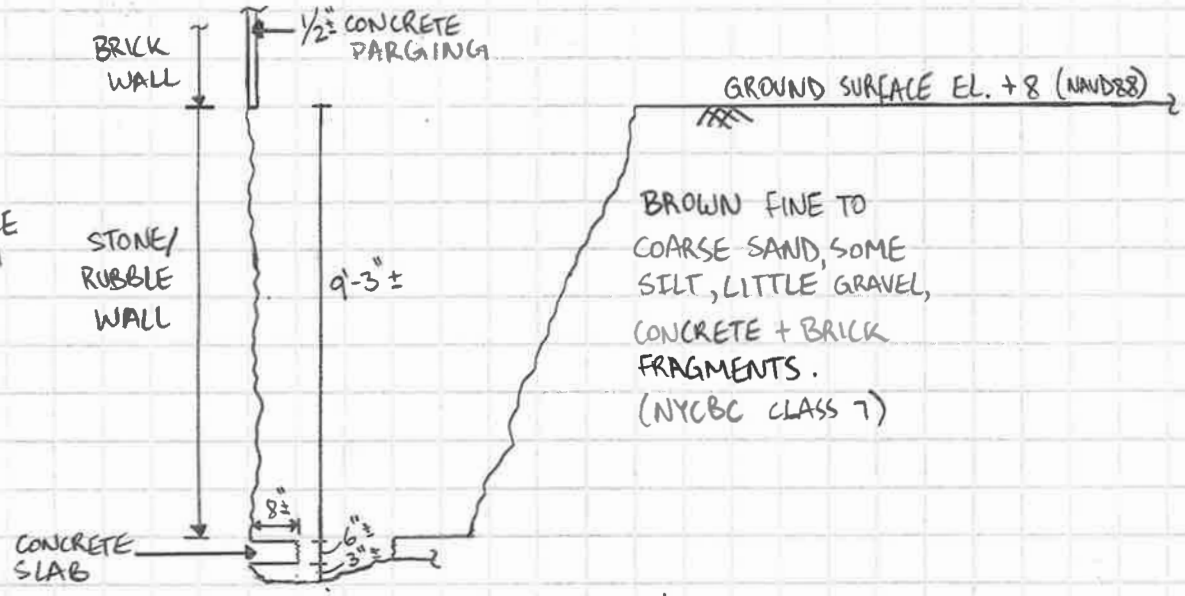
Engineers and Scientists

JOB 51 LITTLE WEST 12th STREET, NY, NY - 41.0163381.00
SHEET NO. 1 OF 5
CALCULATED BY A. AMADOR DATE 12/31/24
CHECKED BY _____ DATE _____
SCALE REFER TO SKETCH

TEST PIT: TP-1



PLAN VIEW
1" = 4'-0"



SECTION A-A'
1" = 4'-0"

NOTES:
1) CONTRACTOR BROKE THROUGH EXPOSED UNREINFORCED CONCRETE AT BOTTOM OF TEST PIT.
2) A STEEL BAR WAS USED TO PROBE UNDER CONCRETE SLAB. IT ADVANCED APPROX. 24-INCHES FROM FACE OF STONE/RUBBLE WALL.
3) GROUNDWATER WAS NOT ENCOUNTERED WHILE TEST PIT WAS OPEN.

GZA
GeoEnvironmental, Inc.
of New York
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New York, NY 10001
(212) 594-8140
Fax (212) 279-8180
http://www.gza.com

Engineers and Scientists

JOB 51 LITTLE WEST 12TH STREET, NY, NY - 41.0163381.00

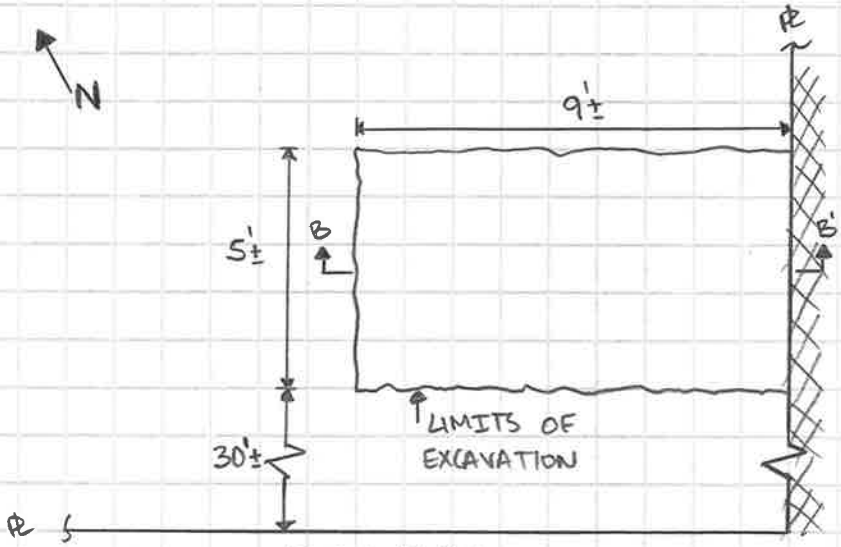
SHEET NO. 2 OF 5

CALCULATED BY A. AMADOR DATE 12/31/24

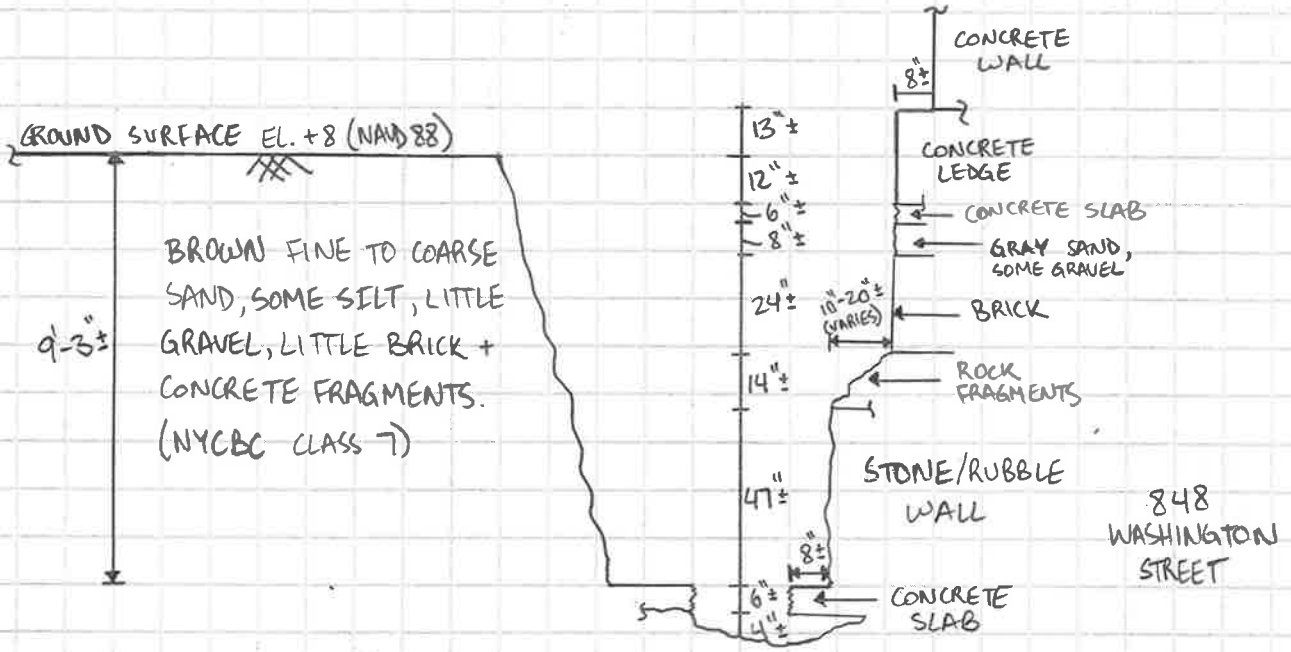
CHECKED BY _____ DATE _____

SCALE REFER TO SKETCH

TEST PIT: TP-2



PLAN VIEW
1" = 4'-0"



SECTION B-B'
1" = 4'-0"

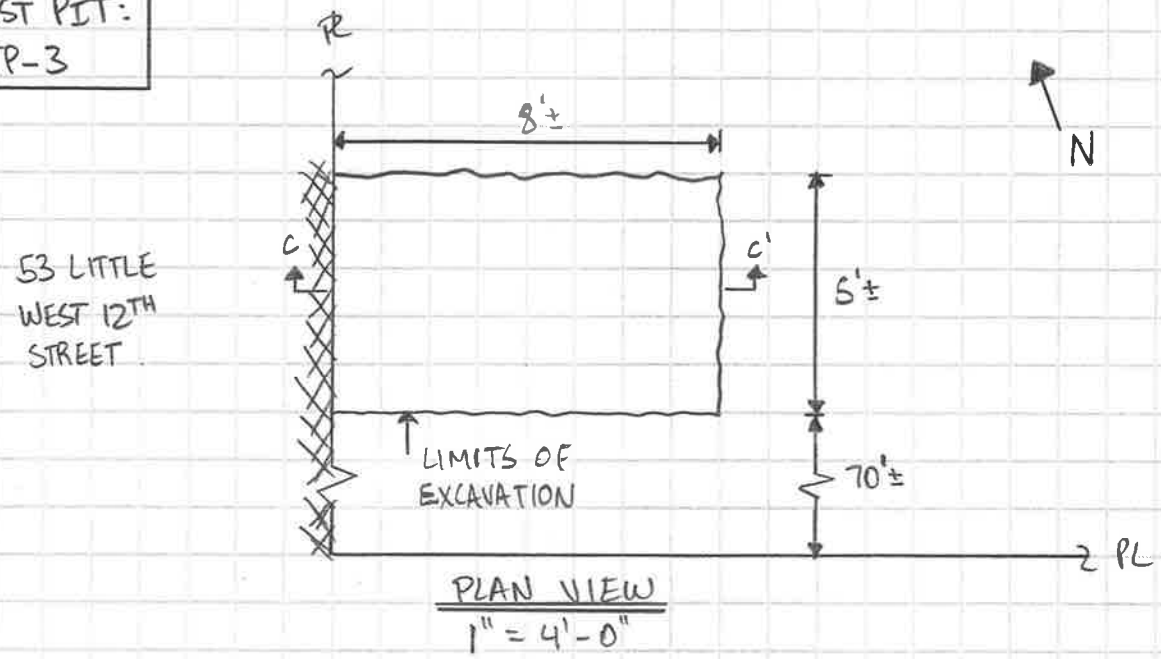
NOTES:
1) CONTRACTOR BROKE THROUGH EXPOSED UNREINFORCED CONCRETE SLAB AT BOTTOM OF TEST PIT.
2) A STEEL BAR WAS USED TO PROBE UNDER THE CONCRETE SLAB. IT ADVANCED APPROX. 36-INCHES FROM FACE OF STONE/RUBBLE WALL.
3) GROUNDWATER WAS NOT ENCOUNTERED WHILE TEST PIT WAS OPEN.

GZA
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http://www.gza.com

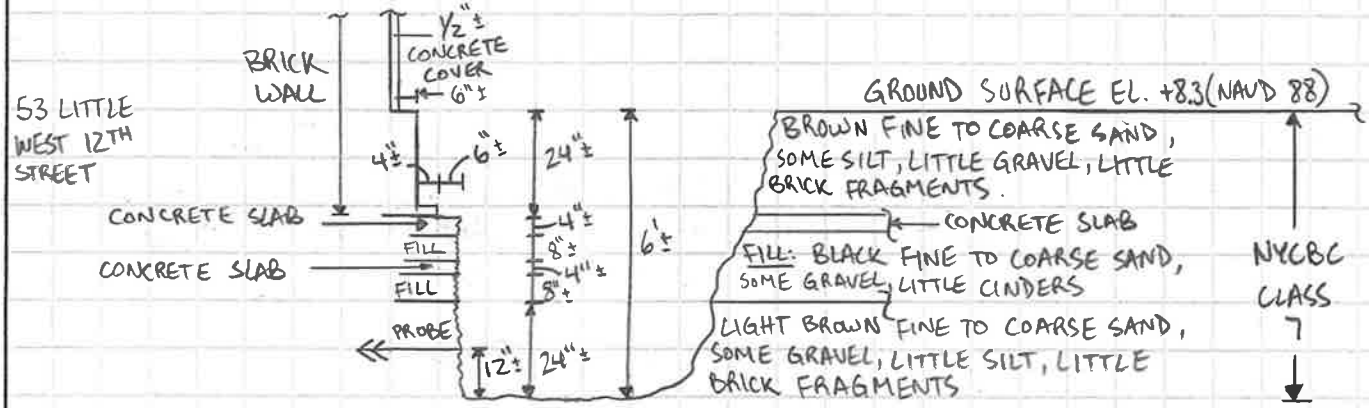
Engineers and Scientists

JOB 51 LITTLE WEST 12th STREET, NY, NY - 41.0163381.00
SHEET NO. 3 OF 5
CALCULATED BY A. AMADOR DATE 12/31/24
CHECKED BY _____ DATE _____
SCALE REFER TO SKETCH

TEST PIT: TP-3



PLAN VIEW
1" = 4'-0"



SECTION C-C'
1" = 4'-0"

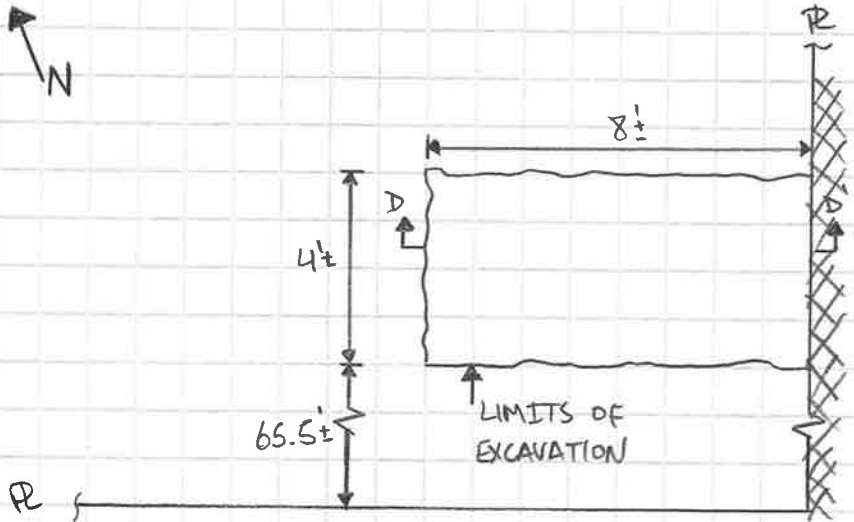
NOTES: 1) GROUNDWATER WAS NOT ENCOUNTERED WHILE TEST PIT WAS OPEN.
2) A STEEL BAR WAS USED TO PROBE AS SHOWN ON SECTION C-C'. IT ADVANCED APPROX. 12" FROM FACE OF BRICK WALL.

GZA
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of New York
104 West 29th Street, 10th Floor
New York, NY 10001
(212) 594-8140
Fax (212) 279-8180
http://www.gza.com

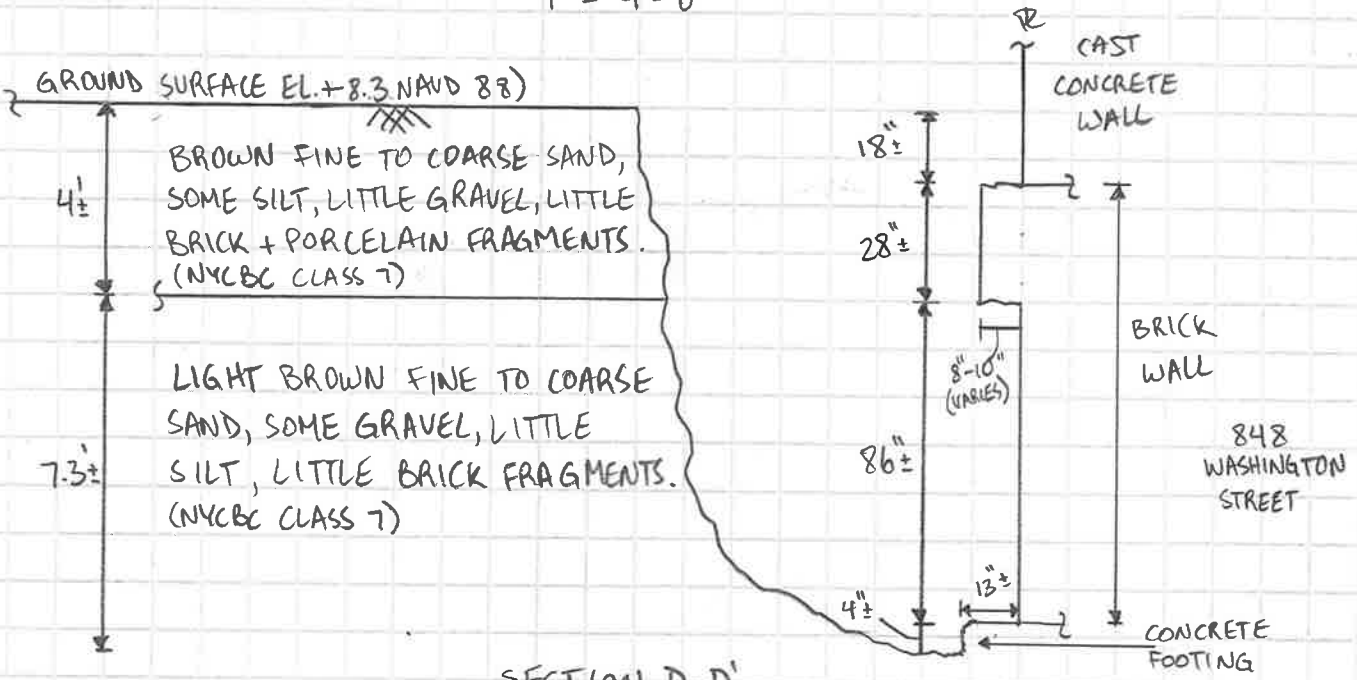
Engineers and Scientists

JOB 51 LITTLE WEST - 41.0163381.00
12th STREET, NY, NY
SHEET NO. 4 OF 5
CALCULATED BY A. AMADOR DATE 12/31/24
CHECKED BY _____ DATE _____
SCALE REFER TO SKETCH

TEST PIT: TP-4



PLAN VIEW
1" = 4'-0"



SECTION D-D'
1" = 4'-0"

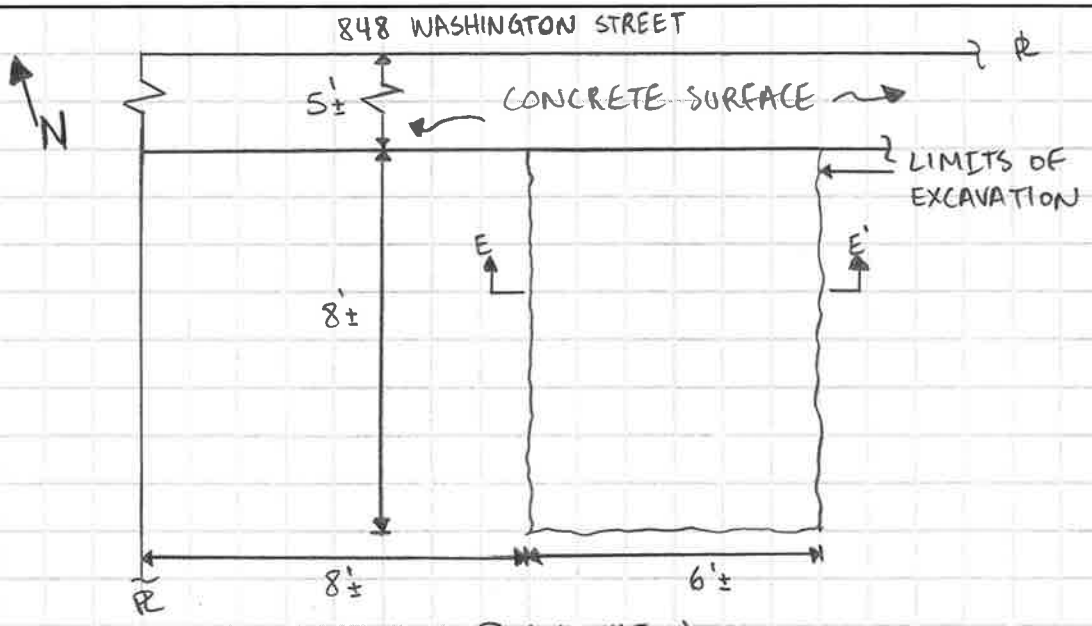
NOTES: 1) TEST PIT LOCATED ON THE EAST REAR END OF SITE. GRADE INCREASES APPROX. 4"-6". AT 11.3 FT OF DEPTH, EXCAVATOR ARM COULD NOT EXCAVATE DEEPER. BOTTOM OF EXPOSED CONCRETE FOOTING WAS NOT ENCOUNTERED.
2) GROUNDWATER WAS NOT ENCOUNTERED WHILE TEST PIT WAS OPEN.

GZA
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of New York
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New York, NY 10001
(212) 594-8140
Fax (212) 279-8180
http://www.gza.com

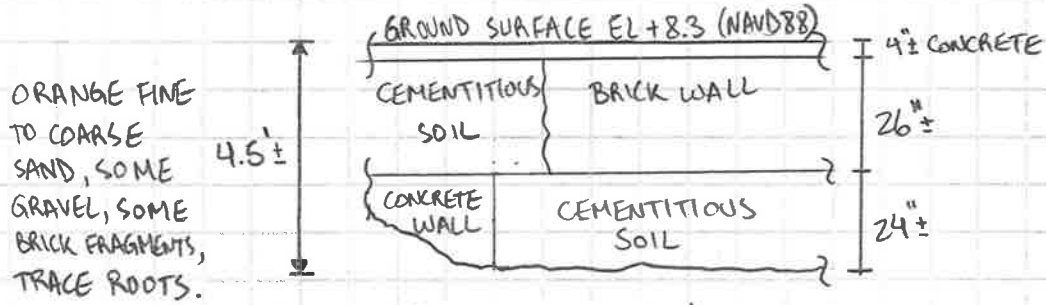
Engineers and Scientists

JOB 51 LITTLE WEST 12TH STREET, NY, NY - 41.0163381.00
SHEET NO. 5 OF 5
CALCULATED BY A. AMADOR DATE 12/31/24
CHECKED BY _____ DATE _____
SCALE REFER TO SKETCH

TEST PIT: TP-5



PLAN VIEW
1" = 4'-0"



ELEVATION VIEW E-E'
1" = 4'-0"

NOTES: 1) GROUNDWATER WAS NOT ENCOUNTERED WHILE TEST PIT WAS OPEN.
2) EXPOSED CONCRETE WALL EXTENDED BEYOND THE LIMITS OF EXCAVATION.

Photographic Log

Client Name:	Site Location:	Project No.
Novac Naury	51 Little West 12th Street, New York, NY	41.0163381.00

Photo No.	Date:
1	12/31/24

Direction Photo Taken:
West and down

Description:
Test Pit TP-01: General overview of brick and stone masonry wall.



Photo No.	Date:
2	12/31/24

Direction Photo Taken:
Down

Description:
Test Pit TP-01: Close up of concrete footing.



Photographic Log

Client Name:	Site Location:	Project No.
Novac Naury	51 Little West 12th Street, New York, NY	41.0163381.00

Photo No.	Date:
3	12/31/24

Direction Photo Taken:
East

Description:
Test Pit TP-02: General overview of brick and stone masonry wall.



Photo No.	Date:
4	12/31/24

Direction Photo Taken:
East and down

Description:
Test Pit TP-02: Concrete footing supporting brick and stone masonry walls.



Photographic Log

Client Name:	Site Location:	Project No.
Novac Naury	51 Little West 12th Street, New York, NY	41.0163381.00

Photo No.	Date:
5	12/31/24

Direction Photo Taken:
West and down

Description:
Test Pit TP-03: General overview.



Photo No.	Date:
6	12/31/24

Direction Photo Taken:
Northwest

Description:
Test Pit TP-03: Interlayered concrete slabs and soil observed.



Photographic Log

Client Name:	Site Location:	Project No.
Novac Naury	51 Little West 12th Street, New York, NY	41.0163381.00

Photo No.	Date:
7	12/31/24

Direction Photo Taken:
East

Description:
Test Pit TP-04: Brick perimeter wall overview



Photo No.	Date:
8	12/31/24

Direction Photo Taken:
East and down

Description:
Test Pit TP-04: Close up of concrete footing supporting brick wall.



Photographic Log

Client Name:	Site Location:	Project No.
Novac Naury	51 Little West 12th Street, New York, NY	41.0163381.00

Photo No.	Date:
9	12/31/24

Direction Photo Taken:
North

Description:
Test Pit TP-05: Brick wall section and concrete wall general overview.



Photo No.	Date:
10	12/31/24

Direction Photo Taken:
Northwest

Description:
Test Pit TP-05: Closeup of concrete wall at northern portion of test pit.



APPENDIX D
LABORATORY TESTING RESULTS

Thielsch
DIVISION OF THE RISE GROUP

195 Frances Avenue
Cranston RI, 02910
Phone: (401)-467-6454
Fax: (401)-467-2398
cts.thielsch.com
Let's Build a Solid Foundation

Client Information:		Project Information:	
GZA GeoEnvironmental		**51 Little West 12th Street**	
New York, NY		**New York, NY**	
(212)594-8140		Project Number:	41.0163381.00
Project Contact:	Dharmil Patel	Summary Page:	1 of 1
Collected By:	S. Santos/A. Amandor	Report Date:	01.16.25

LABORATORY TESTING DATA SHEET, Report No.: 7425-A-137, Rev. 1

Material Source	Sample ID	Depth (ft)	Laboratory No.	Identification Tests									Proctor / CBR / Permeability Tests								Laboratory Log and Soil Description
				As Rcvd Moisture Content %	LL %	PL %	OD LL	Gravel %	Sand %	Fines %	Org. %	pH	g_d MAX (pcf) W_{opt} (%)	g_d MAX (pcf) W_{opt} (%) (Corr.)	Dry unit wt. (pcf)	Test Moisture Content %	Target Test Setup as % of Proctor	CBR @ 0.1"	CBR @ 0.2"	Permeability cm/sec	
				D2216	D4318			D6913			D2974	D4792	D1557								
B-01(OW)	S-11	20-22	25-S-112	21.5				20.7	56.4	22.9											Dark Brown f-m SAND, some Silt & Clay, some f-c Gravel
B-01(OW)	S-14	40-42	25-S-113					0.0	70.2	29.8											Red-Brown fine SAND, some Clayey Silt
B-01(OW)	S-16	50-52	25-S-114					0.0	45.3	54.7											Red-Brown CLAYEY SILT and f-m SAND
B-01(OW)	S-19	65-67	25-S-115					0.0	91.4	8.6											Red-Brown f-m SAND, trace Silt
B-02	S-6	10-12	25-S-116					43.2	42.4	14.4											Brown f-c GRAVEL and f-c SAND, little Silt
B-02	S-9	16-18	25-S-117					25.3	52.5	22.2											Brown f-c SAND, some f-c Gravel, some Silt
B-02	S-11	20-22	25-S-118					32.8	58.0	9.2											Brown f-c SAND, some f-c Gravel, trace Silt
B-02	S-13	30-32	25-S-119					0.1	72.8	27.1											Red-Brown fine SAND, some Silt, trace fine Gravel
B-02	S-19	60-62	25-S-120					0.0	63.9	36.1											Red-Brown fine SAND and CLAYEY SILT

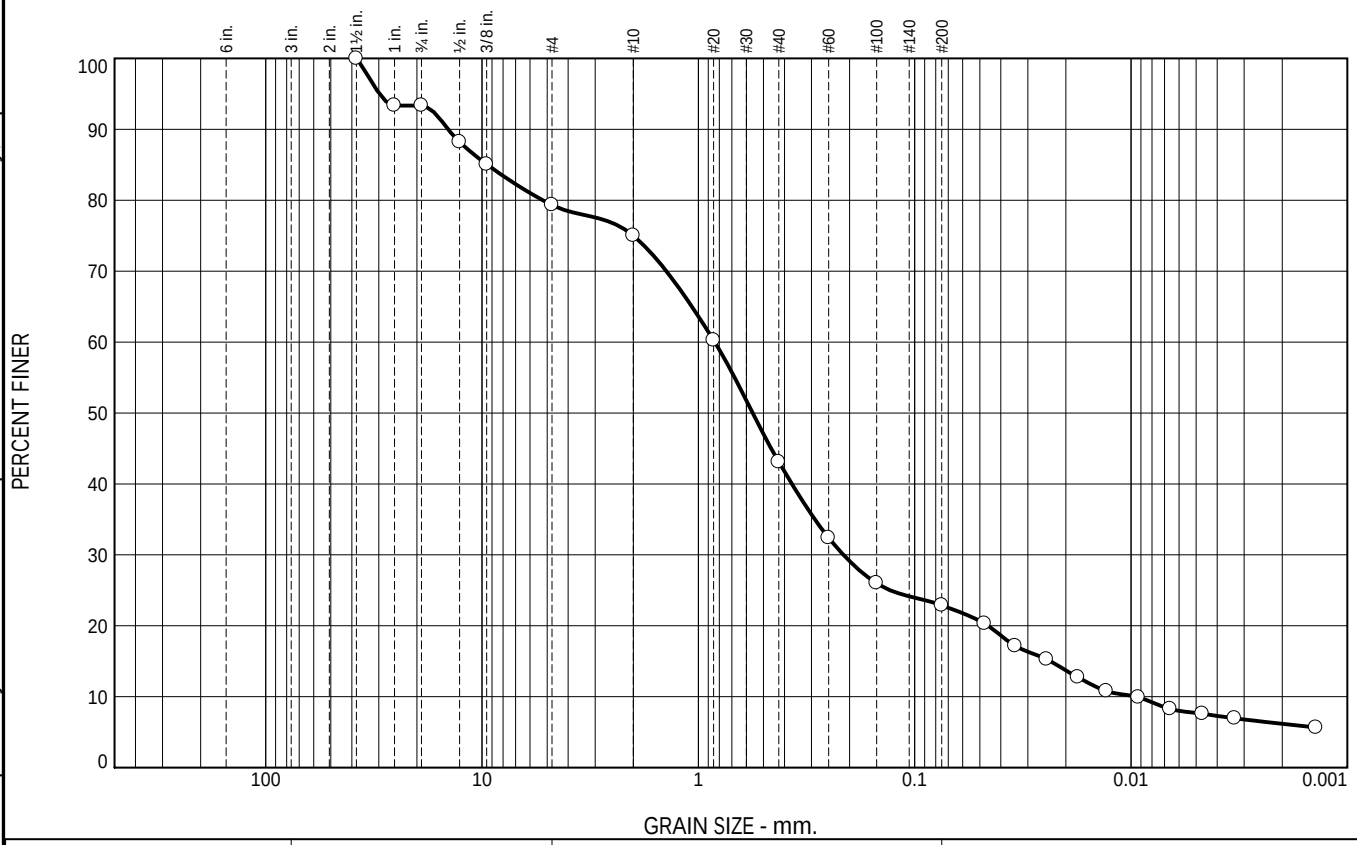
Report revised to correct laboratory numbering error

Date Received: **01.09.25** Reviewed By: Date Reviewed: **01.16.25**

This report only relates to items inspect and/or tested. No warranty, expressed or implied, is made.
This report shall not be reproduced, except in full, without prior written approval from the Agency, as defined in ASTM E329.

These results are for the exclusive use of the client for whom they were obtained. This report only relates to items inspect and/or tested. No warranty, expressed or implied, is made.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	6.6	14.1	4.3	31.9	20.2	16.7	6.2

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 1/2"	100.0		
1"	93.4		
3/4"	93.4		
1/2"	88.2		
3/8"	85.1		
#4	79.3		
#10	75.0		
#20	60.3		
#40	43.1		
#60	32.4		
#100	26.0		
#200	22.9		
0.0476 mm.	20.3		
0.0343 mm.	17.2		
0.0245 mm.	15.3		
0.0176 mm.	12.7		
0.0130 mm.	10.8		
0.0092 mm.	9.9		
0.0066 mm.	8.3		
0.0047 mm.	7.6		
0.0033 mm.	7.0		
0.0014 mm.	5.6		

* (no specification provided)

Soil Description

Dark Brown f-m SAND, some Silt & Clay, some f-c Gravel

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 14.3231 D_{85}= 9.4525 D_{60}= 0.8396
D_{50}= 0.5610 D_{30}= 0.2136 D_{15}= 0.0236
D_{10}= 0.0095 C_u= 88.41 C_c= 5.72

Classification

USCS= SM AASHTO= A-1-b

Remarks

Sample visually classified as plastic. Sample rolled to 1/8".

Source of Sample: Boring Depth: 20-22'
Sample Number: B-01(OW) S-11

Date: 01.15.25

Thielsch Engineering Inc.

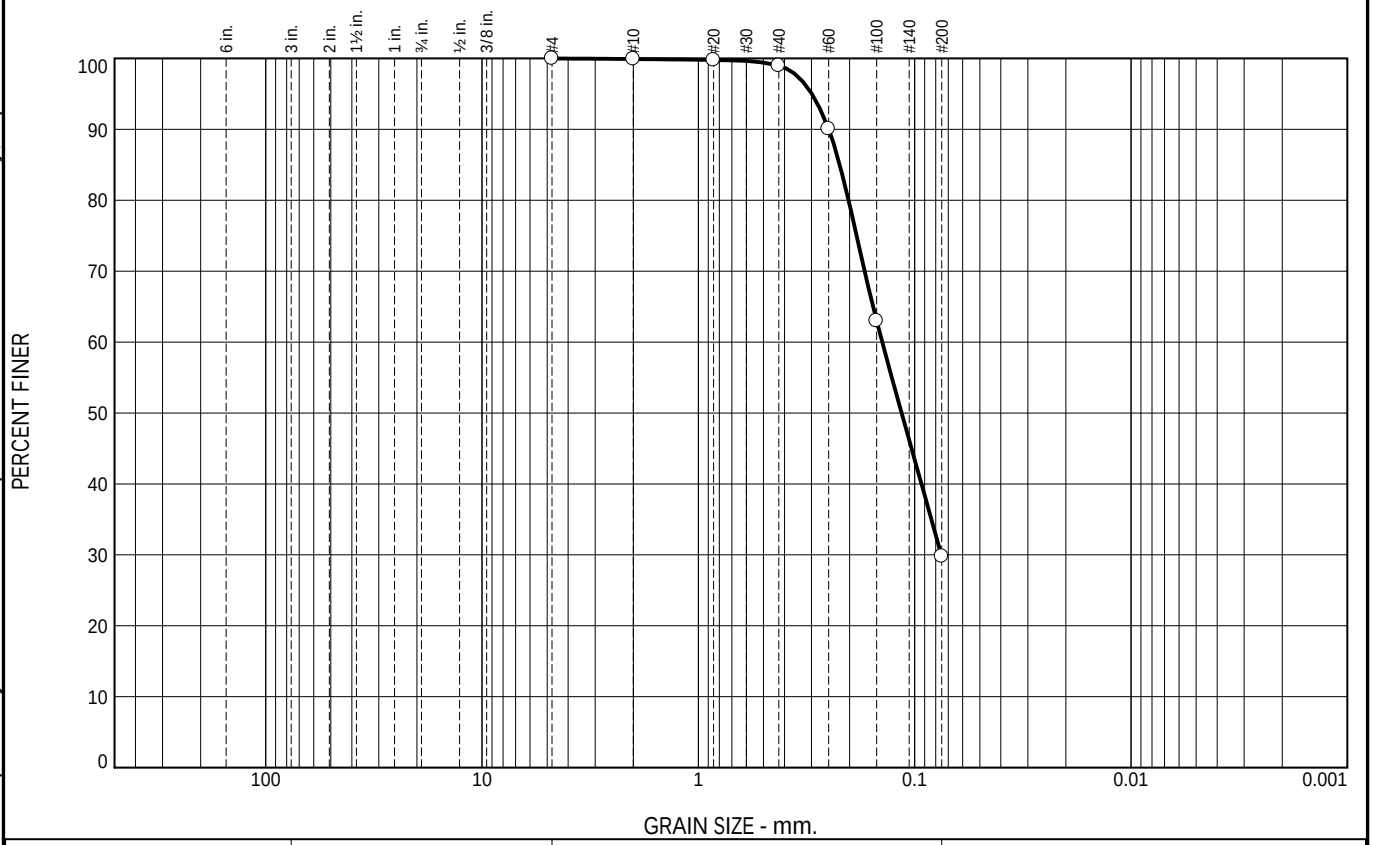
Cranston, RI

Client: GZA GeoEnvironmental
Project: 51 Little West 12th Street
New York, NY
Project No: 41.0163381.00 Fig. 25-S-112

Tested By: RKO/AB Checked By: Rebecca Roth

These results are for the exclusive use of the client for whom they were obtained. This report only relates to items inspect and/or tested. No warranty, expressed or implied, is made.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.1	0.9	69.2	29.8	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#20	99.8		
#40	99.0		
#60	90.0		
#100	63.0		
#200	29.8		

* (no specification provided)

Soil Description

Red-Brown fine SAND, some Clayey Silt

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.2496 D_{85}= 0.2221 D_{60}= 0.1413
D_{50}= 0.1150 D_{30}= 0.0754 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Sample visually classified as plastic. Sample rolled to 1/4"

Source of Sample: Boring Depth: 40-42'
Sample Number: B-01(OW) S-14

Date: 01.13.25

Thielsch Engineering Inc.

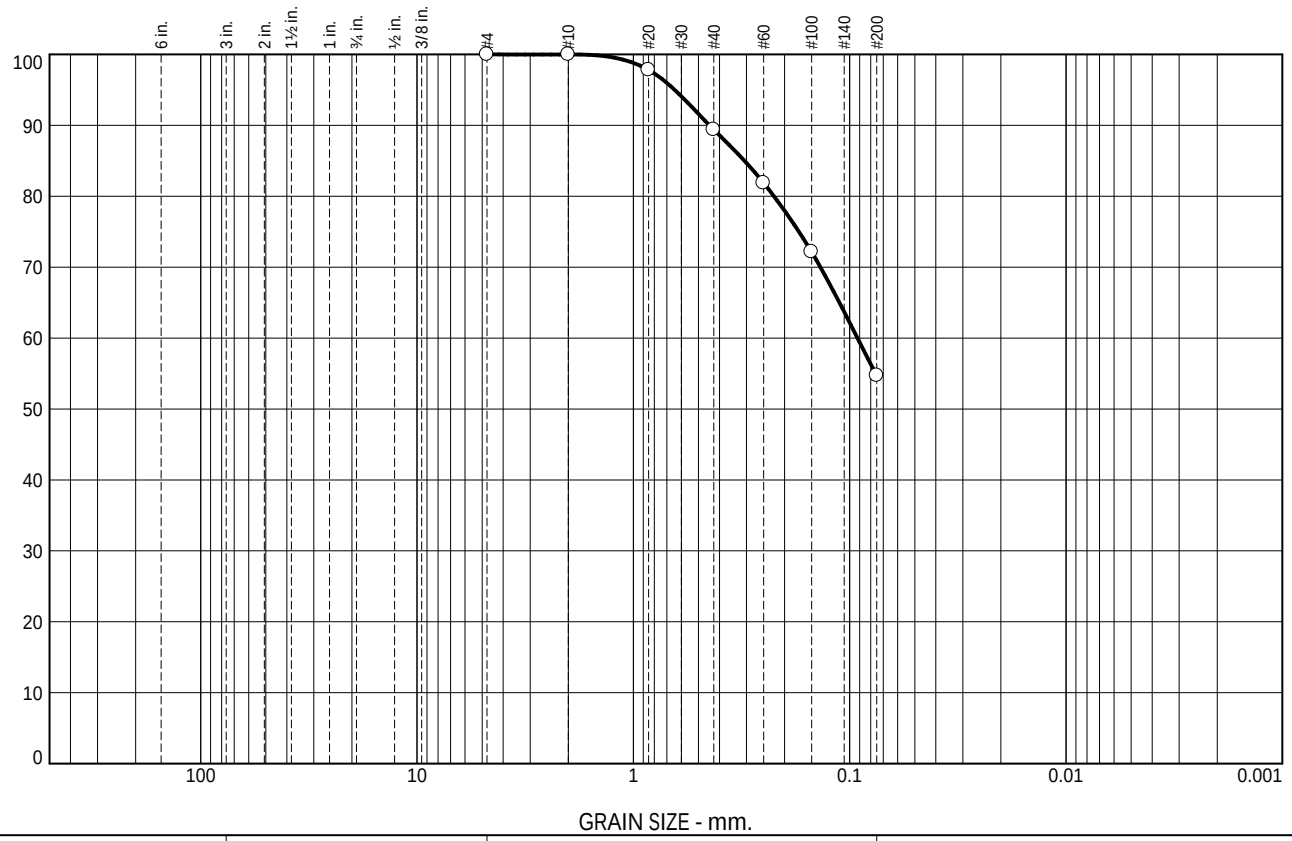
Cranston, RI

Client: GZA GeoEnvironmental
Project: 51 Little West 12th Street
New York, NY
Project No: 41.0163381.00 Fig. 25-S-113

Tested By: SBR/ND Checked By: Rebecca Roth

These results are for the exclusive use of the client for whom they were obtained. This report only relates to items inspect and/or tested. No warranty, expressed or implied, is made.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	10.6	34.7	54.7	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	100.0		
#20	97.8		
#40	89.4		
#60	81.9		
#100	72.1		
#200	54.7		

* (no specification provided)

Soil Description

Red-Brown CLAYEY SILT and f-m SAND

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.4447 D_{85}= 0.3064 D_{60}= 0.0921
D_{50}= D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= ML AASHTO= A-4(0)

Remarks

Sample visually classified as plastic. Sample rolled to 1/4"

Source of Sample: Boring Depth: 50-52'
Sample Number: B-01(OW) S-16

Date: 01.13.25

Thielsch Engineering Inc.

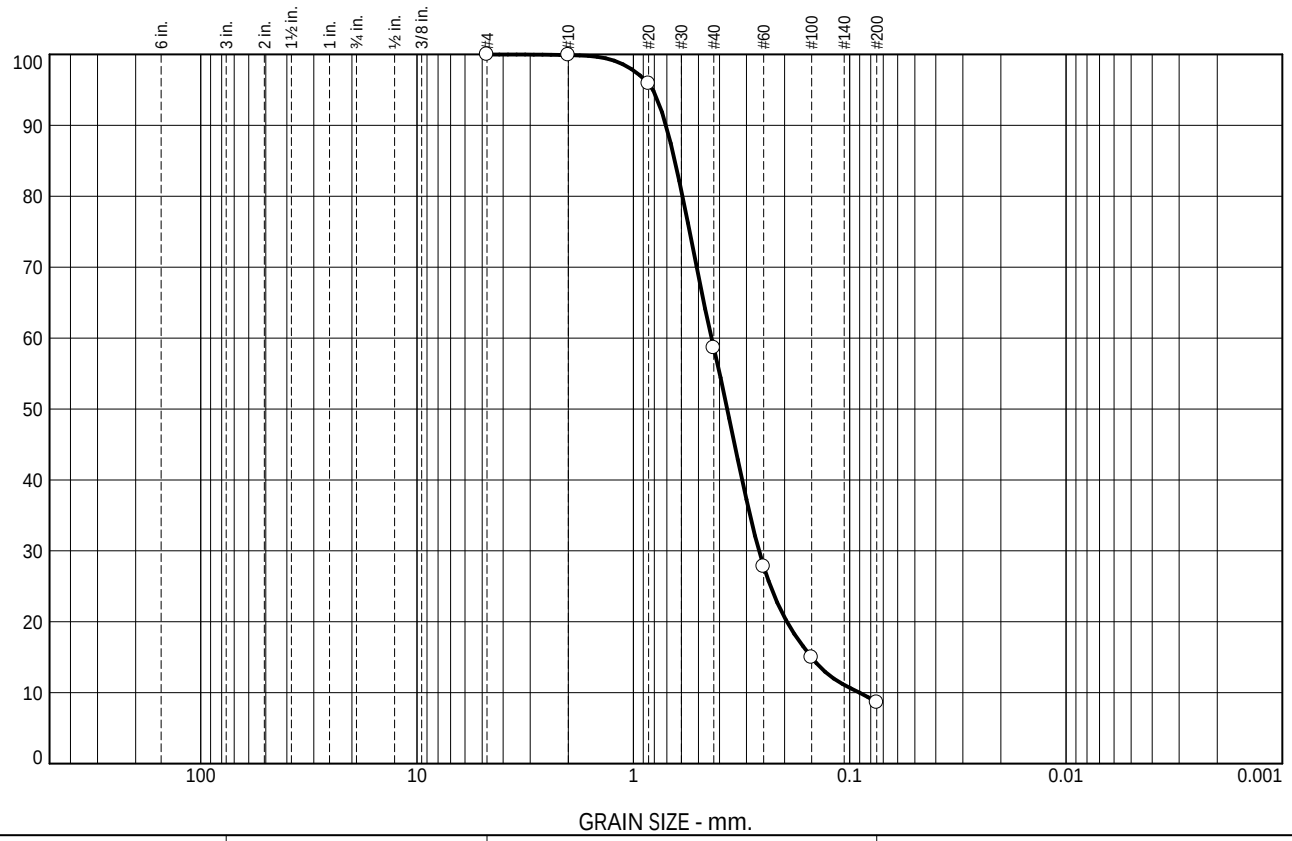
Cranston, RI

Client: GZA GeoEnvironmental
Project: 51 Little West 12th Street
New York, NY
Project No: 41.0163381.00 Fig. 25-S-114

Tested By: RKO/ND/SBR Checked By: Rebecca Roth

These results are for the exclusive use of the client for whom they were obtained. This report only relates to items inspect and/or tested. No warranty, expressed or implied, is made.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.1	41.3	50.0	8.6	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#20	95.9		
#40	58.6		
#60	27.8		
#100	15.0		
#200	8.6		

* (no specification provided)

Soil Description

Red-Brown f-m SAND, trace Silt

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.7068 D_{85}= 0.6431 D_{60}= 0.4354
D_{50}= 0.3683 D_{30}= 0.2626 D_{15}= 0.1502
D_{10}= 0.0900 C_u= 4.84 C_c= 1.76

Classification

USCS= SP-SM AASHTO= A-3

Remarks

Source of Sample: Boring Depth: 65-67'
Sample Number: B-01(OW) S-19

Date: 01.13.25

Thielsch Engineering Inc.

