
**APPRAISAL OF
WORLD TRADE CENTER
PARCELS AND EASEMENTS – PHASE 2
NEW YORK, NEW YORK**

VALUATION AS OF MARCH 5, 2019

Prepared for

Lee A. Ohliger, Esq.
Carter Ledyard & Milburn LLP
2 Wall Street
New York, New York 10005

Prepared by

BBG JEROME HAIMS REALTY, INC.
REAL ESTATE APPRAISERS & CONSULTANTS
Jerome Haims Realty, Inc., *now part of BBG*

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JEROME HAIMS REALTY, INC., *now part of BBG*
REAL ESTATE APPRAISERS & CONSULTANTS
112 MADISON AVENUE, NEW YORK, NY 10016
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June 5, 2019

Lee A. Ohliger, Esq.
Carter Ledyard & Milburn LLP
2 Wall Street
New York, New York 10005

Re: World Trade Center
Parcels and Easements – Phase 2
Southern Site Street Parcels
Parcels from City to PA: S1, S2, S6 and S7
Parcels from LMDC to City: S9
Parcels from PA to City: S4, S4A, S5 and S8
Permanent Easements
Easements from City to PA: Oculus and PAC

Dear Mr. Ohliger:

Pursuant to your request, we have examined and appraised the value of the several groups of parcels, collectively known as the World Trade Center Transfer Parcels involved in the transactions described in a Notice to Proceed dated as of April 3, 2019 from The Port Authority of New York and New Jersey (the PA) and The City of New York (the City) to Lower Manhattan Development Corporation (LMDC). The Notice to Proceed references and amends a letter of November 1, 2006 (the Request Letter).

The date of valuation is March 5, 2019. The date of the appraisal report is June 5, 2019.

Our valuation analysis has considered all aspects of the World Trade Center Transfer Parcels, including any limitation on ownership rights, such as existing subsurface and other easements, presence of subway tunnels (“boxes”) and other subsurface areas below any respective parcel, restrictions of total zoning FAR for each parcel, size and/or shape of the parcels, etc. In most cases, we considered that any potential development rights could be transferred to enhance an adjoining parcel, if not capable of being employed directly on a specific parcel.

For World Trade Center Parcels that included only subsurface or above-surface or other limited rights and where development rights were not available, we applied substantial downward adjustments to reflect the extremely limited utility for those parcels.

Our valuation is based on research and analysis of a wide group of comparable land sales in the Lower Manhattan area. Each sale has been inspected, photographed and described in detail in the body of the attached appraisal report. The conclusion of the basic FAR value for a typical land parcel in the subject’s area is based on the analysis of those land sales. Adjustments were made to the concluded unit land value (\$/SF FAR) where required.

The appraisal conforms with the appraisal reporting standards of the Uniform Standards of Professional Appraisal Practice (USPAP), as well as all other applicable regulatory or agency requirements, including the “Scope of Work.”

The appraisal addresses the market value of each parcel, pursuant to the ownership/easement rights or restrictions appended to each parcel.

Based on the data and analysis presented herein, our opinions of the market value of the subject properties, as of March 5, 2019, are:

Parcels from City to PA:	
<u>Parcel</u>	<u>Value</u>
S1	\$ 12,286,359
S2	\$ 35,596,819
S6	\$ 296,180
S7	\$ 180,500
Oculus Easement 1	\$ 325,438
Oculus Easement 2	\$ 35,782
PAC Easement 1	\$ 9,588
PAC Easement 2	\$ 87
Total:	\$ 48,730,753

Parcels from PA to City:*	
<u>Parcel</u>	<u>Value</u>
S4	\$ 61,500
S8	\$ 21,000
S4A	\$ 54,600
S5	\$ 412,493
Total:	\$ 549,593

Parcels from LMDC to City:	
<u>Parcel</u>	<u>Value</u>
S9	\$ 0

*Parcels S4, S4A and S5 are part of the properties formerly known as 140 Liberty Street (Tax Lots 15 and 21) and part of 130 Liberty Street (Tax Lot 30). LMDC currently holds fee title to these parcels because they were held back from LMDC’s 2017 transfer of the remainder of those lots to the PA in anticipation of the PA’s direction to transfer them to the City in the current transactions, as set forth in the Request Letter.

We understand that PA has spent approximately \$206,923,000 and anticipates spending another approximately \$47,345,000 (\$254,268,000 in the aggregate) (the “PA Contribution”) to design and construct improvements to the City’s right-of-way in connection with the earlier transfer of those certain parcels (the “Prior Parcels”) completed pursuant to the Request Letter and referenced in our appraisal of WTC street beds dated as of May 1, 2007 (the “Prior Appraisal”) and of the transfer of those certain parcels contemplated hereunder (the “Current Parcels”). The Prior Appraisal reserved \$40,000,000 (the “Reserve Amount”) for the cost of future improvements related to the Current Parcels, the entirety of which has been spent as part of the PA Contribution. For the avoidance of doubt, the PA Contribution is sufficient to offset the acquisition costs of the transfers of both the Current Parcels and the Prior Parcels.

Lee A. Ohliger, Esq.
Carter Ledyard & Milburn LLP
Re: World Trade Center – Parcels and Easements – Phase 2
New York, New York

3.

We are pleased to provide you with this appraisal report and we are available to respond to any questions relative to the contents and conclusions herein.

Very truly yours,

JEROME HAIMS REALTY, INC.

A handwritten signature in black ink, appearing to read 'Yamil Arocho', written in a cursive style.

Yamil N. Arocho, MAI
Senior Appraiser
Certified New York State
General Real Estate Appraiser
Certificate No. 46000045109



Aerial View of the WTC Campus

PARCEL MAP (SOUTHERN SITE PARCELS)



LEGEND

- PARCELS ST AND 32 - LAND TO THE PORT AUTHORITY FROM THE CITY OF NEW YORK HAVING NO UPPER OR LOWER LIMITING PLANES
- PARCELS 54, 54A, 55 AND 58 - LAND TO THE CITY OF NEW YORK FROM THE LOWER MANHATTAN DEVELOPMENT CORPORATION HAVING NO UPPER LIMITING PLANE FROM THE CITY OF NEW YORK
- PARCELS 56 AND 57 - LAND TO THE CITY AUTHORITY FROM THE CITY OF NEW YORK HAVING NO LOWER LIMITING PLANE FROM 130' BELOW CURB GRADE
- PARCELS 50 - LAND TO THE CITY OF NEW YORK FROM THE LOWER MANHATTAN DEVELOPMENT CORPORATION HAVING NO UPPER OR LOWER LIMITING PLANE

BY AUTHORITY OF
THE PORT AUTHORITY
OF NEW YORK AND NEW JERSEY

WORLD TRADE CENTER

STREET MAPPING
WORLD TRADE CENTER

THE COOPERATIVE AND BUSINESS BLOCKS REFERRED TO IN THIS MAP ARE LOCATED IN THE NEW YORK STATE PLANE HORIZONTAL CONTROL SYSTEM AND IS 17 ZONE.

CERTIFIED MANHATTAN DEVELOPMENT CORPORATION, THE CITY OF NEW YORK, AND THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY, BY AND THROUGH THEIR RESPECTIVE ENGINEERS AND SURVEYORS, HAVE CAUSED THIS MAP TO BE MADE AND TO BE ACCURATE WITHIN THE LIMITS OF SUCH PROFESSIONAL LIABILITY.

DATE: 8/1/74
 DRAWN BY: J. STONER
 CHECKED BY: J. STONER
 TITLE: STREET MAPPING
 PROJECT NO.: 14-001
 SHEET NO.: 2

MAP REFERENCES:
 1. THE CITY OF NEW YORK PRESIDENT OF THE BOROUGH OF MANHATTAN TOPOGRAPHICAL MAP OF THE CITY OF NEW YORK, 1896
 2. THE CITY OF NEW YORK PRESIDENT OF THE BOROUGH OF MANHATTAN TOPOGRAPHICAL MAP OF THE CITY OF NEW YORK, 1896
 3. LOVELL & BELCHER SURVEY OF BLOCK 54, DATED AUGUST 19, 1974

SUMMARY OF SALIENT FACTS AND CONCLUSIONS

Description: Various parcels in a transfer of ownership/easements, among the City, LMDC and the PA, in and adjacent to the site of the World Trade Center. Site is generally bounded by Vesey Street on the north, Church Street on the east, West Street on the west and Cedar Street on the south.