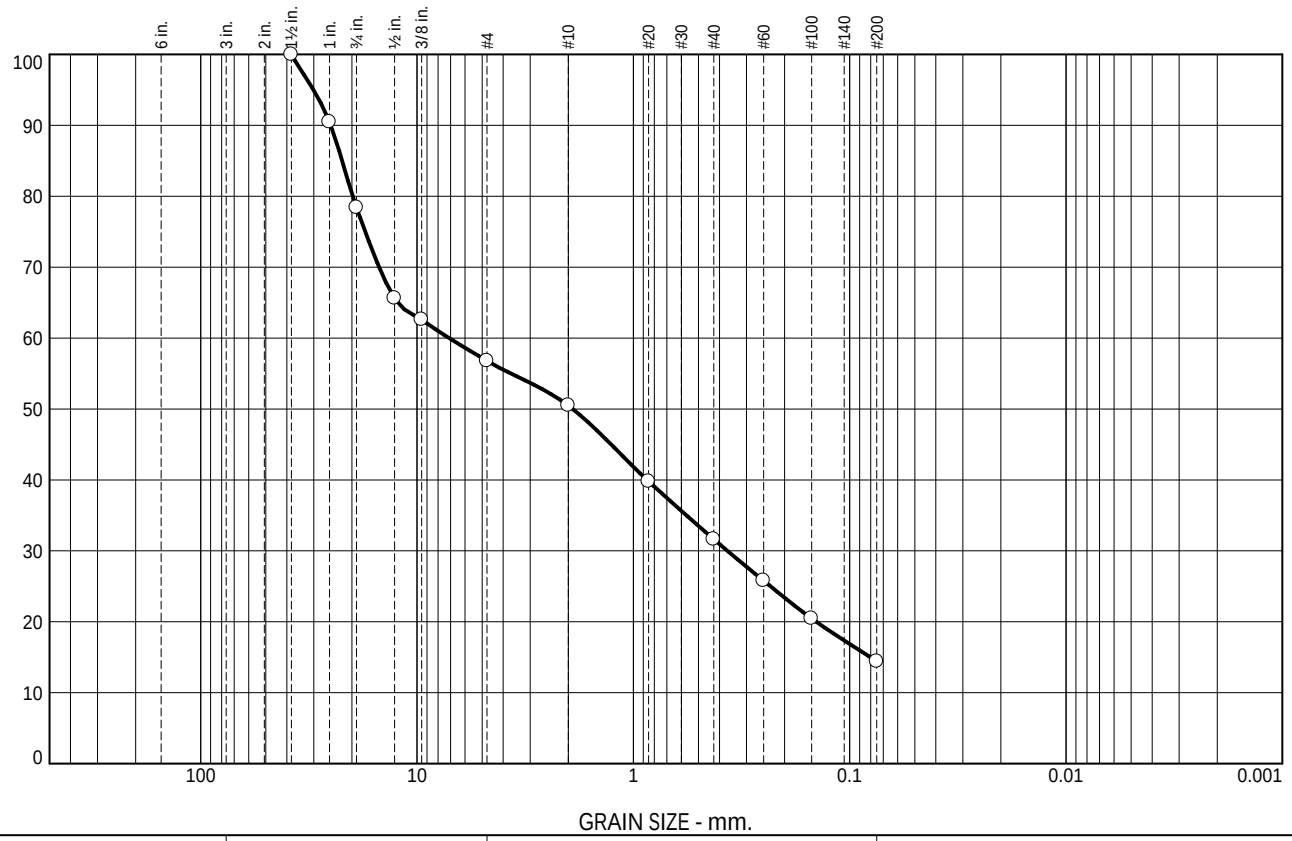
Cranston, RI

Client: GZA GeoEnvironmental
Project: 51 Little West 12th Street
New York, NY
Project No: 41.0163381.00 Fig. 25-S-115

Tested By: RKO/ND/SBR Checked By: Rebecca Roth

These results are for the exclusive use of the client for whom they were obtained. This report only relates to items inspect and/or tested. No warranty, expressed or implied, is made.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	21.6	21.6	6.3	18.9	17.2	14.4	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 1/2"	100.0		
1"	90.5		
3/4"	78.4		
1/2"	65.6		
3/8"	62.6		
#4	56.8		
#10	50.5		
#20	39.8		
#40	31.6		
#60	25.8		
#100	20.5		
#200	14.4		

* (no specification provided)

Soil Description

Brown f-c GRAVEL and f-c SAND, little Silt

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 25.0349 D_{85}= 22.1976 D_{60}= 7.1010
D_{50}= 1.9066 D_{30}= 0.3676 D_{15}= 0.0803
D_{10}= C_u= C_c=

Classification

USCS= GM AASHTO= A-1-b

Remarks

Source of Sample: Boring Depth: 10-12'
Sample Number: B-02 S-6

Date: 01.13.25

Thielsch Engineering Inc.

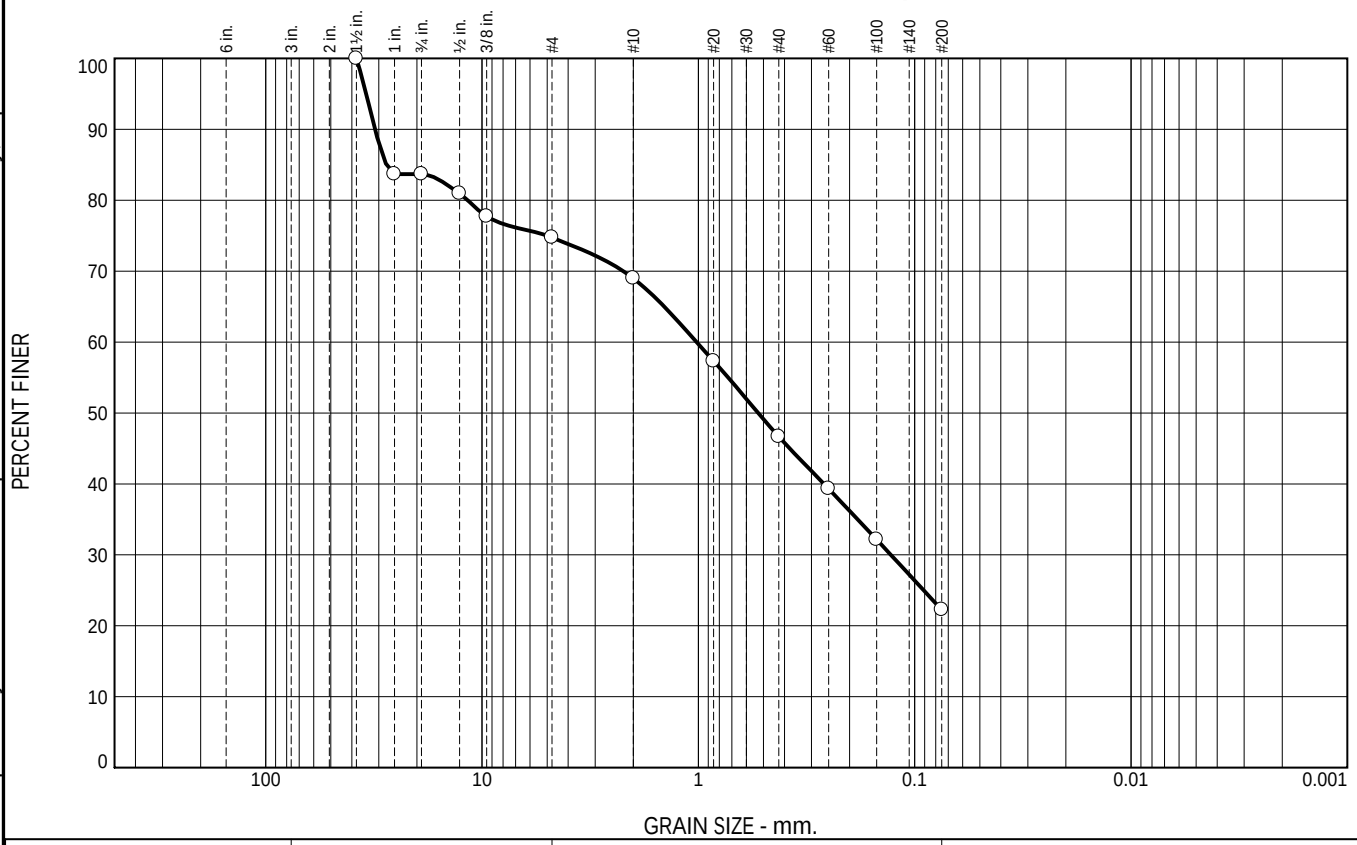
Cranston, RI

Client: GZA GeoEnvironmental
Project: 51 Little West 12th Street
New York, NY
Project No: 41.0163381.00 Fig. 25-S-116

Tested By: SBR/ND Checked By: Rebecca Roth

These results are for the exclusive use of the client for whom they were obtained. This report only relates to items inspect and/or tested. No warranty, expressed or implied, is made.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	16.3	9.0	5.7	22.3	24.5	22.2	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1 1/2"	100.0		
1"	83.7		
3/4"	83.7		
1/2"	81.0		
3/8"	77.7		
#4	74.7		
#10	69.0		
#20	57.3		
#40	46.7		
#60	39.3		
#100	32.2		
#200	22.2		

* (no specification provided)

Soil Description

Brown f-c SAND, some f-c Gravel, some Clayey Silt

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 31.2286 D_{85}= 27.6804 D_{60}= 1.0191
D_{50}= 0.5292 D_{30}= 0.1289 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-1-b

Remarks

Sample visually classified as plastic. Sample rolled to 1/4"

Source of Sample: Boring Depth: 16-18'
Sample Number: B-02 S-9

Date: 01.13.25

Thielsch Engineering Inc.

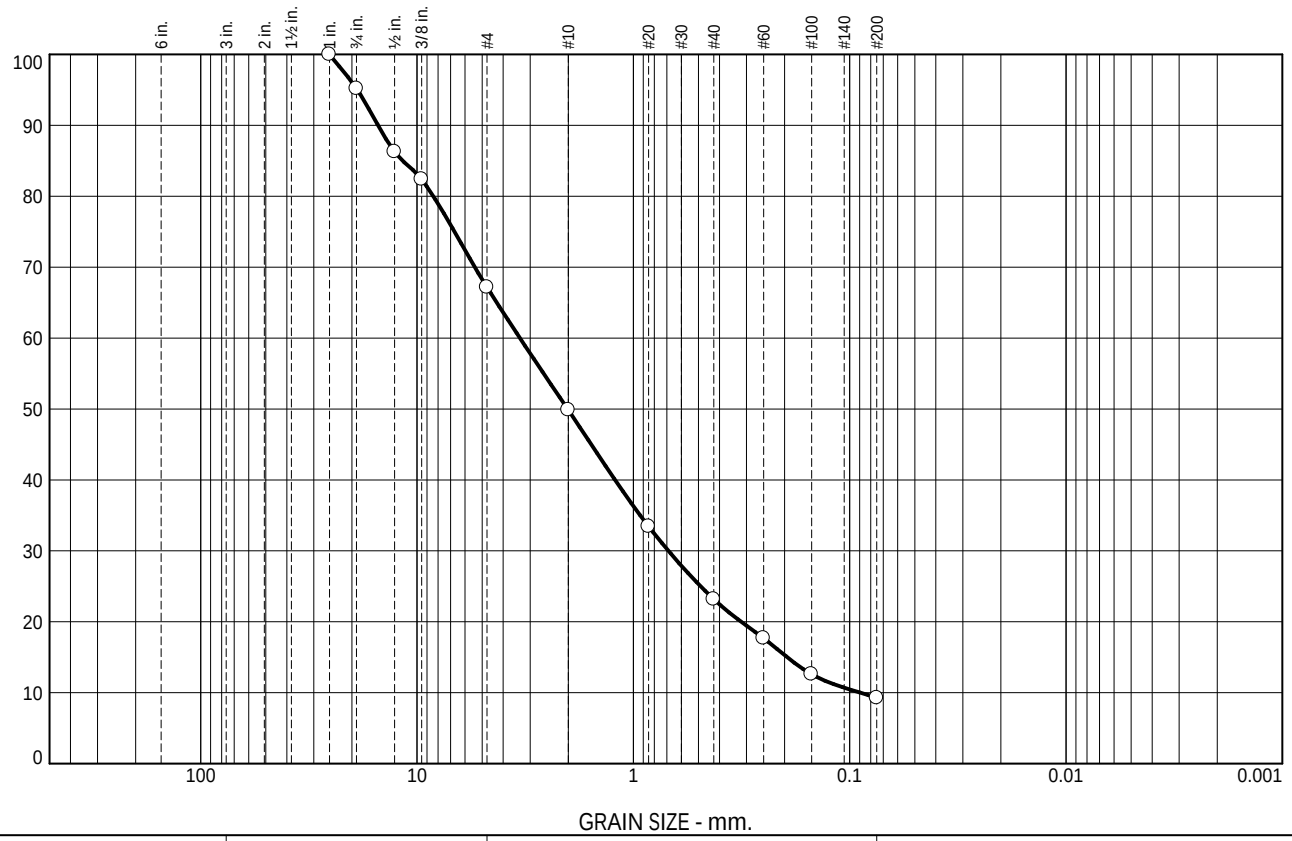
Cranston, RI

Client: GZA GeoEnvironmental
Project: 51 Little West 12th Street
New York, NY
Project No: 41.0163381.00 Fig. 25-S-117

Tested By: SBR/ND Checked By: Rebecca Roth

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Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	4.8	28.0	17.3	26.7	14.0	9.2	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
1"	100.0		
3/4"	95.2		
1/2"	86.3		
3/8"	82.4		
#4	67.2		
#10	49.9		
#20	33.4		
#40	23.2		
#60	17.7		
#100	12.6		
#200	9.2		

* (no specification provided)

Soil Description

Brown f-c SAND, some f-c Gravel, trace Silt

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 15.1432 D_{85}= 11.6588 D_{60}= 3.3435
D_{50}= 2.0138 D_{30}= 0.6888 D_{15}= 0.1945
D_{10}= 0.0893 C_u= 37.46 C_c= 1.59

Classification

USCS= SW-SM AASHTO= A-1-a

Remarks

Source of Sample: Boring Depth: 20-22'
Sample Number: B-02 S-11

Date: 01.13.25

Thielsch Engineering Inc.

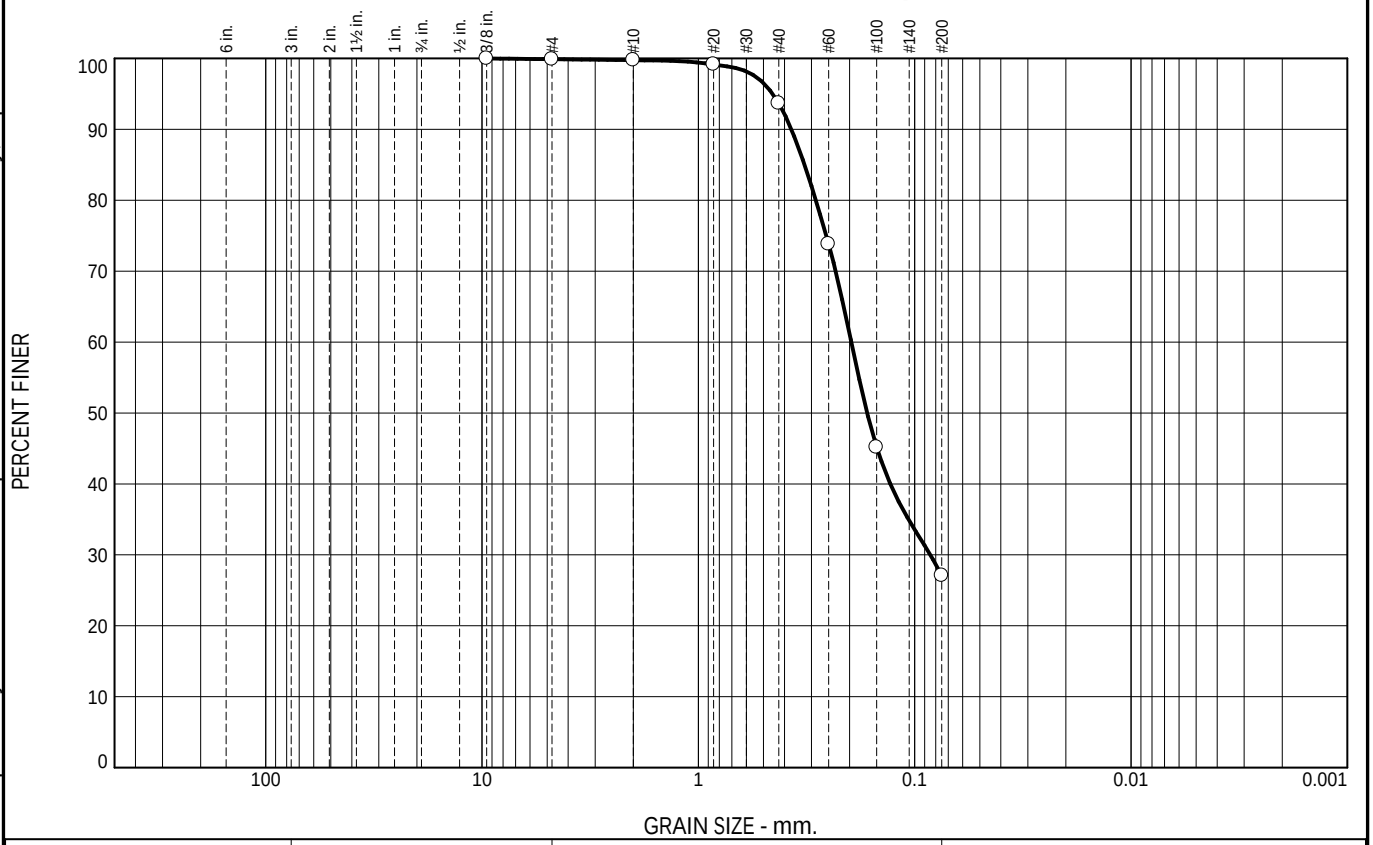
Cranston, RI

Client: GZA GeoEnvironmental
Project: 51 Little West 12th Street
New York, NY
Project No: 41.0163381.00 Fig. 25-S-118

Tested By: ND/SBR Checked By: Rebecca Roth

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Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.1	0.1	6.1	66.6	27.1	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8"	100.0		
#4	99.9		
#10	99.8		
#20	99.1		
#40	93.7		
#60	73.8		
#100	45.2		
#200	27.1		

* (no specification provided)

Source of Sample: Boring Depth: 30-32'
Sample Number: B-02 S-13

Soil Description

Red-Brown fine SAND, some Silt, trace fine Gravel

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.3717 D_{85}= 0.3231 D_{60}= 0.1964
D_{50}= 0.1659 D_{30}= 0.0847 D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-2-4(0)

Remarks

Date: 01.13.25

Thielsch Engineering Inc.

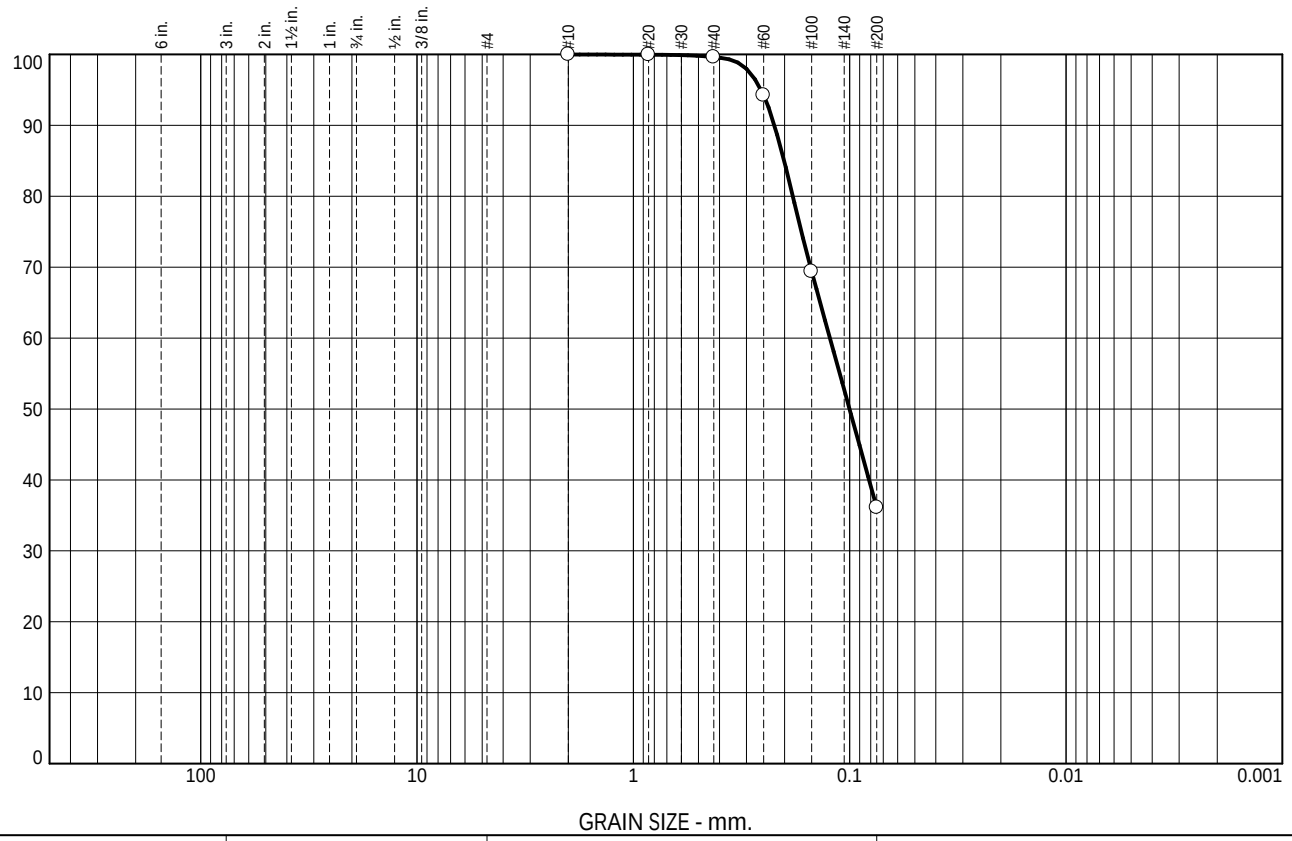
Cranston, RI

Client: GZA GeoEnvironmental
Project: 51 Little West 12th Street
New York, NY
Project No: 41.0163381.00 Fig. 25-S-119

Tested By: ND/SBR Checked By: Rebecca Roth

These results are for the exclusive use of the client for whom they were obtained. This report only relates to items inspect and/or tested. No warranty, expressed or implied, is made.

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.4	63.5	36.1	

SIEVE SIZE OR DIAMETER	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#20	100.0		
#40	99.6		
#60	94.2		
#100	69.4		
#200	36.1		

* (no specification provided)

Soil Description

Red-Brown fine SAND and CLAYEY SILT

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.2230 D_{85}= 0.2010 D_{60}= 0.1234
D_{50}= 0.1002 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Classification

USCS= SM AASHTO= A-4(0)

Remarks

Sample visually classified as plastic. Sample rolled to 1/4"

Source of Sample: Boring Depth: 60-62'
Sample Number: B-02 S-19

Date: 01.13.25

Thielsch Engineering Inc.

Cranston, RI

Client: GZA GeoEnvironmental
Project: 51 Little West 12th Street
New York, NY
Project No: 41.0163381.00 Fig. 25-S-120

Tested By: RKO/ND/SBR Checked By: Rebecca Roth

CLICK HERE TO SIGN UP FOR BUILDINGS NEWS

NYC Department of Buildings

Work Permit Data

Premises: 51 LITTLE WEST 12 STREET MANHATTAN **Filed At: 51 LITTLE WEST 12TH ST MANHATTAN**

BIN: 1012204 Block: 645 Lot: 21 **Job Type: DM - FULL DEMOLITION**

Job No:	120211626			**Fee:**	EXEMPT
Permit No:	120211626-01-DM	**Issued:**	12/21/2009	**Expires:**	07/14/2010
Seq. No.:	01	**Filing Date:**	12/21/2009 INITIAL	**Status:**	ISSUED
Work:		**Proposed Job Start:**	12/21/2009	**Work Approved:**	11/30/2009

FULL DEMOLITION -
DEMOLITION OF THREE STORY LOFT BUILDING UNDER EMERGENCY DECLARATION BY DOB

Use: RES - RESID. BLDG - OLD CODE **Landmark:** N/A **Stories:** 3
Site Fill: OFF-SITE
Review is requested under Building Code: 2008

Adding more than three stories: No
Removing one or more stories: Yes
Performing work in 50% or more of the area of the building: No
Demolishing 50% or more of the area of the building: Yes
Performing a vertical or horizontal enlargement adding more than 25% of the area of the building: No
Mechanical equipment other than handheld devices to be used for demolition or removal of debris to be used: No
Work includes 2,000 cubic yards or more of concrete: No

Issued to: BENEDICT COLUMBO **GC SAFETY REGISTRATION:** GC 601384

Business: TERRASAN ENVIRONMENTAL SO
3200 BORDENTOWN AVENUE OLD BRIDGE NJ 08857 **Phone:** 732-525-1015

Superintendent of Construction: ANTHONY SCOTTO **Registration No:** 0024176
Business: TERRASAN ENVIRONMENT SOUI **Phone:** 732-525-1015
3200 BORDENTOWN AVE OLD BRIDGE NJ 08857

Demolition Subcontractor

Applicant/contractor performing the demolition work for this permit: Yes

DEMOLITION CONTRACTOR: BENEDICT COLUMBO **GC SAFETY REGISTRATION**

Business: TERRASAN ENVIRONMENTAL SO **Registration No:** 601384 - GC

3200 BORDENTOWN AVENUE OLD BRIDGE NJ **Phone:** 732 - 525 - 1015

DEMOLITION CHECKLIST 12/21/2009

CODE	DESCRIPTION	STATUS
A01	PRE-DEMO INSPECTOR'S REPORT	FILED
A02	WORKMEN'S COMPENSATION INSURANCE	FILED
A03	DISABILITY BENEFITS INSURANCE	FILED
A04	STREET OBSTRUCTION BOND	FILED
A05	RODENT CONTROL	WAIVED
A06	GAS CUT-OFF	FILED
A07	ELECTRIC CUT-OFF	FILED
A08	SEWER CUT-OFF	WAIVED
A09	WATER CUT-OFF	WAIVED
A10	SRO INTAKE FORM (SR01) / HPD3 CHECKLIST	FILED
A11	5 DAY PRIOR NOTICE TO ADJOINING OWNERS	FILED
A12	COMMUNITY BOARD NOTIFICATION	FILED
A13	ASBESTOS REPORT (ACP5/ASB4)	FILED
A14	PHOTOGRAPHS	FILED
A15	PW1 APPLICATION FOR FENCE OR NB	FILED
A16	APPOINTMENT CARD FROM B.E.S.T	WAIVED
A17	LANDMARK LETTER RE NO DESIGNATION OR CAL	WAIVED
A18	TITLE SEARCH	WAIVED
A19	DEED FOR TRANSFER OF UNIMPROVED PROPERTY	WAIVED
A20	ECB VIOLATIONS(S) FOR ILLEGAL DEMOLITION	WAIVED
A21	HPD CONH PILOT	N/A
A22	MS4 DEP STORM WATER CONSTRUCTION PERMIT	N/A

If you have any questions please review these Frequently Asked Questions, the Glossary, or call the 311 Citizen Service Center by dialing 311 or (212) NEW YORK outside of New York City.

51 LITTLE W.12TH STREET, NEW YORK 10014

PROJECT INFORMATION

SCOPE OF WORK

14 STORY RESIDENTIAL BUILDING

ZONING INFORMATION

ADDRESS:	51 LITTLE WEST. 12TH STREET, NEW YORK 10014
BLOCK:	645
LOT:	21
MAP:	8B
DISTRICT:	M1-5
LOT AREA:	2,581 SF

BUILDING CODE INFORMATION

BUILDING CODE:	2022 NEW YORK CITY BUILDING CODE
CONSTRUCTION CLASS:	I-B (NON COMBUSTIBLE 2 HR RATED)
OCCUPANCY CLASS:	-
PROP. BUILDING HEIGHT:	-
# OF STORIES:	-
FIRE PROTECTION:	-
FIRE DISTRICT:	INSIDE
FLOOD ZONE:	PROPERTY IS NOT IN SPECIAL FLOOD HAZARD AREA AS PER EFFECTIVE 2007 FIRM MAP AND 2013 PRELIMINARY MAP
ADDITIONAL NOTES:	- THIS BUILDING DOES NOT CONTAIN PREFABRICATED OR MODULAR CONSTRUCTION
	- THIS BUILDING WILL NOT BE OCCUPIED DURING CONSTRUCTION
	- THIS PROPERTY IS NOT LOCATED WITHIN 200 FEET OF ANY TRANSIT STRUCTURE
	- THIS PROPERTY IS FULLY SPRINKLERED BUILDING AS PER BC 903.3.1.1 WITH FIRE ALARM INSTALLED IN ACCORDANCE TO 2022 NYC CONSTRUCTION CODE

NEW BUILDING - APPLICATION # B00836072-I1

THE WORK TYPES TO BE FILED UNDER SEPARATE APPLICATIONS:

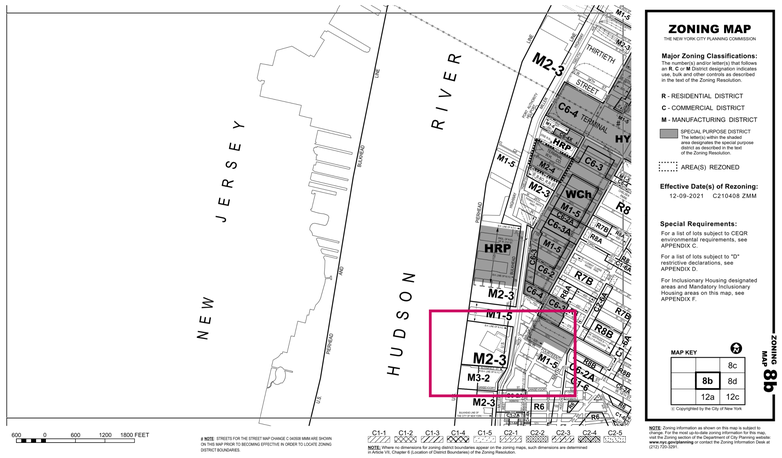
- BUILDING PAVERS PLAN # ----------
- SPRINKLER & STANDPIPE # ----------
- FIRE ALARM APP. # ----------
- MECHANICAL. # ----------
- PLUMBING. # ----------
- FENCE # ----------
- FOUNDATION # ----------
- STRUCTURAL. # ----------
- SOE # ----------
- CURB CUT # ----------
- ARCS # ----------

NYCECC COMPLIANCE STATEMENT

ENERGY CODE COMPLIANCE STATEMENT

TO THE BEST OF MY KNOWLEDGE, BELIEVE AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 NEW YORK CITY ENERGY CONSERVATION CODE, USING CHAPTER C4

ZONING MAP



ZONING MAP
THE NEW YORK CITY PLANNING COMMISSION

Major Zoning Classifications:
The number(s) and/or letter(s) that follows an **R, C** or **M** District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.

R - RESIDENTIAL DISTRICT
C - COMMERCIAL DISTRICT
M - MANUFACTURING DISTRICT
SPECIAL PURPOSE DISTRICT The letter(s) within the shaded area designates the special purpose district described in the text of the Zoning Resolution.
AREA(S) REZONED

Effective Date(s) of Rezoning:
12-09-2021 C210408 ZMM

Special Requirements:
For a list of lots subject to CEQR environmental requirements, see APPENDIX C.
For a list of lots subject to "D" restrictive declarations, see APPENDIX D.
For Inclusionary Housing designated areas and Mandatory Inclusionary Housing areas on this map, see APPENDIX F.

MAP KEY 8b

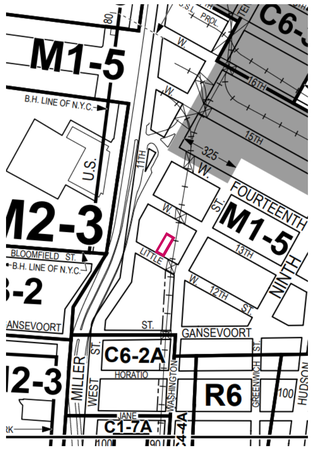
	8b	8c
	12a	8d
		12c

ZONING MAP 8b

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NOTE: Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website: www.nyc.gov/planning or contact the Zoning Information Desk at (212) 720-3291.

AREA OF WORK



MARIN ARCHITECTS
57 W 38TH ST NEW YORK NY 10018
212 463 8480 INFO@ MARINARCHITECTS.COM
CONSULTING ENGINEERS

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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

COVER SHEET

SEAL

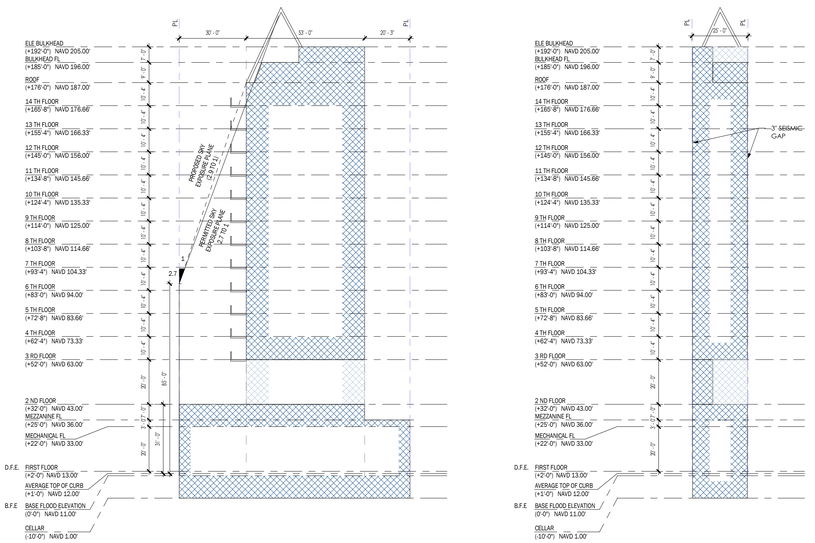
REGISTERED ARCHITECT DMITRIY MARIN STATE OF NEW YORK

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-000.00

DOB BSCAN STICKER



1 HEIGHT & SETBACK DIAGRAM
1/32" = 1'-0"

PROPOSED BUILDING

	BUILDING GROSS FLOOR AREA	USE		DEDUCTIONS	BALCONY AS FLOOR AREA	BALCONY AS NON-FLOOR AREA	ZONING FA		TOTAL ZONING FA
		RESIDENTIAL GROSS	COMMERCIAL GROSS				RESIDENTIAL	COMMERCIAL	
CELLAR	2,525 SQ.FT	1,537 SQ.FT	988 SQ.FT	2,525 SQ.FT					0 SQ.FT
1ST FLOOR	2,102 SQ.FT	790 SQ.FT	1,312 SQ.FT	10 SQ.FT			780 SQ.FT	1,312 SQ.FT	2,092 SQ.FT
MEP FLOOR	1,648 SQ.FT	1,648 SQ.FT	133 SQ.FT	1,515 SQ.FT			0 SQ.FT	133 SQ.FT	133 SQ.FT
2 ND FLOOR	475 SQ.FT	342 SQ.FT	133 SQ.FT	10 SQ.FT			332 SQ.FT	133 SQ.FT	465 SQ.FT
3 RD FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT		165 SQ.FT	1,259 SQ.FT		1,259 SQ.FT
4 TH FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT		165 SQ.FT	1,259 SQ.FT		1,259 SQ.FT
5 TH FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT		165 SQ.FT	1,259 SQ.FT		1,259 SQ.FT
6 TH FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT		165 SQ.FT	1,259 SQ.FT		1,259 SQ.FT
7 TH FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT		165 SQ.FT	1,259 SQ.FT		1,259 SQ.FT
8 TH FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT		165 SQ.FT	1,259 SQ.FT		1,259 SQ.FT
9 TH FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT		165 SQ.FT	1,259 SQ.FT		1,259 SQ.FT
10TH FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT		165 SQ.FT	1,259 SQ.FT		1,259 SQ.FT
11ST FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT		165 SQ.FT	1,259 SQ.FT		1,259 SQ.FT
12ND FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT		165 SQ.FT	1,259 SQ.FT		1,259 SQ.FT
13RD FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT	165 SQ.FT		1,424 SQ.FT		1,424 SQ.FT
14TH FLOOR	1,299 SQ.FT	1,299 SQ.FT		40 SQ.FT	165 SQ.FT		1,424 SQ.FT		1,424 SQ.FT
MECHANICAL ROOF	820 SQ.FT	820 SQ.FT		820 SQ.FT			0 SQ.FT		0 SQ.FT
BULKHEAD	1,088 SQ.FT	1,088 SQ.FT		1,088 SQ.FT			0 SQ.FT		0 SQ.FT
TOTAL	24,246 SQ.FT	21,813 SQ.FT	2,566 SQ.FT	6,448 SQ.FT			16,550 SQ.FT	1,578 SQ.FT	18,128 SQ.FT
									18,128 SQ.FT

ZONING ANALYSIS

ZONING REGULATION	ZR SECTION	PERMITTED / REQUIRED BY UNDERLYING ZONING DISTRICT		PROPOSED	COMPLIANCE / LACK OF COMPLIANCE AND NOTES
PERMITTED USE	ZR 42-10	USE GROUP II - RESIDENTIAL IN M1-5 AND M1-6 DISTRICTS, EXCEPT FOR M1-6D DISTRICTS, LOCATED WITHIN THE RECTANGLE FORMED BY WEST 23RD STREET, FIFTH AVENUE, WEST 31 TH STREET, AND EIGHT AVENUE, NO NEW DWELLING UNITS SHALL BE PERMITTED. USE GROUP III - COMMUNITY FACILITIES USE GROUP VI - COMMERCIAL		USE GROUP II - RESIDENTIAL USE GROUP VI - SERVICE ESTABLISHMENTS (EATING AND DRINKING ESTABLISHMENT)	VARIANCE REQUIRED FOR USE GROUP II
TOWER REGULATIONS	ZR 43-45 ZR 43-451	ZONING LOTS OF LESS THAN 20,000 SF (TOWERS ON SMALL LOT) MAY PENETRATE AN ESTABLISHED SKY EXPOSURE PLANE, SUCH BUILDING OR PORTION THEREOF IS HEREIN AFTER REFERRED TO AS A TOWER. IN DISTRICT M1-5, FOR THE AREA OF THE ZONING IS 10,500 OR LESS MAXIMUM PERCENT OF LOT COVERAGE OF TOWERS ON SMALL ZONING LOT = 50% 2,581/2 = 1,290.5 SF (50%)		MAX LOT COVERAGE : 1,299 SF (50.3 %)	WAIVER REQ.
FLOOR AREA	ZR 43-10	MAX PERMITTED FLOOR AREA RATIO = MAX PERMITTED FLOOR AREA RATIO FOR COMMUNITY FACILITY =		RESIDENTIAL ZF: 16,550 SF COMMERCIAL ZF: 1,578 SF TOTAL ZF: 18,128 SQ. FT	COMPLIES
NUMBER OF DWELLING UNITS	ZR 23-22	FOR RESIDENTIAL USE IN R6-R10, FACTOR FOR DETERMINING MAX NUMBER OF DWELLING UNITS = 680 16,550 / 680 = 18.76 = 24 UNITS		12 UNITS	COMPLIES
YARDS	ZR 43-26	SIDE YARDS	NO SIDE YARD IS REQUIRED. IF PROVIDED, AT LEAST 8FT	NONE PROVIDED	COMPLIES
	ZR 43-26	REAR YARDS	MIN 20 FT	20'-3" FT PROVIDED	COMPLIES
HEIGHT AND SETBACK REGULATIONS	ZR 43-43	MAX. BUILDING HEIGHT: 85 FT OR 6 STORIES, WHICHEVER IS LESS ABOVE SUCH MAX HEIGHT AND BEYOND THE INITIAL SETBACK DISTANCE, THE BUILDING SHALL NOT PENETRATE THE SKY EXPOSURE PLANE. SKY EXPOSURE PLANE, AFTER 85 FT SLOPE OVER ZONING LOT: ON NARROW STREET; VERTICAL DISTANCE = 2.7, HORIZONTAL DISTANCE = 1 INITIAL SETBACK DISTANCE: 20 FT ON NARROW STREET & 15 FT ON WIDE STREET		MAX BUILDING HEIGHT: 176'-0" INITIAL SETBACK DISTANCE: 30'-0"	WAIVER REQ.
PERMITTED OBSTRUCTIONS	ZR 43-42	IN ALL M DISTRICTS, THE OBSTRUCTIONS SET FORTH IN SECTION 23-621 AS WELL AS THE FOLLOWING OBSTRUCTIONS SHALL BE PERMITTED TO PENETRATE A MAXIMUM HEIGHT LIMIT OR A SKY EXPOSURE PLANE SET FORTH IN SECTION 43-43. ZR 23-621: IN ALL RESIDENCE DISTRICTS, THE FOLLOWING OBSTRUCTIONS SHALL BE PERMITTED TO PENETRATE A MAXIMUM HEIGHT LIMIT OR SKY EXPOSURE PLANE. THESE ALLOWANCES ARE GENERALLY COMMON TO RESIDENCE, COMMERCIAL AND MANUFACTURING DISTRICTS. ZR 23-622: IN ALL RESIDENCE DISTRICTS, THE OBSTRUCTIONS SET FORTH IN SECTION 23-621 (GENERAL PERMITTED OBSTRUCTIONS), AS WELL AS THE FOLLOWING OBSTRUCTIONS, SHALL BE PERMITTED TO PENETRATE A MAXIMUM HEIGHT LIMIT OR SKY EXPOSURE PLANE. A) BALCONIES, UNENCLOSED, SUBJECT TO THE PROVISIONS OF SECTION 23-13.			
BALCONIES	ZR 23-13 ZR 23-132	IN THE DISTRICT R6-R10, BALCONIES MAY PROJECT INTO OR OVER ANY REQUIRED OPEN AREA WITHIN A PUBLICLY ACCESSIBLE OPEN AREA, A REAR YARD, AN INITIAL SETBACK DISTANCE, ANY OPEN AREAS NOT OCCUPIED BY TOWERS, ANY REQUIRED SIDE OR REAR SETBACKS, OR ANY REQUIRED OPEN SPACE, PROVIDED THAT SUCH BALCONY SHALL: A) NOT PROJECT BY A DISTANCE GREATER THAN 7FT AS MEASURED FROM THE PLANE SURFACE OF THE BUILDING WALL FROM WHICH IT PROJECTS. B) NOT PROJECT INTO THE MINIMUM REQUIRED DISTANCE BETWEEN BUILDINGS ON THE SAME ZONING LOT F) HAVE AN AGGREGATE WIDTH, AT THE LEVEL OF ANY STORY, NOT EXCEEDING 50% OF THE WIDTH AT THAT LEVEL OF THE PLANE SURFACE OF THE BUILDING WALL FROM WHICH IT PROJECTS.	BALCONY WIDTH: 7'-0"	COMPLIES
ACCESSORY OFF-STREET PARKING	ZR 44-01 ZR 25-20	EXCEPT AS OTHERWISE PROVIDED IN THIS SECTION, THE REGULATIONS OF THIS CHAPTER ON PERMITTED OR REQUIRED ACCESSORY OFF-STREET PARKING SPACES APPLY TO MANUFACTURING, COMMERCIAL OR COMMUNITY FACILITIES USES. IN DISTRICT M1-5, FOR NON-RESIDENTIAL USE, NONE REQUIRED. THE RESIDENTIAL DISTRICT EQUIVALENCY IS UNKNOWN, SO IT IS UNCLEAR WHICH R DISTRICT WOULD APPLY TO DETERMINE THE PARKING REQUIREMENTS.		NONE PROVIDED	COMPLIES
REQUIRED BICYCLE PARKING SPACES	ZR 25-81	FOR RESIDENTIAL, 1 PER 2 DWELLING UNITS: 12/2 = 6 BIKE PARKING REQUIRED COMMERCIAL, 1 PER 7,500 SF: 1,500 / 7,500 = 0.2 = NONE REQUIRED		6 BIKE SPACE PROVIDED 6 X 15 = 90 SQ FT SPACE REQUIRED.	COMPLIES
STREET TREE PLANTING	ZR 26-41	1 FOR EVERY 25'-0" FOR LOT FRONTAGE: 25 FT / 25 = 1 TREE REQUIRED			
FLOOD MAP	ZR 64-11	APPENDIX G STRUCTURAL OCCUPANCY CATEGORY II. MINIMUM ELEVATION OF LOWEST FLOOR: DFE = BFE +2		MINIMUM ELEVATION OF LOWEST FLOOR: DFE= 11'-0" + 2'-0" = 13'-0" BASE PLAN ELEVATION: 13'-0"	COMPLIES
FLOOD-RESISTANT BUILDING				MINIMUM ELEVATION OF LOWEST FLOOR: DFE= 11'-0" + 2'-0" = 13'-0" BASE PLAN ELEVATION: 13'-0"	COMPLIES
FLOOD-RESISTANT CONSTRUCTION ELEVATION				MINIMUM ELEVATION OF LOWEST FLOOR: DFE= 11'-0" + 2'-0" = 13'-0" BASE PLAN ELEVATION: 13'-0"	COMPLIES
FLOOD-RESISTANT CONSTRUCTION STANDARDS				MINIMUM ELEVATION OF LOWEST FLOOR: DFE= 11'-0" + 2'-0" = 13'-0" BASE PLAN ELEVATION: 13'-0"	COMPLIES
HIGH-RISK FLOOD ZONE				MINIMUM ELEVATION OF LOWEST FLOOR: DFE= 11'-0" + 2'-0" = 13'-0" BASE PLAN ELEVATION: 13'-0"	COMPLIES
MEASUREMENT OF HEIGHT	ZR 64-22	ALL HEIGHT MEASUREMENTS IN FLOOD ZONES, INCLUDING THE NUMBER OF STORIES PERMITTED, AS APPLICABLE, MAYBE MEASURED FROM THE REFERENCE PLANE.		BUILDING HEIGHTS ARE MEASURED FROM THE REFERENCE PLANE	COMPLIES
GROUND FLOOR USE	ZR 64-222	PARKING, STORAGE AND BUILDING ACCESS		PARKING GARAGE, STORAGE OR BUILDING ACCESS	COMPLIES

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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

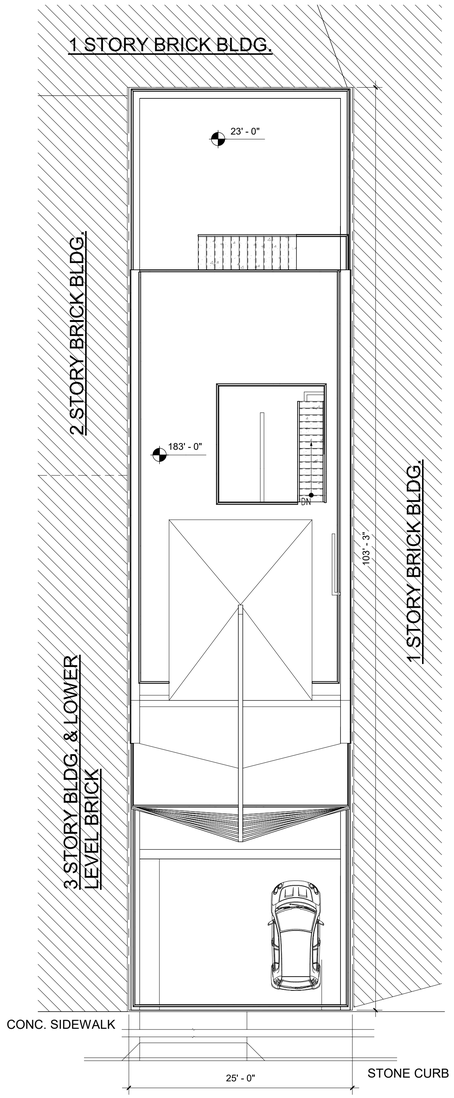
ZONING & BUILDING CODE ANALYSIS

SEAL

REGISTERED ARCHITECT JENNIFER M. MARIN 027234 STATE OF NEW YORK

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-001.00

DOB BSCAN STICKER



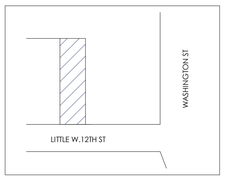
LITTLE WEST 12TH STREET

1 SITE PLAN
1/8" = 1'-0"

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KEY PLAN



CLIENT:
NOVAC NOURY

PROJECT NAME:
51 LITTLE W.12TH ST

PROJECT ADDRESS:
51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:
SITE PLAN

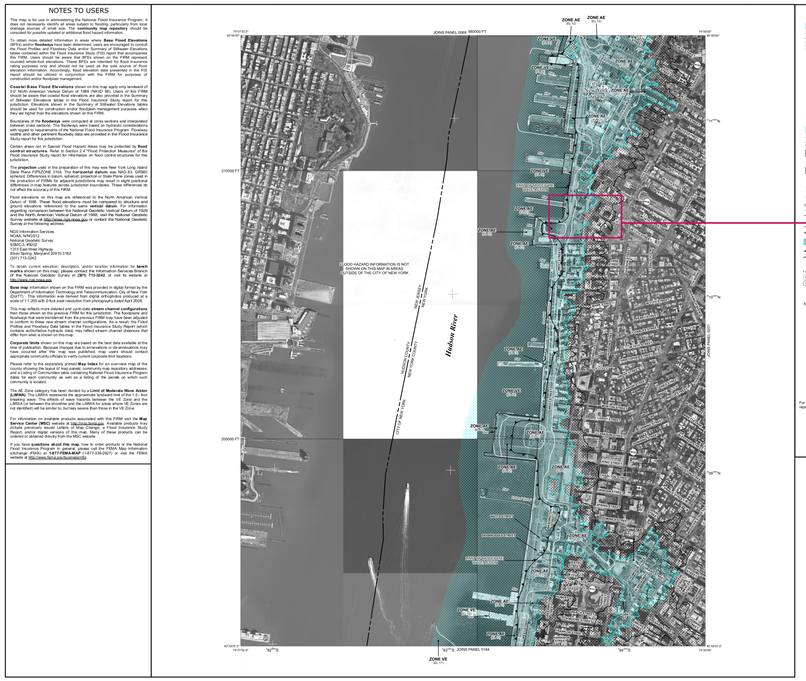
SEAL

REGISTERED ARCHITECT JENNIFER MARIN 027294 STATE OF NEW YORK

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-002.00

DOB BSCAN STICKER

FLOOD ZONE INFORMATION 2013 PRELIMINARY


NOTES TO USERS
This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.
To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.
Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.
Boundaries of the floodways were computed at cross-sections and interpolated between cross-sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.
Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.
The projection used in the preparation of this map was New York Long Island State Plane FIPS 3104 Feet. The horizontal datum was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.
Flood elevations on this map are referenced to the North American Vertical Datum of 1988 (NAVD 88). These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:
NOS Information Services
NOAA, NNGS12
National Geodetic Survey
SSMC3, #9202
1315 East-West Highway
Silver Spring, MD 20910-3282
(301) 713-3242
To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at http://www.ngs.noaa.gov.
Base map information shown on this FIRM was provided in digital format by the Department of Information Technology and Telecommunication, City of New York. This data was compiled from aerial photography at a scale of 1:12,000 and a scale of 1:1,200 with 2-foot pixel resolution from photography dated April 2008.
This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplain boundaries were redelineated from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contains authoritative hydraulic data may reflect stream channel distances that differ from what is shown on this map.
Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.
Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.
The AE Zone category has been divided by a Limit of Moderate Wave Action (LiMWA). The LiMWA represents the inland limit of the 1.5-foot breaking wave. The effects of wave hazards between the VE Zone and the LiMWA (or between the shoreline and the LiMWA for areas where VE Zones are not identified) will be similar to, but less severe than those in the VE Zone.
For information on available products associated with this FIRM visit the Map Service Center (MSC) website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.
If you have questions about this map, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip.
JOINS PANEL 0080
ZONE AE
ZONE VE
JOINS PANEL 0104
Hudson River
ZONE AE
ZONE VE
LEVEE
LEVEE
LEVE

GENERAL NOTES:

1. THE CONTRACTOR SHALL REVIEW AND FAMILIARIZE HIMSELF WITH THE GENERAL NOTES AND SPECIFICATION DRAWINGS AND TO DETERMINE WHICH NOTES APPLY DIRECTLY TO HIS RESPONSIBILITY. ALL SEPARATE SUBTRADES WILL BE RESPONSIBLE FOR REVIEWING THE ENTIRE SET OF DRAWINGS AND NOTING THEIR WORK AS APPLICABLE. ALL WORK INDICATED OR INFERRED ON THE DRAWINGS WILL BE DEEMED AND INCLUDED IN ALL CONTRACTORS' COSTS.
2. THE A/E SHALL BE NOTIFIED OF ANY DISCREPANCIES OR OMISSIONS WHICH WOULD INTERFERE WITH THE SATISFACTORY COMPLETION OF THE WORK, PRIOR TO THE START OF ANY AND ALL WORK.
3. THE GENERAL CONTRACTOR SHALL HAVE HAD EXPERIENCE ON AT LEAST THREE PROJECTS INVOLVING QUALITIES AND COMPLEXITIES OF AT LEAST EQUAL TO THOSE REQUIRED UNDER ALL DIVISIONS DETAILED IN THESE DRAWINGS.
4. THE FOLLOWING TERMS SHALL BE UNDERSTOOD TO BE THE SAME UNLESS SPECIFICALLY NOTED OTHERWISE "CONSTRUCTION SUBCONTRACTOR" "GENERAL CONTRACTOR," AND "CONTRACTOR".
5. EACH SUBCONTRACTOR PRIOR TO CONTRACTION, AND AS ANTICIPATED OR INFERRED PRIOR TO PRICING OR BIDDING SHALL VERIFY ALL JOB CONDITIONS, DIMENSIONS AND DETAILS.
6. ANY AND ALL WORKERS PERFORMING WORK ON THIS PROJECT SHALL BE SKILLED WORKMEN IN THEIR RESPECTIVE TRADES.
7. THE CONTRACTOR SHALL FULLY UNDERSTAND ALL WORK, WHETHER SHOWN OR IMPLIED, UNLESS SPECIFICALLY QUESTIONED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY MISINTERPRETATIONS OR CONSEQUENCES THEREOF FOR ALL WORK ON ALL DRAWINGS.
8. ANY AND ALL WORK SHALL BE COMPLIANT WITH LOCAL AND MUNICIPAL BUILDING CODES THAT ARE APPLICABLE, AS WELL AS ALL REGULATORY AGENCIES INCLUDING, BUT NOT LIMITED TO, OSHA, ETC. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS.
9. SCHEDULING OF ALL WORK TO CONFORM TO THE CONSTRUCTION SCHEDULE AND COOPERATION WITH OTHER CONTRACTORS IN THE REQUIRED SEQUENTIAL INSTALLATION IS THE GENERAL CONTRACTORS RESPONSIBILITY AS APPROVED BY THE ARCHITECT.
10. 10. THE A/E AND THE OWNER RESERVE THE RIGHT TO LET OTHER CONTRACTS IN CONNECTION WITH THE WORK OF THE PROJECT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK AND ESTABLISHING SCHEDULES FOR ALL TRADES; HE SHALL AFFORD OTHER CONTRACTORS REASONABLE OPPORTUNITY FOR THE INTRODUCTION AND STORAGE OF THEIR MATERIALS AND EQUIPMENT AND THE EXECUTION OF THEIR WORK.
11. ALL WORK IS TO CONFORM TO CONSTRUCTION DRAWINGS AND SPECIFICATIONS AND SHALL BE NEW AND BEST QUALITY OF THE KINDS SPECIFIED.
12. THE CONTRACTOR SHALL SUBMIT CERTIFICATES OF INSPECTION AND A CERTIFICATE OF SUBSTANTIAL COMPLETION (A.I.A DOCUMENT #G-704) UPON COMPLETION OF THE JOB.
13. DRAWINGS ARE NOT TO BE SCALED; DIMENSIONS GOVERN.
14. SUBMITTING IN WRITING ALL PROPOSALS FOR ADDITIONAL WORK TO THE A/E FOR REVIEW AND APPROVAL SHALL BE THE CONTRACTORS RESPONSIBILITY. UNTIL A SIGNED AUTHORIZATION TO PROCEED IS RETURNED TO THE GENERAL CONTRACTOR, NO WORK IS TO PROCEED.
15. MATERIAL CHANGE REQUESTS WILL BE CONSIDERED BY THE A/E ON AN INDIVIDUAL BASIS. THE GENERAL CONTRACTOR SHALL SUBMIT SAMPLES AND CUTS FOR WRITTEN APPROVAL BY THE A/E PRIOR TO THE START OF ANY WORK. NO MATERIAL SUBSTITUTIONS SHALL BE MADE.
16. AS DIRECTED BY THE SUPPLIER/MANUFACTURER, IN ACCORDANCE WITH ACCEPTED INDUSTRY STANDARD PRACTICE ALL MATERIALS AND EQUIPMENT SPECIFIED SHALL BE SUPPLIED, INSTALLED, CONNECTED, ERECTED, CLEANED, AND CONDITIONED.
17. THE DELIVERY, HANDLING, AND INSTALLATION OF MATERIALS, EQUIPMENT, AND DEBRIS MUST BE ARRANGED TO AVOID ANY INCONVENIENCE AND ANNOYANCE TO OTHER TENANTS. DEMOLITION AND OTHER WORK WHICH CREATES DISTURBING NOISE MUST BE SCHEDULED WITH BUILDING MANAGEMENT AND PERFORMED DURING HOURS PERMITTED.
18. EQUIPMENT AND OTHER PROPERTY BELONGING TO THE BUILDING SHALL ALSO RECEIVE PROTECTION AND REFURBISHING IF DAMAGED IN THE COURSE OF CONSTRUCTION, TO THE SATISFACTION OF THE OWNER.
19. ALL SUBCONTRACTORS' SHOP DRAWINGS SHALL BE SUBMITTED TO THE A/E FOR APPROVAL THROUGH THE CONSTRUCTION MANAGER PRIOR TO WORK BEING PERFORMED, UNLESS OTHERWISE NOTED.
20. CONTRACTOR SHALL ASSIGN ONE TOILET AREA FOR THE WORKMEN, AND THE G.C. SHALL BE RESPONSIBLE FOR CLEANING, MAINTAINING, AND UPON COMPLETION OF THE WORK, RESTORING IT TO ITS ORIGINAL CONDITION.
21. CONSTRUCTION PERSONNEL MUST CARRY PROPER IDENTIFICATION AT ALL TIMES.
22. ALL FIRE EXITS SHALL BE KEPT CLEAR AND ACCESSIBLE AT ALL TIMES.
23. ALL ELECTRIC HAND TOOLS MUST BE GROUNDED PROPERLY.
24. INDUSTRY STANDARD AND APPROVED PROTECTIVE EYE GOGGLES WILL BE WORN DURING ANY CUTTING, WHETHER BY HAND OR BY MECHANICAL MEANS, OF FLOORS, WALLS, AND ARCHES.
25. IN THE WORK AREAS ALL WINDOWS SHALL BE KEPT CLOSED.
26. ALL DAMAGED LADDERS, BAKERS, AND ROLLING SCAFFOLDING WILL BE IMMEDIATELY REMOVED FROM THE JOB SITE. ALL LADDERS, BAKERS, AND SCAFFOLDING SHALL BE IN GOOD OPERATING CONDITION.
27. FIRE EXTINGUISHERS MUST BE KEPT ON THE JOB SITE DURING CONSTRUCTION.
28. THOROUGH VACUUM CLEANING OF ALL CARPETED AREAS, CLEANING OF ALL FLOORING, MILLWORK, ETC. AND UNCOVERING AND VACUUMING OUT OF ALL CONVECTOR UNITS AFTER THE INSTALLATION IS COMPLETED, AND THE MAINTAINING OF CONDITIONS THROUGH THE TENANT'S MOVE-IN IS THE RESPONSIBLE OF EACH CONTRACTOR.
29. 29. CLEAN UP AND REMOVAL FROM THE PREMISES ALL WASTE MATERIALS, RUBBISH, WRAPPINGS, AND SALVAGES AS GENERATED BY THE CONSTRUCTION, DEMOLITION AND/OR THE DELIVERY AND INSTALLATION OF ANY PRODUCTS, MATERIALS, OR EQUIPMENT IS THE RESPONSIBILITY OF EACH CONTRACTOR THAT IS PART OF HIS CONTRACT.
30. 30. EACH CONTRACTOR SHALL MAINTAIN THE WORK AREA AND THE AREAS INVOLVED IN THE DELIVERY OF MATERIALS FOR CLEANLINESS BEFORE AND AFTER HIS MATERIAL DELIVERY.
31. HAVING A COMPETENT SUPERINTENDENT/FOREMAN ON THE PREMISES AT ALL TIMES WHEN WORK IS IN PROGRESS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
32. RESPONSIBILITY FOR ALL COSTS INCURRED FOR DAMAGES CAUSED BY HIS WORKFORCE/SUBCONTRACTORS LIES ON THE GENERAL CONTRACTOR.33. THE GENERAL CONTRACTOR IS TO INSTALL ADEQUATE PROTECTION OF BUILDING PAPER, MASONITE, OR THEIR APPROVED MATERIAL ON ALL.
33. FINISHED SURFACES AS DIRECTED BY THE BY ARCHITECT/B.S. PRIOR TO THE OWNER'S MOVING DATE, AND SHALL REMOVE SAME FOLLOWING COMPLETION OF THE MOVE.
34. G. C. /SUBCONTRACTOR SHALL SECURE ALL PERMITS FORM ALL APPLICABLE AGENCIES HAVING JURISDICTION FOR EACH FOR THIS PROJECT.
35. OWNER SHALL ARRANGE WITH THE ARCHITECT OF RECORD, A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT ACCEPTABLE BY THE ARCHITECT OF RECORD TO EMPLOY HIS SERVICES FOR ALL ITEMS OFCONTROLLED INSPECTIONS AND PAY FOR SAME.
36. G.C. SHALL RETAIN ONLY LICENSED CONTRACTORS FOR PLUMBING, ELECTRICAL OR ANY OTHER TRADE THAT MAY REQUIRE LICENSING
37. G.C. OR HIS SUB-CONTRACTOR HAVING JURISDICTION SHALL CALL FOR ALL INSPECTIONS OF HIS WORK, GET WRITTEN SIGN-OFFS REQUIRED.
38. AT THE TIME OF PERMIT SECURE, CONTRACTOR WILL BE FURNISHED WITH APPROVED PLANS AND APPLICATIONS FOR THIS PROJECT. SHOULD HE REQUIRE PRINTS OR SEPIAS FOR HIS OR HIS SUB-CONTRACTOR'S USE HE SHALL REIMBURSE THE ARCHITECT OF RECORD FOR SAME.
39. G.C. SHALL MAINTAIN ALL FORMS OF INSURANCE INCLUDING WORKMAN'S COMPENSATION AS REQUIRED BY THE LOCAL BUILDING DEPARTMENT.
40. WHERE NECESSARY, OWNER SHALL PAY ALL COSTS CHARGED BY UTILITY COMPANIES FOR MAKING SERVICE CONNECTIONS, INCLUDING ALL INSTALLATION CHARGES NORMALLY ASSESSED AGAINST THE OWNER AND ALL COST OF INSPECTIONS OR TESTS BY UTILITY COMPANIES OR AUTHORITIES AND FINAL ADJUSTMENT OF FEES WITH LOCAL AUTHORITIES.
41. IT SHALL BE THE DUTY OF THE G. C./C. M. TO COMPLY AND TO REQUIRE ALL AGENTS OF THE G. C./C. M. TO COMPLY, WITH ALL FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS IN THE CONSTRUCTION AND COMPLETION OF THE WORK HEREIN PROVIDED FOR. THE G. C./C. M. SHALL BE SOLELY RESPONSIBLE FOR AND SHALL SAVE THE OWNER HARMLESS FROM ANY AND ALL DAMAGES AND COSTS ON ACCOUNT OF ACCIDENTS OR INJURIES TO PERSONS OR PROPERTY OR PENALTIES THAT MAY BE OCCASIONED BY OR RESULT FROM THE FAILURE OR NEGLECT OF THE G. C./ C. M. TO COMPLY WITH SAID FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS OR FROM ANY OTHER FAILURE OR NEGLECT OF THE G. C./C. M. OR OF ANY AGENT OF THE CONTRACTOR IN THE PERFORMANCE OF THIS CONTRACT.
42. ALL WORK SHALL CONFORM TO THE LOCAL BUILDING CODE AND ALL GOVERNMENTAL AUTHORITIES HAVING JURISDICTION.
43. CONTRACTOR SHALL PROVIDE ALL PERMITS AND SIGN OFFS FOR WORK TO BE PERFORMED.
44. THE FOLLOWING REQUIREMENTS ARE PART OF THE CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT. THIS SPECIFICATION INCLUDES CERTAIN ITEMS OF GENERAL NATURE THAT APPLY TO THE WORK AS A WHOLE. SUCH REQUIREMENTS SHALL ALSO APPLY TO, AND BE MADE PART OF, EACH SECTION OF THE SPECIFICATIONS, AS THEY ARE APPLICABLE TO THE WORK OF THIS PROJECT.
45. THE CONTRACTOR SHALL MAINTAIN ALL FORMS OF INSURANCE INCLUDING WORKMANS COMPENSATION AS REQUIRED BY THE LOCAL BUILDING DEPARTMENT.
46. THE CONTRACTORS ARE TO VERIFY ALL MEASUREMENTS AND FIELD CONDITIONS AT SITE PRIOR TO PROCEEDING WITH THE WORK AND IMMEDIATELY NOTIFYING THE ARCHITECT AS TO ANY DISCREPANCIES.
47. THE CONTRACTOR SHALL PROVIDE ALL MEANS OF PROTECTION REQUIRED AND NEEDED FOR THE PROPERTY, ADJOINING PROPERTY, WORKERS AND PEDESTRIANS IN ACCORDANCE WITH THE LOCAL BUILDING CODE AND OTHER AGENCIES HAVING JURISDICTION. THIS PROTECTION SHALL BE MAINTAINED THROUGHOUT THE ENTIRE PERIOD OF THE WORK.
48. UNLESS OTHERWISE NOTED, ALL MATERIALS USED ON THE PROJECT SHALL BE NEW AND THE BEST OF THEIR RESPECTIVE KINDS.
49. ALL CONSTRUCTION IS TO BE CONFINED TO THE AREA OF WORK AND SHALL NOT CREATE ANY INCONVENIENCE SUCH AS DUST, DIRT, NOISE, ETC. TO ANY OTHER SPACE WITHIN THE BUILDING. CONTRACTOR TO PROVIDE PROTECTION TO ALL PROPERTY, WORKERS AND PEDESTRIANS IN ACCORDANCE WITH LOCAL BUILDING CODES, INCLUDING NO INTERRUPTION OF ESSENTIAL SERVICES INCLUDING HEAT, HOT WATER, ELECTRICITY AND SECURITY.
50. ALL REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND ORDERLY MANNER AND THE WORK SHALL CONFORM TO THE LOCAL CODES, REGULATIONS AND OTHER AGENCIES HAVING JURISDICTION. ALL ITEMS REMOVED FROM THE PREMISES AND NOT SCHEDULED FOR REUSE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE.
51. ALL AREAS DISTURBED BY THE NEW WORK SHALL BE PATCHED TO MATCH EXISTING ADJACENT SURFACES.
52. ALL ELECTRICAL WORK TO BE DONE ACCORDING TO THE LOCAL ELECTRICAL CODE.
53. ALL WORK SHOWN IS DIAGRAMMATIC AND SHALL BE INSTALLED TO FIT ACTUAL BUILDING CONDITIONS. CONTRACTOR SHALL, AS PART OF CONTRACT, FURNISH ALL INCIDENTALS NECESSARY TO LEAVE EACH PART OF THE THE WORK COMPLETE AND READY FOR OPERATION.
54. THE CONTRACTOR SHALL CHECK AND VERIFY ALL CONDITIONS, DIMENSIONS, NOTES, ETC. AT THE SITE AND REPORT TO THE ARCHITECT, ALL DISCREPANCIES AND OTHER CONDITIONS NOT NOTED BEFORE PROCEEDING WITH THE WORK.
55. WATER DISTRIBUTION SYSTEM PIPING SHALL BE COPPER PIPE, COPPER TUBING, OR AS PER PLUMBING DRAWINGS.
56. CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, TO ARCHITECTS FOR APPROVAL.
57. ALL STRUCTURAL STEEL WORK SHALL CONFORM WITH ALL REQUIREMENTS OF THE LOCAL BUILDING CODE AND WITH AISC SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS. ELECTRICITY AND SECURITY.

CONSTRUCTION NOTES:

1. PRIOR TO COMMENCEMENT OF ANY WORK FINAL PLACEMENT OF ALL PARTITIONS IS TO BE APPROVED IN THE FIELD BY ARCHITECTS' REPRESENTATIVE.
2. ALL GYPSUM BOARD PARTITIONS SHALL BE PROPERLY BRACED.
3. WATER-RESISTANT TYPE GYPSUM BOARD IS TO BE USED AT ALL TOILETS AND AROUND ALL PANTRY SINKS.
4. ALL METAL TRIMS ON GYPSUM BOARD PARTITIONS SHALL BE TYPE # 200 SERIES AS MANUFACTURED BY U.S. GYPSUM OR EQUAL.
5. ALL PARTITION DIMENSIONS ARE FROM FINISHED SURFACE UNLESS OTHERWISE NOTED.
6. INSTALLATION OF ALL GYPSUM BOARD SHALL BE VERTICALLY IN FULL LENGTH SECTIONS.
7. WHERE A PARTITION MEETS THE WINDOW MULLION, PROVIDE A CONTINUOUS COMPRESSIBLE FILLER STRIP.
8. DRYWALL CONTRACTOR SHALL BE RESPONSIBLE FOR TAPING AND SPACKLING OF GYPSUM BOARD INSTALLED AS WELL AS PATCHING AND REPAIRING ALL WALLS, CEILING, AND COLUMNS TO REMAIN AS EXISTING.
9. NOT USED
10. AT CONTRACTOR'S EXPENSE ALL FIREPROOFING ON STEEL MUST BE REPLACED IF DAMAGED OR MISSING.
11. PROVIDE ACCESS DOORS (APPROX 4 SQ. FT) FOR PLUMBING, ELECTRICAL, ETC. AS REQUIRED TO ACCESS EQUIPMENT OR CONTROLS. LOCATION TO BE APPROVED BY A/E. (REF. CONTRACT SCOPE OF WORK).
12. CAPPING ALL EXPOSED EXISTING PIPING NOT BEING USED BEHIND FINISH SURFACE SHALL BE THE CONTRACTORS RESPONSIBILITY.
13. ALL DOORS, EXISTING AND NEW, TO BE UNDERCUT TO 5/8" A.F.F. UNLESS OTHERWISE NOTED.
14. SEE DOOR SCHEDULE/HARDWARE SCHEDULE FOR INFORMATION. ALL LOCKSETS SHALL BE MASTER KEYED AS REQUIRED BY OWNER.
15. CONTRACTOR SHALL FURNISH AND INSTALL FIREPROOF BLOCKING IN CEILINGS OR PARTITIONS AS REQUIRED, OR WHERE WALL-MOUNTED EQUIPMENT OR CABINETRY IS INDICATED, FOR A COMPLETE INSTALLATION.
16. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DOCUMENT ANY PRE-EXISTING DAMAGE AND NOTIFY THE A/E OF ANY SUCH DAMAGE PRIOR TO PRICING OR BIDDING. WHERE EXISTING SURFACES OR FINISHES ARE TO REMAIN, IF DAMAGED DURING DEMOLITION OR ANY OTHER STAGE OF THE WORK, SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE TO "LIKE NEW" CONDITION.
17. AS REQUIRED AND PREPARED TO RECEIVE NEW FINISHES PER FINISH PLAN ALL EXISTING CONSTRUCTION TO REMAIN SHALL BE PATCHED AND REPAIRED.
18. NOT USED
19. FAMILIARIZATION OF THE SITE BY THE CONTRACTOR WITH ALL EXISTING CONDITIONS ON THE SITE IS HIS RESPONSIBILITIES. THE CONTRACTOR BE FAMILIAR TO ANY EXISTING CONDITIONS WHICH MIGHT REQUIRE PERMANENT OR TEMPORARY ACCESS DOORS, AND SHALL INCLUDE IN HIS BID AS A SEPARATE PRICE THE COST OF FURNISHINGS AND INSTALLING THESE ACCESS DOORS. STATING QUANTITY AND UNIT COST.
20. ALL MATERIALS & WORK PERFORMED SHALL BE UNCONDITIONALLY GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE WORK BY ARCHITECT. ALL WORK MUST BE REPLACED PROMPTLY AND WITHOUT CHARGE FOR MATERIALS, LABOR, OVERTIME LABOR, TRANSPORTATION OR ANY OTHER COST WHAT-SO-EVER.
21. THE CONTRACTOR SHALL CONTACT THE ARCHITECT TO RESOLVE ANY CHANGES, OMISSIONS OR PLAN DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
22. THE CONTRACTOR SHALL COORDINATE ALL PORTIONS OF WORK AS DESCRIBED IN THESE PLANS.
23. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES INCLUDING BUT NOT LIMITED TO SEWER, WATER, GAS, HVAC, ELECTRIC SERVICE OR SUB-PANEL.
24. WHERE NECESSARY, CONTRACTOR SHALL PAY ALL COSTS CHARGED BY UTILITY COMPANIES FOR MAKING SERVICE CONNECTIONS AND ALL COST OF INSPECTIONS OR TEST BY UTILITY COMPANIES OR AUTHORITIES AND FINAL ADJUSTMENT FEES WITH LOCAL AUTHORITIES.
25. G.C. SHALL PROVIDE ALL MEANS OF PROTECTION REQUIRED AND NEEDED FOR THE PROPERTY, ADJOINING PROPERTY, WORKERS AND PEDESTRIANS IN ACCORDANCE WITH THE LOCAL BUILDING CODE AND OTHER AGENCIES HAVING JURISDICTION. THIS PROTECTION SHALL BE MAINTAINED THROUGHOUT THE ENTIRE PERIOD OF THE WORK.
26. PERSONNEL AND PROPERTY SHALL BE SAFEGUARDED AT ALL TIMES. WHEN HOISTING, PLACING, OR DELIVERING EQUIPMENT, MATERIALS AND TOOLS ALONG SIDE, OVER OR ON EXISTING STRUCTURES, THE G.C. SHALL BE REQUIRED TO EXERCISE ALL DUE SAFETY PRECAUTIONS TO PREVENT ACCIDENTS. THE G.C. SHALL BE RESPONSIBLE FOR ENFORCING ALL MEASURES NECESSARY TO PREVENT ACCIDENTS AND FIRES.
27. IT SHALL BE THE DUTY OF THE G.C. TO COMPLY AND TO REQUIRE ALL AGENTS OF THE G.C. TO COMPLY, WITH ALL FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS OR FROM ANY OTHER FAILURE OR NEGLECT OF THE G.C OR OF ANY AGENT OF THE CONTRACTOR IN THE PERFORMANCE OF THIS CONTRACT.
28. IN THE CONSTRUCTION AND COMPLETION OF THE WORK HEREIN PROVIDED FOR THE G.C. SHALL BE SOLELY RESPONSIBLE FOR AND SHALL SAVE THE OWNER HARMLESS FROM ANY AND ALL DAMAGES AND COSTS ON ACCOUNT OF ACCIDENTS OR INJURIES TO PERSONS OR PROPERTY OR PENALTIES THAT MAY BE OCCASIONED BY OR RESULT FROM THE FAILURE OR NEGLECT OF THE G.C. TO COMPLY WITH SAID FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS OR FROM ANY OTHER FAILURE OR NEGLECT OF THE G.C. OR OF ANY AGENT OF THE CONTRACTOR IN THE PERFORMANCE OF THIS CONTRACT.

REFLECTED CEILING NOTES:

1. SEE ENGINEERS DRAWINGS FOR ALL CEILING DIFFUSERS, DUCTWORK LAYOUTS, TRANSFER DUCTS, FUSIBLE LINK DAMPERS, ETC. CONSTRUCTION DRAWINGS INDICATE DIFFUSERS FOR LOCATION ONLY. WHERE DISCREPANCIES OCCUR BETWEEN ENGINEERING AND ARCHITECTURAL DRAWINGS REGARDING LOCATIONS, ARCHITECTURAL DRAWINGS SHALL GOVERN.
2. CONTRACTOR SHALL PROVIDE A COMPOSITE CEILING PLAN AND NECESSARY SHOP DRAWINGS COORDINATING ALL TRADES, SHOWING THE LOCATION OF SUSPENSION MEMBERS, LIGHT FIXTURES, EMERGENCY AND EXIT LIGHTING, H.V.A.C. FIXTURES, DRAPERY POCKETS, FIRE DAMPERS, ACCESS DOORS, FASCIAS, SOFFITS AND AL OTHER ITEMS PENETRATING OR ATTACHED TO THE CEILING. (REF. CONTRACT SCOPE OF WORK.)
3. SEE ENGINEER'S DRAWINGS FOR ADDITIONAL NOTES AND GENERAL INFORMATION.
4. SEE ENGINEER'S DRAWINGS FOR ALL LIGHT FIXTURE CURCUITING, EMERGENCY AND EXIT LIGHTING, SMOKE DETECTORS, STROBE LIGHTING, ALARM SPEAKERS, SWITCHING AND RELATED WORK. LIGHT SWITCHES AND DIMMERS AS INDICATED ON TMG PLANS ARE FOR LOCATION ONLY. CONTRACTOR IS TO VERIFY ALL LIGHT FIXTURE WATTAGE (MAX.) AND PROVIDE PROPER NUMBER OF SWITCHES AT THAT LOCATION TO SERVICE INDICATED LIGHT FIXTURES.
5. NO CEILING BREAKS WILL BE PERMITTED WITHIN A ROOM, UNLESS OTHERWISE NOTED.
6. NOT USED.
7. ACCESS DOOR LOCATIONS TO BE REVIEWED IN THE FIELD PRIOR TO INSTALLATIONS, AND THEIR LOCATIONS TO BE APPROVED BY THE A/E.
8. SEE REFLECTED CEILING PLAN FOR CEILING HEIGHTS. MAINTAIN CEILING HEIGHT THROUGHOUT. NOTIFY ARCHITECT OF ANY COMPLICATIONS WITH HEIGHT.
9. CONTRACTOR TO CLEAN, RELAMP, AND REPLACE ALL FAULTY BALLASTS AND/OR BALLASTS NOT CONFIRMING TO THE LATEST LOCAL BUILDING CODE.
10. CONTRACTOR SHALL PROVIDE AND INSTALL SHALLOW DEPTH FIXTURES AS FIELD CONDITIONS NECESSITATE, WITH THE A/E'S APPROVAL.
11. ALL SWITCHES/DIMMERS TO BE MOUNTED AT 3' - 2" A.F.F. TO CENTER LINE OF SWITCH/DIMMER. MULTIPLE SWITCHES AND/OR DIMMERS TO GANGED AND PROVIDED WITH SINGLE GANG PLATE.
12. EACH CONTRACTOR TO PROVIDE INITIAL LAMPING OF ALL FIXTURES AND INSTALL APPROPRIATE LAMPS AS REQUIRED BY SPECIFIED LIGHT FIXTURE.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING COMPATIBILITY OF LIGHTING FIXTURES WITH THE SPECIFIED CEILING SYSTEM.
14. ALL FLUORESCENT FIXTURES SHALL HAVE WARM WHITE LAMPS. U.O.N.- SEE LIGHTING SCHEDULE.
15. NOT USED
16. CONTRACTOR TO PROVIDE APPROPRIATE SIZED CUT-OUT ABOVE CEILING WHERE PARTITION WALLS EXTEND TO SLAB ABOVE. AS REQUIRED FOR CIRCULATION OF RETURN AIR TO H.V.A.C. SYSTEM. FURNISH AND INSTALL FIRE DAMPERS AS REQUIRED TO MAINTAIN THE INTEGRITY OF RATED WALLS.
17. ALL EXHAUST FAN EQUIPMENT TO BE LOCATED OUTSIDE THE SPECIFIED ROOM AND DUCTED INTO THE SPACE TO THE CEILING REGISTER. ALL EXHAUST FANS TO BE CONTROLLED BY A (RED) PILOT LIGHT WALL MOUNTED SWITCH.
18. H.V.A.C. CONTRACTOR IS RESPONSIBLE TO BALANCE THE H.V.A.C. SYSTEM AFTER THE INSTALLATION IS COMPLETED AND IS TO SUBMIT A WRITTEN REPORT TO THE A/E'S OFFICE FOR REVIEW AND APPROVAL.
19. INSTALL DIRECTIONAL ACOUSTICAL TILE WITH THE GRAIN IN ONE DIRECTION ONLY IN ANY SINGLE SPACE. AS DIRECTED BY THE ARCHITECT.
20. SPRINKLER CONTRACTOR TO SUBMIT A LAYOUT SHOP DRAWING TO ARCHITECT'S OFFICE FOR REVIEW AND APPROVAL OF ALL SPRINKLER HEAD LOCATIONS PRIOR TO FABRICATION OF ANY WORK.

COORDINATION

1. CONTRACTOR SHALL COORDINATE ALL LABOR AND MATERIALS REQUIRED, AND SHALL BE RESPONSIBLE FORSCHEDULING ALL TRADES AND FOR COORDINATION WITH OWNER SUPPLIED ITEMS AND WORK.
2. CONTRACTOR SHALL PROVIDE SUPERVISION ADEQUATE FOR THE COMPLETION OF THE WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING SITE CONDITIONS TO ENSURE ADEQUATE CLEARANCE FOR MOVING ALL MATERIALS, ASSEMBLIES AND EQUIPMENT TO AND FROM THE SITE AS REQUIRED.
4. EACH SUBCONTRACTOR SHALL IDENTIFY LONG LEAD ITEMS INDEPENDENTLY AND SHALL NOTIFY THE GENERAL CONTRACTOR TO ENSURE THAT PRODUCTS ARE ORDERED AND DELIVERED ON TIME. GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY ITEMS REQUIRING LONG LEAD TIMES THAT MAY ADVERSELY EFFECT THE PROJECT SCHEDULE.
5. CONTRACTOR SHALL COORDINATE ALL WORK, TRADES AND SUBMITTALS WITH MANUFACTURES' LEAD TIMES TO ENSURE THAT ALL MATERIALS AND PRODUCTS ARE REVIEWED, ORDERED AND DELIVERED ON SCHEDULE. SUBSTITUTIONS SHALL NOT BE ACCEPTED FOR FAILURE TO COORDINATE SUBMITTALS OR ORDERS WITH MANUFACTURERS' LEAD TIMES.
6. CONTRACTOR SHALL WORK CLOSELY WITH THE OWNER TO COORDINATE DELIVERY AND INSTALLATION OF OWNER-SUPPLIED ITEMS AND WORK. CONTRACTOR SHALL PROVIDE FOR RECEIVING AND STORAGE OF OWNER-SUPPLIED EQUIPMENT, CASEWORK AND FURNITURE.
7. CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL OWNER SCHEDULING REQUIREMENTS AND COMMUNICATE REGULARLY WITH THE BUILDING MANAGEMENT, CONTRACT OWNER, AND ARCHITECT.
8. CONTRACTOR SHALL BE RESPONSIBLE TO LAY OUT THE WORK AND SHALL PROVIDE ALL DIMENSIONS REQUIRED FOR OTHER TRADES, I.E. PLUMBING, ELECTRICAL, ETC. OR OTHER DISRUPTIVE WORK WITH THE BUILDING OWNER AND ANY AFFECTED TENANTS TO MINIMIZE DISRUPTION. CONTRACTOR TO PROTECT ANY EFFECTED AREAS AND RESTORE FINISHED TO THEIR FORMER CONDITION.
9. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT UPON COMPLETION OF THE PARTITION LAYOUT CHALK LINES. NO STUD OR TRACK SHALL BE INSTALLED WITHOUT THE APPROVAL OF THE ARCHITECT.

SMOKE DETECTOR NOTE

1. SMOKE DETECTORS SHALL BE INSTALLED AS REQUIRED BY SUBCHAPTER 17 ARTICLE 6 ENTITLED "SMOKE DETECTING DEVICES"(C26-1705.01) IN DWELLING UNITS.
2. DETECTORS SHALL BE EITHER IONIZATION CHAMBER OR PHOTOELECTRIC TYPE TO COMPLY WITH RS17-11.
3. UNITS TO BE APPROVED BY THE BOARD OF STANDARDS AND APPEALS ACCEPTED PURSUANT TO RULES AND REGULATIONS PROMULGATED BY THE COMMISSIONER OR LISTED BY AN ACCEPTABLE TESTING LABORATORY, SUCH AS, UNDERWRITER'S LABORATORY, NORTHBROOK, ILLINOIS, MEA LAB.
4. UNITS SHALL BE INSTALLED IN AREAS DESIGNATED ON PLANS.THEY SHALL BE LOCATED ON OR NEAR THE CEILING AND WITHIN 15'-0" OF ANY ROOMS USED FOR SLEEPING PURPOSED. FOR DWELLING UNITS WITH MULTIPLE LEVELS, WHEN ANY LEVEL HAS ONLY ONE MEANS OF EGRESS, UNITS SHALL BE PROVIDED AT ALL LEVELS.
5. SMOKE DETECTORS SHALL BE INSTLLED AS FOLLOWS: (A) CEILING MOUNT-CLOSET EDGE OF UNIT SHALL BE MINIMUM OF 4" FROM ANY WALL (B) WALL MOUNT-CLESET EDGE OF UNIT SHALL BE MINIMUM OF 6"AND A MAXIMUM OF 12" FROM CEILING.

CARBON MONOXIDE DETECTING DEVICE NOTE

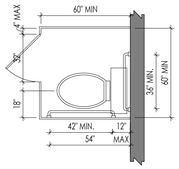
1. HARD WIRED CARBON MONOXIDE DETECTORS WITH BATTERY BACK-UP WILL BE PROVIDED IN EACH APARTMENT WITHIN FIFTEEN OF EVERY BEDROOM.
2. SUCH CARBON MONOXIDE DETECTING DEVICE MAY BE COMBINED WITH A SMOKE DETECTING DEVICE THAT COMPLIES WITH THE PROVISIONS OF THIS TITLE AND ANY APPLICABLE RULES PROMULGATED THERE UNDER 27-9812(a
3. ALL CARBON MONOXIDE DETECTING DEVICES REQUIRED TO BE PROVIDED AND AND INSTALLED PURSUANT TO THIS ARTICLE SHALL BE OF A TYPE AUTHORIZED BY THE RULES PROMULGATED BY THE COMMISSIONER 27-9812(a)
4. KEEP AND MAINTAIN CARBON MONOXIDE DETECTING DEVICES IN GOOD REPAIR.
5. REPLACE ANY CARBON MONOXIDE DETECTING DEVICES WHICH HAS BEEN STOLEN, REMOVED, FOUND, MISSING OR RENDERED INOPERABLE PRIOR TO THE COMMENCEMENT OF A NEW OCCUPANCY OF A DWELLING UNIT.
6. KEEP SUCH RECORDS AS THE COMMISSIONER SHALL PRESCRIBE RELATING TO THE INSTALLATION AND MAINTENANCE OF CARBON MONOXIDE DETECTING DEVICES IN THE BUILDING AND MAKE SUCH RECORDS AVAILABLE TO THE COMMISSIONER UPON REQUEST

SURFACE STORMWATER MANAGEMENT

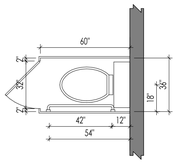
TREAT OR RETAIN ON SITE PRECIPITATION EQUIVALENT TO THE 60TH PERCENTILE PRECIPITATION EVENT. WHERE NOT FEASIBLE DUE TO GEOTECHNICAL ISSUES, SOIL CONDITIONS, OR THE SIZE OF THE SITE, TREAT OR RETAIN THE MAXIMUM VOLUME POSSIBLE.