Interest Appraised: As to the ownership parcels, Fee Simple Estate, subject to limitations of surface easements, subsurface easements, below-grade retained space, and other restrictions. Also, as to the easement parcels, easements in the above-grade areas described in the easements, subject to the limitations set forth in such easements.

Date of Value: March 5, 2019

Lot Shape and Area: The fee parcels are irregular in shape and have an aggregate lot area of 34,336 square feet. The easements have irregular shapes and volumes and have an aggregate at-grade lot area of 17,842.36 square feet.
(Per property surveys prepared by the Port Authority)

Subject

Parcels and Easements: See Parcel Maps for details.

Parcels from City to PA by Condemnation:
S1, S2, S6 and S7

Parcels from LMDC to City:
S9

Parcels from PA to City by Negotiation¹:
S4, S4A, S5 and S8

Permanent Easements from City to PA by Condemnation:
Oculus Easement and PAC Easement

¹ Parcels S4, S4A and S5 are part of the properties formerly known as 140 Liberty Street (Tax Lots 15 and 21) and part of 130 Liberty Street (Tax Lot 30). LMDC currently holds fee title to these parcels because they were held back from LMDC's 2017 transfer of the remainder of those lots to the PA in anticipation of the PA's direction to transfer them to the City in the current transactions, as set forth in the Request Letter.

Zoning and FAR: C6-4 in westerly portion of WTC Campus, C5-3 in easterly portion of WTC Campus, and C6-9 in southerly portion of WTC Campus. The combined floor area ratio is 13.61. By agreement, we have used this FAR in the valuation analysis

Highest and Best Use: Mixed-use development including office, retail, hotel and residential uses.

Date of Report: June 5, 2019

Opinions of Market Value:

Parcels from City to PA:	
Parcel	Value
S1	\$ 12,286,359
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We understand that PA has spent approximately \$206,923,000 and anticipates spending another approximately \$47,345,000 (\$254,268,000 in the aggregate) (the "PA Contribution") to design and construct improvements to the City's right-of-way in connection with the earlier transfer of those certain parcels (the "Prior Parcels") completed pursuant to the Request Letter and referenced in our appraisal of WTC street beds dated as of May 1, 2007 (the "Prior Appraisal") and of the transfer of those certain parcels contemplated hereunder (the "Current Parcels"). The Prior Appraisal reserved \$40,000,000 (the "Reserve Amount") for the cost of future improvements related to the Current Parcels, the entirety of which has been spent as part of the PA Contribution. For the avoidance of doubt, the PA Contribution is sufficient to offset the acquisition costs of the transfers of both the Current Parcels and the Prior Parcels.

**UNDERLYING ASSUMPTIONS AND
LIMITING AND QUALIFYING CONDITIONS**

This appraisal is subject to the following Underlying Assumptions and Qualifying and Limiting Conditions:

1. The appraisal covers the property as described in this report, and the areas and dimensions as shown herein is assumed to be correct.
2. The appraiser has made no survey of the property and assumes no responsibility in connection with such matters. Any sketch or identified survey of the property included in this report is only for the purpose of assisting the reader to visualize the property.
3. Responsible ownership and competent management are assumed.
4. No responsibility is assumed for matters involving legal or title considerations.
5. This report has been prepared in accordance with the requirements of the Appraisal Institute and the Uniform Standards of Professional Appraisal Practice (USPAP).
6. The information identified in this report as being furnished by others is believed to be reliable, but no responsibility for its accuracy is assumed.
7. That the present zoning will remain in force, unless otherwise adjusted in the zoning section of this report.
8. That the appraisal report will not be utilized in any present or proposed, public or private syndication of any of the interests in the property unless prior written agreement has been obtained from the signatories to this report.
9. The Bylaws and Regulations of the Appraisal Institute requires each member and candidate to control the use and distribution of each appraisal report signed by such member or candidate. Therefore, except as hereinafter provided, the party for whom this appraisal report was prepared may distribute copies of this appraisal report, in its entirety, to such third parties as may be selected by the party for whom this appraisal report was prepared; however, selected portions of this appraisal report shall not be given to third parties without the prior written consent of the signatories of this appraisal report. Further, neither all nor any part of this appraisal report shall be disseminated to the general public by the use of advertising media, public relations media, news media, sales media or other media for public communication without the prior written consent of the signatories of this appraisal report.

10. The appraiser is authorized by the client to disclose all or any portion of this appraisal report and the related appraisal data to appropriate representatives of the Appraisal Institute if such disclosure is required to enable the appraisers to comply with the Bylaws and Regulations of the Institute now or hereafter in effect.
11. The appraiser is not required to give testimony or attendance in court by reason of this appraisal unless arrangements have been previously made therefor.
12. Unless stated otherwise, the appraiser has not learned of any asbestos, hazardous waste or toxic material in existence at the subject property. In any event, the appraisers are not qualified to detect such substances and urge that a qualified expert be employed for this procedure. The appraisal and indicated value, therefore, do not consider any costs to cure that may arise from hazardous material contained at the property, unless separately noted herein.
13. Unless stated otherwise in the appraisal, the appraiser has not considered compliance with the requirements of the Americans With Disabilities Act of 1990 (ADA) in the estimate of value in this appraisal. The appraisers are not qualified to determine such compliance and recommend a qualified expert be employed for this procedure. Failure to comply with the requirements of the ADA, including the costs to cure any non-complying items, can negatively affect the value estimated herein.
14. All of the facts, conclusions and observations contained herein are consistent with information available as of the date of the report. The value of real estate is affected by many related and unrelated economic conditions, local and national. The real estate market is constantly fluctuating and changing. We cannot predict nor in any way warrant the conditions of a future real estate market; the appraiser can only reflect what the investment community, as of the date of the appraisal, envisions for the future in terms of rental rates, expenses, supply and demand.
15. Acceptance and/or use of this appraisal report by the client and/or any third party constitutes acceptance of the stated limiting conditions and assumptions. The appraisers' and/or reviewers' responsibility and liability extends only to the stated client, not to subsequent parties or users, and is limited to the amount of the fee received by the appraisers in conjunction with performance of this appraisal and related consulting services and/or court preparation, deposition, and testimony.

PURPOSE AND FUNCTION OF THE APPRAISAL

The purpose of this report is to provide our opinion of the market value of permanent easements, the fee simple interest (subject to various below-grade easements), and the value of sub-surface rights, in the various parcels that comprise the subject real estate, in accordance with the plans presented to the appraisers. The report will serve a function in an exchange of a group of parcels, owned by the City of New York, to the Port Authority of New York & New Jersey (PA) and another group of parcels in the ownership of the LMDC or PA, to the City of New York, including the grant of certain easements by the City to the PA.

INTENDED USERS AND USE OF THE APPRAISAL

The intended users of this report are Lower Manhattan Development Corporation and its counsel. The intended use of the appraisal is for the acquisition and disposition purposes of the City of New York, the Port Authority of New York & New Jersey, and the Lower Manhattan Development Corporation.

DATES OF REPORT, INSPECTION AND VALUATION

This report is dated June 5, 2019. The subject property (i.e., the various parcels owned by NYC, LMDC and the PA) was inspected at various times in November of 2018. This appraisal considers the value of property interests that, in many cases, are less than a full fee simple interest. For example, many of the interests include the surface rights and those surface rights extend to a depth of only 1.35 feet below the top of the curb. In other cases, the interests involve the subsurface rights. In several instances, the parcels involve the full fee interest or an easement. The easements are subject to limitations on use described therein and are located within public rights-of-way. All of the parcels owned by the LMDC or PA and to be transferred by deed to NYC, are of the surface rights, except Parcel S9. Parcels S6 and S7, owned by the City, are of subsurface rights, while Parcels S1 and S2 are the only parcels which are transferred in fee including the above- and below-grade rights.

SCOPE OF WORK

According to the Uniform Standards of Professional Appraisal Practice (USPAP), scope of work is defined as “the type and extent of research and analyses in an appraisal or appraisal review assignment.”

The scope of work in this appraisal assignment included:

- A review of New York City records (including the plot plan and tax map) in order to gather information about the physical and legal characteristics of the subject property that are relevant to the valuation problem;
- An analysis of regional and local area characteristics and trends as of the March 5, 2019, date of value;
- A review of the Notice to Proceed dated as of April 3, 2019 from The Port Authority of New York and New Jersey (the PA) and The City of New York (the City) to Lower Manhattan Development Corporation (LMDC);
- A review of maps, surveys, and legal descriptions of the subject parcels as prepared by or for the PA;
- A review of the Lower Manhattan Development Corporation General Project Plan – World Trade Center Memorial and Cultural Program, as amended February 14, 2017;
- A determination of the subjects’ highest and best use;
- Application of the Sales Comparison Approach to arrive at an opinion of base land value, which involves the research and analysis of comparable land sales and a comparative analysis of relevant factors that influence value to adjust the comparable sales based upon the likely actions and preferences demonstrated by participants in the marketplace;
- The collection and analysis of pertinent data applicable to the Sales Comparison Approach, in order to develop a reasonable unit of value per square foot; and
- The reporting of our opinions and conclusions in a narrative appraisal report format, as requested by our client.

PROPERTY RIGHTS APPRAISED

We have valued the subject properties' fee simple estate. A fee simple estate is defined as:

“An absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.”²

We have also valued permanent easements. An easement is defined as:

“The right to use another’s land for a stated purpose.”³

² The Dictionary of Real Estate Appraisal, 6th ed., Appraisal Institute, Chicago, Illinois, 2015, p. 90

³ The Dictionary of Real Estate Appraisal, 6th ed., Appraisal Institute, Chicago, Illinois, 2015, p. 71

DEFINITION OF MARKET VALUE⁴

A type of value that is the major focus of most real property appraisal assignments.

Both economic and legal definitions of market value have been developed and refined, such as the following.

- (1) The most widely accepted components of market value are incorporated in the following definition: the most probable price, as of specified date, in cash, or in terms equivalent to cash or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, for self-interest, and assuming that neither is under duress.
- (2) Market value is described, not defined, in the Uniform Standards of Professional Appraisal Practice (USPAP) as follows: A type of value, stated as an opinion, that presumes the transfer of a property (i.e., a right of ownership or a bundle of such rights), as of a certain date, under specific conditions set forth in the definition of the term identified by the appraiser as applicable in an appraisal. USPAP also requires that certain items be included in every appraisal report. Among these items, the following are directly related to the definition of market value:
 - a. Identification of the specific property rights to be appraised.
 - b. Statement of the effective date of the value opinion.
 - c. Specification as to whether cash, terms equivalent to cash, or other precisely described financing terms are assumed as the basis of the appraisal.
 - d. If the appraisal is conditioned upon financing or other terms, specification as to whether the financing or terms are at, below, or above market interest rates and/or contain unusual conditions or incentives. The terms of above- or below-market interest rates and/or other specific incentives must be clearly set forth; their contribution to, or negative influence on, value must be described and estimated; and the market data supporting the opinion of value must be described and explained.

⁴ The Dictionary of Real Estate Appraisal, 6th ed., Appraisal Institute, Chicago, Illinois, 2015, pp. 141-143

Definition of Market Value -- Continued

(3) The following definition of market value is used by agencies that regulate federally insured financial institutions in the United States: the most probable price that a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus, implicit in this definition is the consummation of a sale of a specified date and the passing of title from seller to buyer under conditions whereby:

- a. Buyer and seller are typically motivated;
- b. Both parties are well informed or well advised, and acting in what they consider their best interests;
- c. A reasonable time is allowed for exposure in the open market;
- d. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
- e. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

(12 C.F.R. Part 34.42(g); 55 *Federal Register* 34696, August 24, 1990, as amended at 57 *Federal Register* 12202, April 9, 1992; 59 *Federal Register* 29499, June 7, 1994)

The International Valuation Standards Council defines *market value* for the purpose of international standards as follows: The estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion.

REGIONAL MAP



REGIONAL AND AREA ANALYSIS

The New York Metropolitan Statistical Area (MSA) consists of the City of New York's five counties and the counties of Westchester and Rockland. The subject property is located in the City of New York, New York County (Manhattan). New York City's five boroughs cover 309 square miles. New York City is the nation's center for finance, the arts, media, fashion, and telecommunications.

The borough of Manhattan, or New York County, forms the central political, financial, and cultural core of the City and is the economic growth engine for the Greater New York region. Seventy-five percent of the City's employees work in Manhattan, which is home to the Midtown and Downtown business districts. The City's other boroughs are the Bronx, Brooklyn, Queens, and Staten Island (otherwise known as Bronx, Kings, Queens, and Richmond Counties). They also have strong, albeit significantly smaller, economies than Manhattan. Brooklyn and Queens have the largest economies behind Manhattan.

POPULATION

	1980	1990	2000	2010	Est 2019	Est 2024
Overall	7,071,639	7,322,564	8,008,278	8,175,133	8,680,063	8,903,224
% Change		3.55%	9.36%	2.08%	6.18%	2.57%
Bronx	1,168,972	1,203,789	1,332,648	1,385,108	1,484,024	1,528,028
% Change		2.98%	10.70%	3.94%	7.14%	2.97%
Brooklyn	2,230,936	2,300,664	2,465,323	2,504,700	2,663,688	2,729,851
% Change		3.13%	7.16%	1.60%	6.35%	2.48%
Manhattan	1,428,285	1,487,536	1,537,201	1,585,873	1,674,506	1,714,395
% Change		4.15%	3.34%	3.17%	4.16%	2.07%
Queens	1,891,325	1,951,598	2,229,379	2,230,722	2,375,848	2,440,085
% Change		3.19%	14.23%	0.06%	6.51%	2.70%
Staten Island	352,121	378,977	443,728	468,730	481,997	490,865
% Change		7.63%	17.09%	5.63%	2.83%	1.84%

Source: 1980-2010, US Census; 2018 The Nielsen Company

New York City is home to more than 8 million people in over 3 million households. Brooklyn is the most populous borough with 31% of the City's population. Manhattan's 1.6 million residents, at 49,100 residents per square mile, make it one the most densely populated residential areas in the nation. While the 1980's and 1990's saw the continuing trend of migration of city residents to neighboring suburbs, due primarily to high housing costs and density of living, the total population was bolstered by the large number of immigrants arriving in the city each year.

The 4.16% increase in the City's census population from 2010 to 2019 can be attributed to the decrease in unemployment rate as well as increasing appeal of the City. In addition, more accurate Census counts may have benefited New York during this Census period. The City's population now totals 42% of the state's total population. Except for Staten Island, each of New York City's five boroughs has a population greater than 1,400,000. The city's population is expected to continue growth over the next 5 years.

MANHATTAN POPULATION TRENDS, 2010-2024

Description	2010 Census	2019 Estimate	% Change 2010-2019	2024 Projection	% Change 2019-2024
Population	1,585,873	1,674,506	5.59%	1,714,395	2.38%
Households	763,846	811,634	6.26%	832,789	2.61%
Family Households	308,828	326,409	5.69%	334,446	2.46%

Source: The Nielsen Company

Claritas estimates the 2019 population for Manhattan at 1,674,506 and projects a small increase by 2024. The number of households in Manhattan is also projected to increase 2.61% between 2019 and 2024 from 811,634 to 832,789. These statistics are reflective of stable, mature market.