MINIMIZATION OF DISTURBANCE DURING STAGING AND CONSTRUCTION

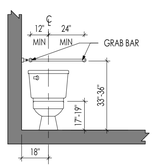
1. STOCKPILE AND PROTECT HIGH-QUALITY TOPSOIL FROM EROSION, FOR REUSE.
2. CONTROL THE PATH AND VELOCITY OF RUNOFF WITH SILT FENCING OR COMPARABLE MEASURES.
3. PROTECT EPP2S, ON-SITE STORM SEWER INLETS, WATERCOURSES AND WATER BODIES WITH STRAW BALES, SILT FENCING, SILT SACKS, ROCK FILTERS, OR COMPARABLE MEASURES.
4. PROVIDE SWALES TO DIVERT SURFACE WATER FROM HILLSIDES.
5. IDENTIFY AND PROTECT SIGNI



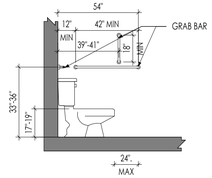
WHEEL CHAIR TOILET STALL CLEARANCES



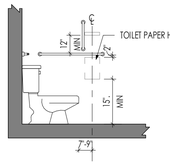
AMBULATORY TOILET STALL CLEARANCES



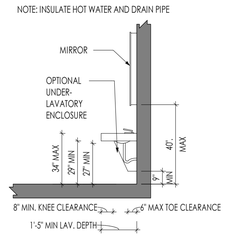
WATER CLOSETS BACK WALL



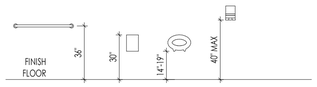
WATER CLOSETS SIDE WALL



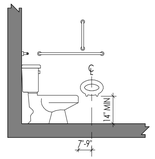
WATER CLOSETS: DISPENSER LOCATION



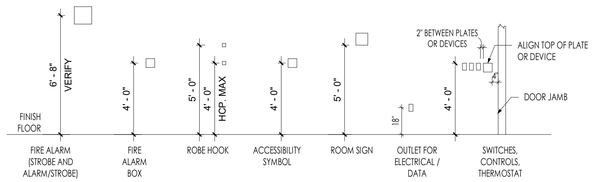
LAVATORY CLEARANCES



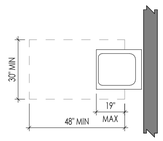
ACCESSORY MOUNTING HEIGHT



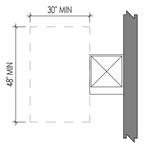
LOCATION OF TOILET PAPER DISPENSER



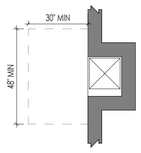
DEVICE MOUNTING HEIGHT



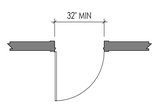
CLEAR SPACE AT LAVATORIES



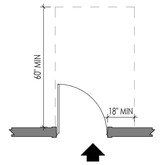
FREE-STANDING FOUNTAIN OR COOLER



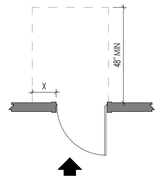
BUILT-IN FOUNTAIN OR COOLER
*NOT TO EXCEED FOUNTAIN DEPTH



HINGED DOOR

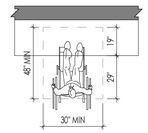


NOTE: X=12" IF DOOR HAS BOTH A CLOSER & A LATCH

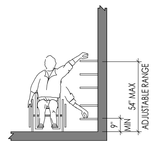




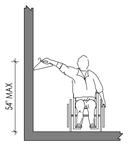
MAXIMUM DOORWAY DEPTH



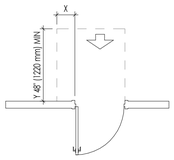
COUNTER WORK SURFACE



SHELVES

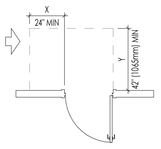


CLOSETS



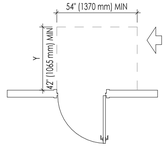
Note:
X = 12 in. (305 mm) if the door has both a closer and a latch.

PUSH SIDE
FRONT APPROACHES - SWINGING DOORS



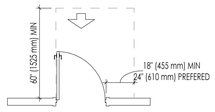
Note:
Y =48 in. (1220 mm) minimum if the door has both a closer and a latch.

PUSH SIDE
LATCH SIDE APPROACHES - SWINGING DOORS

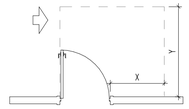


Note:
Y =48 in. (1220 mm) minimum if the door has both a closer and a latch.

PUSH SIDE
HINGE SIDE APPROACHES - SWINGING DOORS

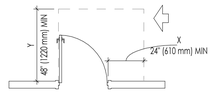


PULL SIDE
FRONT APPROACHES - SWINGING DOORS



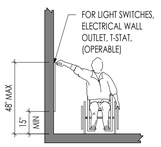
Note:
X = 36 in. (915 mm) if Y = 60 in. (1525 mm)
X = 42 in. (1065 mm) if Y =54 in. (1370 mm)

PULL SIDE
LATCH SIDE APPROACHES - SWINGING DOORS

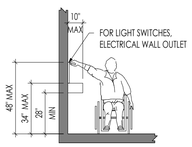


Note:
Y = 54 in. (1370 mm) minimum if the door has a closer and a latch.

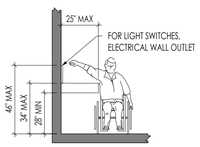
PULL SIDE
HINGE SIDE APPROACHES - SWINGING DOORS



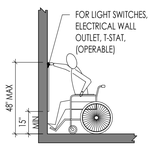
SIDE REACH WITH NO OBSTRUCTION



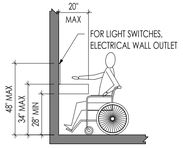
SIDE REACH WITH 10" MAX OBSTRUCTION



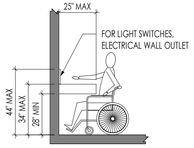
SIDE REACH WITH 25" MAX OBSTRUCTION



FOWARD REACH WITH NO OBSTRUCTION



FOWARD REACH WITH 20" MAX OBSTRUCTION



FOWARD REACH WITH 25" MAX OBSTRUCTION

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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

ADA DETAILS

SEAL

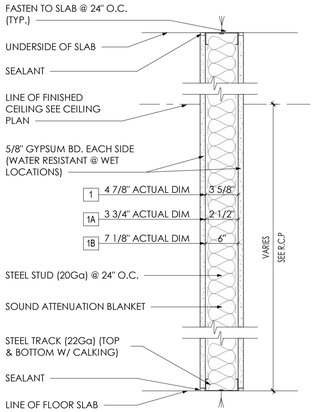
REGISTERED ARCHITECT
WALTER MARIN
026234
STATE OF NEW YORK

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-010.00

DOB BSCAN STICKER



1 1-HR RATED PARTITION w/ 2 1/2" STUDS

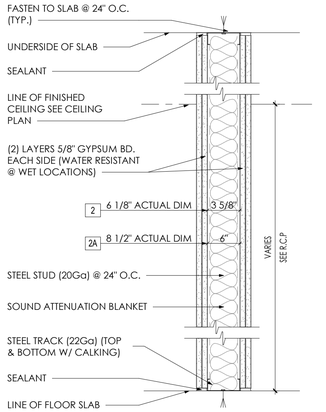
STC: 45 .L.#: U407

1A 1-HR RATED PARTITION w/ 3 5/8" STUDS

STC: 53 .L.#: U407

1B 1-HR RATED PARTITION w/ 6" STUDS

STC: 53 .L.#: U407

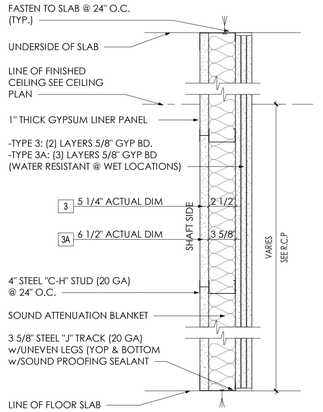


2 2-HR RATED PARTITION w/ 3 5/8" STUDS

STC: 53 .L.#: U407

2A 2-HR RATED PARTITION w/ 6" STUDS

STC: 53 .L.#: U407

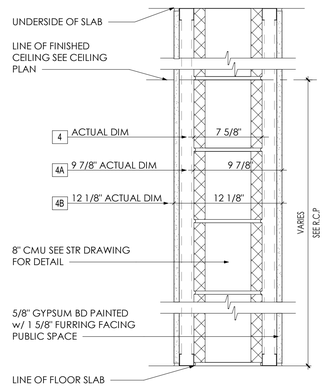


3 2-HR RATED SHAFT WALL w/ 2 1/2" STUDS

STC: 58 .L.#: U415

3A 3-HR RATED SHAFT WALL w/ 3 5/8" STUDS

STC: 58 .L.#: U415

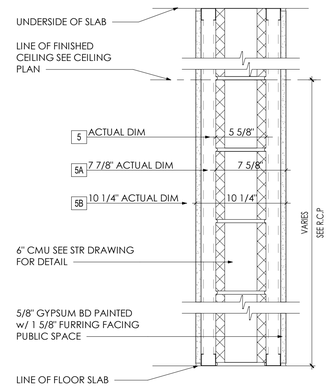


4 8" CMU WALL

STC: 55

4A 8" CMU WALL & FURRING

4B 8" CMU WALL & FURRING BOTH SIDES



5 6" CMU WALL

STC: 55

5A 6" CMU WALL & FURRING

5B 6" CMU WALL & FURRING BOTH SIDES

6 PIPE CHASE

STC: 55

7 8" CONCRETE WALL

7A 8" CONCRETE WALL & FURRING

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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

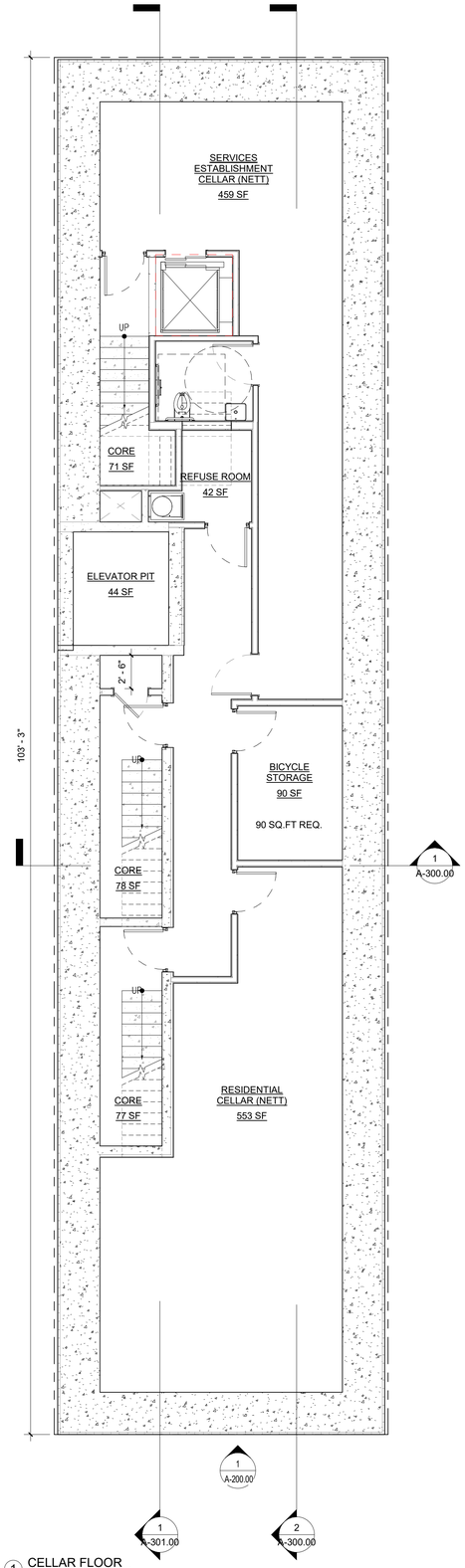
INTERIOR PARTITIONS

SEAL

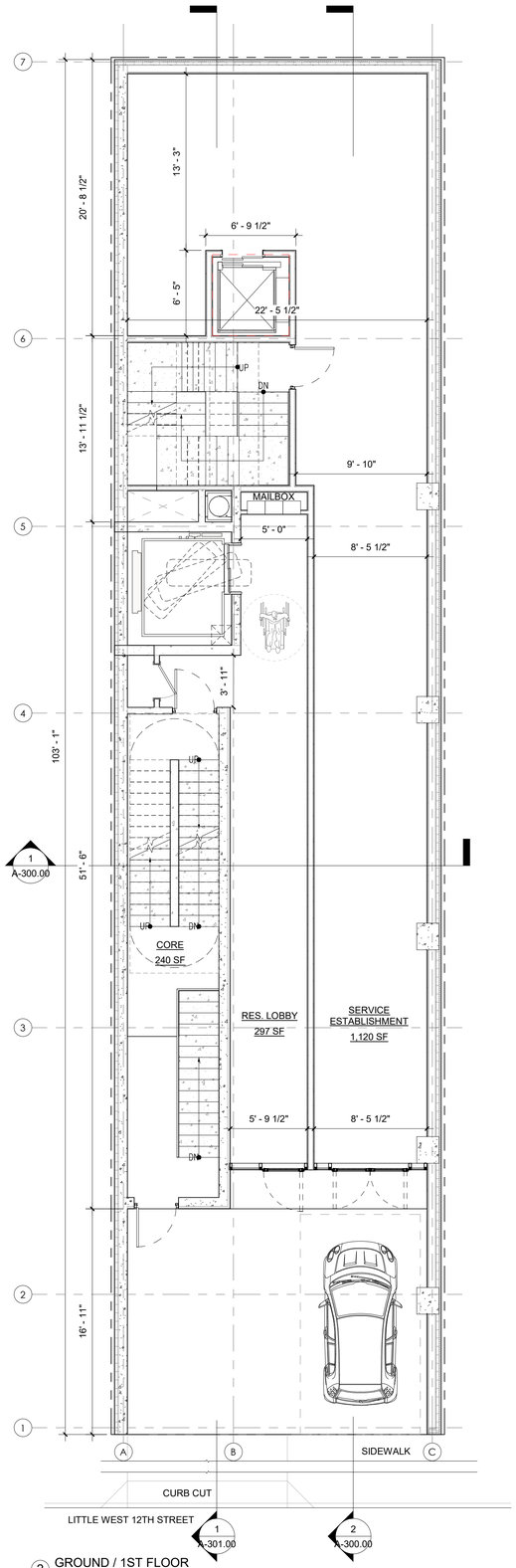


DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-011.00

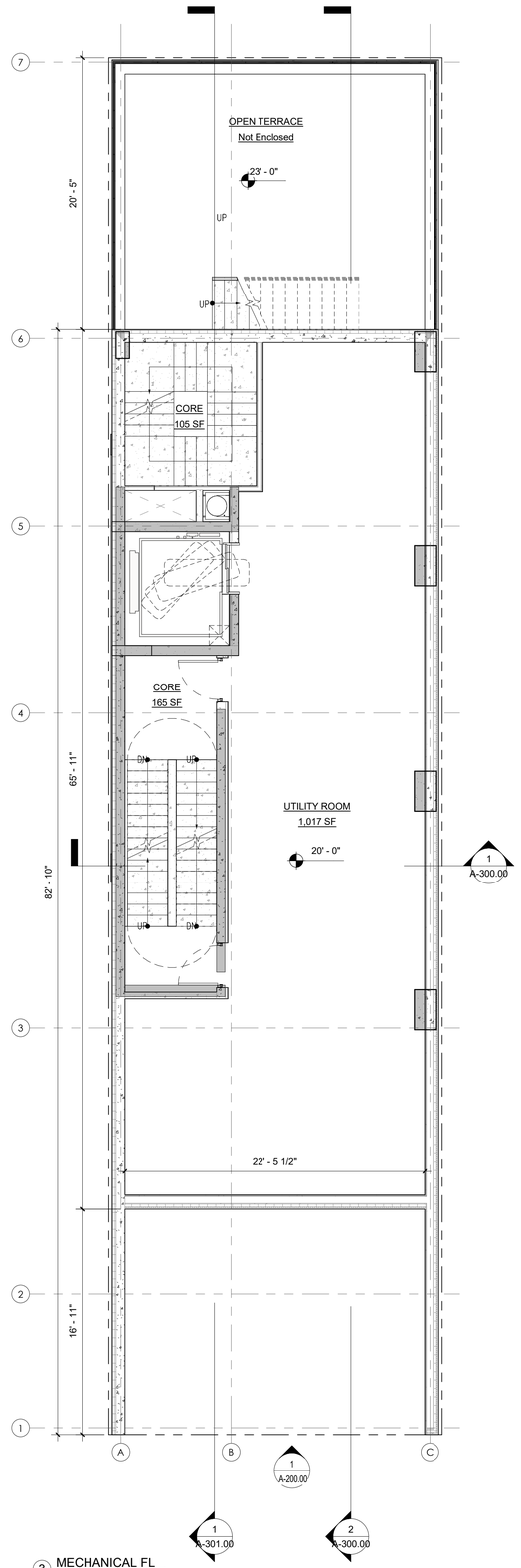
DOB BSCAN STICKER



1 CELLAR FLOOR
3/16" = 1'-0"



2 GROUND / 1ST FLOOR
3/16" = 1'-0"



3 MECHANICAL FL
3/16" = 1'-0"

Note required on plans: "Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

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CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

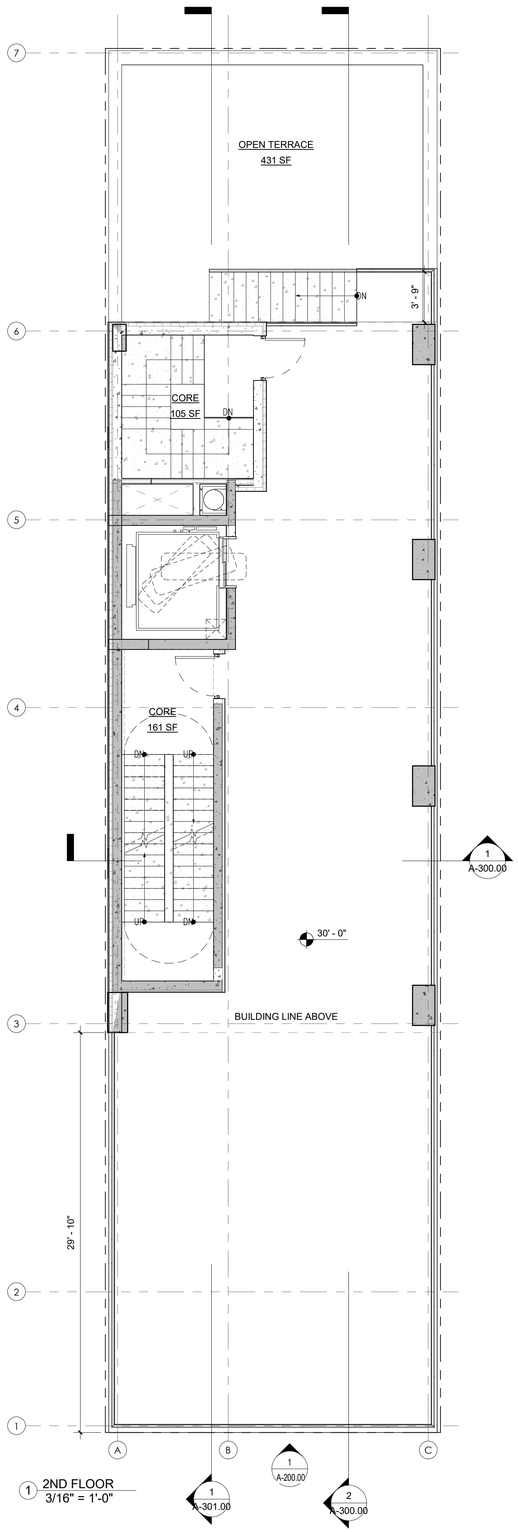
CELLAR, 1ST, MEZZANINE FL

SEAL

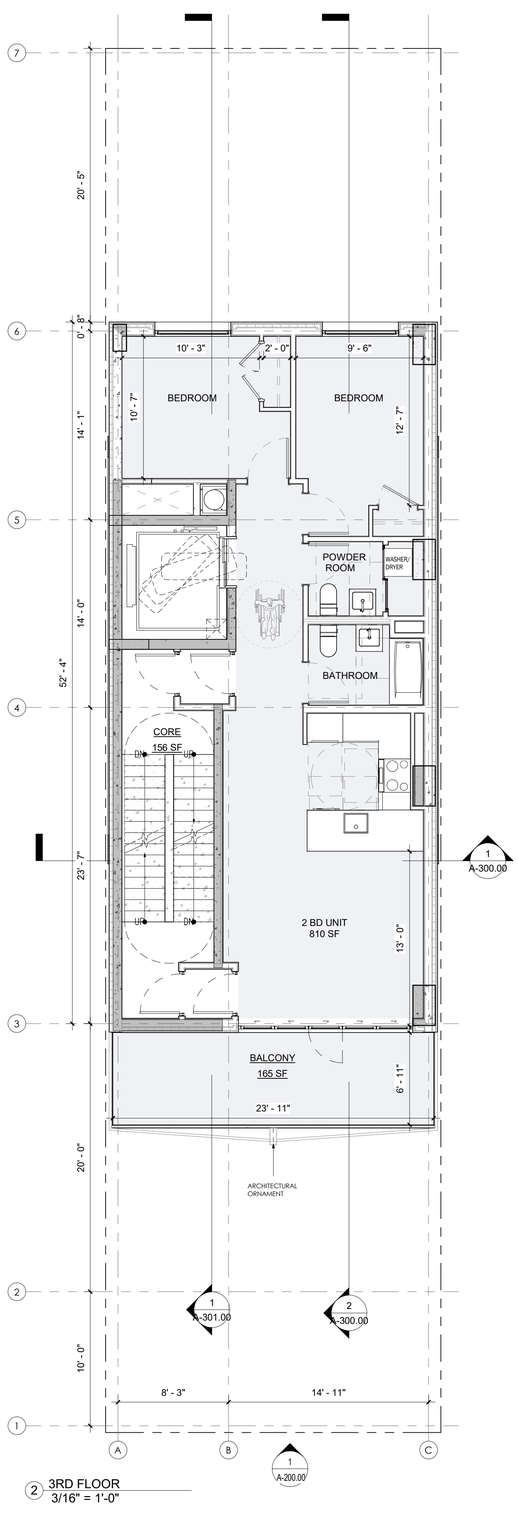


DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-100.00

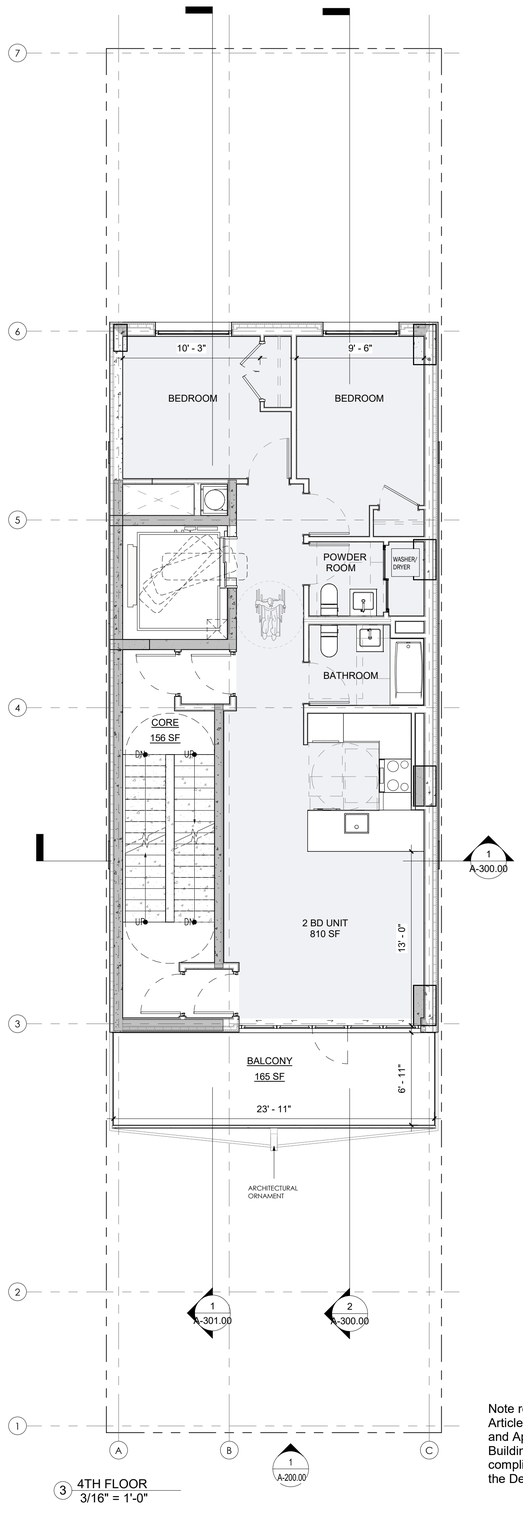
DOB BSCAN STICKER



1 2ND FLOOR
3/16" = 1'-0"



2 3RD FLOOR
3/16" = 1'-0"



3 4TH FLOOR
3/16" = 1'-0"

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51 LITTLE W.12TH ST

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NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

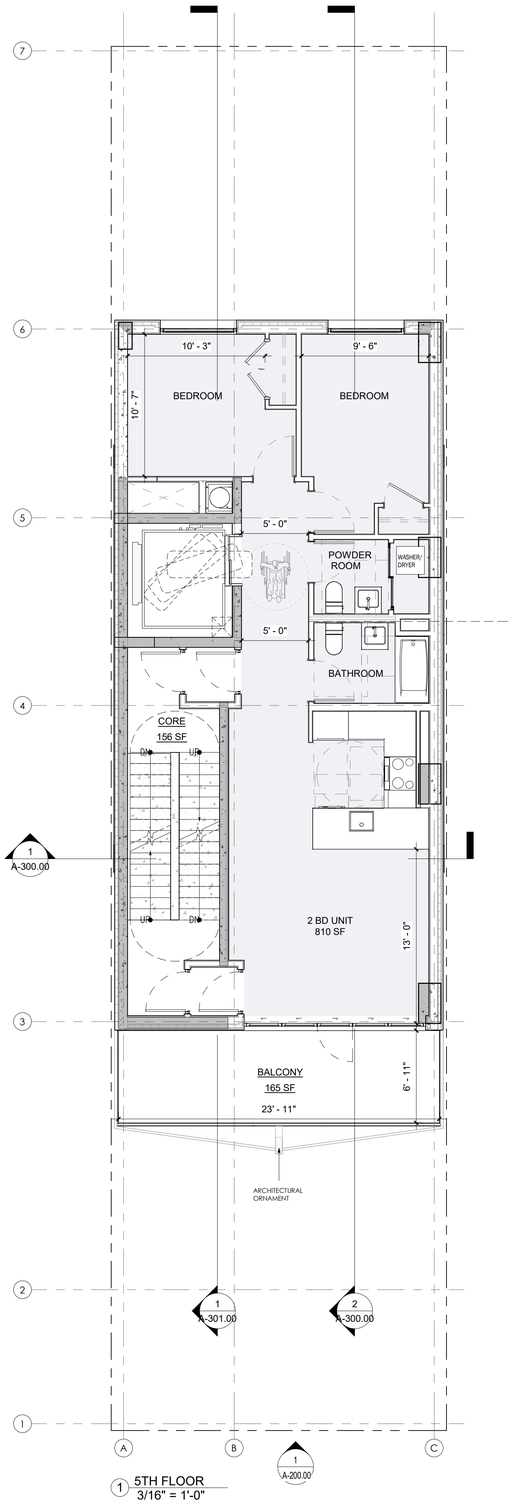
2ND, 3RD, 4TH FLOOR

SEAL

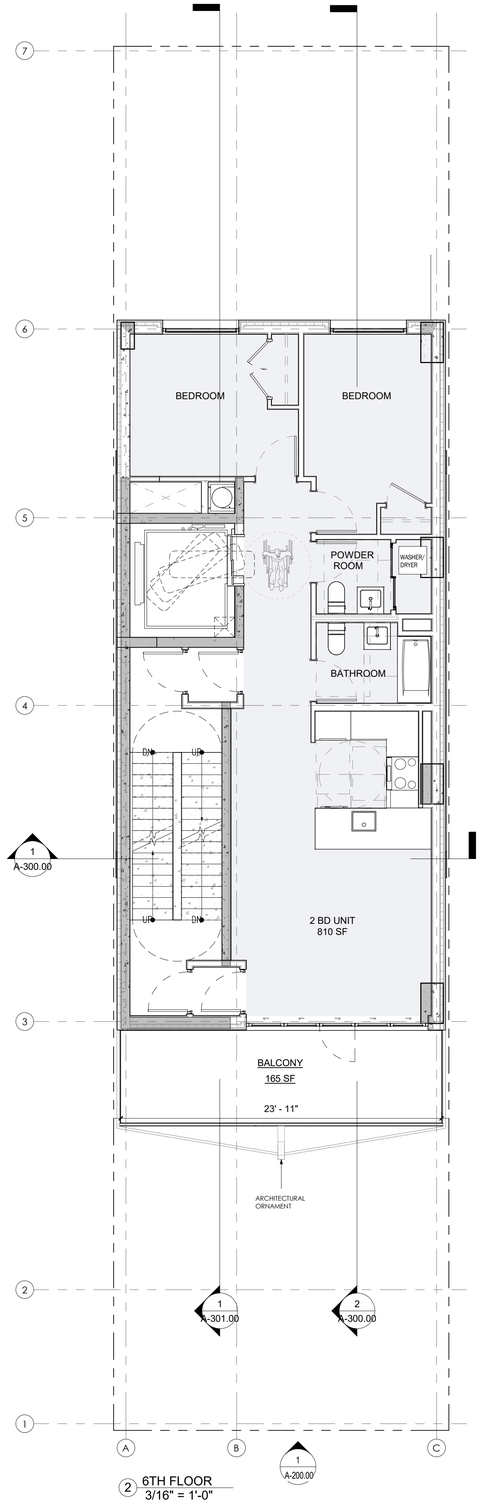


DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-101.00

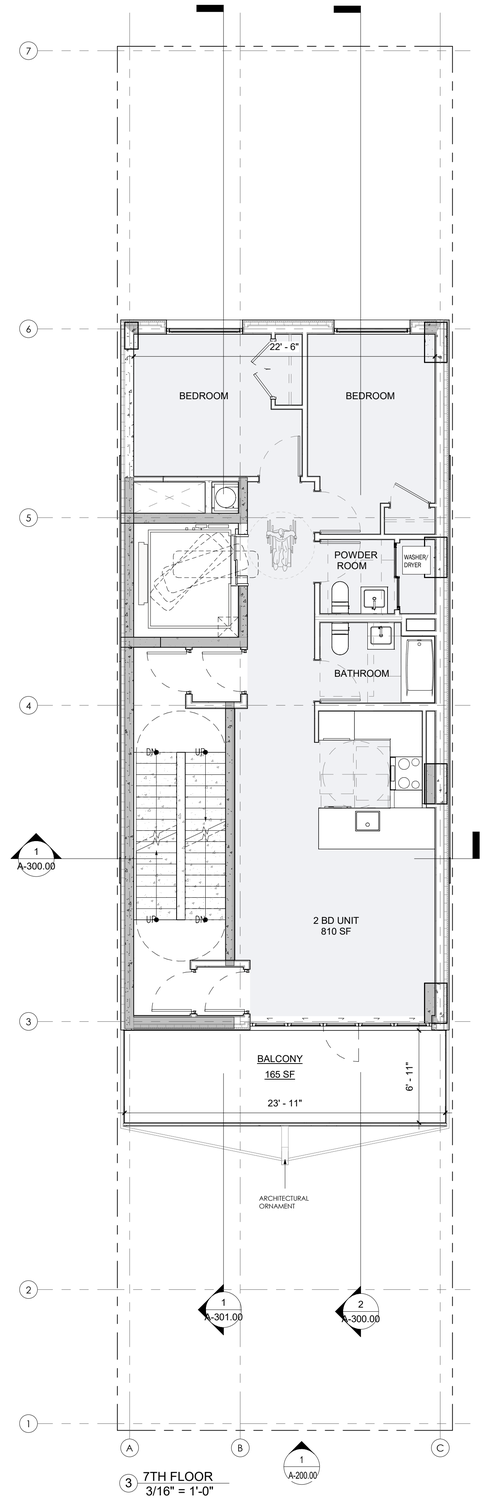
DOB BSCAN STICKER



1 5TH FLOOR
3/16" = 1'-0"



2 6TH FLOOR
3/16" = 1'-0"



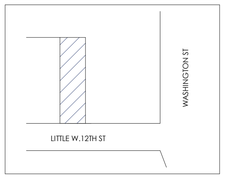
3 7TH FLOOR
3/16" = 1'-0"

Note required on plans: "Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

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NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

5TH, 6TH, 7TH FLOOR PLAN

SEAL

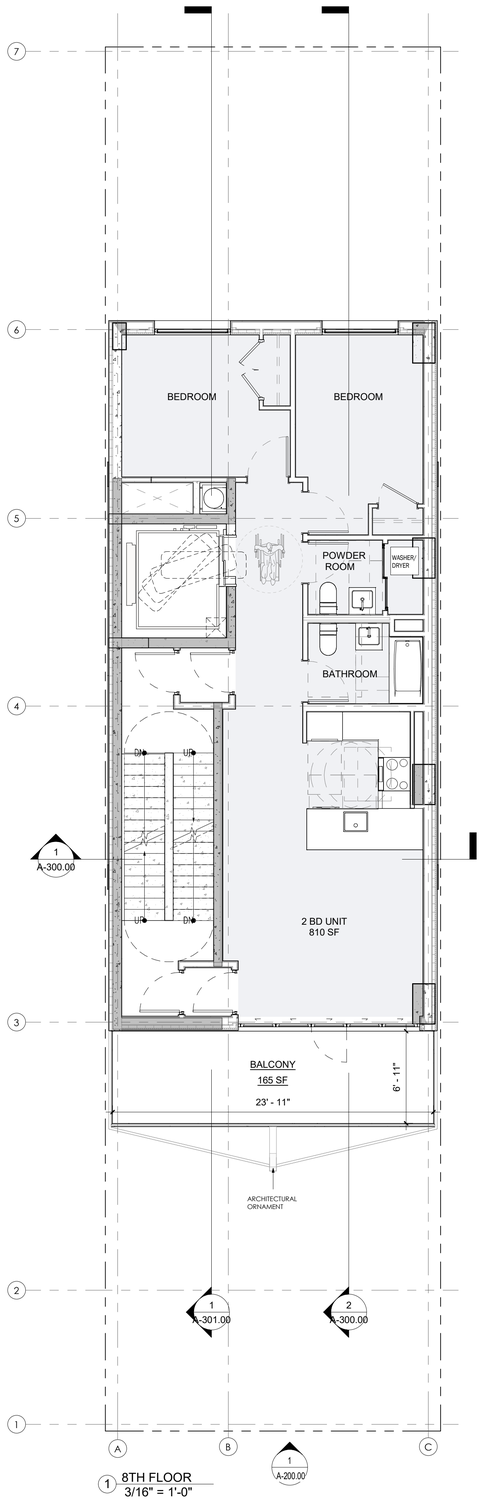
REGISTERED ARCHITECT JENNIFER MARIN STATE OF NEW YORK

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

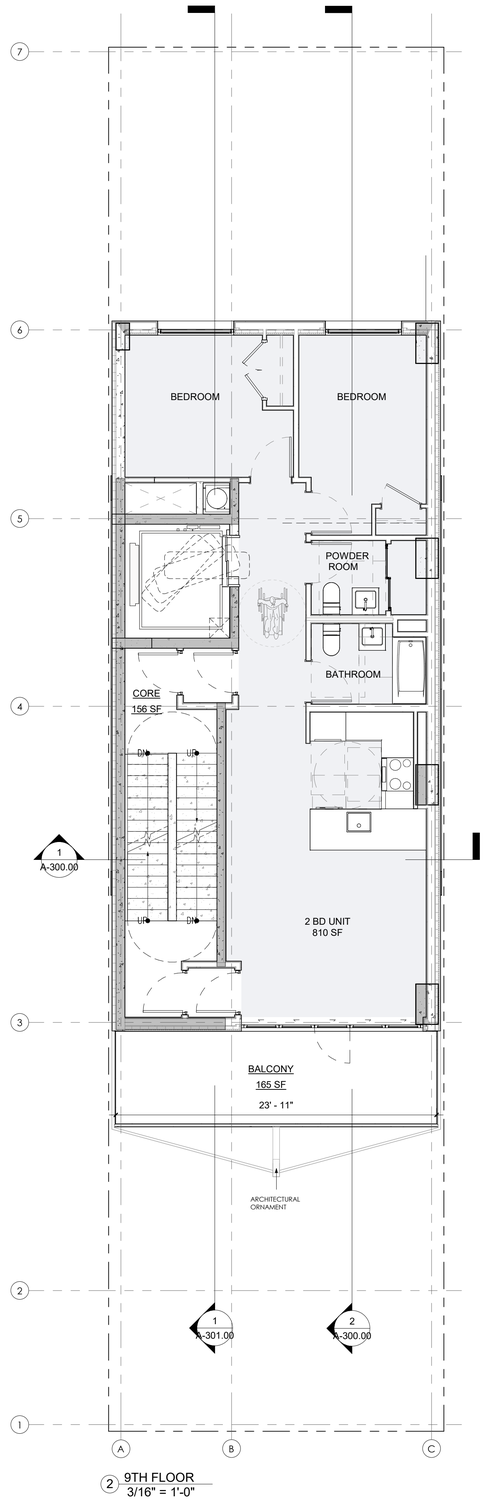
DWG No:

A-102.00

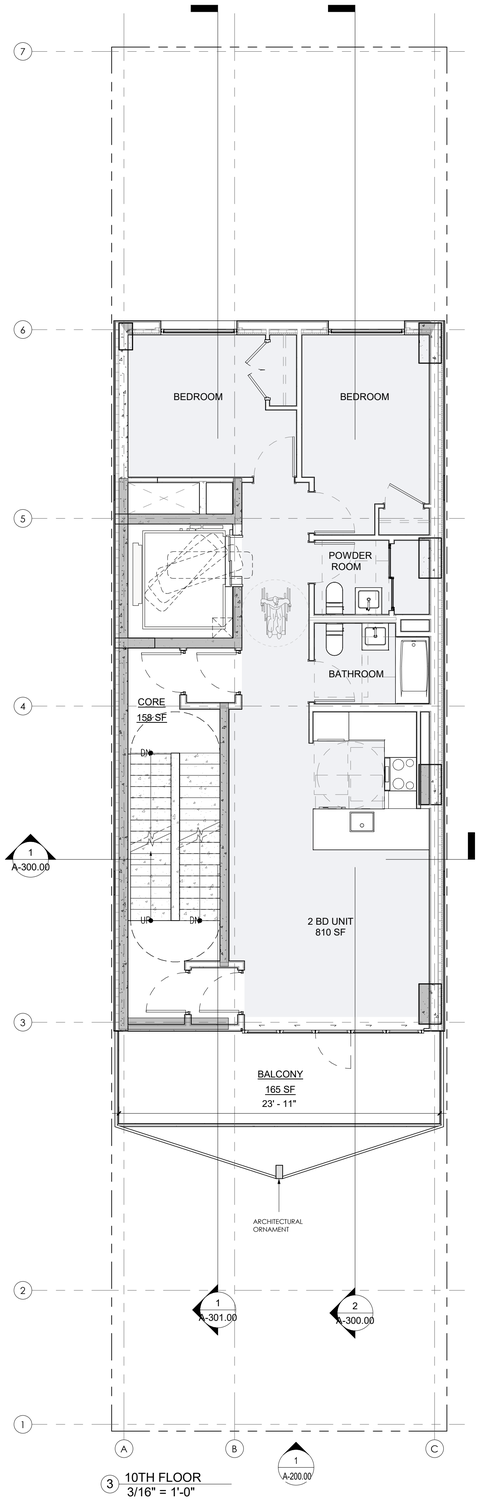
DOB BSCAN STICKER



1 8TH FLOOR
3/16" = 1'-0"



2 9TH FLOOR
3/16" = 1'-0"



3 10TH FLOOR
3/16" = 1'-0"

Note required on plans: "Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

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PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

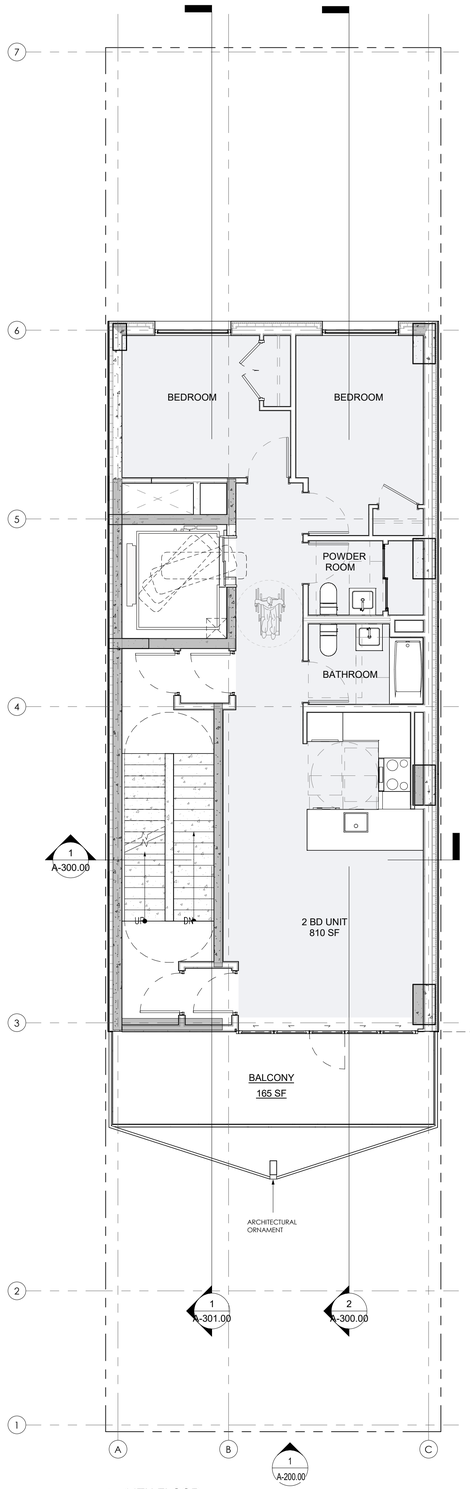
8TH, 9TH, 10TH FLOOR PLAN

SEAL

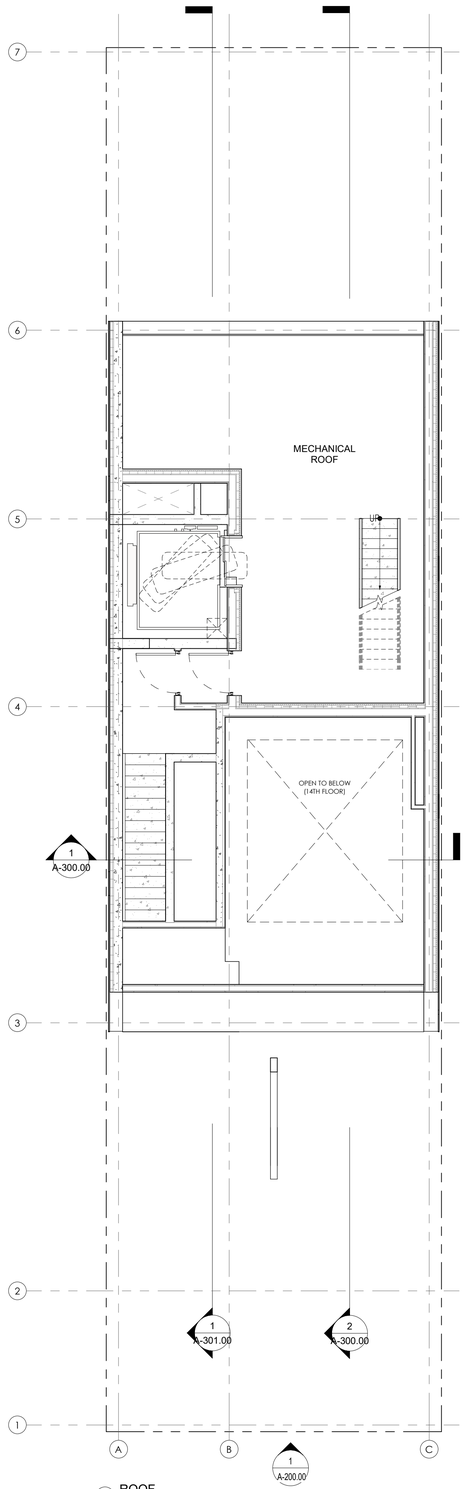
REGISTERED ARCHITECT JENNIFER MARIN STATE OF NEW YORK