NEW YORK CITY ECONOMY AND EMPLOYMENT

New York City has a thriving diversified economy which explains its economic resiliency and ability to recover from economic downturns at a faster than national average rate. As the single largest regional urban economy in the country, New York City is the leading job hub for finance, communication, real estate and hospitality industries in the U.S. New York is also a major manufacturing center and shipping port, and has a thriving technological sector. The city's comprehensive economic diversification strategy has proven to be effective.

The traditional core sectors of the city's economy—finance and real estate—remain the foundation of the city's economic strength. The importance of the financial services industry to the overall wellbeing of the city cannot be overstated. At 20% of the city's economic output, the contribution of financial services is at least twice that of the next top-grossing industry. Although the industry represents only 9% of the city's private sector jobs, it accounts for nearly a third of the private sector payroll. It also pays at least \$8 billion, or 18%, of the city's annual tax revenues. The financial services industry generates even greater economic impact due to what is known as the economic multiplier effect, which is a standard economic measure of the additional indirect and induced jobs, wages and demand in non-financial services industries resulting from an increase or decrease in financial services industry employment.

Real estate is a significant component of the New York City economy. A booming real estate market has also brought tremendous growth to the value of construction projects across the city. One notable example is the entirely new neighborhood of Hudson Yards, the single largest private real estate development in the history of the United States. When complete, the new west side neighborhood will provide over 25 million square feet of new office, retail, and residential space. Significant public investment has already gone into the recently-opened 7 subway extension and Hudson Park, reflecting a historic step towards delivering critical infrastructure and beautiful green open space to the West Side. Additionally, the first section of the 2nd Avenue subway was opened.

The City also demonstrated its commitment to working with the private sector to bring online 60 million square feet of new commercial office space citywide. Much of that will come out of the East Midtown rezoning, which will bring state-of-the-art, high rise commercial buildings to the 73-block area around Grand Central Station.

EMPLOYMENT

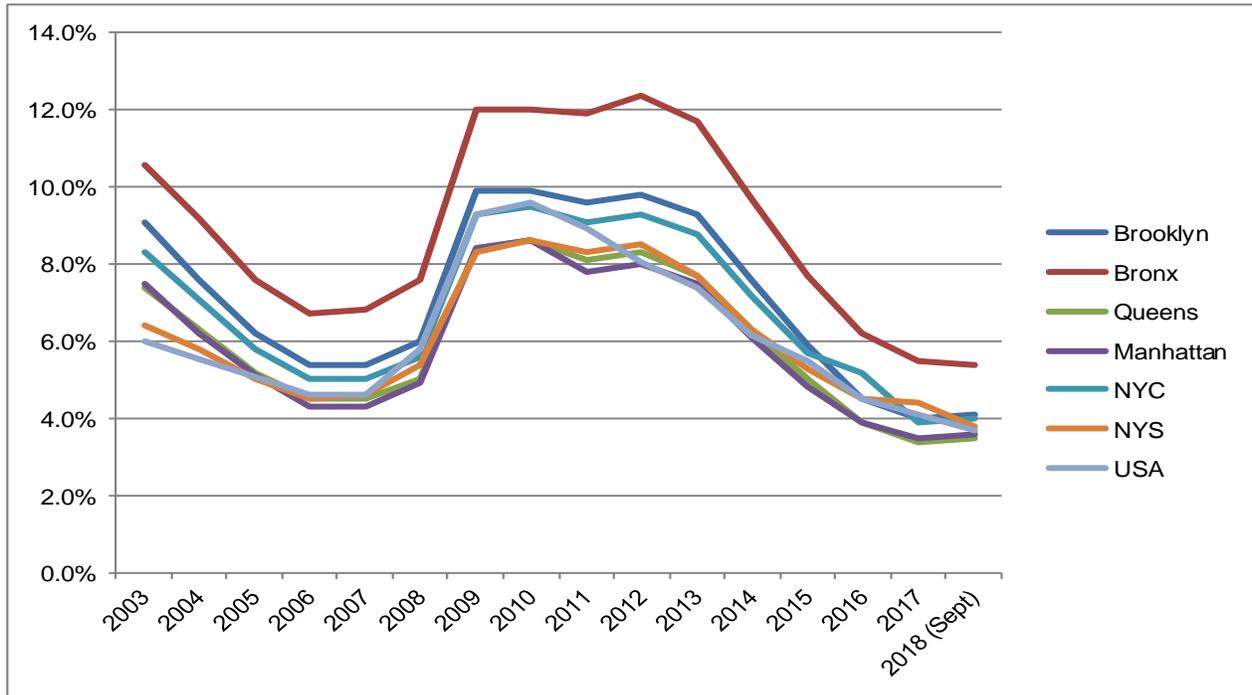
As of September 2018, Manhattan’s unemployment rate was 3.6%, below the 3.7% national rate, and also below the New York State’s unemployment rate of 3.8%. These statistics indicate a decrease in unemployment since 2012 as a result of the moderate recovery from the recession. The following table illustrates historical and current unemployment rates:

UNEMPLOYMENT RATES

Year	Brooklyn	Bronx	Queens	Manhattan	NYC	NYS	USA
2003	9.1%	10.6%	7.4%	7.5%	8.3%	6.4%	6.0%
2004	7.6%	9.2%	6.3%	6.2%	7.1%	5.8%	5.5%
2005	6.2%	7.6%	5.2%	5.1%	5.8%	5.0%	5.1%
2006	5.4%	6.7%	4.5%	4.3%	5.0%	4.5%	4.6%
2007	5.4%	6.8%	4.5%	4.3%	5.0%	4.6%	4.6%
2008	6.0%	7.6%	5.0%	4.9%	5.6%	5.4%	5.8%
2009	9.9%	12.0%	8.4%	8.4%	9.3%	8.3%	9.3%
2010	9.9%	12.0%	8.6%	8.6%	9.5%	8.6%	9.6%
2011	9.6%	11.9%	8.1%	7.8%	9.1%	8.3%	8.9%
2012	9.8%	12.4%	8.3%	8.0%	9.3%	8.5%	8.1%
2013	9.3%	11.7%	7.7%	7.5%	8.8%	7.7%	7.4%
2014	7.6%	9.7%	6.3%	6.1%	7.2%	6.3%	6.2%
2015	5.9%	7.7%	5.0%	4.8%	5.7%	5.3%	5.5%
2016	4.5%	6.2%	3.9%	3.9%	5.2%	4.5%	4.5%
2017	4.0%	5.5%	3.4%	3.5%	3.9%	4.4%	4.1%
2018 (Sept)	4.1%	5.4%	3.5%	3.6%	4.0%	3.8%	3.7%

Source: NYS Department of Labor, Bureau of Labor Statistics

UNEMPLOYMENT TRENDS



New York City’s employment base has historically enjoyed the distinction as an international center of business, commerce, tourism, and culture. The FIRE (finance, insurance, and real estate) and services (including the professions of legal, engineering services, consulting, tourism, recreation, health care, computers and data processing) segments are considered the primary sources of “white collar,” or office prone, employment in the region.

NEW YORK CITY’S LARGEST EMPLOYERS

Employer	# of Employees
International Business Machines Corp. (IBM)	379,592
PepsiCo Inc. (PEP)	271,000
J.P.Morgan Chase & Co. (JPM)	241,359
Citigroup Inc. (C)	241,000
Verizon Communications, Inc. (VZ)	177,300
Philip Morris International (PM)	82,500
Pfizer Inc. (PFE)	78,300
MetLife Inc. (MET)	68,000
American International Group Inc. (AIG)	65,000
Prudential Financial Inc. (PRU)	48,331
Source: Crain's Book of Lists	

New York City is also the center of media (journalism and publishing), arts, fashion, and design. Businesses in New York City can capitalize on the synergy created from the presence of more than 200,000 companies, the access to investment capital and consumers, and the City’s attractive quality of life. Companies in New York City include headquarters and regional offices of leading world companies including 52 Fortune 500 firms—the highest of any city in the United States—making New York the nation’s headquarters capital.

NYC EMPLOYMENT BY INDUSTRY (2000’s)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018 (Sept)
Construction	118.5	119.7	124.4	118.1	107.4	104.4	120.8	133.6	138.3	146.3	158.2	160.6
Manufacturing	101.0	89.1	81.8	79.9	73.3	74.2	76.0	76.5	78.0	76.3	74.5	72.7
Trade, Transportation, and Utilities	576.6	562.5	578.8	556.8	584.5	584.1	593.7	622.4	629.0	629.4	644.5	635.0
Information	165.9	160.1	168.8	159.3	160.6	174.8	178.6	185.1	189.1	192.6	189.6	200.3
Financial Activities	467.9	430.4	456.7	434.2	434.9	444.6	434.0	450.4	459.7	465.8	477.3	471.8
Professional and Business Services	591.4	578.7	600.9	583.5	606.1	639.3	639.4	672.4	699.8	723.4	757.6	752.5
Education and Health Services	707.0	756.4	738.5	764.1	781.9	763.9	819.9	845.3	869.4	930.2	991.0	993.4
Leisure and Hospitality	297.0	310.8	307.0	320.5	339.3	365.9	379.6	413.6	425.7	437.6	449.0	496.2
Other Services	158.1	162.3	164.0	167.0	157.5	171.1	174.1	179.8	184.8	187.3	194.3	194.2
Government	559.2	557.1	564.6	538.2	544.4	585.0	545.5	540.5	549.9	552.4	559.2	543.9
Total	3,742.6	3,727.1	3,785.5	3,721.6	3,789.9	3,907.3	3,961.6	4,119.6	4,223.7	4,341.3	4,495.2	4,520.6

Source: New York State Department of Labor

From 2006 to September 2018, decreases in private employment in the city were seen in only a few of the sectors. There were increases in most sectors, which include Education and Health Services, Professional and Business Services, and Government. The remaining sectors of employment have remained relatively stable.

Office-using employment amounts to approximately 30% of total New York City employment, reflective of the financial and services orientation of the local economy. New York City’s prime office inventory is concentrated in Manhattan south of Central Park within the two major submarkets of Downtown and Midtown. Brooklyn’s central business district in Downtown Brooklyn is anchored by Brooklyn Borough Hall and MetroTech Center, a 16-acre urban corporate campus. Long Island City in Queens is

located across the East River from Midtown Manhattan and has long been a center of manufacturing, distribution, and industrial services

MANHATTAN ECONOMY AND EMPLOYMENT

Total private sector employment in Manhattan was over 2,000,000 in the past year, the highest level of any borough, representing 60.0% of the City's total. Private sector employment increased by 16.5% in the past decade, and is now 7.0% above its pre-crisis level in 2008. The biggest employers in 2018 are Education and Health Services, Leisure and Hospitality, Professional and Business Services, and Trade, Transportation, and Utilities. In the past decade, average private sector wages rose by 7.0%, after adjusting for inflation, compared to an increase of 3.3% citywide. Manhattan was the only borough to see wages rise over this time period, with wages falling in the other boroughs between 1% and 8%. The strongest wage growth over this period occurred in Finance and Insurance. The 2018 estimate of average household income in New York City is \$100,415 and the median household income is estimated at \$63,345

Manhattan had the second lowest unemployment rate across the five boroughs, with a 3.5% average in the past year and 3.6% unemployment rate as of September 2018. During the financial crisis, the annual average unemployment rate in Manhattan peaked at 8.6% in 2010 and has continued a strong decline since then. Over 80% of individuals between the ages of 24-65 were in the labor force in the past year, the highest across the five boroughs. Big business is dominant in the borough: 20.1% of workers are employed in a firm with more than 500 employees, and 22.5% of workers are employed in a firm with less than 20 employees. These are the highest and lowest shares respectively amongst the five boroughs. Manhattan has more Fortune 1000 company headquarters than any county in the country. Manhattan is also home to the City's creative sector, accounting for 92.5% of all 'creative economy' employees in the City. This share is even higher within certain subsectors, such as Television and Broadcasting and Advertising and Marketing. Three out of Manhattan's five fastest growing businesses are in Advertising and Marketing. Manhattan dominates the City's patent activity which has increased 198.8% since 2005.

SEPTEMBER 2018 LABOR FORCE DATA

	Labor Force (000's)	Employed (000's)	Unemployed (000's)	Unemployment Rate
Bronx County (Bronx)	618.7	585.3	33.4	5.4%
Kings County (Brooklyn)	1,244.1	1,192.5	51.6	4.1%
New York County (Manhattan)	938.9	905.0	33.8	3.6%
Queens County (Queens)	1,188.9	1,147.3	41.7	3.5%
Richmond County (Staten Island)	226.3	217.3	9.1	4.0%
New York City	4,246.1	4,047.3	169.7	4.0%
Source: NYS Department of Labor				

NEW YORK CITY PERSONAL INCOME

Average household income in New York City increased by 74.2% between 2000 and 2019 from \$57,645 to \$100,415. This is higher than the 65.1% increase experienced by New York State.

NYC & STATE HOUSEHOLD INCOME

	New York City		New York State	
	2000 Census	2019 Estimate	2000 Census	2019 Estimate
Average Household Income	\$57,645	\$100,415	\$61,489	\$101,507
Median Household Income	\$38,846	\$63,345	\$44,138	\$68,067
Source: The Nielsen Company				

Manhattan is the most affluent borough in New York City with a 2019 estimated average household income level of \$145,795. The next highest borough in terms of average household income is Staten Island at \$108,205. The following table illustrates per capita income figures for New York City and the various boroughs.

NYC HOUSEHOLD INCOME

	Average Household Income 2000	Average Household Income 2019 Est.	% Change 2000-2019
Bronx	\$38,885	\$58,521	50.50%
Brooklyn	\$46,279	\$92,079	98.96%
Manhattan	\$83,976	\$145,795	73.62%
Queens	\$54,663	\$90,660	65.85%
Staten Island	\$67,698	\$108,205	59.83%
New York City	\$57,645	\$101,507	76.09%
Source: The Nielsen Company, U.S. Census			

As is evident, Manhattan exhibits the highest average income among the New York City boroughs and is nearly twice the level of the United States overall.

Manhattan accounts for nearly 20% of New York State's total income. The borough is home to nine of the wealthiest big city neighborhoods in the nation, testifying to its affluence. Nearly all of Manhattan's zip codes below 96th Street have median household incomes well above the national median. The most affluent concentrations of households' border Central Park on Manhattan's West Side between 77th and 91st Streets and on the East Side along Fifth, Park, and Madison Avenues between 60th and 96th Streets. Other affluent pockets include the southern tip of Manhattan at Battery Park City and the communities surrounding Lower Manhattan's Financial District such as TriBeCa. In contrast, the area north of Central Park, as well as portions of the Lower East Side, is where residents with the lowest median household incomes reside.

CULTURE AND RECREATION

New York City offers an unsurpassed variety of cultural activities. New York is a world-renowned center of culture, entertainment, and shopping. New York contains hundreds of museums, art galleries, theaters, restaurants, and retail stores.

The City is home to such musical institutions as the New York City Philharmonic, Carnegie Hall, Lincoln Center, Brooklyn Academy of Music, and Metropolitan Opera and, with its many Broadway and off-Broadway plays and musicals, is the performing arts capital of the world. Several world-famous dance troupes are located in New York including the Alvin Ailey Company and Dance Theater of Harlem.

World class museums include the Metropolitan Museum of Art, Museum of Modern Art, The Guggenheim, and Museum of Natural History. Other attractions include the Statue of Liberty, New York Aquarium, Bronx Zoo, Brooklyn Botanical Gardens, Empire State Building, United Nations, New York Stock Exchange, and many others, which draw millions of visitors each year.

New York City has significant parkland including Central Park, an 843-acre oasis in Manhattan; Prospect Park in Brooklyn; and Jamaica Bay National Wildlife Refuge in Queens. New York City has teams in every major professional sport.