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-103.00

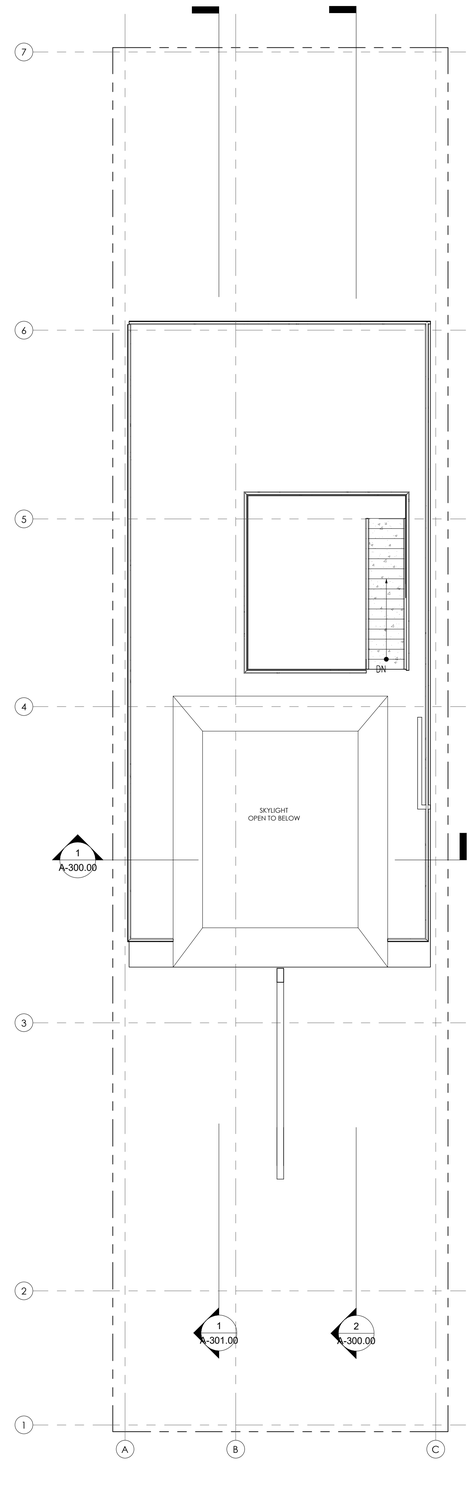
DOB BSCAN STICKER



1 14TH FLOOR
3/16" = 1'-0"



4 ROOF
3/16" = 1'-0"



2 BULKHEAD
3/16" = 1'-0"

Note required on plans: "Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

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KEY PLAN



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PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

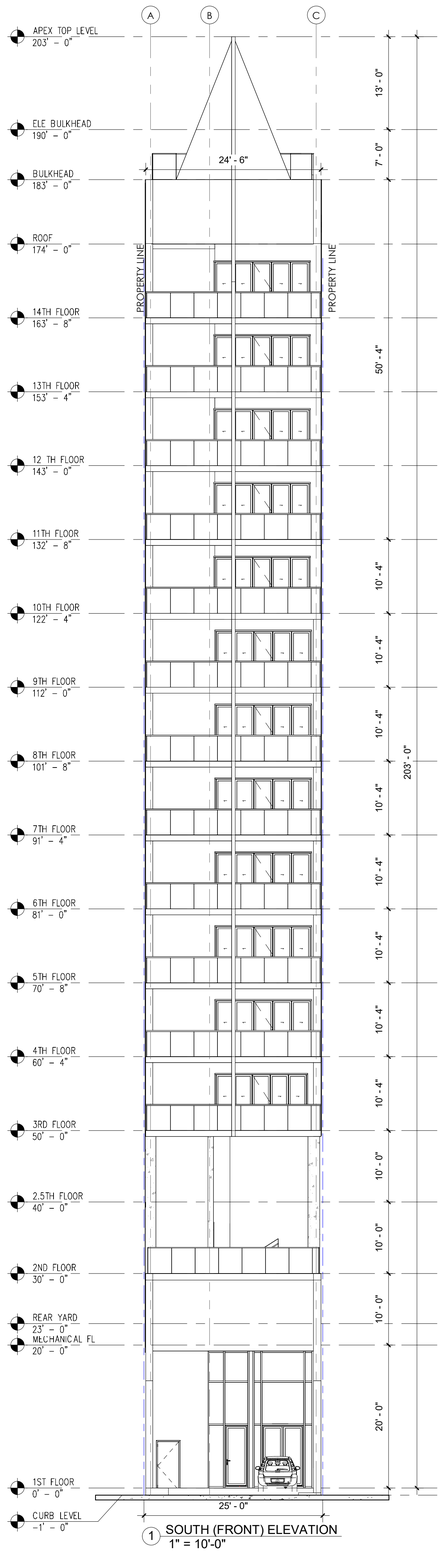
14TH, ROOF, BULKHEAD FL PLAN

SEAL

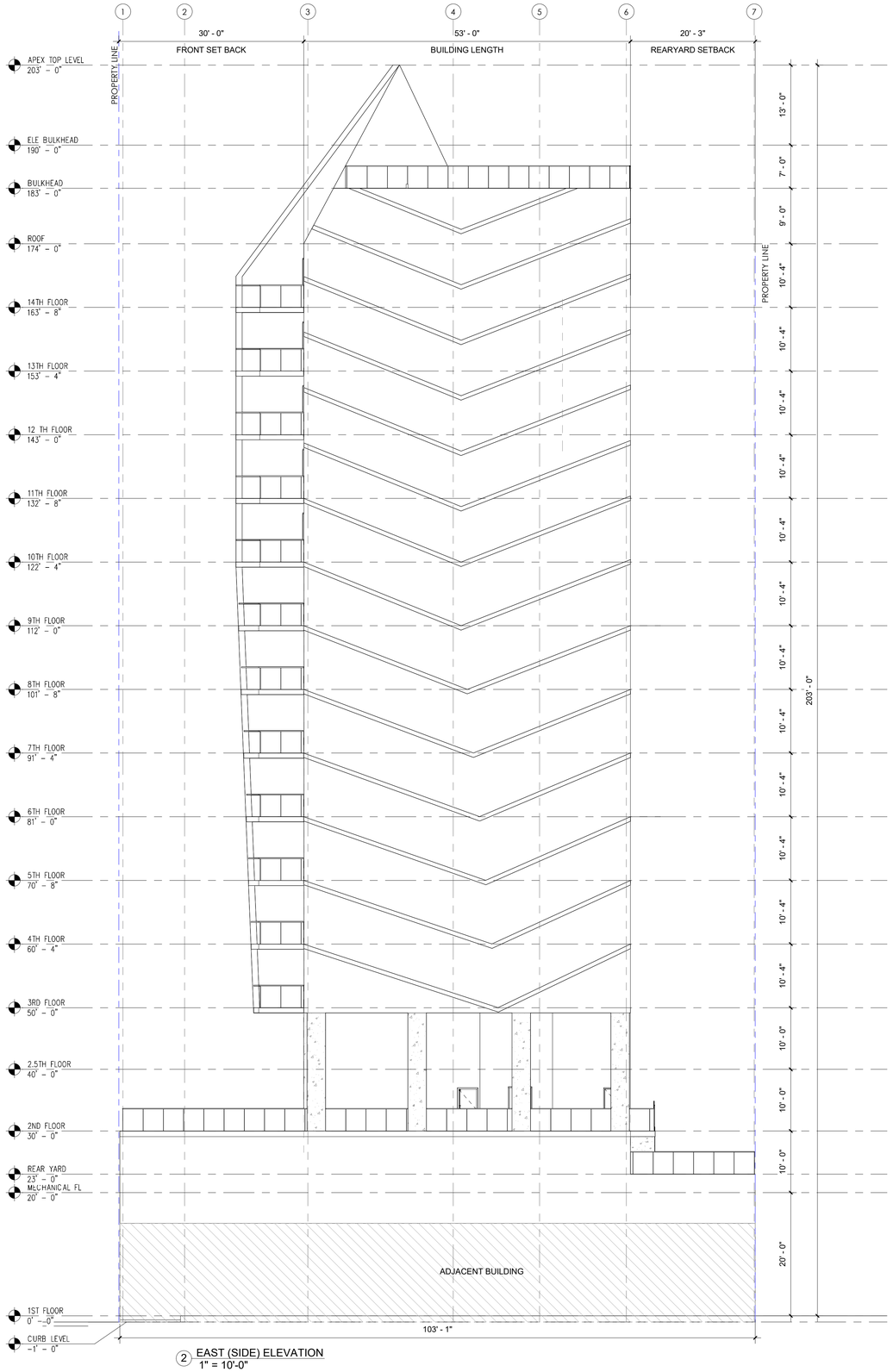
REGISTERED ARCHITECT WALTER MARIN 031784 STATE OF NEW YORK

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-104.00

DOB BSCAN STICKER



1 SOUTH (FRONT) ELEVATION
1" = 10'-0"



2 EAST (SIDE) ELEVATION
1" = 10'-0"

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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

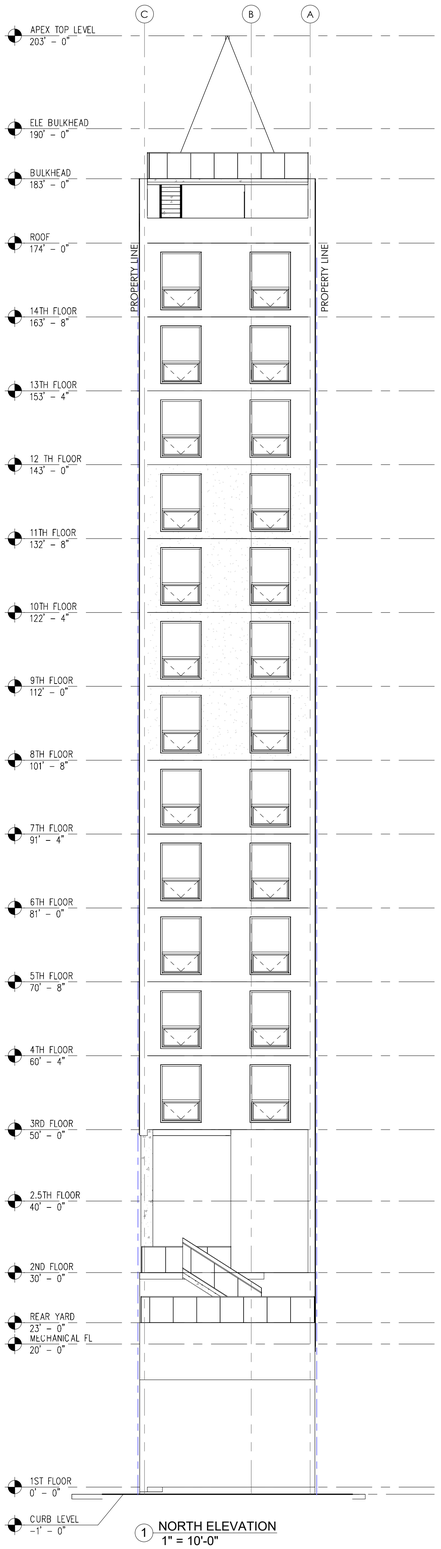
SOUTH & EAST ELEVATION

SEAL

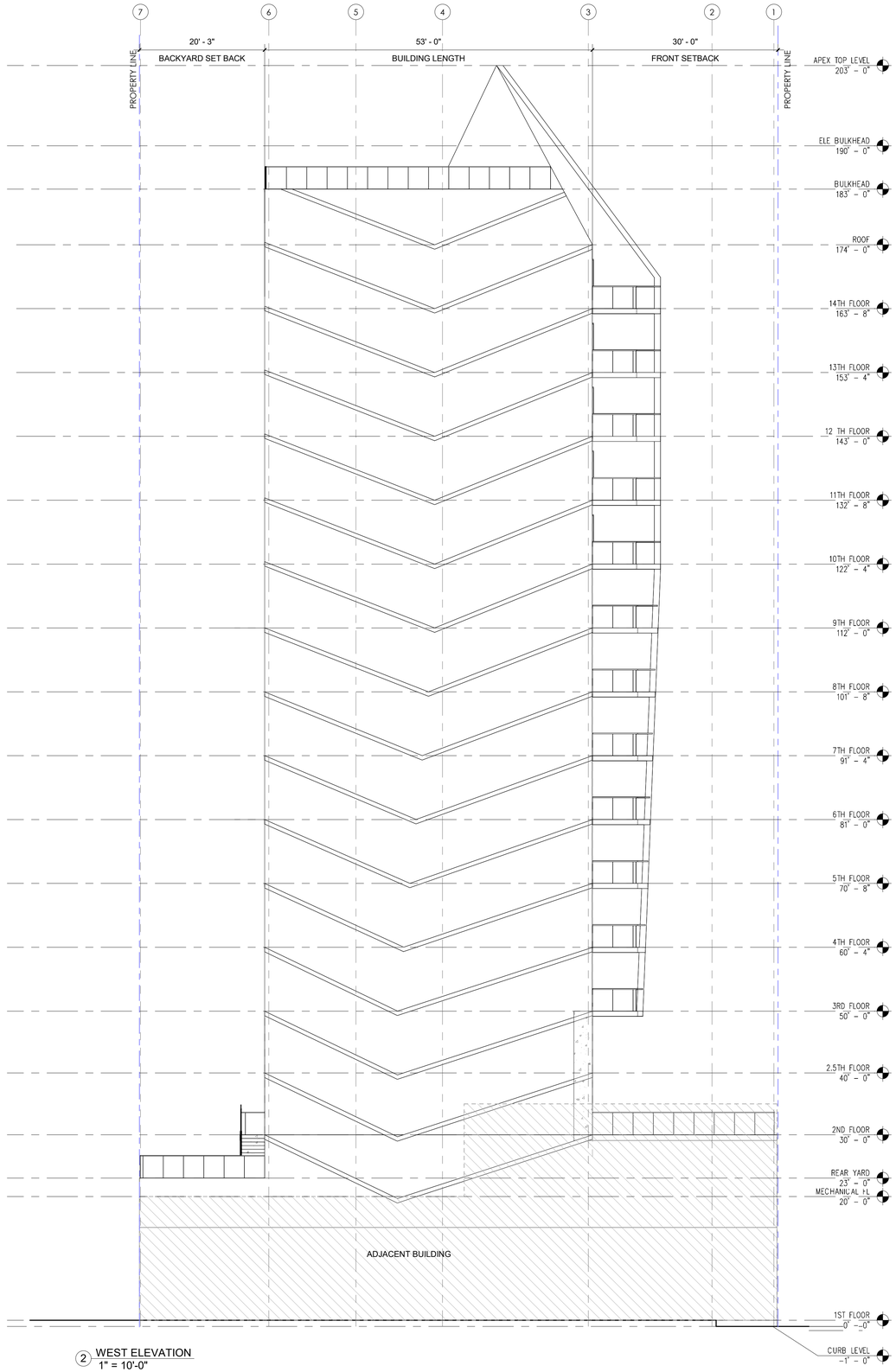


DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-200.00

DOB BSCAN STICKER



1 NORTH ELEVATION
1" = 10'-0"



2 WEST ELEVATION
1" = 10'-0"

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NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

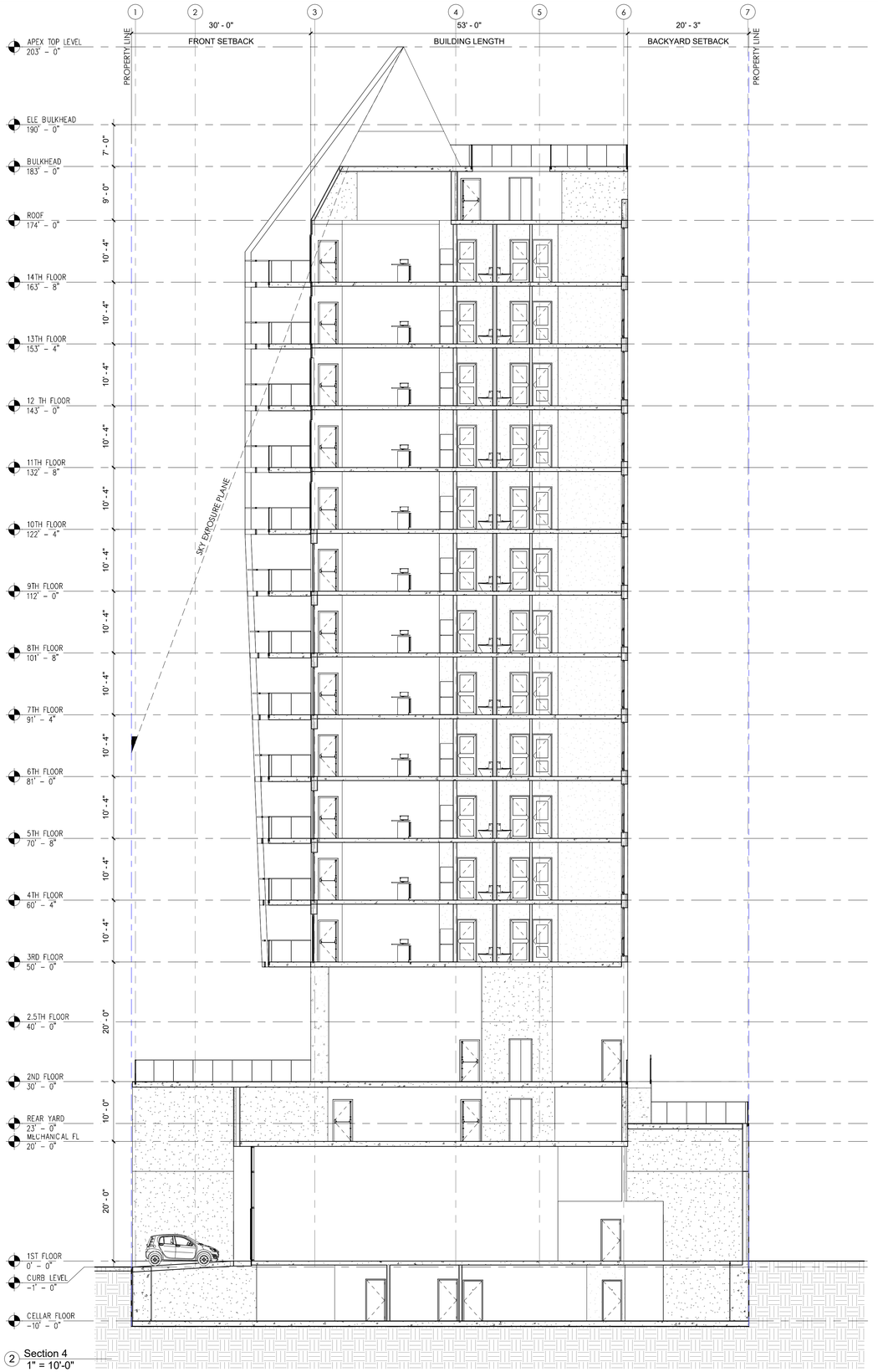
NORTH & WEST ELEVATION

SEAL

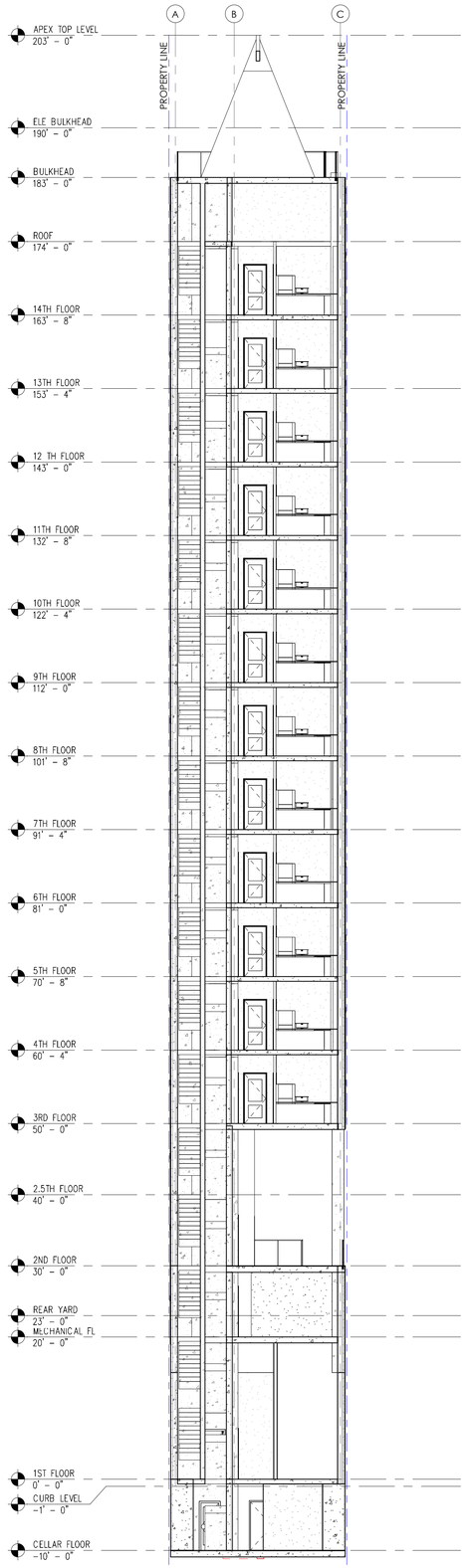


DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-201.00

DOB BSCAN STICKER



2 Section 4
1" = 10'-0"

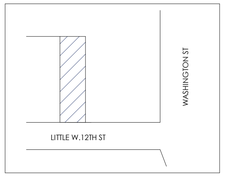


1 Section 5
1" = 10'-0"

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KEY PLAN



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PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

SECTION A

SEAL

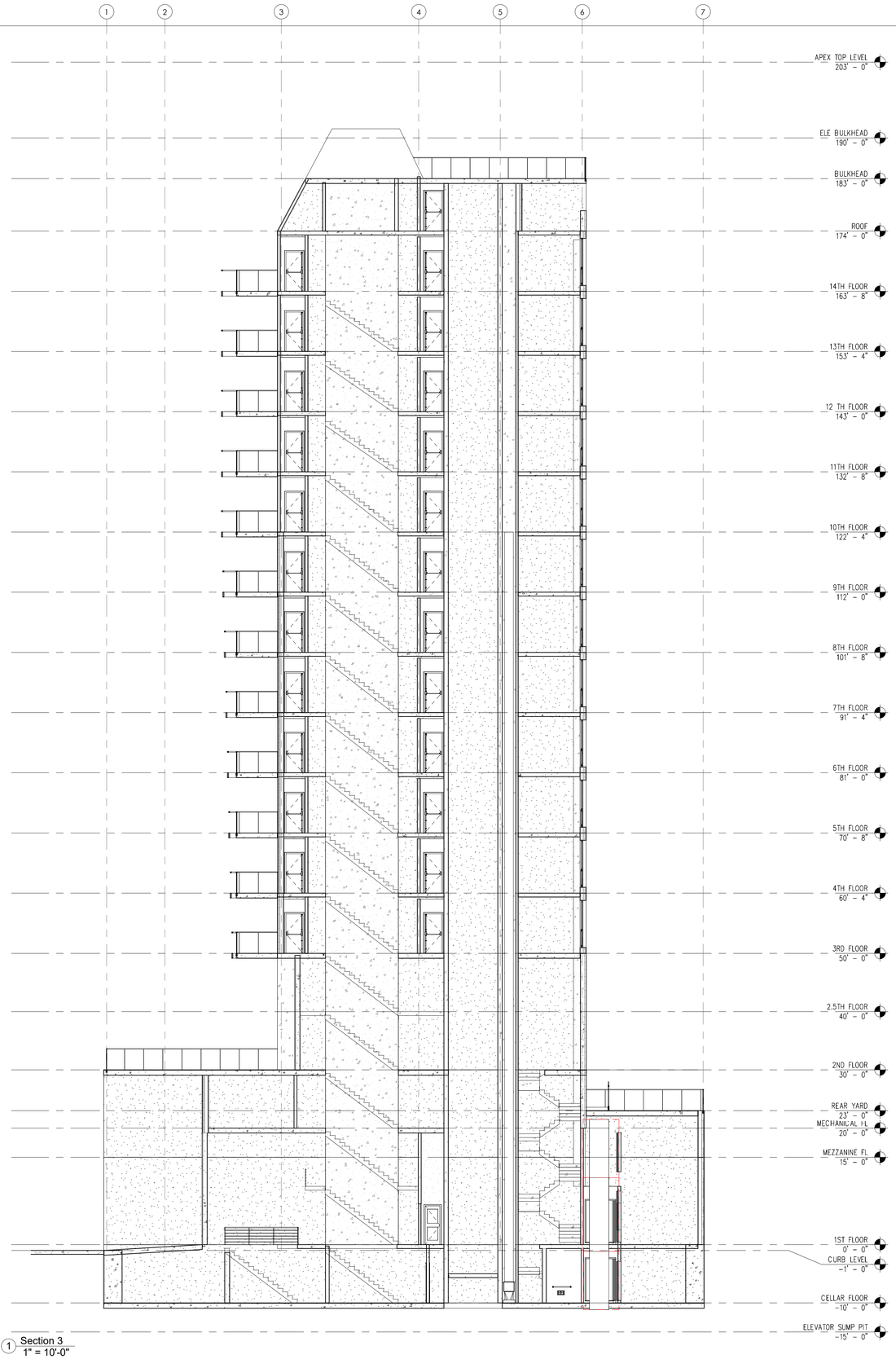


DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-300.00

DOB BSCAN STICKER



1 Section 3
1" = 10'-0"

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NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

SECTION B

SEAL

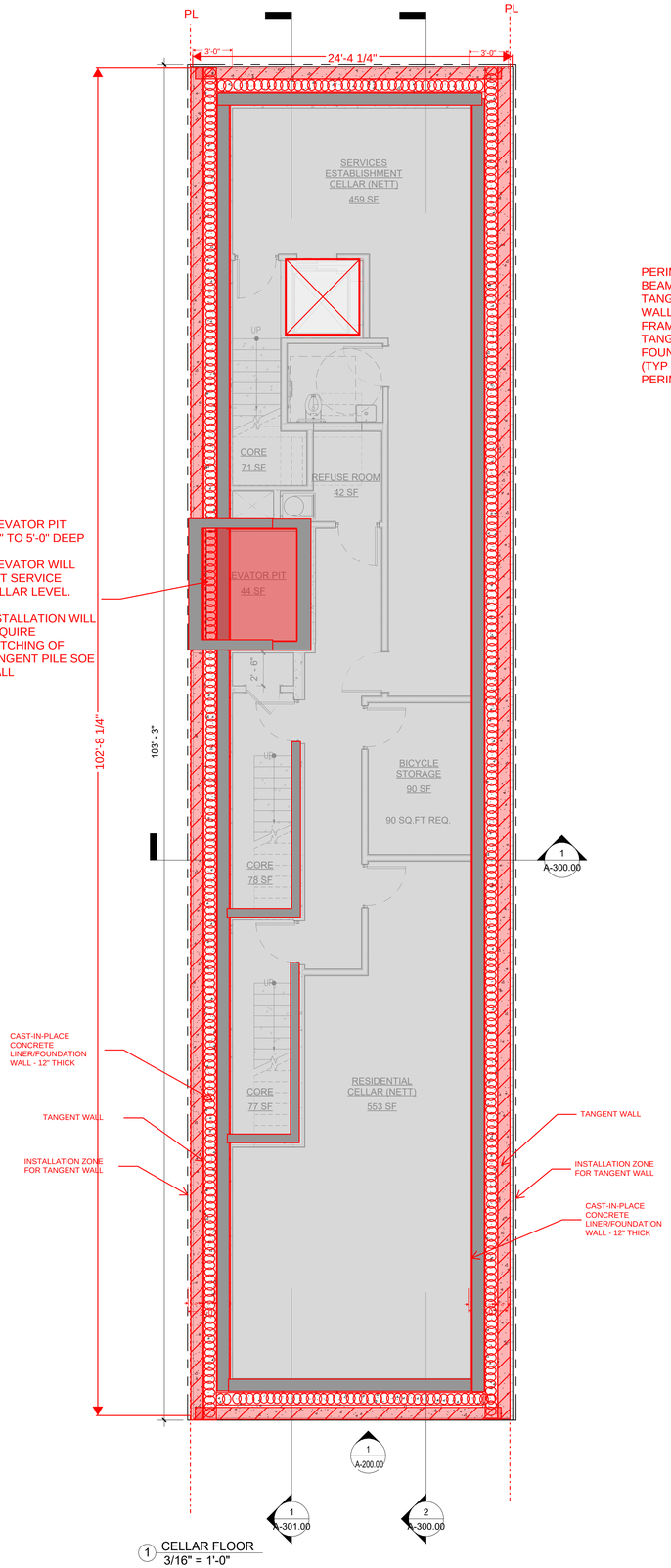
REGISTERED ARCHITECT
WALTER MARIN
STATE OF NEW YORK

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

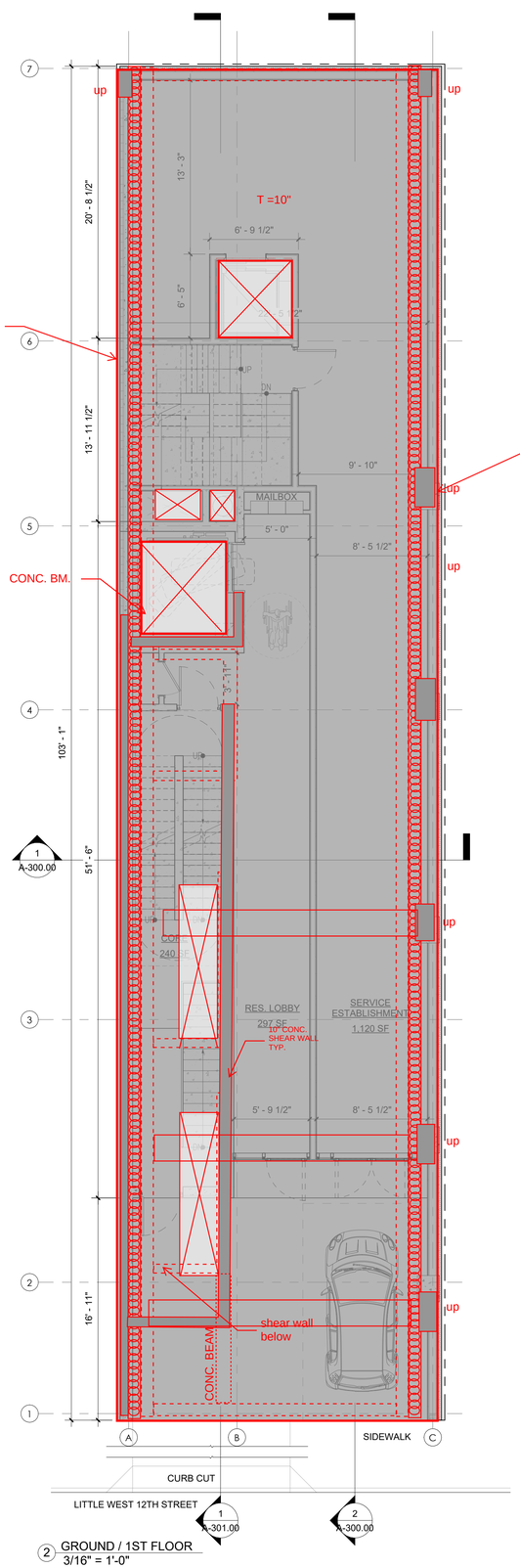
DWG No:

A-301.00

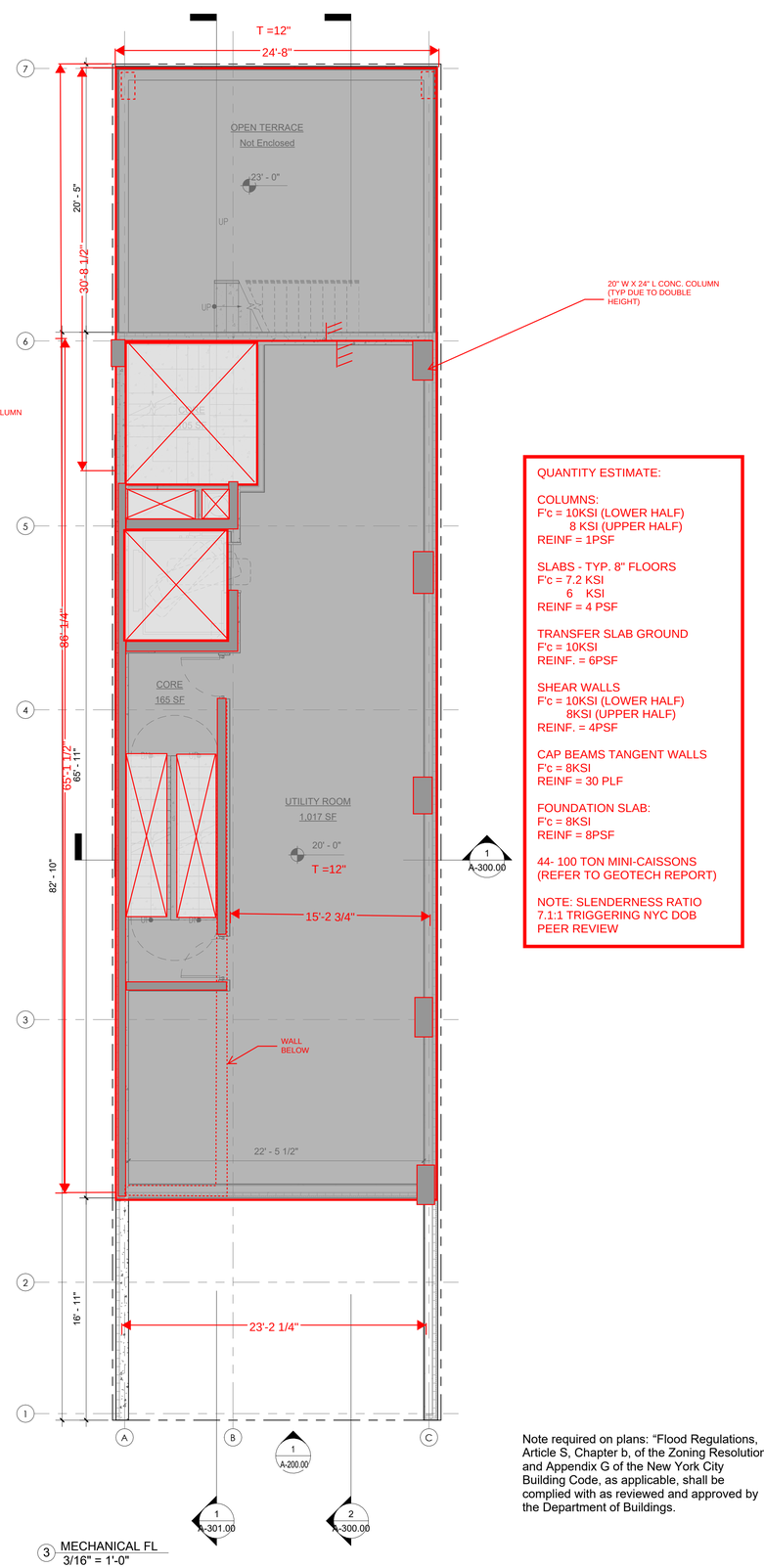
DOB BSCAN STICKER



1 CELLAR FLOOR
3/16" = 1'-0"



2 GROUND / 1ST FLOOR
3/16" = 1'-0"



3 MECHANICAL FL
3/16" = 1'-0"

QUANTITY ESTIMATE:

COLUMNS:
F'c = 10KSI (LOWER HALF)
8 KSI (UPPER HALF)
REINF = 1PSF

SLABS - TYP. 8" FLOORS
F'c = 7.2 KSI
6 KSI
REINF = 4 PSF

TRANSFER SLAB GROUND
F'c = 10KSI
REINF. = 6PSF

SHEAR WALLS
F'c = 10KSI (LOWER HALF)
8KSI (UPPER HALF)
REINF. = 4PSF

CAP BEAMS TANGENT WALLS
F'c = 8KSI
REINF = 30 PLF

FOUNDATION SLAB:
F'c = 8KSI
REINF = 8PSF

44- 100 TON MINI-CAISSONS (REFER TO GEOTECH REPORT)

NOTE: SLENDERNESS RATIO 7.1:1 TRIGGERING NYC DOB PEER REVIEW

Note required on plans: "Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

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CONSULTING ENGINEERS

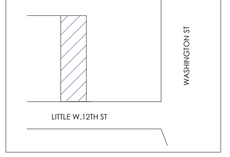
DESIMONE
7-8-2025

"PROPOSED"
RESTAURANT AND RESIDENTIALS DEVELOPMENT SCENARIO

CONCEPT STRUCTURAL

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KEY PLAN



CLIENT:
NOVAC NOURY

PROJECT NAME:
51 LITTLE W.12TH ST

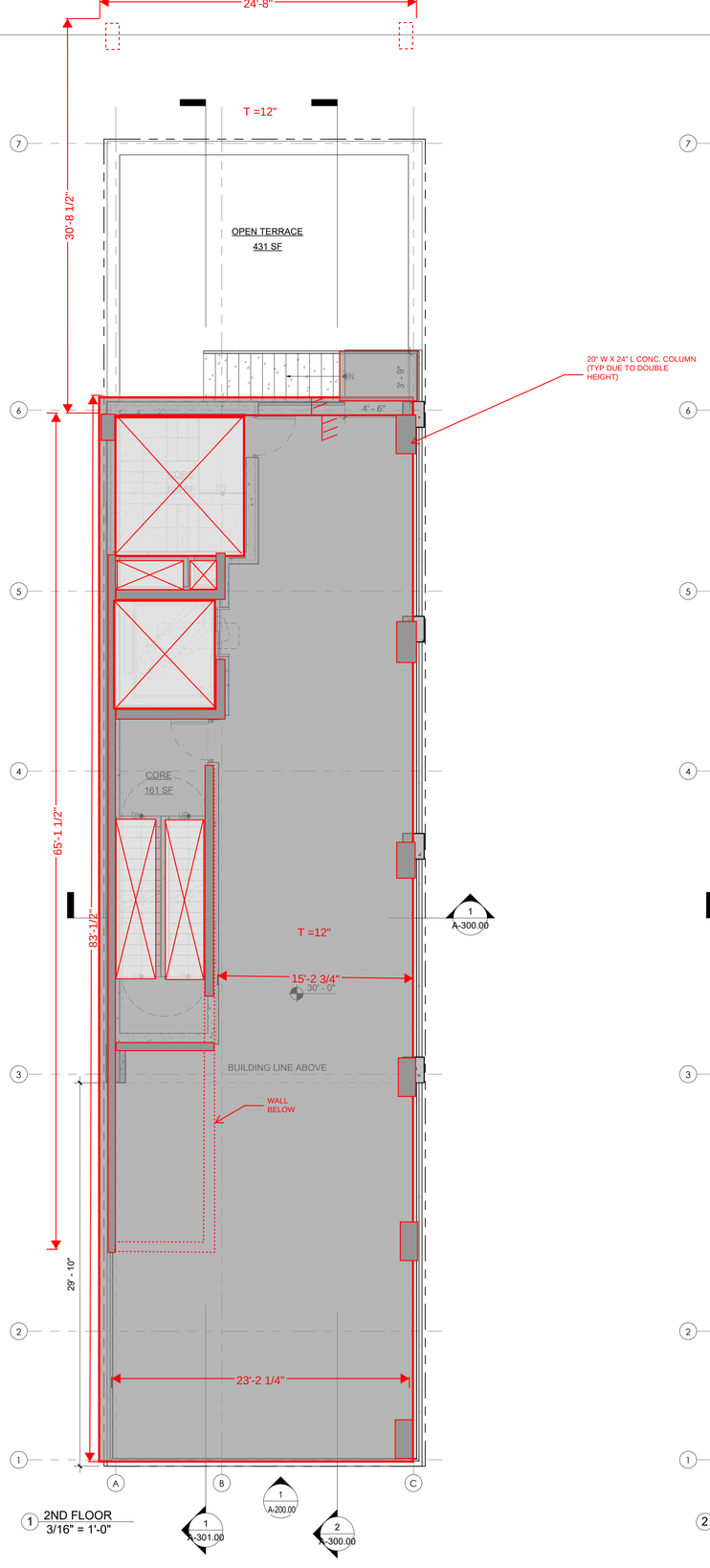
PROJECT ADDRESS:
51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

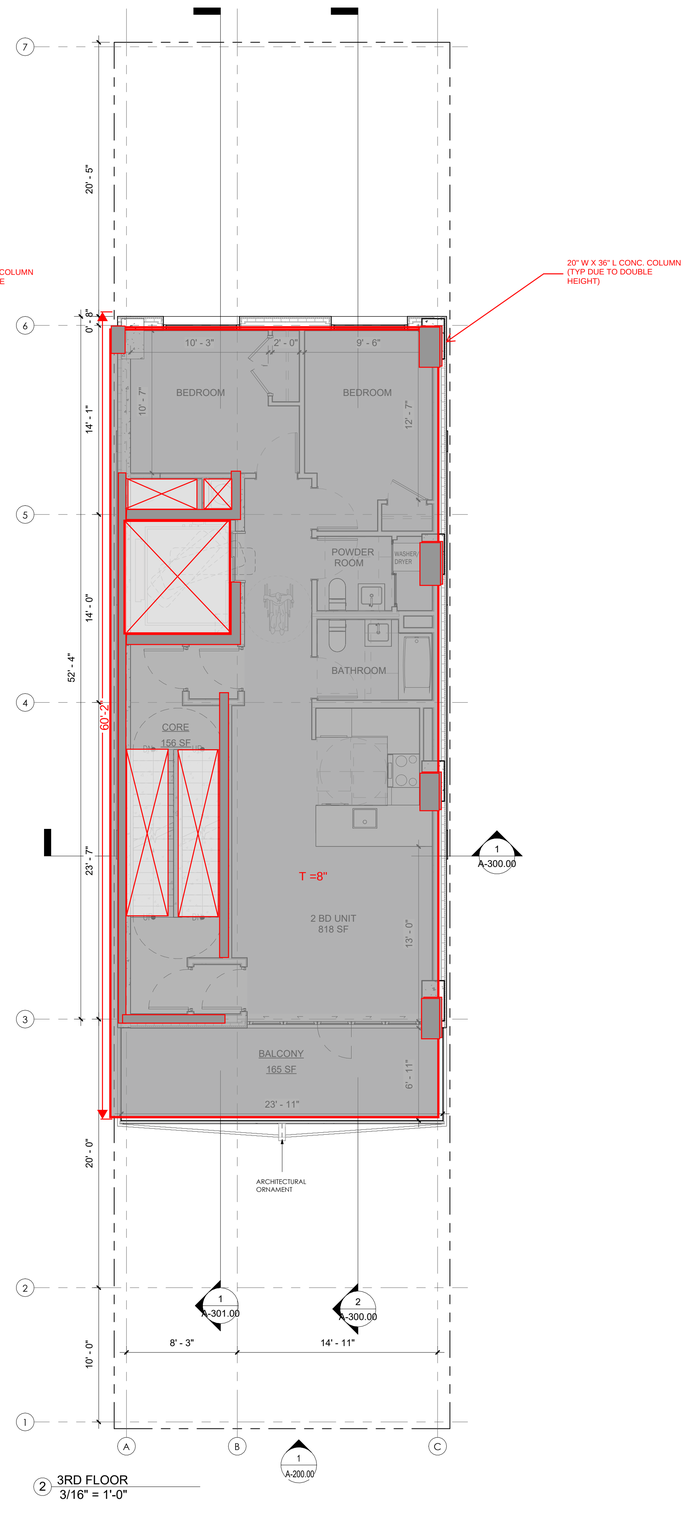
DWG TITLE:
CELLAR, 1ST, MEZZANINE FL

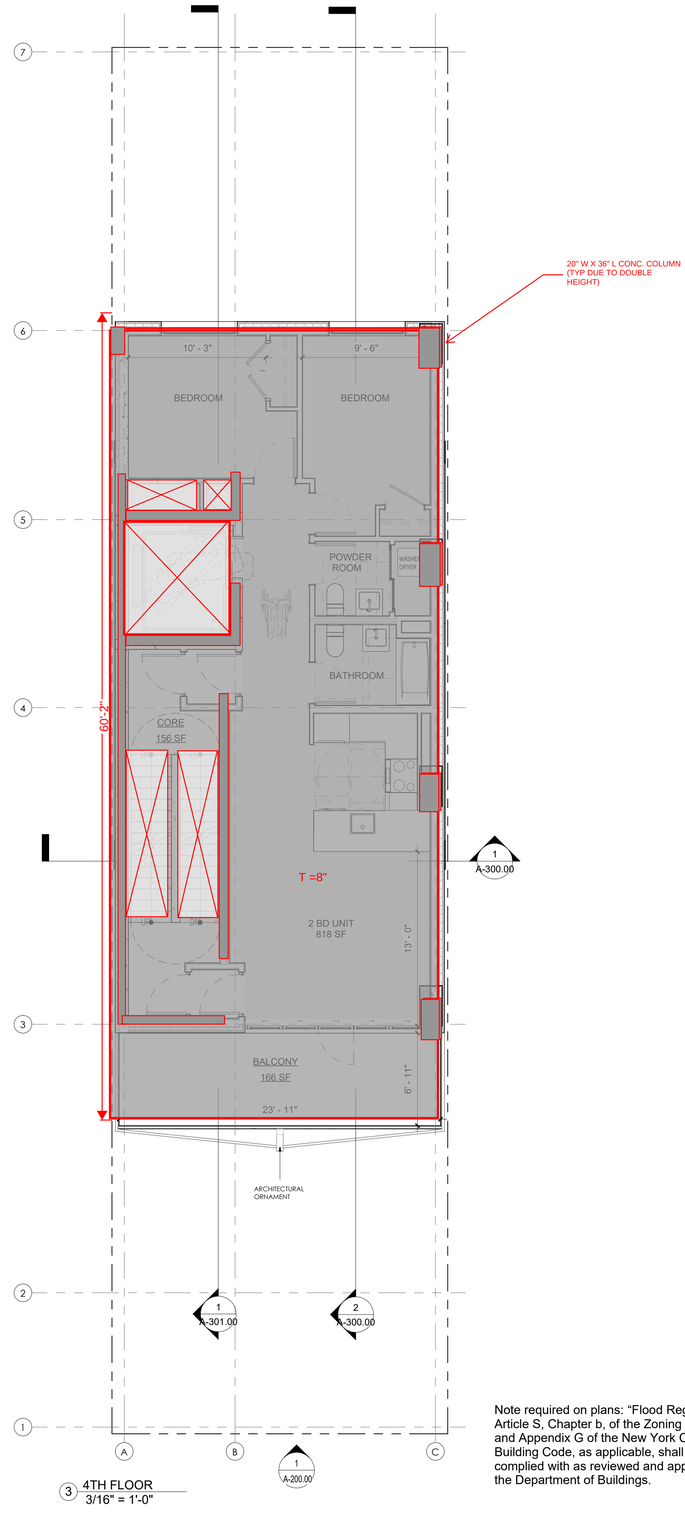
SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-100.00