EDUCATIONAL AND PROFESSIONAL FACILITIES

New York City has 173 schools of higher education including 21 two-year colleges, 45 four-year colleges, professional schools, law schools, and vocational schools.

Manhattan is home to some of the most prominent educational institutions in the nation including Columbia University, New York University, The Juilliard School, and Manhattan School of Music. The CUNY (City University of New York) system offers an affordable education in its 6 community colleges and 11 campuses with 4-year and graduate programs across all 5 boroughs. Notable colleges and universities located outside Manhattan include Pratt Institute in Brooklyn—a well-recognized school of art and architecture; St. John's University and Queens College in Queens; and Fordham University in the Bronx. New York City also has two of the most highly regarded public high schools in the nation—Stuyvesant and Bronx Science. As in most urban areas, the City's public primary and secondary education system is considered only fair overall with a wide range in quality of education from district to district.

New York City has 75 short-term general hospitals, many of which are affiliated with local professional universities. World famous research hospitals include NYU-Cornell, Rockefeller, Columbia, and New York Hospital. Other highly ranked hospitals include Memorial Sloan-Kettering Cancer Center, Mount Sinai Hospital, New York Eye and Ear Infirmary, and New York Presbyterian Hospital.

TRANSPORTATION

New York City is served by the most diverse transportation system in the United States. The region's transportation network links the area to the regional, national, and global commerce and trade. A brief synopsis of the area's transportation system follows:

RAIL SYSTEM

As the densest urban area in the country, New York City is served by the biggest transit network, and is one of the only places where one does not need a car to get around.

Rail systems include:

- **NYC Subway System:** The Metropolitan Transportation Authority (MTA) runs the 660-mile subway system servicing approximately 5 million passengers on an average weekday and approximately 1.6 billion passengers a year. NYC Transit operates approximately 6,485 cars 24 hours a day throughout Manhattan, Queens, Brooklyn, and the Bronx. The 26 subway routes are interconnected, and many lines feature express trains, across-the-platform transfers to local trains, and "skip-stop" express service. Recently-completed MTA capital projects include extending the 7 line beyond Times Square to Hudson Yards (the West Side) and the Second Avenue subway.
- **Metro North:** Based in the landmark Grand Central Terminal in Midtown Manhattan, the MTA Metro North Railroad is the second busiest commuter line in the United States, providing approximately 281,000 customer trips each weekday and some 80 million trips per year. With 384 route miles and 775 miles of track, Metro North goes to 120 stations distributed in seven counties in New York State--Dutchess, Putnam, Westchester, Bronx, New York (Manhattan), Rockland, and Orange--and two counties in the state of Connecticut--New Haven and Fairfield. Metro North is currently in discussions to extend service to Penn Station.
- **Long Island Railroad (LIRR):** The MTA runs this commuter railroad along 11 branch lines from the eastern tip of Long Island to Pennsylvania Station (Penn Station) in Manhattan and Atlantic Terminal in Brooklyn. The LIRR is the busiest commuter railroad in North America, carrying an average of 324,000 customers each week day on 728 daily trains. Annual ridership is approximately 81 million persons per year. The LIRR is current constructing the \$8.2 billion East Side Access, which will provide a new terminal at Grand Central Station, reducing travel times to Midtown Manhattan for millions of commuters.

- ***New Jersey Transit (NJT):*** NJT runs 11 lines from its terminals in New York-Penn Station, Newark, and Hoboken. NJT is the fourth busiest commuter railroad in the United States, providing approximately 276,000 customer trips each weekday and 78 million trips per year. With 536 miles, NJT goes to 151 stations primarily in Northern New Jersey. From Penn Station, NJT offers direct service along the Northeast Corridor Line to Trenton, the North Jersey Coast Line to Bay Head, and Montclair-Boonton Line to Hackettstown. Riders can also transfer at Secaucus, Hoboken, and Newark for service into New York City.
- ***Amtrak:*** Amtrak serves New York as the national provider of intercity rail service. Amtrak's predominant service from Penn Station is its Northeast Corridor Line (the busiest line in the U.S.), including high-speed Acela service, which includes stops in the major cities of Boston, Philadelphia, Baltimore, and Washington D.C. Amtrak also provides daily service to upstate New York, New England, Chicago, Miami, and New Orleans. In 2010, there were 8.9 million boardings and alightings at Penn Station, by far the highest of any Amtrak station in the country.
- ***Port Authority Trans-Hudson (PATH):*** PATH carries 70% of all commuters entering New York City from New Jersey. Major station stops include Newark, Harrison, Hoboken, and Jersey City in New Jersey, and the World Trade Center and Penn Station in New York City. Approximately 259,000 commuters use the PATH each weekday. The annual passenger trips for 2010 were 73.9 million.

BUS SYSTEM

- ***New York City Transit:*** MTA offers bus service in New York City's five boroughs, handling 2.4 million riders daily and 738 million annually. 208 local and 36 express bus routes operate in the five boroughs, covering 2,109 miles.
- ***Port Authority Bus Terminals:*** Regional bus lines serve approximately 57 million passengers a year, with most service to and from New Jersey. The Port Authority operates two bus terminals in New York, one at 42nd Street, and one at the George Washington Bridge. Both provide several transfers to New York City transit routes. Bus lines include New Jersey Transit, Bolt Bus, Greyhound, Peter Pan, and Coach USA.

AIRPORTS

The New York area is home to the busiest airport system in the United States and second biggest in the world. The three major airports that service New York City are:

- ***John F. Kennedy Airport (JFK)*** is located in the southeastern section of Queens County on Jamaica Bay and consists of 7 terminals and 151 aircraft gates. More than 90 airlines operate at JFK, and it is a major hub for JetBlue Airways, American Airlines, and Delta Air Lines. It is less than 15 miles by highway from Midtown Manhattan, and there is rail service via the AirTrain. In 2011, JFK handled the most international passenger air traffic in North America, and it also serves as a vital international freight gateway.
- ***Newark Liberty International Airport (EWR)*** is located in Essex and Union Counties between the New Jersey Turnpike (accessible from Exits 13A and 14), U.S. Routes 1 & 9, and Interstate 78. Rail service is also available from Penn Station via Amtrak and New Jersey Transit. The airport is about 16 miles from Midtown Manhattan and consists of about 2,027 acres. Newark is a hub for United Airlines, as well as FedEx. In the future, the Port Authority plans to rebuild Terminal B and build a new Terminal A.
- ***LaGuardia Airport (LGA)*** consists of 680 acres and 72 aircraft gates. A \$830 million redevelopment program in 2000 included expanding and modernizing the Central Terminal Building, reconfiguring and widening roadways, improving runways and taxiways, constructing a passenger terminal in the east end, airline modernization of gate areas and passenger service areas, and other rehabilitation projects. The Port Authority broke ground on a new Central Terminal Building in 2016 and the facility is projected to be completed by 2020.

VEHICLE SYSTEM

There are several bridges and tunnels that provide access for automobiles and trucks to and through the island of Manhattan.

- ***Hudson River Crossings*** include the Lincoln Tunnel (connecting Weehawken, NJ and Midtown Manhattan), the Holland Tunnel (connecting Jersey City and Downtown Manhattan), and the George Washington Bridge (Interstate 95 connecting Fort Lee, NJ, and Northern Manhattan).
- ***East River Crossings*** include the Brooklyn Battery Tunnel (connecting Brooklyn and the Financial District), the Queens Midtown Tunnel (connecting Queens and Midtown), the Brooklyn Bridge (connecting Brooklyn and Lower Manhattan), the Manhattan Bridge (connecting Brooklyn and Lower Manhattan), the Williamsburg Bridge (connecting Williamsburg and Lower Manhattan), the Queensboro Bridge

(connecting Long Island City and Midtown Manhattan).

- **Major Road and Highways** linking Manhattan include Interstate 78 (via the Holland Tunnel from New Jersey), Interstate 95 (via the George Washington Bridge from New Jersey to the Cross Bronx Expressway and New England), the Henry Hudson Parkway (to the Bronx and points north), and Interstate 495 (via the Queens Midtown Tunnel from Long Island). The FDR Drive, Harlem River Drive, West Side Highway, and Henry Hudson Parkway also serve as major routes along Manhattan's coast.

Summary

Manhattan is often described as the cultural and financial capital of the world and hosts the United Nations Headquarters. Anchored by Wall Street in the Financial District of Lower Manhattan, New York City has been called both the most economically powerful city and the leading financial center of the world, and Manhattan is home to the world's two largest stock exchanges by total market capitalization: the New York Stock Exchange and NASDAQ.

Moody's Economy.com predicts the city's population will continue to edge up slowly, by 30,000 to 40,000 (0.4% to 0.5%) roughly speaking through 2022. The number of households is expected to rise 106,380 over five years. Labor shortages will slow employment growth. This source expects employment to rise by 52,200 (1.2%) for 2018 all told but by just 29,980 for the entire 2019 to 2022 period.

MANHATTAN OFFICE MARKET ANALYSIS⁵

The Manhattan Office market ended the third quarter 2018 with a vacancy rate of 7.7%. The vacancy rate was down over the previous quarter, with net absorption totaling positive 1,725,067 square feet in the third quarter. Vacant sublease space increased in the quarter, ending the quarter at 4,753,377 square feet. Rental rates ended the third quarter at \$61.52, an increase over the previous quarter. A total of two buildings delivered to the market in the quarter totaling 286,854 square feet, with 14,166,645 square feet still under construction at the end of the quarter.

NET ABSORPTION

Net absorption for the overall Manhattan office market was positive 1,725,067 square feet in the third quarter 2018. That compares to positive 2,504,062 square feet in the second quarter 2018, positive 1,169,789 square feet in the first quarter 2018, and positive 1,224,396 square feet in the fourth quarter 2017.

Tenants moving out of large blocks of space in 2018 include: Omnicom Group moving out of 264,091 square feet at 437 Madison Avenue, RSM McGladery moving out of 165,000 square feet at 1185 Avenue of the Americas; and Arent Fox moving out of 111,283 square feet at 1675 Broadway.

Tenants moving into large blocks of space in 2018 include: GroupM moving into 697,487 square feet at 3 World Trade Center; WeWork moving into 258,000 square feet at 21 Penn Plaza; and New York City Human Resources Administration moving into 193,821 square feet at 375 Pearl Plaza.

The Class-A office market recorded net absorption of positive 1,823,656 square feet in the third quarter 2018, compared to positive 1,666,510 square feet in the second quarter 2018, positive 1,113,437 in the first quarter 2018, and positive 1,007,915 in the fourth quarter 2017.

⁵ Data Source: CoStar Third Quarter 2018

The Class-B office market recorded net absorption of negative (19,704) square feet in the third quarter 2018, compared to positive 713,034 square feet in the second quarter 2018, positive 27,897 in the first quarter 2018, and positive 475,013 in the fourth quarter 2017.

The Class-C office market recorded net absorption of negative (78,885) square feet in the third quarter 2018 compared to positive 124,518 square feet in the second quarter 2018, positive 28,455 in the first quarter 2018, and negative (258,532) in the fourth quarter 2017.

Net absorption for Manhattan's Downtown Submarket was positive 614,918 square feet in the third quarter 2018. That compares to positive 1,144,386 square feet in the second quarter 2018, positive 333,562 in the first quarter 2018, and positive 61,037 in the fourth quarter 2017.

Net absorption for Manhattan's other submarkets was positive 1,110,149 square feet in the third quarter 2018. That compares to positive 1,359,676 square feet in second quarter 2018, positive 836,227 in the first quarter 2018, and positive 1,163,359 in the fourth quarter 2017.

VACANCY

The office vacancy rate in the Manhattan market area decreased to 7.7% at the end of the third quarter 2018. The vacancy rate was 8.0% at the end of the first and second quarter 2018, and 8.1% at the end of the fourth quarter 2017.

Class-A projects reported a vacancy rate of 8.7% at the end of the third quarter 2018, 9.2% at the end of the second quarter 2018, 8.9% at the end of the first quarter 2018, and 9.2% at the end of the fourth quarter 2017.

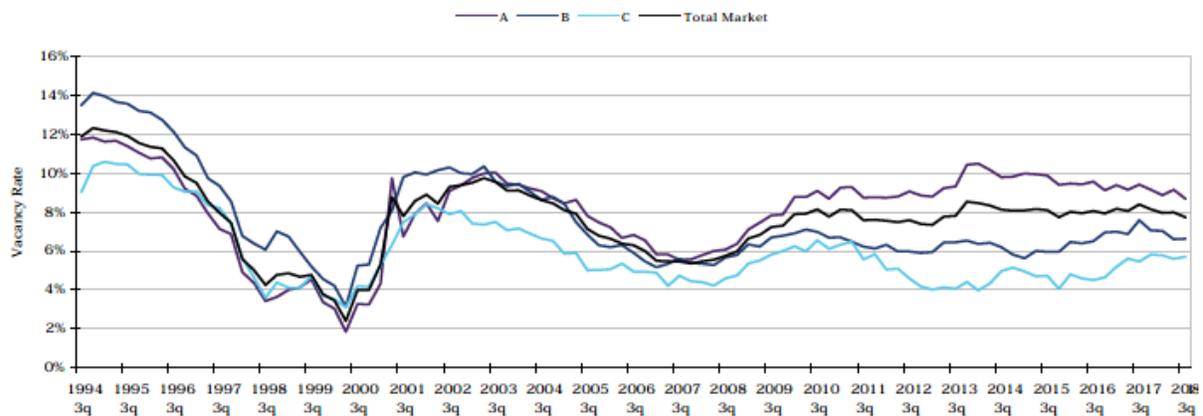
Class-B projects reported a vacancy rate of 6.6% at the end of the second and third quarter 2018, 7.0% at the end of the first quarter 2018, and 7.1% at the end of the fourth quarter 2017.

Class-C projects reported a vacancy rate of 5.7% at the end of the third quarter 2018, 5.6% at the end of second quarter 2018, 5.8% at the end of the first quarter 2018, and 5.8% at the end of the fourth quarter 2017.

The overall vacancy rate in Manhattan’s Downtown Submarket at the end of the third quarter 2018 decreased to 9.3%. The vacancy rate was 9.8% at the end of the second quarter 2018, 8.6% at the end of the first quarter 2018, and 8.9% at the end of the fourth quarter 2017.

The vacancy rate in Manhattan’s other submarkets decreased to 7.3% in the third quarter 2018. The vacancy was 7.5% at the end of the second quarter 2018, 7.8% at the end of the first quarter 2018, and 7.9% at the end of the fourth quarter 2017.

Vacancy Rates by Class 1994-2018



LARGEST LEASE SIGNINGS

The largest lease signings occurring in 2018 occurred in the Mid-town market and included: the 854,000-square-foot leased signed by JPMorgan Chase & Co at 237 Park Avenue in the Midtown market; the 521,374-square-foot renewal deal signed by 1199SEIU Family of Funds at Deco Tower in the Midtown market; and the 406,661-square-foot lease signed by Latham & Watkins LLP at 1271 Avenue of the Americas in the Midtown Market.

SUBLEASE VACANCY

The amount of vacant sublease space the Manhattan market increased to 4,753,377 square feet by the end of third quarter 2018, from 4,644,788 square feet at the end of the second quarter 2018. There was 4,847,235 square feet vacant at the end of the first quarter 2018 and 5,312,635 square feet at the end of the fourth quarter 2017. New York City's Class-A projects reported vacant sublease space of 3,492,659 square feet at the end of third quarter 2018, up from the 3,324,655 square feet reported at the end of the second quarter 2018. There were 3,180,055 square feet of sub-lease space vacant at the end of the first quarter 2018, and 3,342,950 square feet at the end of the fourth quarter 2017.

Class-B projects reported vacant sublease space of 925,471 square feet at the end of the third quarter 2018, down from the 1,007,897 square feet reported at the end of the second quarter 2018. At the end of the first quarter 2018 there were 1,222,177 square feet, and at the end of the fourth quarter 2017 there were 1,575,461 square feet vacant.