DOB BSCAN STICKER







Note required on plans: “Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

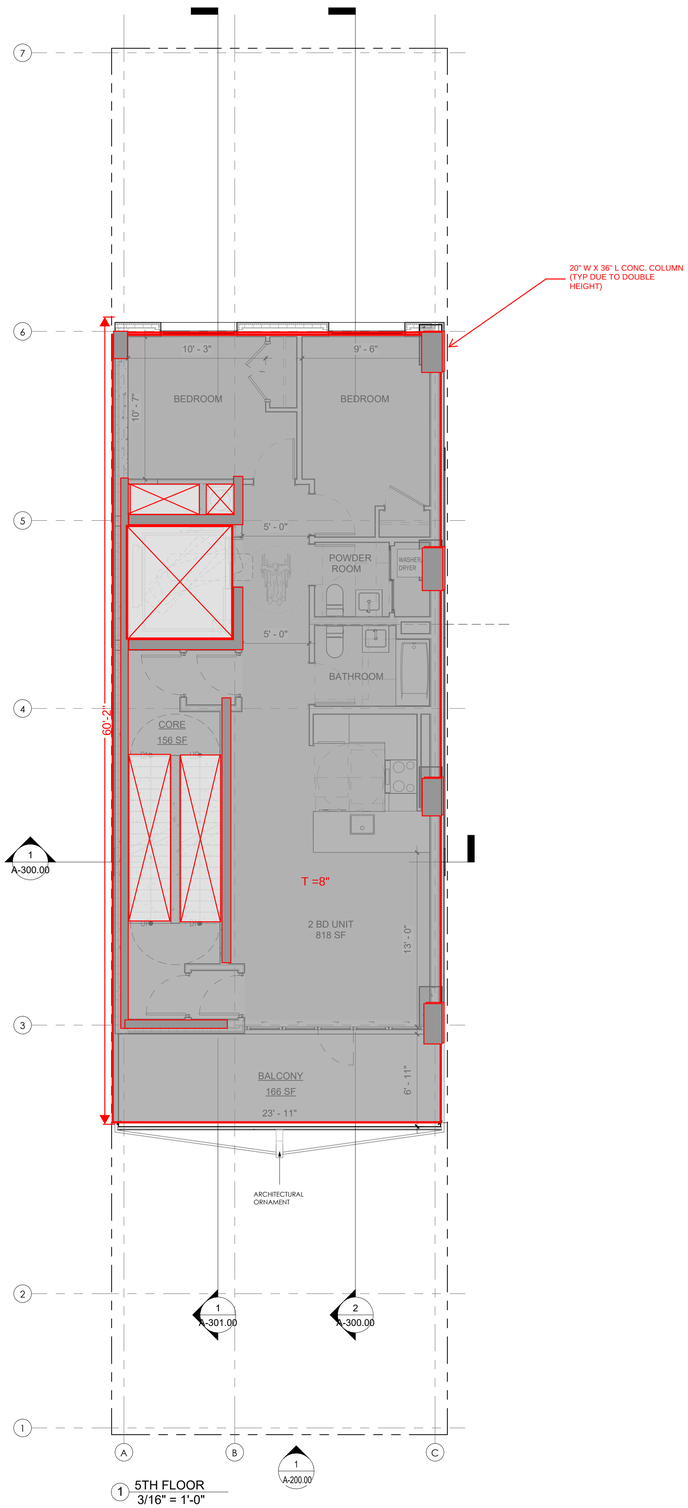
DWG TITLE:

2ND, 3RD, 4TH FLOOR

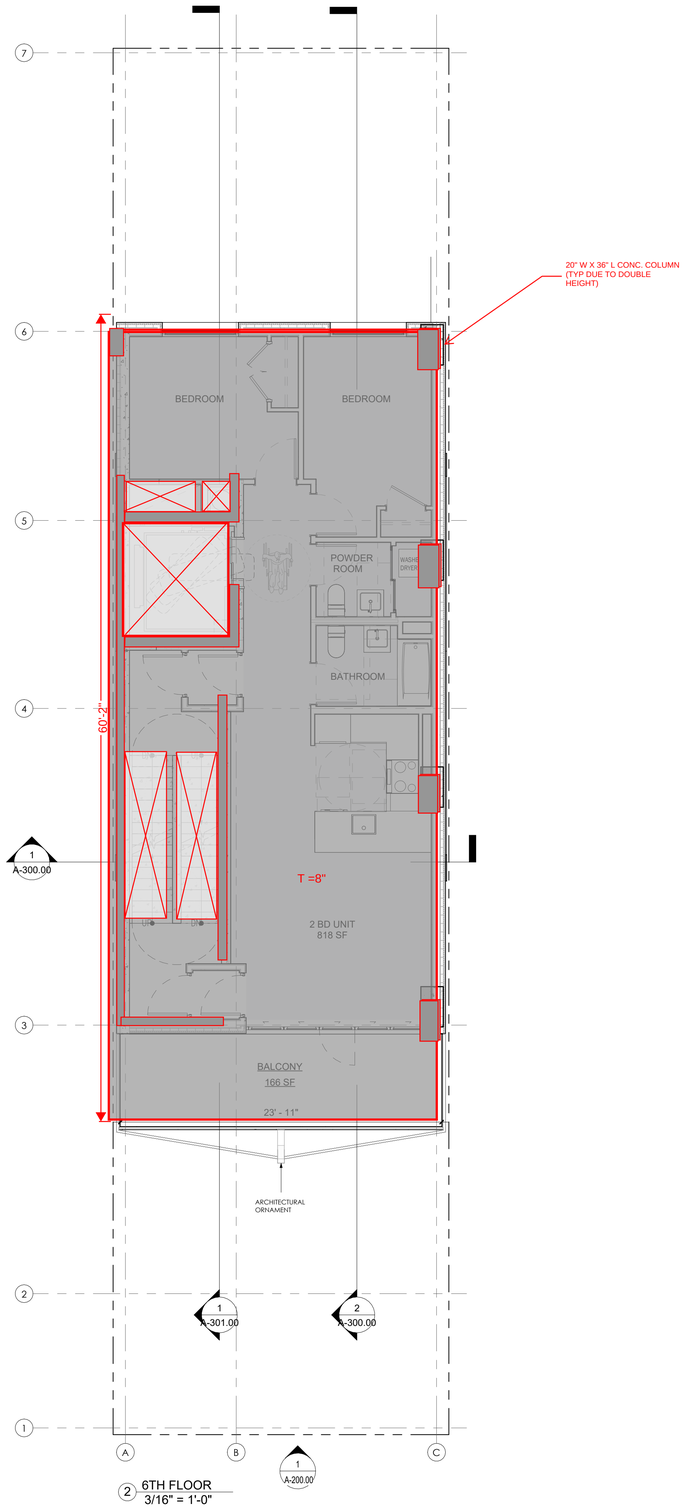
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DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-101.00

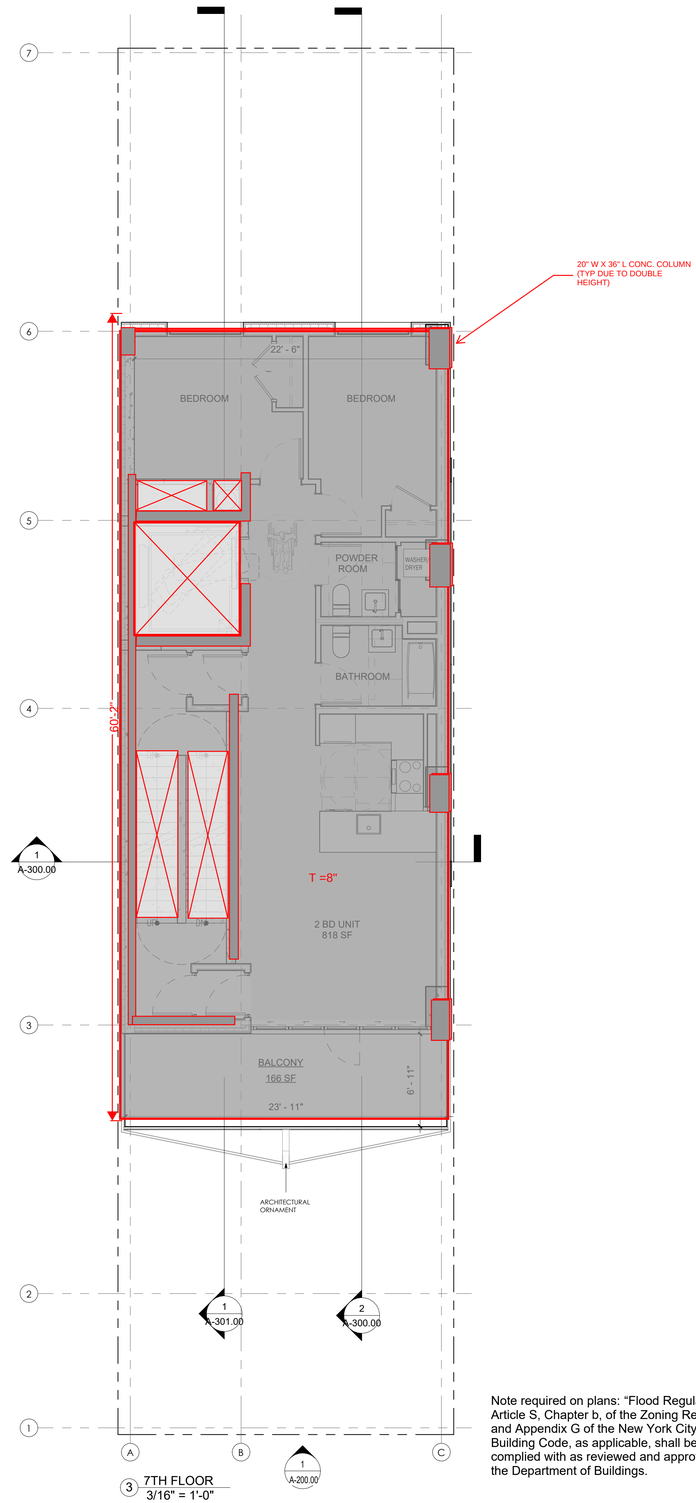
DOB BSCAN STICKER



1 5TH FLOOR
3/16" = 1'-0"



2 6TH FLOOR
3/16" = 1'-0"



3 7TH FLOOR
3/16" = 1'-0"

Note required on plans: “Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

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KEY PLAN

NORTH



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

5TH, 6TH, 7TH FLOOR PLAN

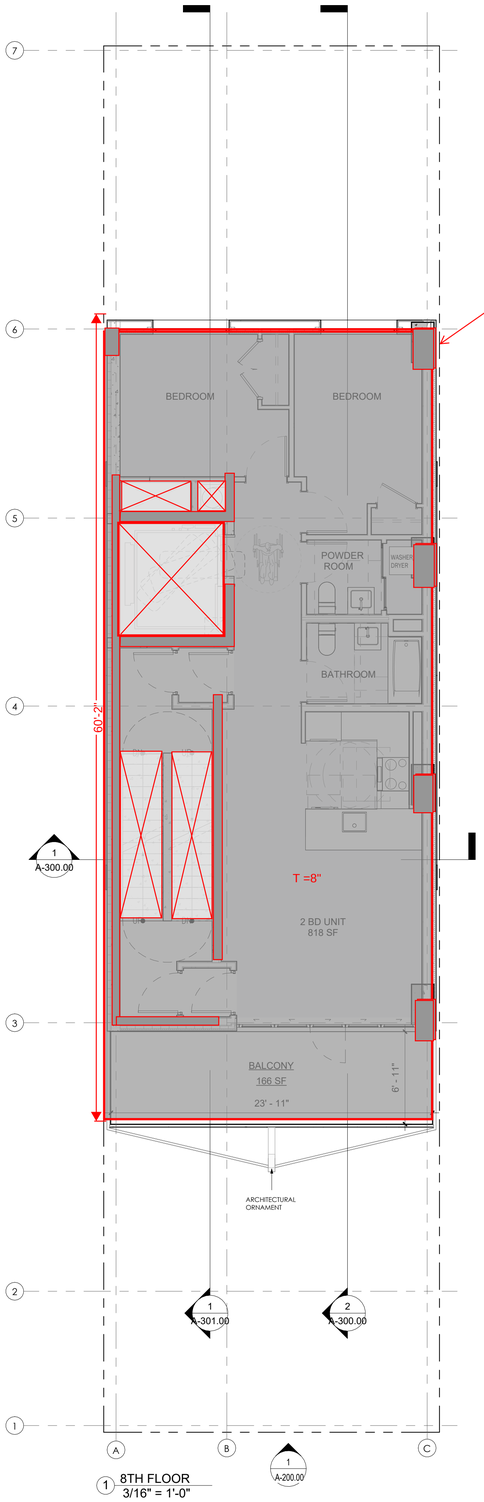
SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

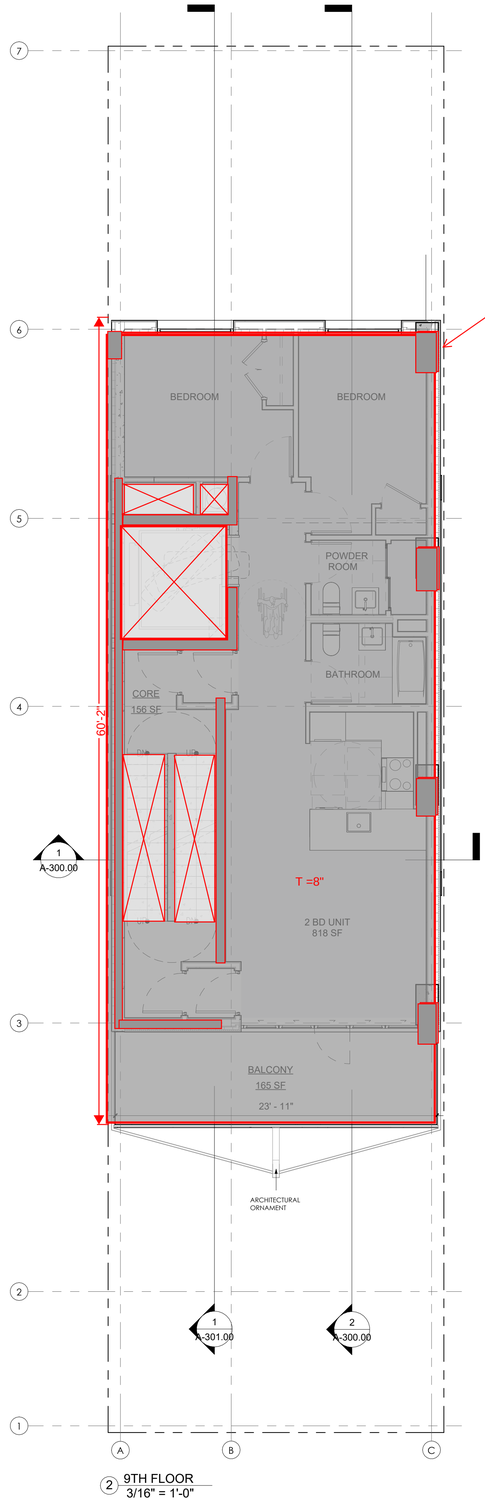
DWG No:

A-102.00

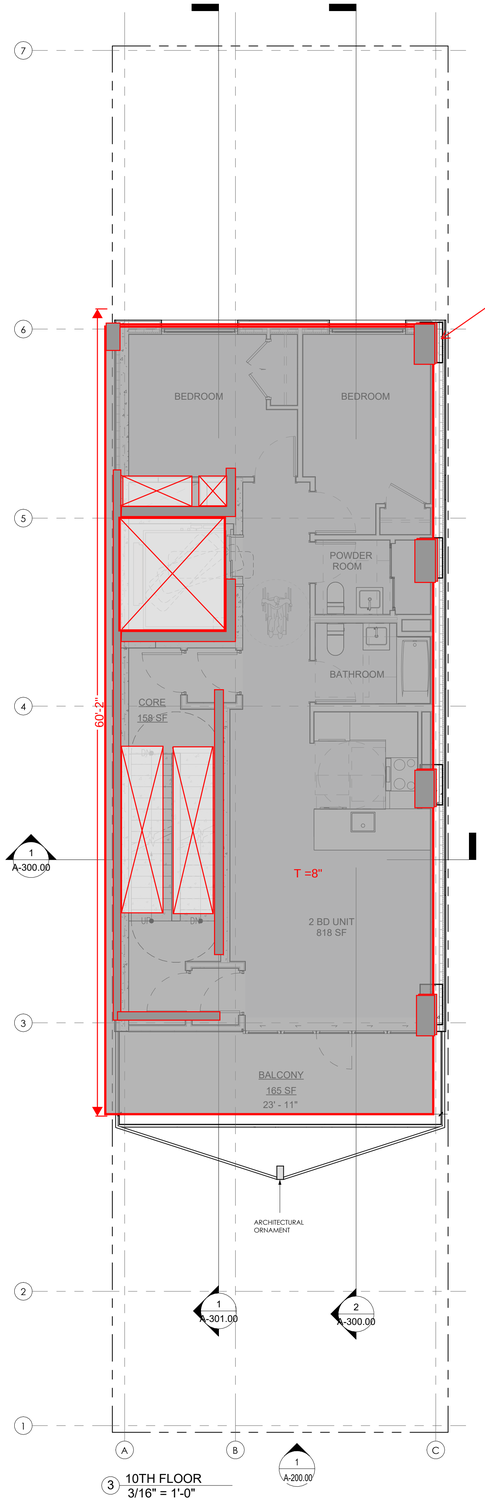
DOB BSCAN STICKER



1 8TH FLOOR
3/16" = 1'-0"



2 9TH FLOOR
3/16" = 1'-0"



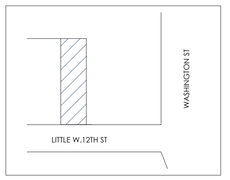
3 10TH FLOOR
3/16" = 1'-0"

Note required on plans: "Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

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KEY PLAN



CLIENT:
NOVAC NOURY

PROJECT NAME:
51 LITTLE W.12TH ST

PROJECT ADDRESS:
51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

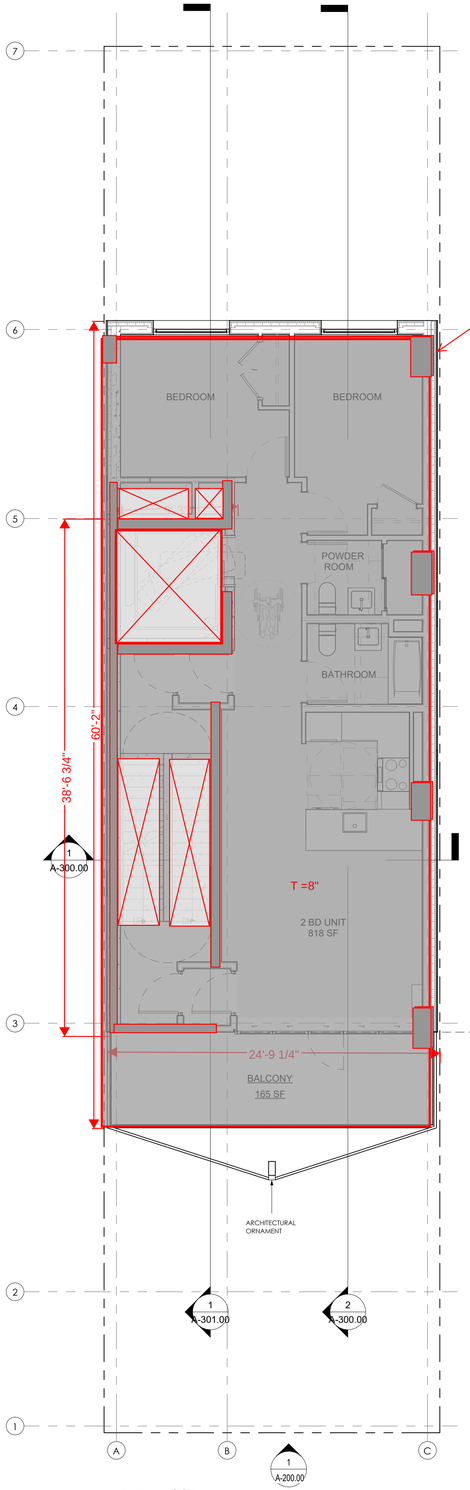
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8TH, 9TH, 10TH FLOOR PLAN

SEAL

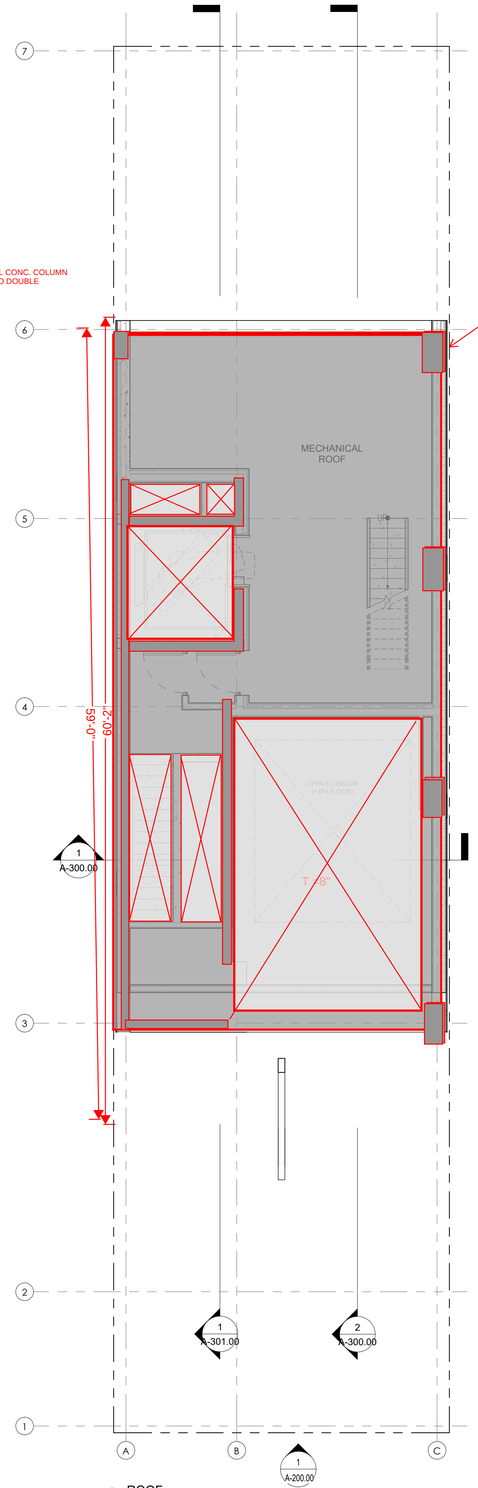
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PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:
A-103.00

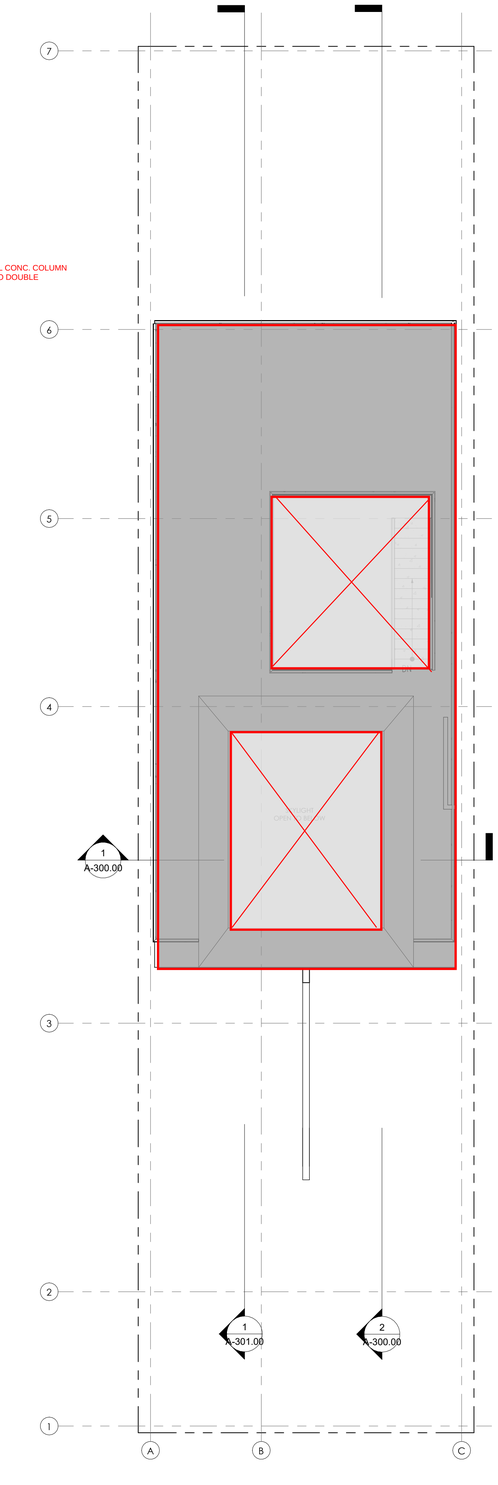
DOB BSCAN STICKER



1 14TH FLOOR
3/16" = 1'-0"



4 ROOF
3/16" = 1'-0"



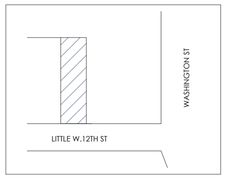
2 BULKHEAD
3/16" = 1'-0"

Note required on plans: “Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

14TH, ROOF, BULKHEAD FL PLAN

SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-104.00

DOB BSCAN STICKER

51 LITTLE W.12TH STREET, NEW YORK 10014

PROJECT INFORMATION

SCOPE OF WORK

6 STORY COMMERCIAL BUILDING

ZONING INFORMATION

ADDRESS: 51 LITTLE WEST. 12TH STREET, NEW YORK 10014
BLOCK: 645
LOT: 21
MAP: 8B
DISTRICT: M1-5
LOT AREA: 2,581 SF

BUILDING CODE INFORMATION

BUILDING CODE:	2022 NEW YORK CITY BUILDING CODE
CONSTRUCTION CLASS:	I-B (NON COMBUSTIBLE 2 HR RATED)
OCCUPANCY CLASS:	-
PROP. BUILDING HEIGHT:	-
# OF STORIES:	-
FIRE PROTECTION:	-
FIRE DISTRICT:	INSIDE
FLOOD ZONE:	PROPERTY IS NOT IN SPECIAL FLOOD HAZARD AREA AS PER EFFECTIVE 2007 FIRM MAP AND 2013 PRELIMINARY MAP
ADDITIONAL NOTES:	- THIS BUILDING DOES NOT CONTAIN PREFABRICATED OR MODULAR CONSTRUCTION
	- THIS BUILDING WILL NOT BE OCCUPIED DURING CONSTRUCTION
	- THIS PROPERTY IS NOT LOCATED WITHIN 200 FEET OF ANY TRANSIT STRUCTURE
	- THIS PROPERTY IS FULLY SPRINKLERED BUILDING AS PER BC 903.3.1.1 WITH FIRE ALARM INSTALLED IN ACCORDANCE TO 2022 NYC CONSTRUCTION CODE

NEW BUILDING - APPLICATION # B00836072-I1

THE WORK TYPES TO BE FILED UNDER SEPARATE APPLICATIONS:

- BUILDING PAVERS PLAN # ----------
- SPRINKLER & STANDPIPE # ----------
- FIRE ALARM APP. # ----------
- MECHANICAL. # ----------
- PLUMBING. # ----------
- FENCE # ----------
- FOUNDATION # ----------
- STRUCTURAL. # ----------
- SOE # ----------
- CURB CUT # ----------
- ARCS # ----------

NYCECC COMPLIANCE STATEMENT

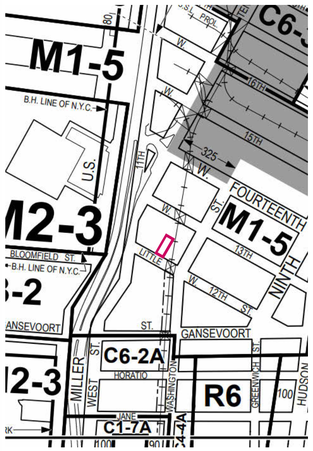
ENERGY CODE COMPLIANCE STATEMENT

TO THE BEST OF MY KNOWLEDGE, BELIEVE AND PROFESSIONAL JUDGMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 NEW YORK CITY ENERGY CONSERVATION CODE, USING CHAPTER C4

ZONING MAP



AREA OF WORK



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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

COVER SHEET

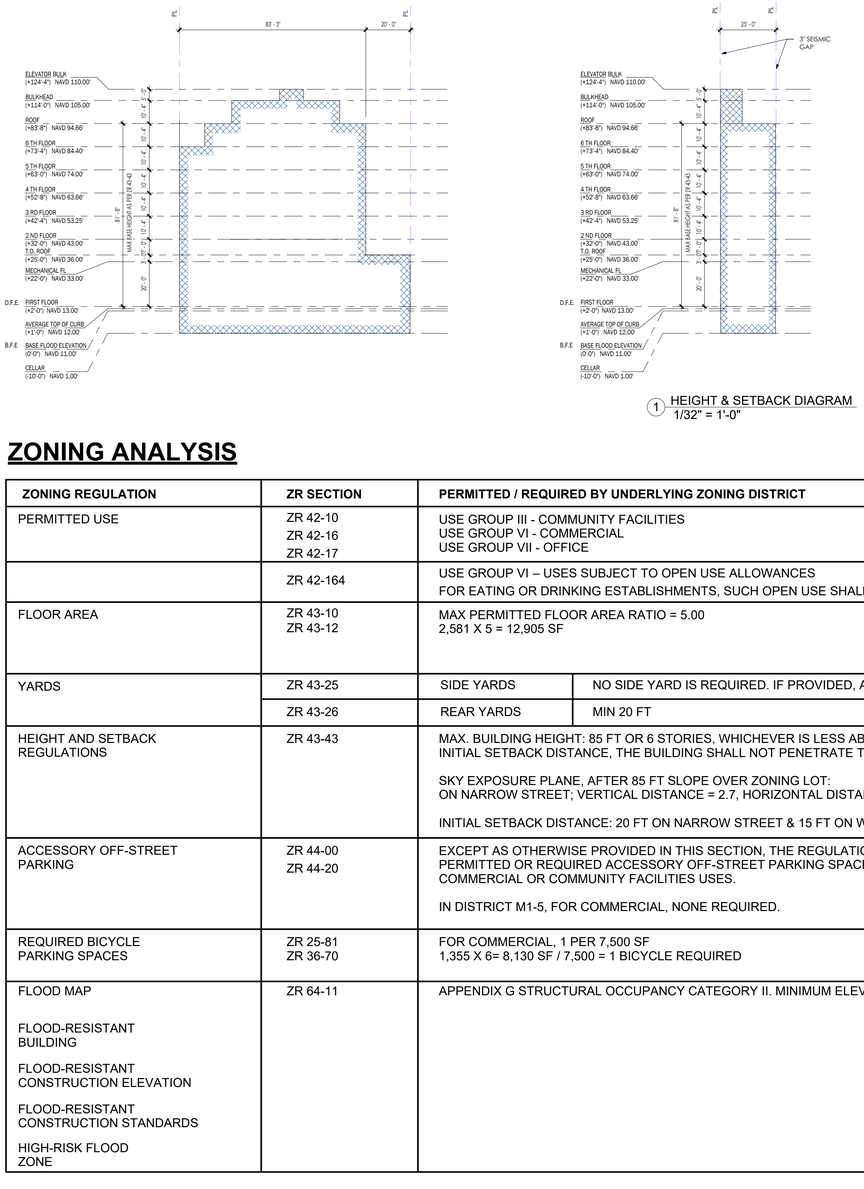
SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-000.00

DOB BSCAN STICKER


PL
83' -3"
20' -0"
PL
ELEVATOR BULK
(+124'-4") NAVD 110.00'
BULKHEAD
(+114'-0") NAVD 105.00'
ROOF
(+83'-8") NAVD 94.66'
6 TH FLOOR
(+73'-4") NAVD 84.40'
5 TH FLOOR
(+63'-0") NAVD 74.00'
4 TH FLOOR
(+52'-8") NAVD 63.66'
3 RD FLOOR
(+42'-4") NAVD 53.25'
2 ND FLOOR
(+32'-0") NAVD 43.00'
T.O. ROOF
(+25'-0") NAVD 36.00'
MECHANICAL FL
(+22'-0") NAVD 33.00'
D.F.E.
FIRST FLOOR
(+2'-0") NAVD 13.00'
AVERAGE TOP OF CURB
(+1'-0") NAVD 12.00'
B.F.E
BASE FLOOD ELEVATION
(0'-0") NAVD 11.00'
CELLAR
(-10'-0") NAVD 1.00'
85'-3"
MAX BASE HEIGHT AS PER R43-43
20'-0"
10'-4"
10'-4"
10'-4

MARIN
ARCHITECTS

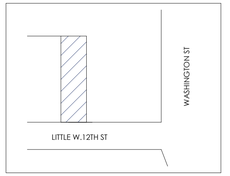
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KEY PLAN

NORTH



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

SITE PLAN

SEAL

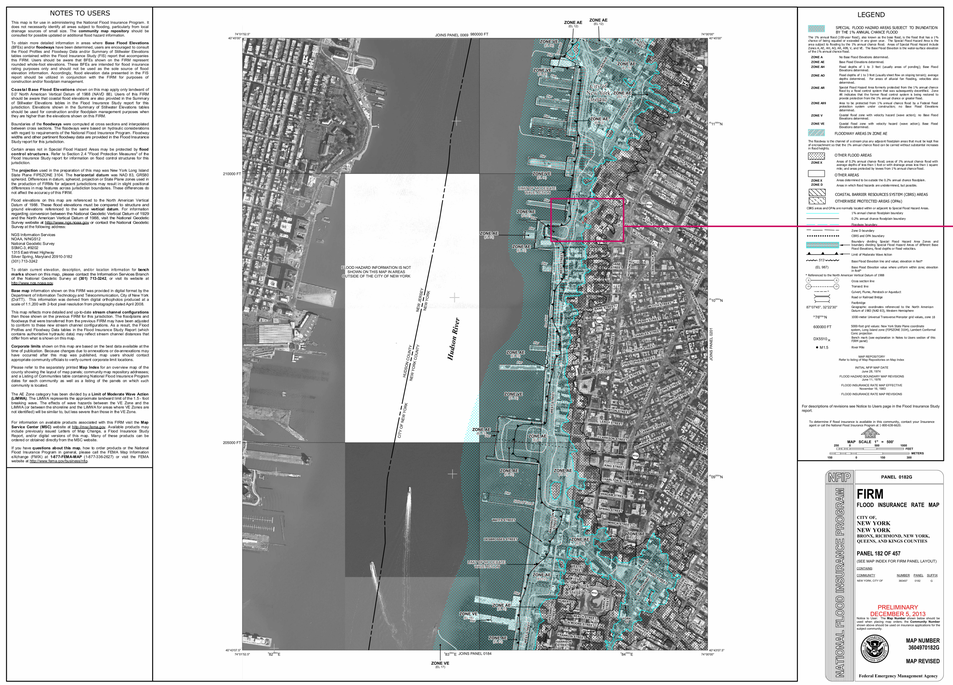
DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-002.00

DOB BSCAN STICKER

FLOOD ZONE INFORMATION 2013 PRELIMINARY



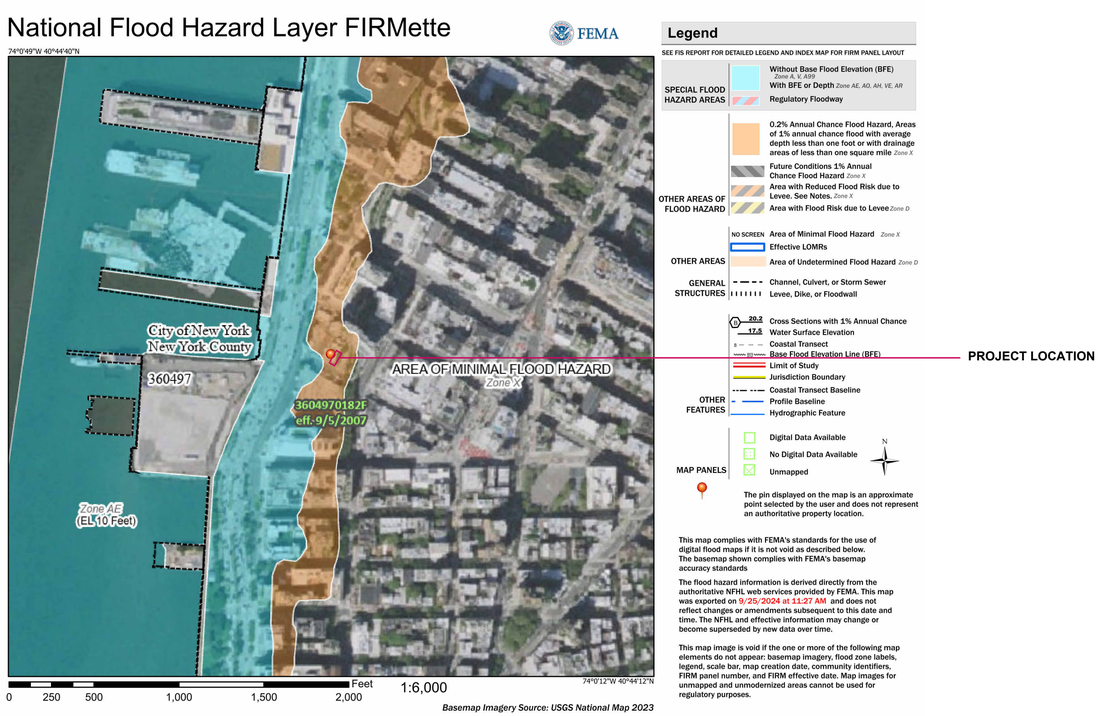
ZONING INFORMATION

ADDRESS: 51 LITTLE WEST. 12TH STREET, NEW YORK 10014
BLOCK: 645
LOT: 21
MAP: 8B
DISTRICT: M1-5
LOT AREA: 2,581 SF

FLOOD MAP NUIMBER: 3604970182G
FLOOD ZONE: AE

PROJECT LOCATION

FEMA FLOOD ZONE INFORMATION



PROJECT LOCATION

MARIN ARCHITECTS
57 W 38TH ST NEW YORK NY 10018
212 463 8480 INFO@MARINARCHITECTS.COM
CONSULTING ENGINEERS



KEY PLAN

CLIENT:
NOVAC NOURY

PROJECT NAME:
51 LITTLE W.12TH ST

PROJECT ADDRESS:
51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:
FEMA MAPS & BUILDING CODE ANALYSIS

SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-003.00

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GENERAL NOTES:

1. THE CONTRACTOR SHALL REVIEW AND FAMILIARIZE HIMSELF WITH THE GENERAL NOTES AND SPECIFICATION DRAWINGS AND TO DETERMINE WHICH NOTES APPLY DIRECTLY TO HIS RESPONSIBILITY. ALL SEPARATE SUBTRADES WILL BE RESPONSIBLE FOR REVIEWING THE ENTIRE SET OF DRAWINGS AND NOTING THEIR WORK AS APPLICABLE. ALL WORK INDICATED OR INFERRED ON THE DRAWINGS WILL BE DEEMED AND INCLUDED IN ALL CONTRACTORS' COSTS.
2. THE A/E SHALL BE NOTIFIED OF ANY DISCREPANCIES OR OMISSIONS WHICH WOULD INTERFERE WITH THE SATISFACTORY COMPLETION OF THE WORK, PRIOR TO THE START OF ANY AND ALL WORK.
3. THE GENERAL CONTRACTOR SHALL HAVE HAD EXPERIENCE ON AT LEAST THREE PROJECTS INVOLVING QUALITIES AND COMPLEXITIES OF AT LEAST EQUAL TO THOSE REQUIRED UNDER ALL DIVISIONS DETAILED IN THESE DRAWINGS.
4. THE FOLLOWING TERMS SHALL BE UNDERSTOOD TO BE THE SAME UNLESS SPECIFICALLY NOTED OTHERWISE "CONSTRUCTION SUBCONTRACTOR" "GENERAL CONTRACTOR," AND "CONTRACTOR".
5. EACH SUBCONTRACTOR PRIOR TO CONTRACTION, AND AS ANTICIPATED OR INFERRED PRIOR TO PRICING OR BIDDING SHALL VERIFY ALL JOB CONDITIONS, DIMENSIONS AND DETAILS.
6. ANY AND ALL WORKERS PERFORMING WORK ON THIS PROJECT SHALL BE SKILLED WORKMEN IN THEIR RESPECTIVE TRADES.
7. THE CONTRACTOR SHALL FULLY UNDERSTAND ALL WORK. WHETHER SHOWN OR IMPLIED, UNLESS SPECIFICALLY QUESTIONED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY MISINTERPRETATIONS OR CONSEQUENCES THEREOF FOR ALL WORK ON ALL DRAWINGS.
8. ANY AND ALL WORK SHALL BE COMPLIANT WITH LOCAL AND MUNICIPAL BUILDING CODES THAT ARE APPLICABLE. AS WELL AS ALL REGULATORY AGENCIES INCLUDING, BUT NOT LIMITED TO, OSHA, ETC. GENERAL NOTES SHALL APPLY TO ALL DRAWINGS.
9. SCHEDULING OF ALL WORK TO CONFORM TO THE CONSTRUCTION SCHEDULE AND COOPERATION WITH OTHER CONTRACTORS IN THE REQUIRED SEQUENTIAL INSTALLATION IS THE GENERAL CONTRACTORS RESPONSIBILITY AS APPROVED BY THE ARCHITECT.
10. 10. THE A/E AND THE OWNER RESERVE THE RIGHT TO LET OTHER CONTRACTS IN CONNECTION WITH THE WORK OF THE PROJECT. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK AND ESTABLISHING SCHEDULES FOR ALL TRADES; HE SHALL AFFORD OTHER CONTRACTORS REASONABLE OPPORTUNITY FOR THE INTRODUCTION AND STORAGE OF THEIR MATERIALS AND EQUIPMENT AND THE EXECUTION OF THEIR WORK.
11. ALL WORK IS TO CONFORM TO CONSTRUCTION DRAWINGS AND SPECIFICATIONS AND SHALL BE NEW AND BEST QUALITY OF THE KINDS SPECIFIED.
12. THE CONTRACTOR SHALL SUBMIT CERTIFICATES OF INSPECTION AND A CERTIFICATE OF SUBSTANTIAL COMPLETION (A.I.A DOCUMENT #G-704) UPON COMPLETION OF THE JOB.
13. DRAWINGS ARE NOT TO BE SCALED; DIMENSIONS GOVERN.
14. SUBMITTING IN WRITING ALL PROPOSALS FOR ADDITIONAL WORK TO THE A/E FOR REVIEW AND APPROVAL SHALL BE THE CONTRACTORS RESPONSIBILITY. UNTIL A SIGNED AUTHORIZATION TO PROCEED IS RETURNED TO THE GENERAL CONTRACTOR, NO WORK IS TO PROCEED.
15. MATERIAL CHANGE REQUESTS WILL BE CONSIDERED BY THE A/E ON AN INDIVIDUAL BASIS. THE GENERAL CONTRACTOR SHALL SUBMIT SAMPLES AND CUTS FOR WRITTEN APPROVAL BY THE A/E PRIOR TO THE START OF ANY WORK. NO MATERIAL SUBSTITUTIONS SHALL BE MADE.
16. AS DIRECTED BY THE SUPPLIER/MANUFACTURER, IN ACCORDANCE WITH ACCEPTED INDUSTRY STANDARD PRACTICE ALL MATERIALS AND EQUIPMENT SPECIFIED SHALL BE SUPPLIED, INSTALLED, CONNECTED, ERECTED, CLEANED, AND CONDITIONED.
17. THE DELIVERY, HANDLING, AND INSTALLATION OF MATERIALS, EQUIPMENT, AND DEBRIS MUST BE ARRANGED TO AVOID ANY INCONVENIENCE AND ANNOYANCE TO OTHER TENANTS. DEMOLITION AND OTHER WORK WHICH CREATES DISTURBING NOISE MUST BE SCHEDULED WITH BUILDING MANAGEMENT AND PERFORMED DURING HOURS PERMITTED.
18. EQUIPMENT AND OTHER PROPERTY BELONGING TO THE BUILDING SHALL ALSO RECEIVE PROTECTION AND REFURBISHING IF DAMAGED IN THE COURSE OF CONSTRUCTION, TO THE SATISFACTION OF THE OWNER.
19. ALL SUBCONTRACTORS' SHOP DRAWINGS SHALL BE SUBMITTED TO THE A/E FOR APPROVAL THROUGH THE CONSTRUCTION MANAGER PRIOR TO WORK BEING PERFORMED, UNLESS OTHERWISE NOTED.
20. CONTRACTOR SHALL ASSIGN ONE TOILET AREA FOR THE WORKMEN, AND THE G.C. SHALL BE RESPONSIBLE FOR CLEANING, MAINTAINING, AND UPON COMPLETION OF THE WORK, RESTORING IT TO ITS ORIGINAL CONDITION.
21. CONSTRUCTION PERSONNEL MUST CARRY PROPER IDENTIFICATION AT ALL TIMES.
22. ALL FIRE EXITS SHALL BE KEPT CLEAR AND ACCESSIBLE AT ALL TIMES.
23. ALL ELECTRIC HAND TOOLS MUST BE GROUNDED PROPERLY.
24. INDUSTRY STANDARD AND APPROVED PROTECTIVE EYE GOGGLES WILL BE WORN DURING ANY CUTTING, WHETHER BY HAND OR BY MECHANICAL MEANS, OF FLOORS, WALLS, AND ARCHES.
25. IN THE WORK AREAS ALL WINDOWS SHALL BE KEPT CLOSED.
26. ALL DAMAGED LADDERS, BAKERS, AND ROLLING SCAFFOLDING WILL BE IMMEDIATELY REMOVED FROM THE JOB SITE. ALL LADDERS, BAKERS, AND SCAFFOLDING SHALL BE IN GOOD OPERATING CONDITION.
27. FIRE EXTINGUISHERS MUST BE KEPT ON THE JOB SITE DURING CONSTRUCTION.
28. THOROUGH VACUUM CLEANING OF ALL CARPETED AREAS, CLEANING OF ALL FLOORING, MILLWORK, ETC. AND UNCOVERING AND VACUUMING OUT OF ALL CONVECTOR UNITS AFTER THE INSTALLATION IS COMPLETED, AND THE MAINTAINING OF CONDITIONS THROUGH THE TENANT'S MOVE-IN IS THE RESPONSIBLE OF EACH CONTRACTOR.
29. 29. CLEAN UP AND REMOVAL FROM THE PREMISES ALL WASTE MATERIALS, RUBBISH, WRAPPINGS, AND SALVAGES AS GENERATED BY THE CONSTRUCTION, DEMOLITION AND/OR THE DELIVERY AND INSTALLATION OF ANY PRODUCTS, MATERIALS, OR EQUIPMENT IS THE RESPONSIBILITY OF EACH CONTRACTOR THAT IS PART OF HIS CONTRACT.
30. 30. EACH CONTRACTOR SHALL MAINTAIN THE WORK AREA AND THE AREAS INVOLVED IN THE DELIVERY OF MATERIALS FOR CLEANLINESS BEFORE AND AFTER HIS MATERIAL DELIVERY.
31. HAVING A COMPETENT SUPERINTENDENT/FOREMAN ON THE PREMISES AT ALL TIMES WHEN WORK IS IN PROGRESS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
32. RESPONSIBILITY FOR ALL COSTS INCURRED FOR DAMAGES CAUSED BY HIS WORKFORCE/SUBCONTRACTORS LIES ON THE GENERAL CONTRACTOR.33. THE GENERAL CONTRACTOR IS TO INSTALL ADEQUATE PROTECTION OF BUILDING PAPER, MASONITE, OR THEIR APPROVED MATERIAL ON ALL.
33. FINISHED SURFACES AS DIRECTED BY THE BY ARCHITECT/B.S. PRIOR TO THE OWNER'S MOVING DATE, AND SHALL REMOVE SAME FOLLOWING COMPLETION OF THE MOVE.
34. G. C. /SUBCONTRACTOR SHALL SECURE ALL PERMITS FORM ALL APPLICABLE AGENCIES HAVING JURISDICTION FOR EACH FOR THIS PROJECT.
35. OWNER SHALL ARRANGE WITH THE ARCHITECT OF RECORD, A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT ACCEPTABLE BY THE ARCHITECT OF RECORD TO EMPLOY HIS SERVICES FOR ALL ITEMS OFCONTROLLED INSPECTIONS AND PAY FOR SAME.
36. G.C. SHALL RETAIN ONLY LICENSED CONTRACTORS FOR PLUMBING, ELECTRICAL OR ANY OTHER TRADE THAT MAY REQUIRE LICENSING
37. G.C. OR HIS SUB-CONTRACTOR HAVING JURISDICTION SHALL CALL FOR ALL INSPECTIONS OF HIS WORK, GET WRITTEN SIGN-OFFS REQUIRED.
38. AT THE TIME OF PERMIT SECURE, CONTRACTOR WILL BE FURNISHED WITH APPROVED PLANS AND APPLICATIONS FOR THIS PROJECT. SHOULD HE REQUIRE PRINTS OR SEPIAS FOR HIS OR HIS SUB-CONTRACTOR'S USE HE SHALL REIMBURSE THE ARCHITECT OF RECORD FOR SAME.
39. G.C. SHALL MAINTAIN ALL FORMS OF INSURANCE INCLUDING WORKMAN'S COMPENSATION AS REQUIRED BY THE LOCAL BUILDING DEPARTMENT.
40. WHERE NECESSARY, OWNER SHALL PAY ALL COSTS CHARGED BY UTILITY COMPANIES FOR MAKING SERVICE CONNECTIONS, INCLUDING ALL INSTALLATION CHARGES NORMALLY ASSESSED AGAINST THE OWNER AND ALL COST OF INSPECTIONS OR TESTS BY UTILITY COMPANIES OR AUTHORITIES AND FINAL ADJUSTMENT OF FEES WITH LOCAL AUTHORITIES.
41. IT SHALL BE THE DUTY OF THE G. C./C. M. TO COMPLY AND TO REQUIRE ALL AGENTS OF THE G. C./C. M. TO COMPLY, WITH ALL FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS IN THE CONSTRUCTION AND COMPLETION OF THE WORK HEREIN PROVIDED FOR. THE G. C./C. M. SHALL BE SOLELY RESPONSIBLE FOR AND SHALL SAVE THE OWNER HARMLESS FROM ANY AND ALL DAMAGES AND COSTS ON ACCOUNT OF ACCIDENTS OR INJURIES TO PERSONS OR PROPERTY OR PENALTIES THAT MAY BE OCCASIONED BY OR RESULT FROM THE FAILURE OR NEGLECT OF THE G. C./ C. M. TO COMPLY WITH SAID FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS OR FROM ANY OTHER FAILURE OR NEGLECT OF THE G. C./C. M. OR OF ANY AGENT OF THE CONTRACTOR IN THE PERFORMANCE OF THIS CONTRACT.
42. ALL WORK SHALL CONFORM TO THE LOCAL BUILDING CODE AND ALL GOVERNMENTAL AUTHORITIES HAVING JURISDICTION.
43. CONTRACTOR SHALL PROVIDE ALL PERMITS AND SIGN OFFS FOR WORK TO BE PERFORMED.
44. THE FOLLOWING REQUIREMENTS ARE PART OF THE CONTRACT AND SHALL APPLY TO ALL WORK UNDER THE CONTRACT. THIS SPECIFICATION INCLUDES CERTAIN ITEMS OF GENERAL NATURE THAT APPLY TO THE WORK AS A WHOLE. SUCH REQUIREMENTS SHALL ALSO APPLY TO, AND BE MADE PART OF, EACH SECTION OF THE SPECIFICATIONS, AS THEY ARE APPLICABLE TO THE WORK OF THIS PROJECT.
45. THE CONTRACTOR SHALL MAINTAIN ALL FORMS OF INSURANCE INCLUDING WORKMANS COMPENSATION AS REQUIRED BY THE LOCAL BUILDING DEPARTMENT.
46. THE CONTRACTORS ARE TO VERIFY ALL MEASUREMENTS AND FIELD CONDITIONS AT SITE PRIOR TO PROCEEDING WITH THE WORK AND IMMEDIATELY NOTIFYING THE ARCHITECT AS TO ANY DISCREPANCIES.
47. THE CONTRACTOR SHALL PROVIDE ALL MEANS OF PROTECTION REQUIRED AND NEEDED FOR THE PROPERTY, ADJOINING PROPERTY, WORKERS AND PEDESTRIANS IN ACCORDANCE WITH THE LOCAL BUILDING CODE AND OTHER AGENCIES HAVING JURISDICTION. THIS PROTECTION SHALL BE MAINTAINED THROUGHOUT THE ENTIRE PERIOD OF THE WORK.
48. UNLESS OTHERWISE NOTED, ALL MATERIALS USED ON THE PROJECT SHALL BE NEW AND THE BEST OF THEIR RESPECTIVE KINDS.
49. ALL CONSTRUCTION IS TO BE CONFINED TO THE AREA OF WORK AND SHALL NOT CREATE ANY INCONVENIENCE SUCH AS DUST, DIRT, NOISE, ETC. TO ANY OTHER SPACE WITHIN THE BUILDING. CONTRACTOR TO PROVIDE PROTECTION TO ALL PROPERTY, WORKERS AND PEDESTRIANS IN ACCORDANCE WITH LOCAL BUILDING CODES, INCLUDING NO INTERRUPTION OF ESSENTIAL SERVICES INCLUDING HEAT, HOT WATER, ELECTRICITY AND SECURITY.
50. ALL REMOVAL WORK SHALL BE PERFORMED IN A NEAT AND ORDERLY MANNER AND THE WORK SHALL CONFORM TO THE LOCAL CODES, REGULATIONS AND OTHER AGENCIES HAVING JURISDICTION. ALL ITEMS REMOVED FROM THE PREMISES AND NOT SCHEDULED FOR REUSE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE.
51. ALL AREAS DISTURBED BY THE NEW WORK SHALL BE PATCHED TO MATCH EXISTING ADJACENT SURFACES.
52. ALL ELECTRICAL WORK TO BE DONE ACCORDING TO THE LOCAL ELECTRICAL CODE.
53. ALL WORK SHOWN IS DIAGRAMMATIC AND SHALL BE INSTALLED TO FIT ACTUAL BUILDING CONDITIONS. CONTRACTOR SHALL, AS PART OF CONTRACT, FURNISH ALL INCIDENTALS NECESSARY TO LEAVE EACH PART OF THE THE WORK COMPLETE AND READY FOR OPERATION.
54. THE CONTRACTOR SHALL CHECK AND VERIFY ALL CONDITIONS, DIMENSIONS, NOTES, ETC. AT THE SITE AND REPORT TO THE ARCHITECT, ALL DISCREPANCIES AND OTHER CONDITIONS NOT NOTED BEFORE PROCEEDING WITH THE WORK.
55. WATER DISTRIBUTION SYSTEM PIPING SHALL BE COPPER PIPE, COPPER TUBING, OR AS PER PLUMBING DRAWINGS.
56. CONTRACTOR SHALL VERIFY DIMENSIONS AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, TO ARCHITECTS FOR APPROVAL.
57. ALL STRUCTURAL STEEL WORK SHALL CONFORM WITH ALL REQUIREMENTS OF THE LOCAL BUILDING CODE AND WITH AISC SPECIFICATION FOR STRUCTURAL STEEL FOR BUILDINGS, ELECTRICITY AND SECURITY.

CONSTRUCTION NOTES:

1. PRIOR TO COMMENCEMENT OF ANY WORK FINAL PLACEMENT OF ALL PARTITIONS IS TO BE APPROVED IN THE FIELD BY ARCHITECTS' REPRESENTATIVE.
2. ALL GYPSUM BOARD PARTITIONS SHALL BE PROPERLY BRACED.
3. WATER-RESISTANT TYPE GYPSUM BOARD IS TO BE USED AT ALL TOILETS AND AROUND ALL PANTRY SINKS.
4. ALL METAL TRIMS ON GYPSUM BOARD PARTITIONS SHALL BE TYPE # 200 SERIES AS MANUFACTURED BY U.S. GYPSUM OR EQUAL.
5. ALL PARTITION DIMENSIONS ARE FROM FINISHED SURFACE UNLESS OTHERWISE NOTED.
6. INSTALLATION OF ALL GYPSUM BOARD SHALL BE VERTICALLY IN FULL LENGTH SECTIONS.
7. WHERE A PARTITION MEETS THE WINDOW MULLION, PROVIDE A CONTINUOUS COMPRESSIBLE FILLER STRIP.
8. DRYWALL CONTRACTOR SHALL BE RESPONSIBLE FOR TAPING AND SPACKLING OF GYPSUM BOARD INSTALLED AS WELL AS PATCHING AND REPAIRING ALL WALLS, CEILING, AND COLUMNS TO REMAIN AS EXISTING.
9. NOT USED
10. AT CONTRACTOR'S EXPENSE ALL FIREPROOFING ON STEEL MUST BE REPLACED IF DAMAGED OR MISSING.
11. PROVIDE ACCESS DOORS (APPROX 4 SQ. FT) FOR PLUMBING, ELECTRICAL ETC., AS REQUIRED TO ACCESS EQUIPMENT OR CONTROLS. LOCATION TO BE APPROVED BY A/E. (REF. CONTRACT SCOPE OF WORK).
12. CAPPING ALL EXPOSED EXISTING PIPING NOT BEING USED BEHIND FINISH SURFACE SHALL BE THE CONTRACTORS RESPONSIBILITY.
13. ALL DOORS, EXISTING AND NEW, TO BE UNDERCUT TO 5/8" A.F.F. UNLESS OTHERWISE NOTED.
14. SEE DOOR SCHEDULE/HARDWARE SCHEDULE FOR INFORMATION. ALL LOCKSETS SHALL BE MASTER KEYED AS REQUIRED BY OWNER.
15. CONTRACTOR SHALL FURNISH AND INSTALL FIREPROOF BLOCKING IN CEILINGS OR PARTITIONS AS REQUIRED, OR WHERE WALL-MOUNTED EQUIPMENT OR CABINETRY IS INDICATED, FOR A COMPLETE INSTALLATION.
16. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DOCUMENT ANY PRE-EXISTING DAMAGE AND NOTIFY THE A/E OF ANY SUCH DAMAGE PRIOR TO PRICING OR BIDDING. WHERE EXISTING SURFACES OR FINISHES ARE TO REMAIN, IF DAMAGED DURING DEMOLITION OR ANY OTHER STAGE OF THE WORK, SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE TO "LIKE NEW" CONDITION.
17. AS REQUIRED AND PREPARED TO RECEIVE NEW FINISHES PER FINISH PLAN ALL EXISTING CONSTRUCTION TO REMAIN SHALL BE PATCHED AND REPAIRED.
18. NOT USED
19. FAMILIARIZATION OF THE SITE BY THE CONTRACTOR WITH ALL EXISTING CONDITIONS ON THE SITE IS HIS RESPONSIBILITIES. THE CONTRACTOR BE FAMILIAR TO ANY EXISTING CONDITIONS WHICH MIGHT REQUIRE PERMANENT OR TEMPORARY ACCESS DOORS, AND SHALL INCLUDE IN HIS BID AS A SEPARATE PRICE THE COST OF FURNISHINGS AND INSTALLING THESE ACCESS DOORS. STATING QUANTITY AND UNIT COST.
20. ALL MATERIALS & WORK PERFORMED SHALL BE UNCONDITIONALLY GUARANTEED FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF THE WORK BY ARCHITECT. ALL WORK MUST BE REPLACED PROMPTLY AND WITHOUT CHARGE FOR MATERIALS, LABOR, OVERTIME LABOR, TRANSPORTATION OR ANY OTHER COST WHAT-SO-EVER.
21. THE CONTRACTOR SHALL CONTACT THE ARCHITECT TO RESOLVE ANY CHANGES, OMISSIONS OR PLAN DISCREPANCIES PRIOR TO THE START OF CONSTRUCTION.
22. THE CONTRACTOR SHALL COORDINATE ALL PORTIONS OF WORK AS DESCRIBED IN THESE PLANS.
23. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES INCLUDING BUT NOT LIMITED TO SEWER, WATER, GAS, HVAC, ELECTRIC SERVICE OR SUB-PANEL.
24. WHERE NECESSARY, CONTRACTOR SHALL PAY ALL COSTS CHARGED BY UTILITY COMPANIES FOR MAKING SERVICE CONNECTIONS AND ALL COST OF INSPECTIONS OR TEST BY UTILITY COMPANIES OR AUTHORITIES AND FINAL ADJUSTMENT FEES WITH LOCAL AUTHORITIES.
25. G.C. SHALL PROVIDE ALL MEANS OF PROTECTION REQUIRED AND NEEDED FOR THE PROPERTY, ADJOINING PROPERTY, WORKERS AND PEDESTRIANS IN ACCORDANCE WITH THE LOCAL BUILDING CODE AND OTHER AGENCIES HAVING JURISDICTION. THIS PROTECTION SHALL BE MAINTAINED THROUGHOUT THE ENTIRE PERIOD OF THE WORK.
26. PERSONNEL AND PROPERTY SHALL BE SAFEGUARDED AT ALL TIMES, WHEN HOISTING, PLACING, OR DELIVERING EQUIPMENT, MATERIALS AND TOOLS ALONG SIDE, OVER OR ON EXISTING STRUCTURES. THE G.C. SHALL BE REQUIRED TO EXERCISE ALL DUE SAFETY PRECAUTIONS TO PREVENT ACCIDENTS. THE G.C. SHALL BE RESPONSIBLE FOR ENFORCING ALL MEASURES NECESSARY TO PREVENT ACCIDENTS AND FIRES.
27. IT SHALL BE THE DUTY OF THE G.C. TO COMPLY AND TO REQUIRE ALL AGENTS OF THE G.C. TO COMPLY, WITH ALL FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS OR FROM ANY OTHER FAILURE OR NEGLECT OF THE G.C OR OF ANY AGENT OF THE CONTRACTOR IN THE PERFORMANCE OF THIS CONTRACT.
28. IN THE CONSTRUCTION AND COMPLETION OF THE WORK HEREIN PROVIDED FOR THE G.C. SHALL BE SOLELY RESPONSIBLE FOR AND SHALL SAVE THE OWNER HARMLESS FROM ANY AND ALL DAMAGES AND COSTS ON ACCOUNT OF ACCIDENTS OR INJURIES TO PERSONS OR PROPERTY OR PENALTIES THAT MAY BE OCCASIONED BY OR RESULT FROM THE FAILURE OR NEGLECT OF THE G.C. TO COMPLY WITH SAID FEDERAL, STATE, COUNTY AND MUNICIPAL LAWS, ORDINANCES AND REGULATIONS OR FROM ANY OTHER FAILURE OR NEGLECT OF THE G.C. OR OF ANY AGENT OF THE CONTRACTOR IN THE PERFORMANCE OF THIS CONTRACT.

REFLECTED CEILING NOTES:

1. SEE ENGINEERS DRAWINGS FOR ALL CEILING DIFFUSERS, DUCTWORK LAYOUTS, TRANSFER DUCTS, FUSIBLE LINK DAMPERS, ETC. CONSTRUCTION DRAWINGS INDICATE DIFFUSERS FOR LOCATION ONLY. WHERE DISCREPANCIES OCCUR BETWEEN ENGINEERING AND ARCHITECTURAL DRAWINGS REGARDING LOCATIONS, ARCHITECTURAL DRAWINGS SHALL GOVERN.
2. CONTRACTOR SHALL PROVIDE A COMPOSITE CEILING PLAN AND NECESSARY SHOP DRAWINGS COORDINATING ALL TRADES, SHOWING THE LOCATION OF SUSPENSION MEMBERS, LIGHT FIXTURES, EMERGENCY AND EXIT LIGHTING, H.V.A.C. FIXTURES, DRAPERY POCKETS, FIRE DAMPERS, ACCESS DOORS, FASCIAS, SOFFITS AND AL OTHER ITEMS PENETRATING OR ATTACHED TO THE CEILING. (REF. CONTRACT SCOPE OF WORK.)
3. SEE ENGINEER'S DRAWINGS FOR ADDITIONAL NOTES AND GENERAL INFORMATION.
4. SEE ENGINEER'S DRAWINGS FOR ALL LIGHT FIXTURE CIRCUITING, EMERGENCY AND EXIT LIGHTING, SMOKE DETECTORS, STROBE LIGHTING, ALARM SPEAKERS, SWITCHING AND RELATED WORK. LIGHT SWITCHES AND DIMMERS AS INDICATED ON TMG PLANS ARE FOR LOCATION ONLY. CONTRACTOR IS TO VERIFY ALL LIGHT FIXTURE WATTAGE (MAX.) AND PROVIDE PROPER NUMBER OF SWITCHES AT THAT LOCATION TO SERVICE INDICATED LIGHT FIXTURES.
5. NO CEILING BREAKS WILL BE PERMITTED WITHIN A ROOM, UNLESS OTHERWISE NOTED.
6. NOT USED.
7. ACCESS DOOR LOCATIONS TO BE REVIEWED IN THE FIELD PRIOR TO INSTALLATIONS, AND THEIR LOCATIONS TO BE APPROVED BY THE A/E.
8. SEE REFLECTED CEILING PLAN FOR CEILING HEIGHTS. MAINTAIN CEILING HEIGHT THROUGHOUT. NOTIFY ARCHITECT OF ANY COMPLICATIONS WITH HEIGHT.
9. CONTRACTOR TO CLEAN, RELAMP, AND REPLACE ALL FAULTY BALLASTS AND/OR BALLASTS NOT CONFIRMING TO THE LATEST LOCAL BUILDING CODE.
10. CONTRACTOR SHALL PROVIDE AND INSTALL SHALLOW DEPTH FIXTURES AS FIELD CONDITIONS NECESSITATE. WITH THE A/E'S APPROVAL.
11. ALL SWITCHES/DIMMERS TO BE MOUNTED AT 3' - 2" A.F.F. TO CENTER LINE OF SWITCH/DIMMER. MULTIPLE SWITCHES AND/OR DIMMERS TO GANGED AND PROVIDED WITH SINGLE GANG PLATE.
12. EACH CONTRACTOR TO PROVIDE INITIAL LAMPING OF ALL FIXTURES AND INSTALL APPROPRIATE LAMPS AS REQUIRED BY SPECIFIED LIGHT FIXTURE.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING COMPATIBILITY OF LIGHTING FIXTURES WITH THE SPECIFIED CEILING SYSTEM.
14. ALL FLUORESCENT FIXTURES SHALL HAVE WARM WHITE LAMPS, U.O.N.- SEE LIGHTING SCHEDULE.
15. NOT USED
16. CONTRACTOR TO PROVIDE APPROPRIATE SIZED CUT-OUT ABOVE CEILING WHERE PARTITION WALLS EXTEND TO SLAB ABOVE, AS REQUIRED FOR CIRCULATION OF RETURN AIR TO H.V.A.C. SYSTEM. FURNISH AND INSTALL FIRE DAMPERS AS REQUIRED TO MAINTAIN THE INTEGRITY OF RATED WALLS.
17. ALL EXHAUST FAN EQUIPMENT TO BE LOCATED OUTSIDE THE SPECIFIED ROOM AND DUCTED INTO THE SPACE TO THE CEILING REGISTER. ALL EXHAUST FANS TO BE CONTROLLED BY A (RED) PILOT LIGHT WALL MOUNTED SWITCH.
18. H.V.A.C. CONTRACTOR IS RESPONSIBLE TO BALANCE THE H.V.A.C. SYSTEM AFTER THE INSTALLATION IS COMPLETED AND IS TO SUBMIT A WRITTEN REPORT TO THE A/E'S OFFICE FOR REVIEW AND APPROVAL.
19. INSTALL DIRECTIONAL ACOUSTICAL TILE WITH THE GRAIN IN ONE DIRECTION ONLY IN ANY SINGLE SPACE. AS DIRECTED BY THE ARCHITECT.
20. SPRINKLER CONTRACTOR TO SUBMIT A LAYOUT SHOP DRAWING TO ARCHITECT'S OFFICE FOR REVIEW AND APPROVAL OF ALL SPRINKLER HEAD LOCATIONS PRIOR TO FABRICATION OF ANY WORK.

COORDINATION

1. CONTRACTOR SHALL COORDINATE ALL LABOR AND MATERIALS REQUIRED, AND SHALL BE RESPONSIBLE FORSCHEDULING ALL TRADES AND FOR COORDINATION WITH OWNER SUPPLIED ITEMS AND WORK.
2. CONTRACTOR SHALL PROVIDE SUPERVISION ADEQUATE FOR THE COMPLETION OF THE WORK.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING SITE CONDITIONS TO ENSURE ADEQUATE CLEARANCE FOR MOVING ALL MATERIALS, ASSEMBLIES AND EQUIPMENT TO AND FROM THE SITE AS REQUIRED.
4. EACH SUBCONTRACTOR SHALL IDENTIFY LONG LEAD ITEMS INDEPENDENTLY AND SHALL NOTIFY THE GENERAL CONTRACTOR TO ENSURE THAT PRODUCTS ARE ORDERED AND DELIVERED ON TIME. GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY ITEMS REQUIRING LONG LEAD TIMES THAT MAY ADVERSELY EFFECT THE PROJECT SCHEDULE.
5. CONTRACTOR SHALL COORDINATE ALL WORK, TRADES AND SUBMITTALS WITH MANUFACTURES' LEAD TIMES TO ENSURE THAT ALL MATERIALS AND PRODUCTS ARE REVIEWED, ORDERED AND DELIVERED ON SCHEDULE. SUBSTITUTIONS SHALL NOT BE ACCEPTED FOR FAILURE TO COORDINATE SUBMITTALS OR ORDERS WITH MANUFACTURERS' LEAD TIMES.
6. CONTRACTOR SHALL WORK CLOSELY WITH THE OWNER TO COORDINATE DELIVERY AND INSTALLATION OF OWNER-SUPPLIED ITEMS AND WORK. CONTRACTOR SHALL PROVIDE FOR RECEIVING AND STORAGE OF OWNER-SUPPLIED EQUIPMENT, CASEWORK AND FURNITURE.
7. CONTRACTOR SHALL COORDINATE AND COMPLY WITH ALL OWNER SCHEDULING REQUIREMENTS AND COMMUNICATE REGULARLY WITH THE BUILDING MANAGEMENT, CONTRACT OWNER, AND ARCHITECT.
8. CONTRACTOR SHALL BE RESPONSIBLE TO LAY OUT THE WORK AND SHALL PROVIDE ALL DIMENSIONS REQUIRED FOR OTHER TRADES, I.E. PLUMBING, ELECTRICAL, ETC. OR OTHER DISRUPTIVE WORK WITH THE BUILDING OWNER AND ANY AFFECTED TENANTS TO MINIMIZE DISRUPTION. CONTRACTOR TO PROTECT ANY EFFECTED AREAS AND RESTORE FINISHED TO THEIR FORMER CONDITION.
9. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT UPON COMPLETION OF THE PARTITION LAYOUT CHALK LINES. NO STUD OR TRACK SHALL BE INSTALLED WITHOUT THE APPROVAL OF THE ARCHITECT.

SMOKE DETECTOR NOTE

1. SMOKE DETECTORS SHALL BE INSTALLED AS REQUIRED BY SUBCHAPTER 17 ARTICLE 6 ENTITLED "SMOKE DETECTING DEVICES"(C26-1705.01) IN DWELLING UNITS.
2. DETECTORS SHALL BE EITHER IONIZATION CHAMBER OR PHOTOELECTRIC TYPE TO COMPLY WITH RS17-11.
3. UNITS TO BE APPROVED BY THE BOARD OF STANDARDS AND APPEALS ACCEPTED PURSUANT TO RULES AND REGULATIONS PROMULGATED BY THE COMMISSIONER OR LISTED BY AN ACCEPTABLE TESTING LABORATORY, SUCH AS, UNDERWRITER'S LABORATORY, NORTHBROOK, ILLINOIS, MEA LAB.
4. UNITS SHALL BE INSTALLED IN AREAS DESIGNATED ON PLANS.THEY SHALL BE LOCATED ON OR NEAR THE CEILING AND WITHIN 15'-0" OF ANY ROOMS USED FOR SLEEPING PURPOSED. FOR DWELLING UNITS WITH MULTIPLE LEVELS, WHEN ANY LEVEL HAS ONLY ONE MEANS OF EGRESS, UNITS SHALL BE PROVIDED AT ALL LEVELS.
5. SMOKE DETECTORS SHALL BE INSTILLED AS FOLLOWS: (A) CEILING MOUNT-CLOSET EDGE OF UNIT SHALL BE MINIMUM OF 4" FROM ANY WALL (B) WALL MOUNT-CLESET EDGE OF UNIT SHALL BE MINIMUM OF 6"AND A MAXIMUM OF 12" FROM CEILING.

CARBON MONOXIDE DETECTING DEVICE NOTE

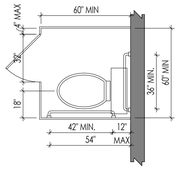
1. HARD WIRED CARBON MONOXIDE DETECTORS WITH BATTERY BACK-UP WILL BE PROVIDED IN EACH APARTMENT WITHIN FIFTEEN OF EVERY BEDROOM.
2. SUCH CARBON MONOXIDE DETECTING DEVICE MAY BE COMBINED WITH A SMOKE DETECTING DEVICE THAT COMPLIES WITH THE PROVISIONS OF THIS TITLE AND ANY APPLICABLE RULES PROMULGATED THERE UNDER 27-9812(a
3. ALL CARBON MONOXIDE DETECTING DEVICES REQUIRED TO BE PROVIDED AND AND INSTALLED PURSUANT TO THIS ARTICLE SHALL BE OF A TYPE AUTHORIZED BY THE RULES PROMULGATED BY THE COMMISSIONER 27-9812(a)
4. KEEP AND MAINTAIN CARBON MONOXIDE DETECTING DEVICES IN GOOD REPAIR.
5. REPLACE ANY CARBON MONOXIDE DETECTING DEVICES WHICH HAS BEEN STOLEN, REMOVED, FOUND, MISSING OR RENDERED INOPERABLE PRIOR TO THE COMMENCEMENT OF A NEW OCCUPANCY OF A DWELLING UNIT.
6. KEEP SUCH RECORDS AS THE COMMISSIONER SHALL PRESCRIBE RELATING TO THE INSTALLATION AND MAINTENANCE OF CARBON MONOXIDE DETECTING DEVICES IN THE BUILDING AND MAKE SUCH RECORDS AVAILABLE TO THE COMMISSIONER UPON REQUEST

SURFACE STORMWATER MANAGEMENT

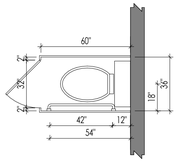
TREAT OR RETAIN ON SITE PRECIPITATION EQUIVALENT TO THE 60TH PERCENTILE PRECIPITATION EVENT. WHERE NOT FEASIBLE DUE TO GEOTECHNICAL ISSUES, SOIL CONDITIONS, OR THE SIZE OF THE SITE, TREAT OR RETAIN THE MAXIMUM VOLUME POSSIBLE.

MINIMIZATION OF DISTURBANCE DURING STAGING AND CONSTRUCTION

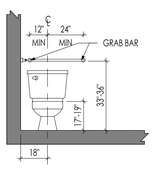
1. STOCKPILE AND PROTECT HIGH-QUALITY TOPSOIL FROM EROSION, FOR REUSE.
2. CONTROL THE PATH AND VELOCITY OF RUNOFF WITH SILT FENCING OR COMPARABLE MEASURES.
3. PROTECT ERPZS, ON-SITE STORM SEWER INLETS, WATERCOURSES AND WATER BODIES WITH STRAW BALES, SILT FENCING, SILT SACKS, ROCK FILTERS, OR COMPARABLE MEASURES.
4. PROVIDE SWALES TO DIVERT SURFACE WATER FROM HILLSIDES.
5. IDENTIFY AND PROTECT SIGNI



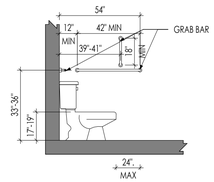
WHEEL CHAIR TOILET STALL CLEARANCES



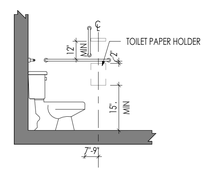
AMBULATORY TOILET STALL CLEARANCES



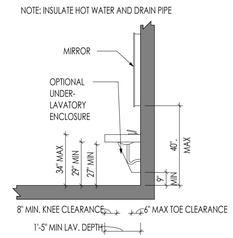
WATER CLOSETS BACK WALL



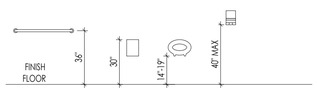
WATER CLOSETS SIDE WALL



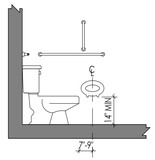
WATER CLOSETS: DISPENSER LOCATION



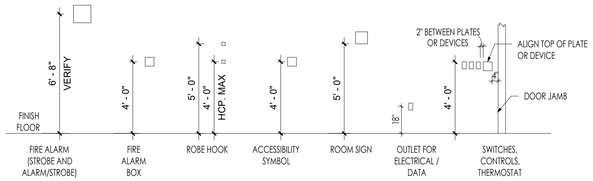
LAVATORY CLEARANCES



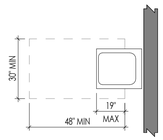
ACCESSORY MOUNTING HEIGHT



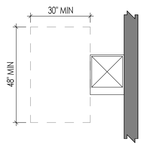
LOCATION OF TOILET PAPER DISPENSER



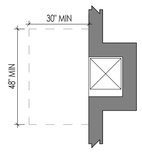
DEVICE MOUNTING HEIGHT



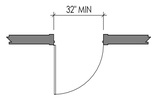
CLEAR SPACE AT LAVATORIES



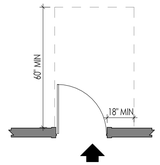
FREE-STANDING FOUNTAIN OR COOLER



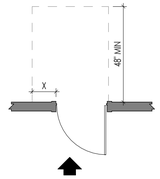
BUILT-IN FOUNTAIN OR COOLER
*NOT TO EXCEED FOUNTAIN DEPTH

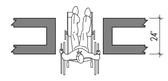


HINGED DOOR

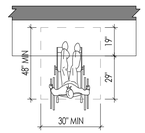


NOTE: X=12" IF DOOR HAS BOTH
A CLOSER & A LATCH

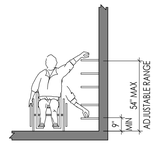




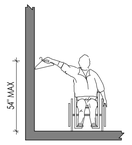
MAXIMUM DOORWAY DEPTH



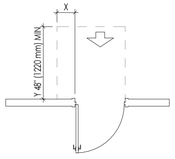
COUNTER WORK SURFACE



SHELVES

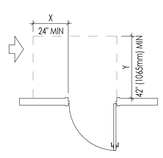


CLOSETS



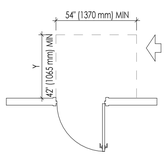
Note:
X = 12 in. (305 mm) if the door
has both a closer and a latch.

PUSH SIDE
FRONT APPROACHES - SWINGING DOORS



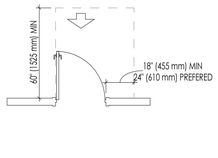
Note:
Y =48 in. (1220 mm) minimum if the door
has both a closer and a latch.

PUSH SIDE
LATCH SIDE APPROACHES - SWINGING DOORS

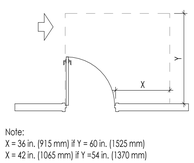


Note:
Y =48 in. (1220 mm) minimum if the door
has both a closer and a latch.

PUSH SIDE
HINGE SIDE APPROACHES - SWINGING DOORS

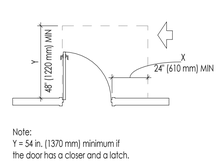


PULL SIDE
FRONT APPROACHES - SWINGING DOORS



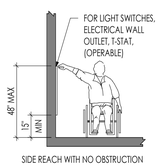
Note:
X = 36 in. (915 mm) if Y = 60 in. (1525 mm)
X = 42 in. (1065 mm) if Y =54 in. (1370 mm)

PULL SIDE
LATCH SIDE APPROACHES - SWINGING DOORS

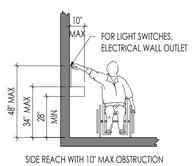


Note:
Y = 54 in. (1370 mm) minimum if
the door has a closer and a latch.

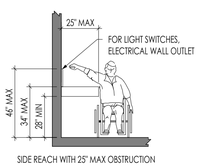
PULL SIDE
HINGE SIDE APPROACHES - SWINGING DOORS



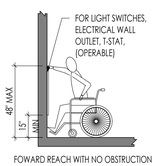
SIDE REACH WITH NO OBSTRUCTION



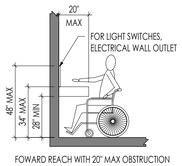
SIDE REACH WITH 10" MAX OBSTRUCTION



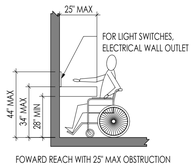
SIDE REACH WITH 25" MAX OBSTRUCTION



FOWARD REACH WITH NO OBSTRUCTION



FOWARD REACH WITH 20" MAX OBSTRUCTION

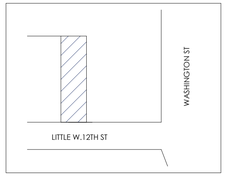


FOWARD REACH WITH 25" MAX OBSTRUCTION

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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

ADA DETAILS

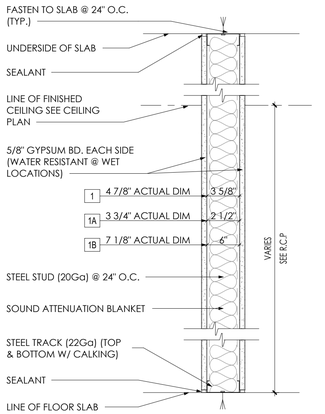
SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK. BY:	Checker

DWG No:

A-010.00

DOB BSCAN STICKER



1 1-HR RATED PARTITION w/ 2 1/2" STUDS

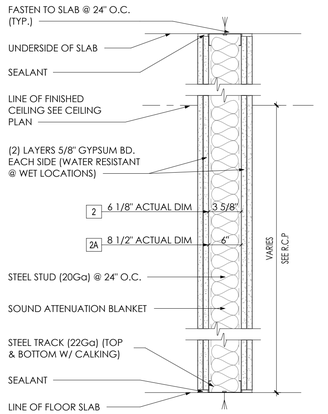
STC: 45 .L.#: U407

1A 1-HR RATED PARTITION w/ 3 5/8" STUDS

STC: 53 .L.#: U407

1B 1-HR RATED PARTITION w/ 6" STUDS

STC: 53 .L.#: U407

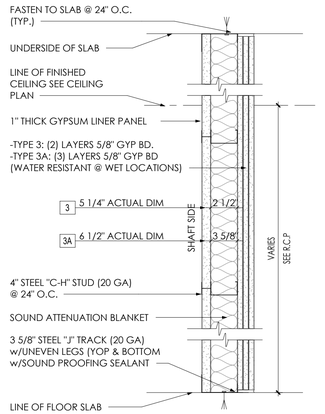


2 2-HR RATED PARTITION w/ 3 5/8" STUDS

STC: 53 .L.#: U407

2A 2-HR RATED PARTITION w/ 6" STUDS

STC: 53 .L.#: U407

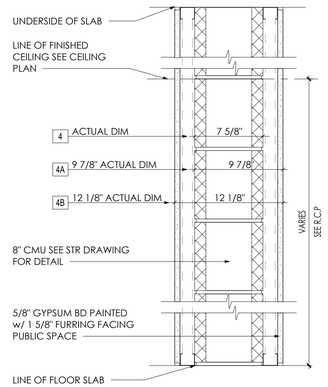


3 2-HR RATED SHAFT WALL w/ 2 1/2" STUDS

STC: 58 .L.#: U415

3A 3-HR RATED SHAFT WALL w/ 3 5/8" STUDS

STC: 58 .L.#: U415

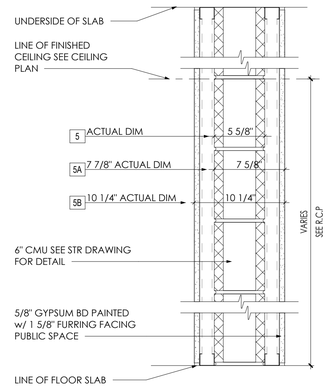


4 8" CMU WALL

STC: 55

4A 8" CMU WALL & FURRING

4B 8" CMU WALL & FURRING BOTH SIDES



5 6" CMU WALL

STC: 55

5A 6" CMU WALL & FURRING

5B 6" CMU WALL & FURRING BOTH SIDES

6 PIPE CHASE

STC: 55

7 8" CONCRETE WALL

7A 8" CONCRETE WALL & FURRING

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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

INTERIOR PARTITIONS

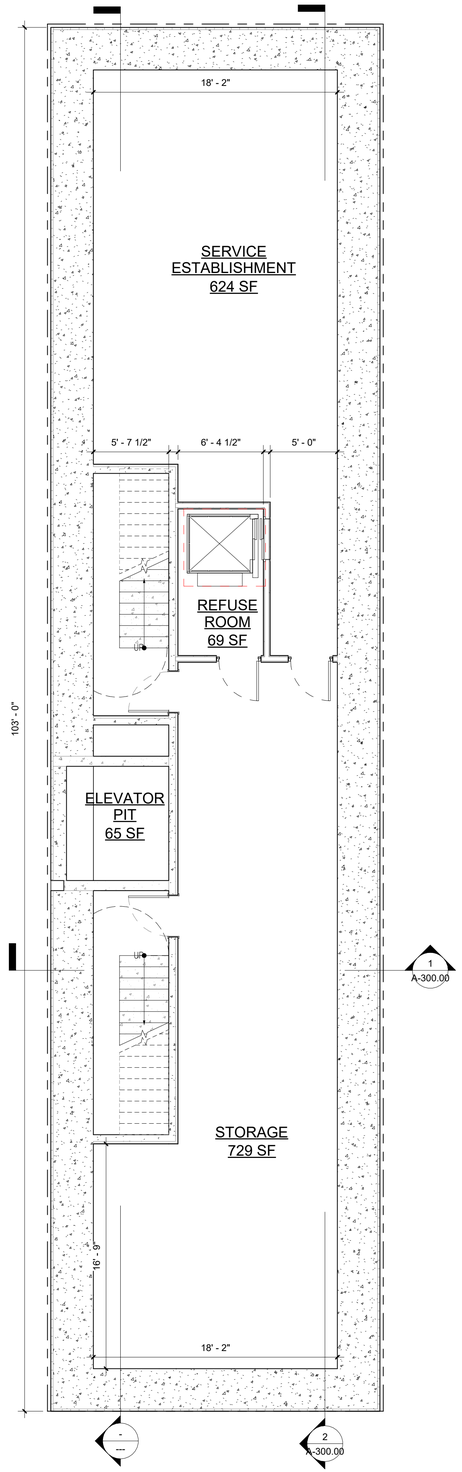
SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

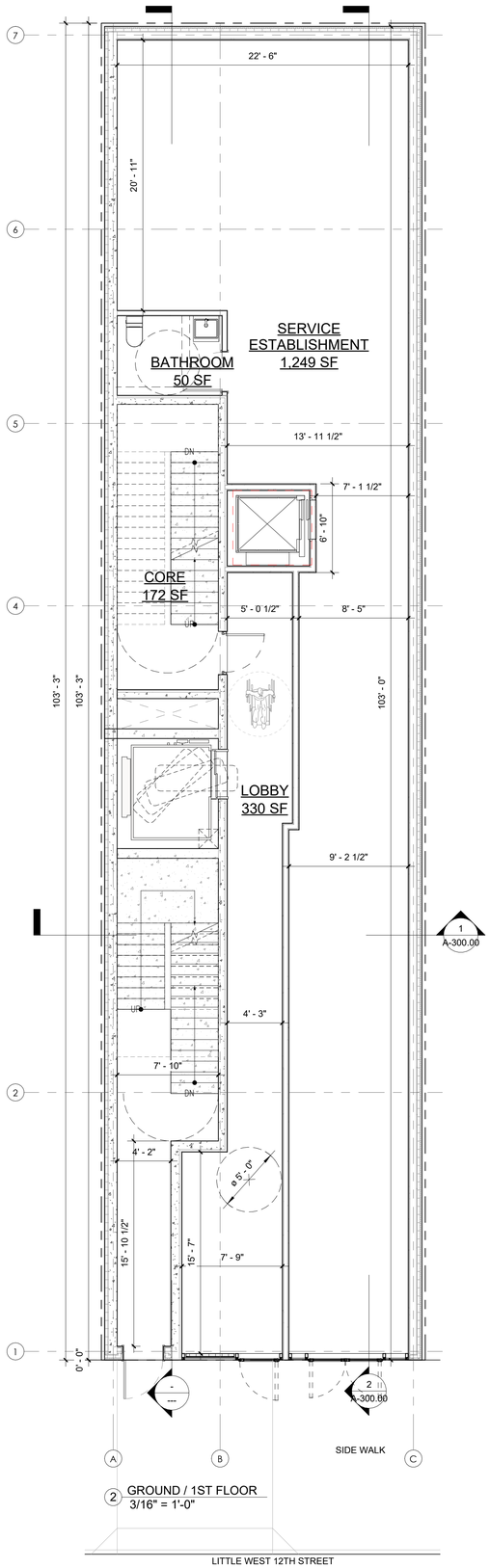
DWG No:

A-011.00

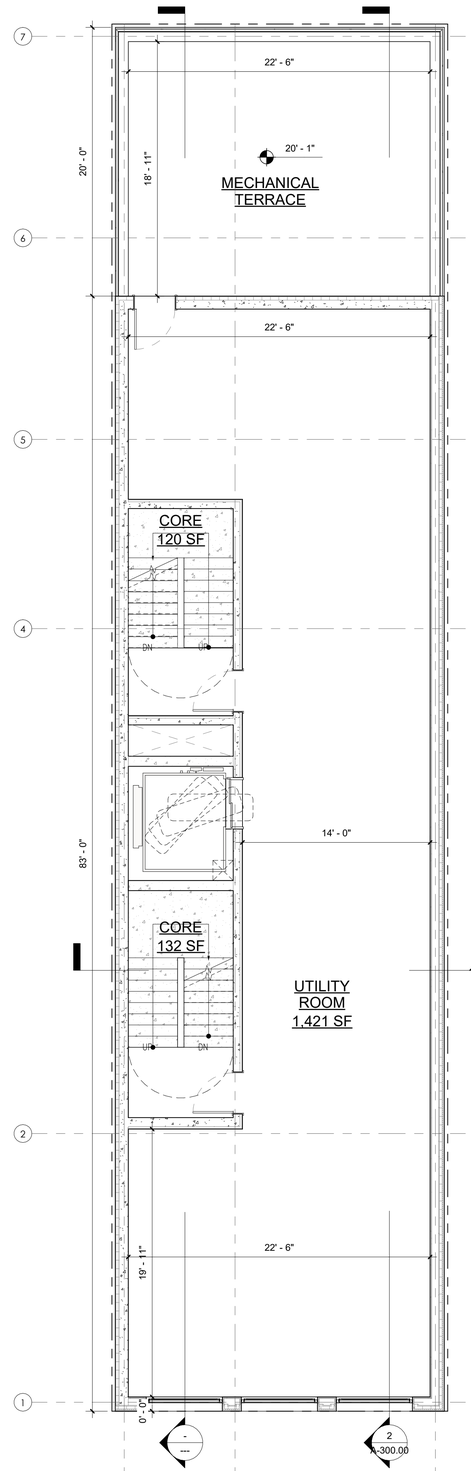
DOB BSCAN STICKER



1 CELLAR FLOOR
3/16" = 1'-0"



2 GROUND / 1ST FLOOR
3/16" = 1'-0"



3 MECHANICAL FL
3/16" = 1'-0"

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PROJECT ADDRESS:

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NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

CELLAR, 1ST, MEZZANINE FL

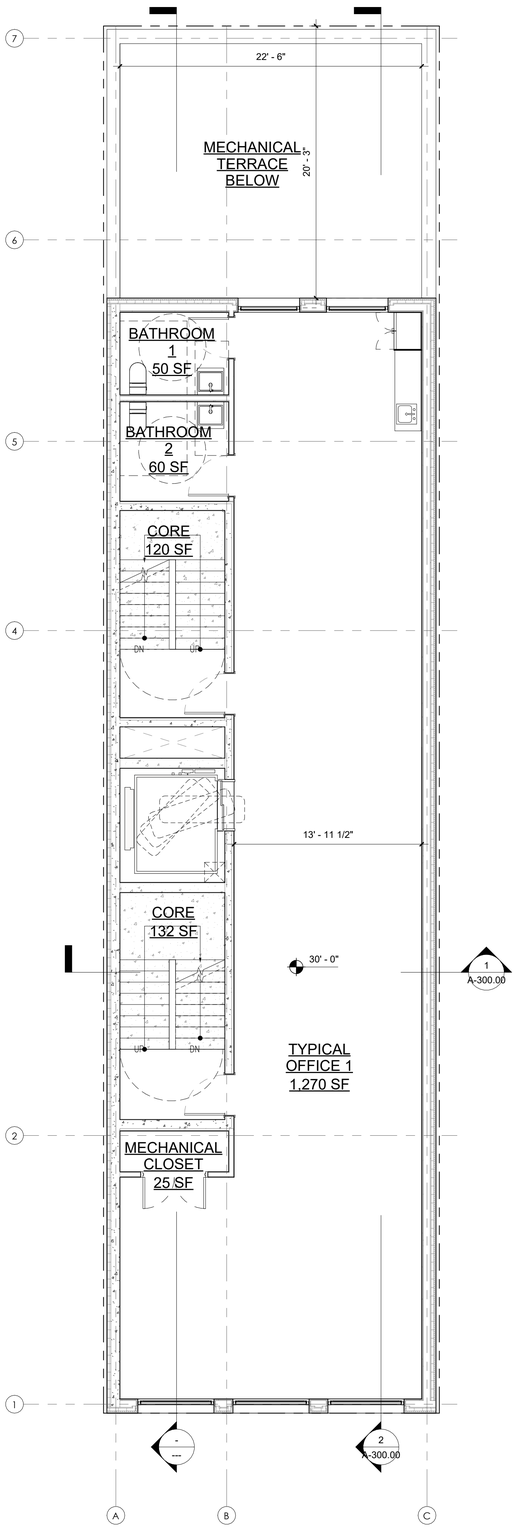
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PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

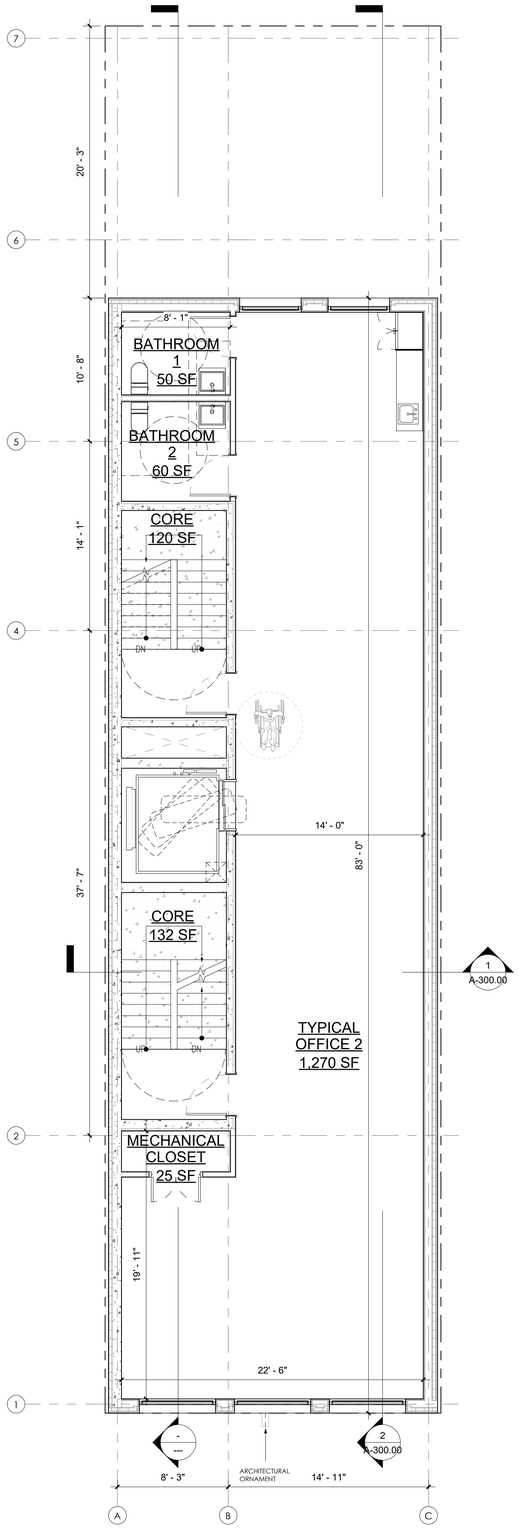
DWG No:

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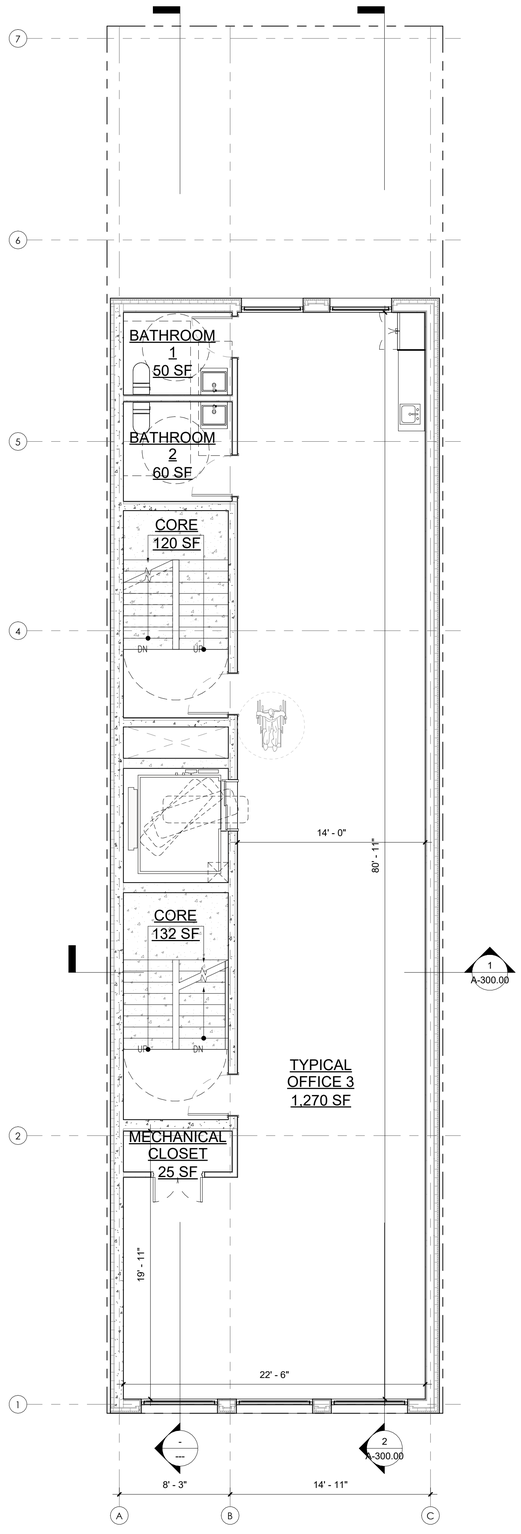
DOB BSCAN STICKER



1 2ND FLOOR
3/16" = 1'-0"



2 3RD FLOOR
3/16" = 1'-0"

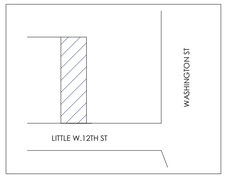


3 4TH FLOOR
3/16" = 1'-0"

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51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

2ND, 3RD, 4TH FLOOR

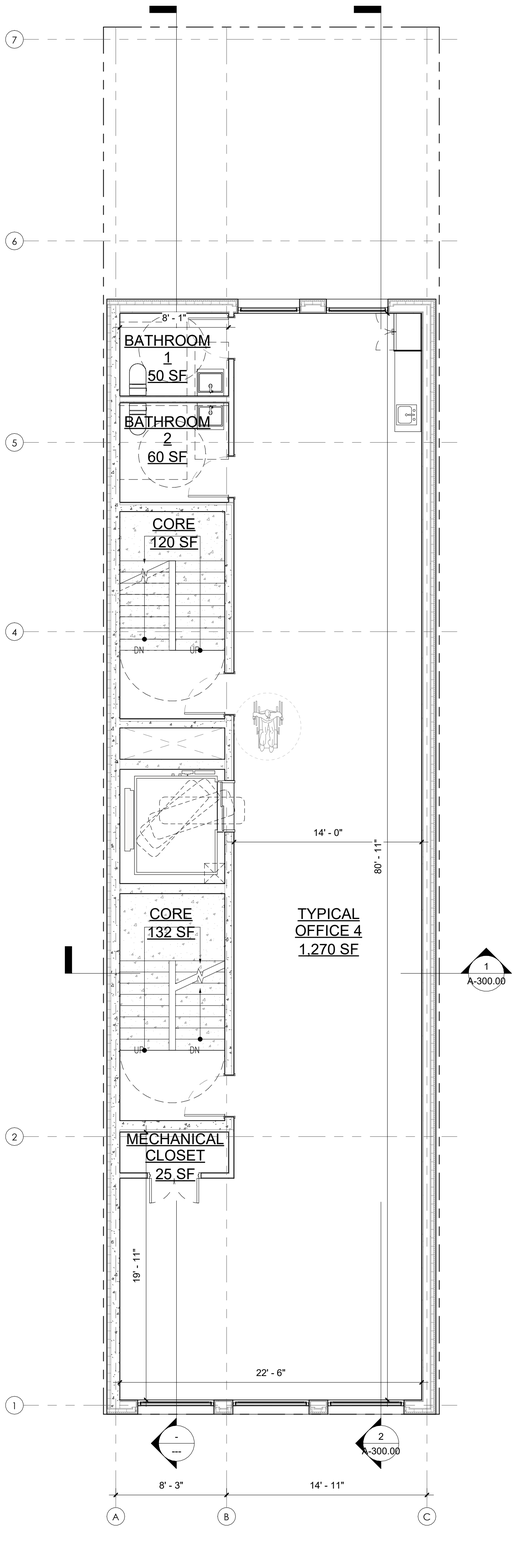
SEAL

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CHK BY:	Checker

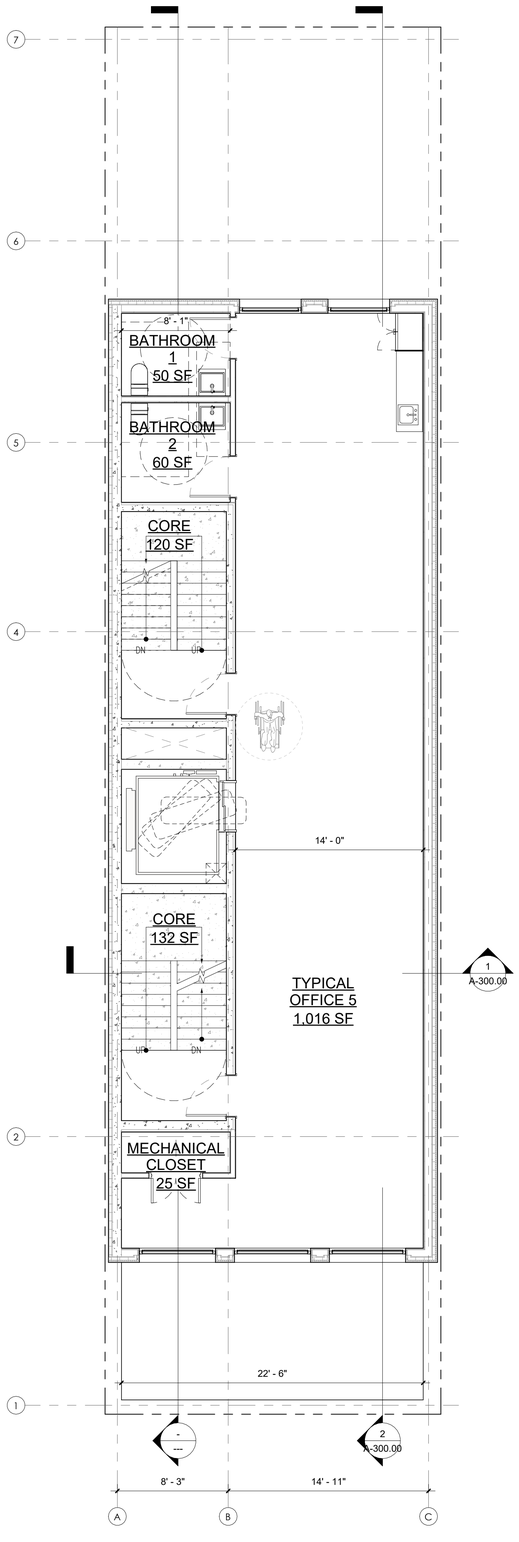
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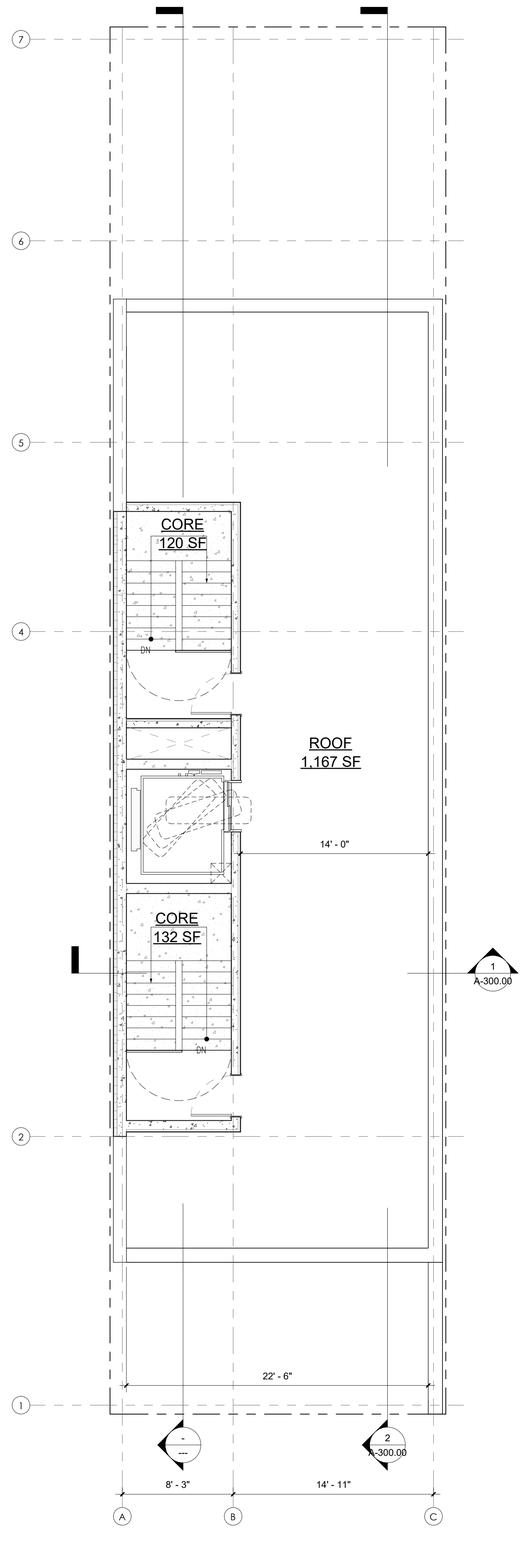
DOB BSCAN STICKER



1 5TH FLOOR
3/16" = 1'-0"



2 6TH FLOOR
3/16" = 1'-0"

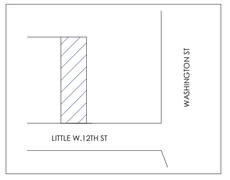


3 ROOF FLOOR
3/16" = 1'-0"

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KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

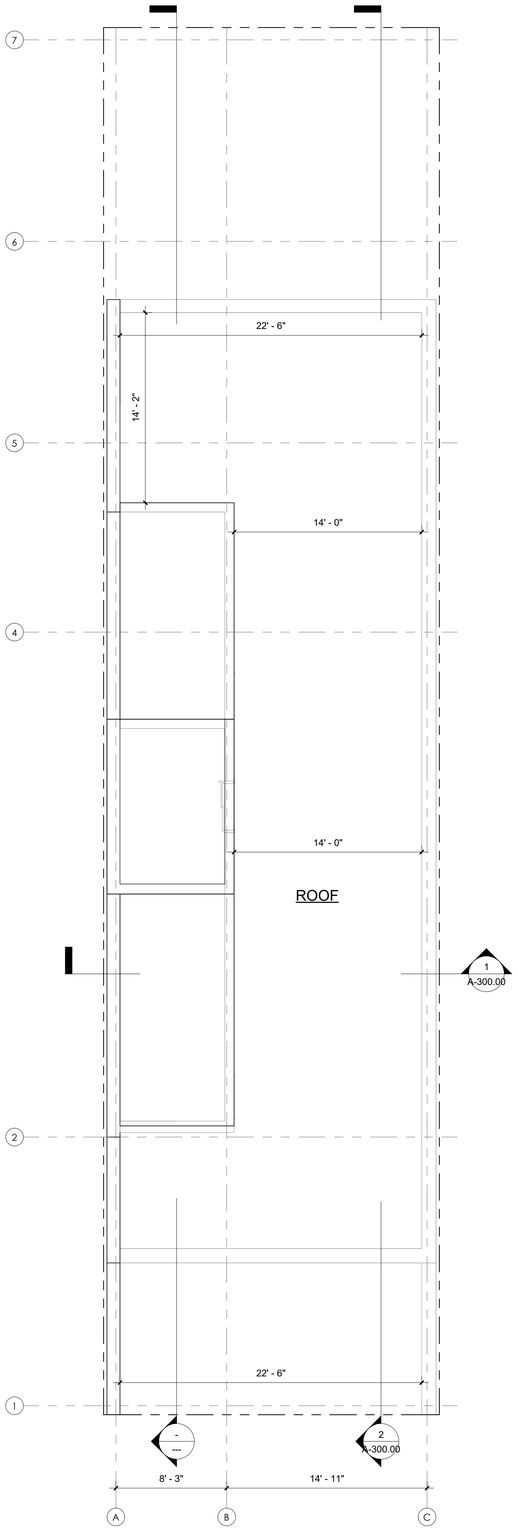
DWG TITLE:

5TH, 6TH, ROOF PLAN

SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-102.00

DOB BSCAN STICKER



1 BULKHEAD
3/16" = 1'-0"

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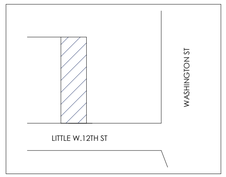
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KEY PLAN

NORTH



CLIENT:

NOVAC NOURY

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51 LITTLE W.12TH ST

PROJECT ADDRESS:

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NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

BULKHEAD

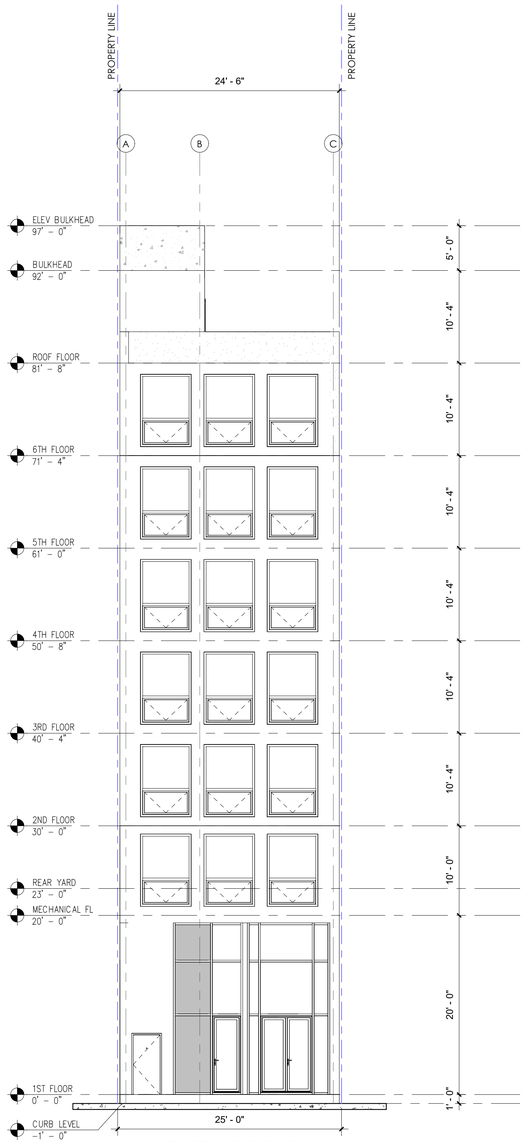
SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

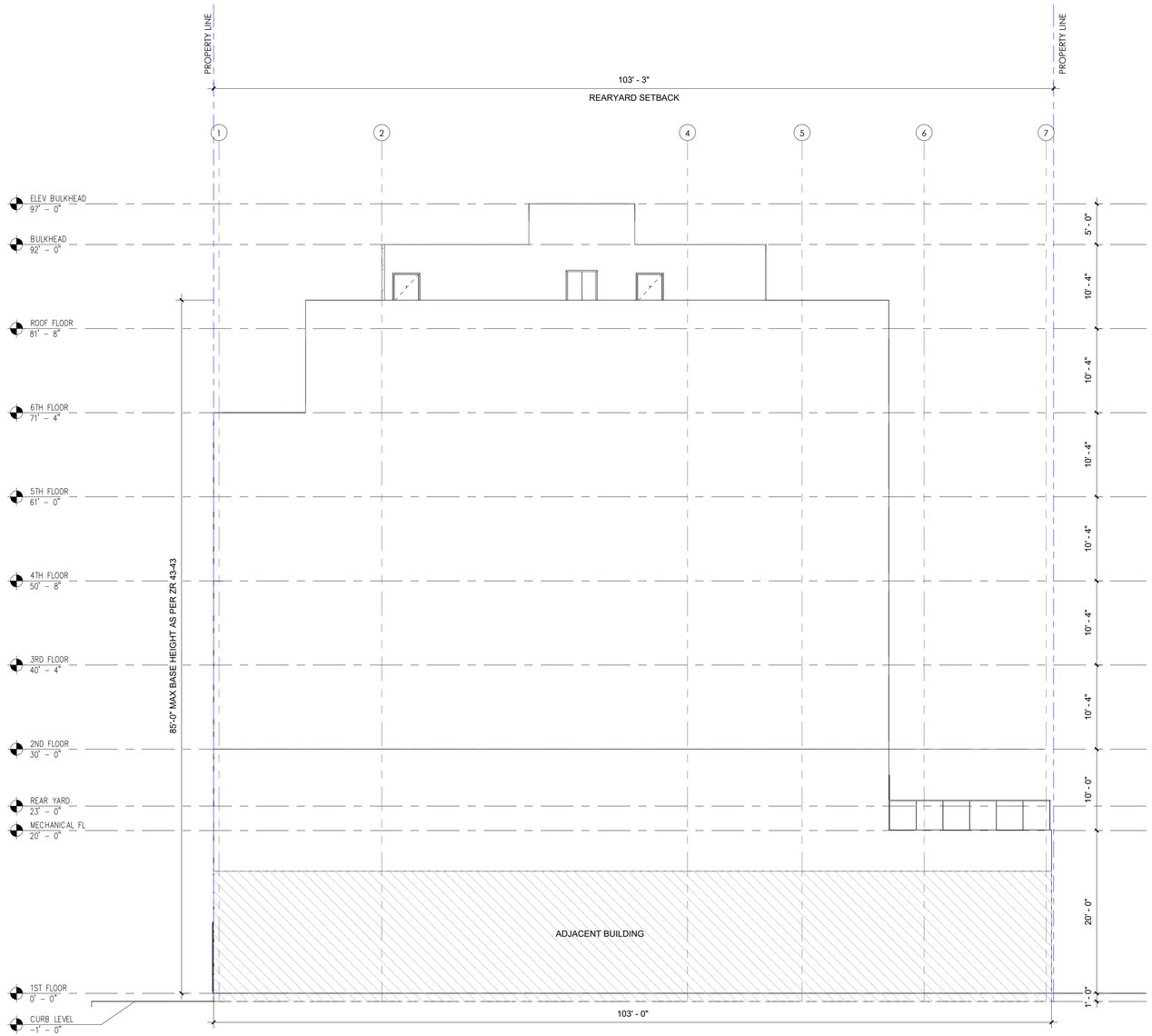
DWG No:

A-103.00

DOB BSCAN STICKER



1 SOUTH (FRONT) ELEVATION
1/8" = 1'-0"



2 EAST (SIDE) ELEVATION
1/8" = 1'-0"

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PROJECT ADDRESS:

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NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

SOUTH & EAST ELEVATION

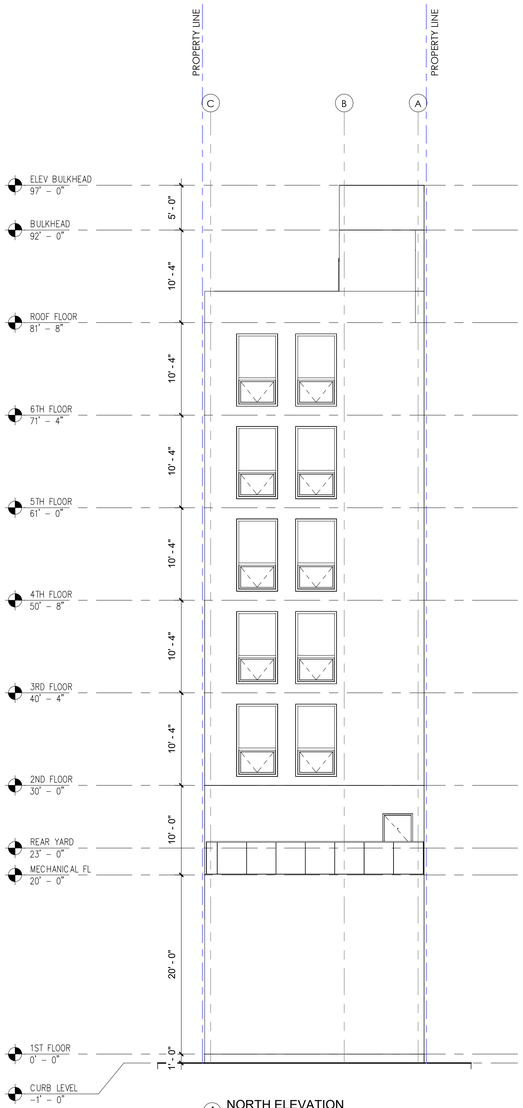
SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

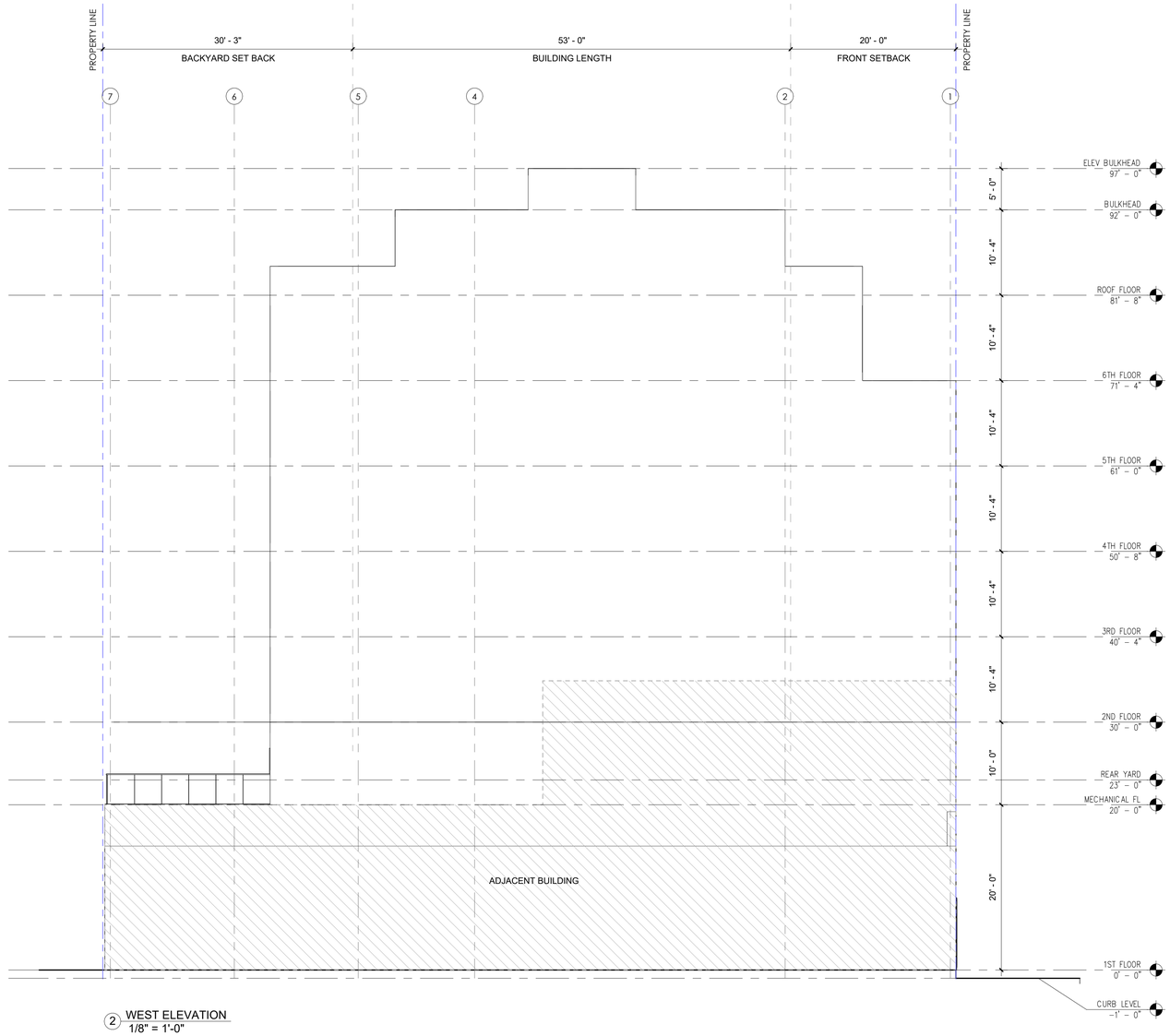
DWG No:

A-200.00

DOB BSCAN STICKER



1 NORTH ELEVATION
1/8" = 1'-0"



2 WEST ELEVATION
1/8" = 1'-0"

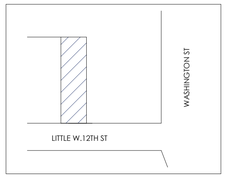
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KEY PLAN



CLIENT:

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PROJECT ADDRESS:

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NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

NORTH & WEST ELEVATION

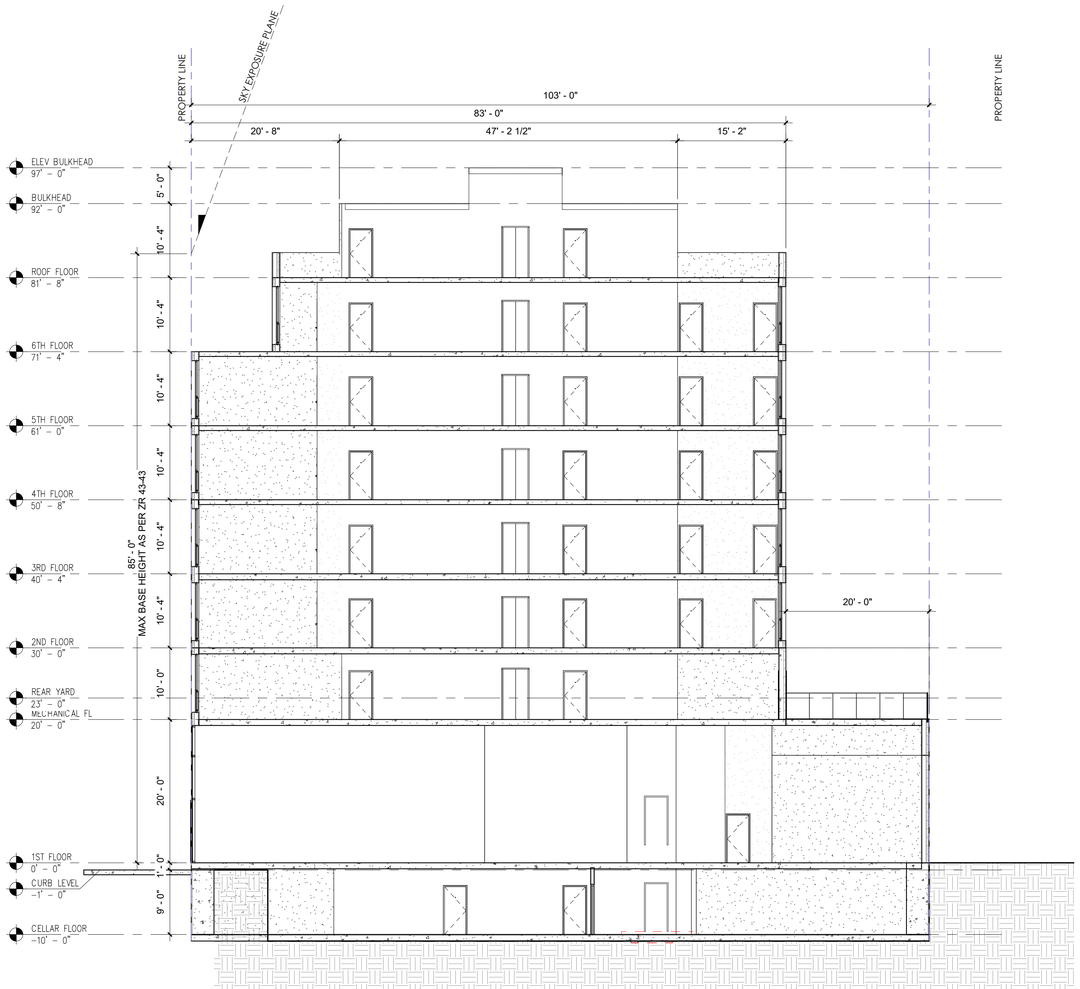
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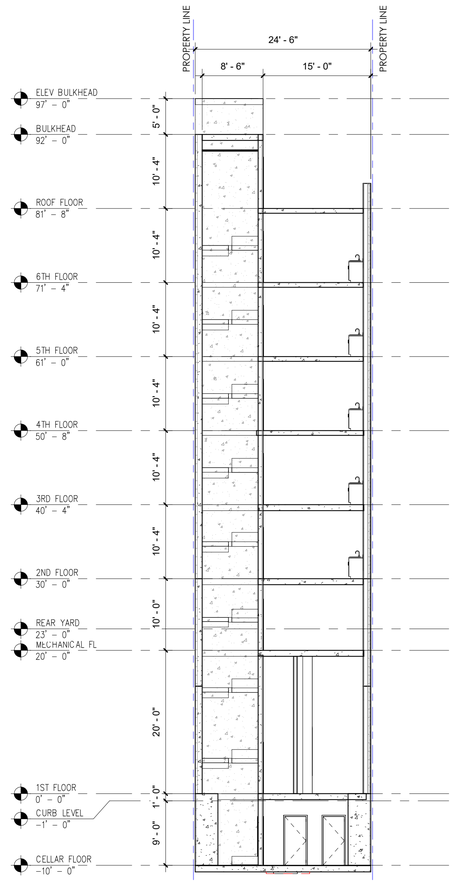
DWG No:

A-201.00

DOB BSCAN STICKER



2 Section 4
1" = 10'-0"



1 Section 5
1" = 10'-0"

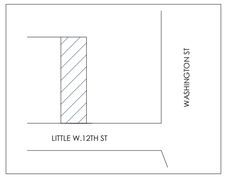
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KEY PLAN



CLIENT:

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PROJECT NAME:

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PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

SECTION A

SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-300.00

DOB BSCAN STICKER

51 Little West 12th Street, Manahattan

Radius Diagram / Land Use Map

Block: 645, Lot: 21 Zoning District: M1-5

Zoning Map: 8b Special District: n/a

Zoning Districts and Commercial Overlays

C1-1 C2-1 C1-2 C2-2 C1-5

C1-3 C2-3 C1-4 C2-4 C2-5

Zoning District Boundary

Special District Boundary

R7A Zoning District Labels

Land Uses

- One and Two-Family Homes
- Multiple Dwelling
- Commercial
- Mixed Use (Residential/Commercial)
- Manufacturing/Transportation
- Open Space / Park Land
- Institutional / Community Facility
- Parking / Automotive
- Vacant

Lot and Building Information

(#)	Lot Numbers (within radius)	C	Commercial
###	Block Numbers	I	Industrial
I, II, III	Story Height	M	Manufacturing
MD	Multiple Dwelling	W	Warehouse
D	Dwelling	A	Auto
R	Retail	CF	Community Facility
G	Garage		

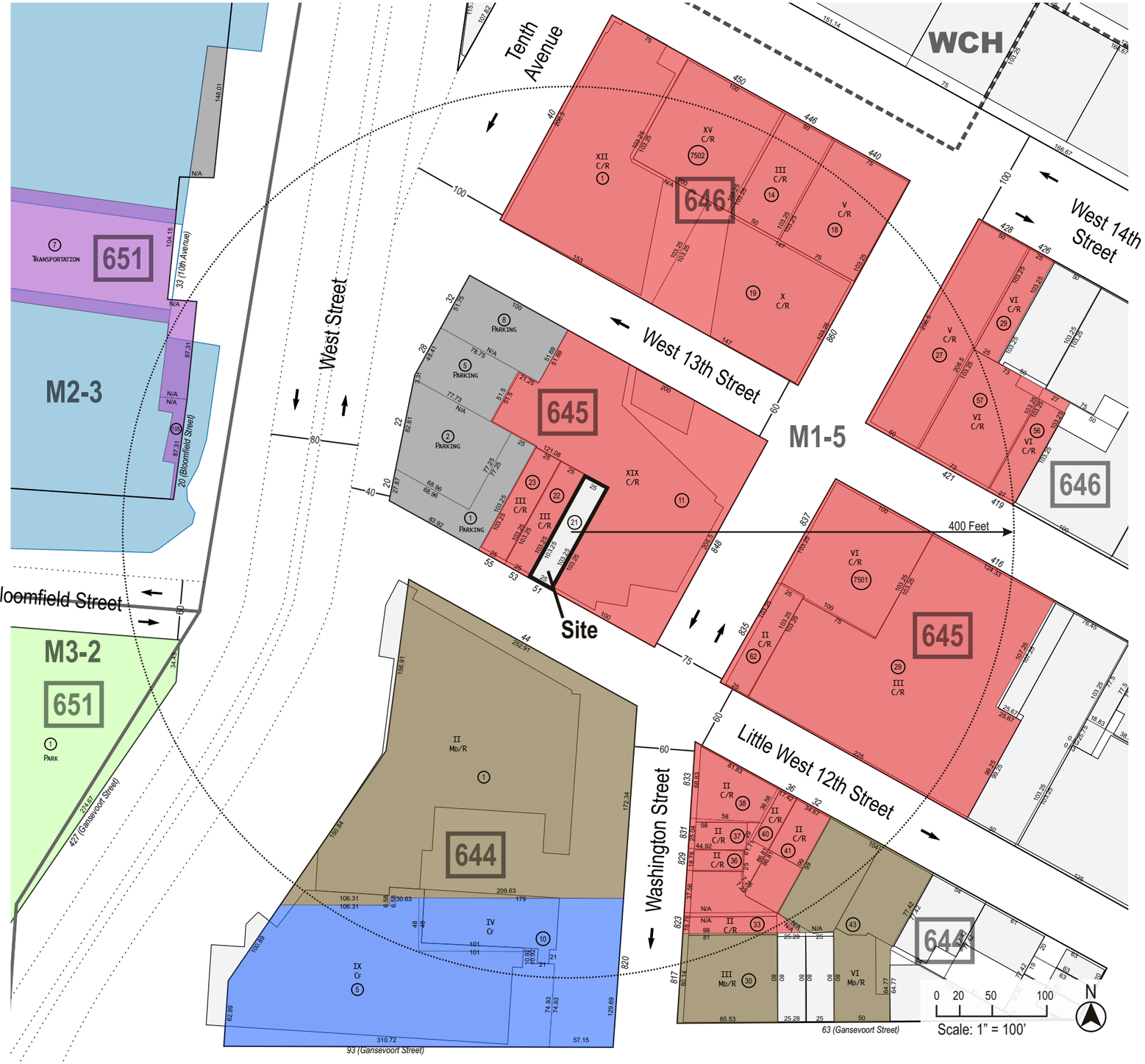
Data Sources

Land Use and Building Information: MapPLUTO 2024v3.1 from NYC DCP

Zoning Districts: NYC DCP, file dated 9/1/2024

Digital Tax Map: NYC DOF, file dated 4/11/2024

Building Footprints: NYC DoITT, file dated 11/2/2024



Urban Cartographics