Class-C projects reported increased vacant sublease space from the second quarter 2018 to the third quarter 2018. Sublease vacancy went from 312,236 square feet to 335,247 square feet during that time. There was 445,003 square feet at the end of the first quarter 2018, and 394,224 square feet at the end of the fourth quarter 2017.

Sublease vacancy in Manhattan's Downtown Submarket stood at 1,021,963 square feet at the end of the third quarter 2018. It was 1,020,071 square feet at the end of the second quarter 2018, 954,853 square feet at the end of the first quarter 2018, and 982,065 square feet at the end of the fourth quarter 2017.

Sublease vacancy in the Manhattan's other submarkets ended the third quarter 2018 at 3,731,414 square feet. At the end of the second quarter 2018 sublease vacancy was 3,624,717 square feet, was 3,892,382 square feet at the end of the first quarter 2018 and was 4,330,570 square feet at the end of the fourth quarter 2017.

RENTAL RATES

The average quoted asking rental rate for available office space, all classes, was \$61.52 per square foot per year at the end of the third quarter 2018 in the Manhattan market area. This represented a 2.0% increase in quoted rental rates from the end of the second quarter 2018, when rents were reported at \$60.33 per square foot.

The average quoted rate within the Class-A sector was \$66.56 at the end of the third quarter 2018, while Class-B rates stood at \$59.84, and Class-C rates at \$53.38. At the end of the second quarter 2018, Class-A rates were \$64.32 per square foot, Class-B rates were \$60.44, and Class-C rates were \$52.77.

The average quoted asking rental rate in Manhattan's Downtown Submarket was \$55.21 at the end of the third quarter 2018, and \$63.45 in Manhattan's other submarkets. In the second quarter 2018, quoted rates were \$55.32 in the Downtown Submarket and \$62.00 in the other submarkets.

DELIVERIES AND CONSTRUCTION

During the third quarter 2018, two buildings totaling 286,854 square feet were completed in the Manhattan market area. This compares to two buildings totaling 2,881,402 square feet that were completed in the second quarter 2018, one building totaling 166,810 square feet completed in the first quarter 2018, and nothing completed in the fourth quarter 2017. There were 14,166,645 square feet of office space under construction at the end of the third quarter 2018.

Some of the notable 2018 deliveries include: 3 World Trade Center, a 2,861,402-square-foot facility that delivered in second quarter 2018 and is now 42% occupied, and 57 11th Ave, a 263,835-square-foot building that delivered in third quarter 2018 and is now 100% occupied.

The largest projects underway at the end of third quarter 2018 were 30 Hudson Yards, a 2,600,000-square-foot building with 98% of its space pre-leased, and One Manhattan West, a 2,216,609-square-foot facility that is 86% pre-leased.

INVENTORY

Total office inventory in the Manhattan market area amounted to 566,121,786 square feet in 3,839 buildings as of the end of the third quarter 2018. The Class-A office sector consisted of 334,662,485 square feet in 486 projects. There were 1,462 Class-B buildings totaling 162,485,364 square feet, and the Class-C sector consisted of 68,973,937 square feet in 1,891 buildings. Within the Office market there were 163 owner-occupied buildings accounting for 23,403,622 square feet of office space.

SALES ACTIVITY

Tallying office building sales of 15,000 square feet or larger, Manhattan office sales figures fell during the second quarter 2018 in terms of dollar volume compared to the first quarter of 2018.

In the second quarter, 17 office transactions closed with a total volume of \$2,811,702,434. The 17 buildings totaled 3,238,292 square feet and the average price per square foot equated to \$868.27 per square foot. That compares to 17 transactions totaling \$5,433,945,329 in the first quarter 2018. The total square footage in the first quarter was 4,051,790 square feet for an average price per square foot of \$1,341.12.

Total office building sales activity in 2018 was up compared to 2017. In the first six months of 2018, the market saw 34 office sales transactions with a total volume of \$8,245,647,763. The price per square foot averaged \$1,331.08. In the same first six months of 2017, the market posted 27 transactions with a total volume of \$7,090,591,305. The price per square foot averaged \$788.17.

Cap rates have been higher in 2018, averaging 4.30% compared to the same period in 2017 when they averaged 3.44%.

One of the largest transactions that has occurred within the last four quarters in the Manhattan market is the sale of 75 9th Avenue. This 1,188,501-square-foot office building sold for \$2,397,501,899, or \$2,017.25 per square foot. The property sold on March 16, 2018. This transaction significantly skewed the average price per square foot.

MANHATTAN RETAIL MARKET ANALYSIS

New York City is a major retail market and has one of the largest sales volumes of any city in the nation. The Manhattan retail market contains over 54.8 million square feet of space. Manhattan does not contain traditional shopping centers in the sense that the term is used when referencing other cities or suburban areas. However, the City consists of shopping districts that function much like suburban malls. That is, the stores in that neighborhood are interdependent to some degree; each neighborhood has a couple of “anchor stores” whose performance can drive or stall dozens of smaller retailers. According to retail brokers, approximately 80% of Manhattan's retail space is contained within street level shops. Of the remainder, about 6 million square feet is in department stores and another 5 million square feet in office building atriums and retail projects configured as urban malls such as Trump Tower, Herald Center, Manhattan Mall, Rockefeller Center, World Trade Center, Time Warner Center (Columbus Circle) and East River Plaza.

In the last decade, Manhattan’s real estate boom extended to include all property types, with retail being no exception. Manhattan prime retail corridors—Madison and Fifth Avenues and 57th Street, Broadway in Times Square—were commanding rents in excess of \$2,000 per square foot (\$3,500 per square foot on Upper Fifth Avenue), making these shopping districts the most expensive in the world with the Champs Elysees of Paris following at a distant second. While rents spiked in New York’s top districts, mainstream and high-end retail corridors emerged in marginal areas that were once the domain of 99-cent stores, taxi repair shops, or food processing plants.

CURRENT RETAIL ENVIRONMENT

A comprehensive overview of current conditions within the Manhattan retail market is provided by CoStar Property Services, a market research firm. The following pages contain excerpts from the CoStar Retail Market Report for the New York City (Manhattan) retail market as of Year End 2018.

Total Retail Market Statistics

Year-End 2018

Period	Existing Inventory		Vacancy			Net	Deliveries		UC Inventory		Quoted
	# Bids	Total GLA	Direct SF	Total SF	Vac %	Absorption	# Bids	Total GLA	# Bids	Total GLA	Rates
2018 4q	4,482	55,130,202	2,292,467	2,422,191	4.4%	(66,009)	3	61,881	18	2,511,282	\$110.30
2018 3q	4,480	55,070,284	2,187,561	2,296,264	4.2%	(241,288)	2	29,680	21	2,573,163	\$112.49
2018 2q	4,481	55,058,504	1,922,241	2,043,196	3.7%	157,004	3	117,750	22	2,525,843	\$101.35
2018 1q	4,478	54,940,754	2,000,030	2,082,450	3.8%	64,917	3	140,778	25	2,643,593	\$102.54
2017 4q	4,476	54,807,641	1,937,310	2,014,254	3.7%	63,174	1	249,394	28	2,784,371	\$98.41
2017 3q	4,475	54,558,247	1,745,122	1,828,034	3.4%	7,409	3	23,910	24	2,808,185	\$98.88
2017 2q	4,472	54,534,337	1,736,268	1,811,533	3.3%	193,347	1	10,380	25	2,821,095	\$91.18
2017 1q	4,472	54,530,434	1,929,172	2,000,977	3.7%	75,029	3	114,528	24	2,667,241	\$89.88
2016	4,470	54,425,170	1,906,348	1,970,742	3.6%	226,861	8	492,030	21	2,520,547	\$83.85
2015	4,484	54,064,002	1,782,260	1,836,435	3.4%	(121,273)	5	103,990	21	2,691,527	\$81.24
2014	4,536	54,402,989	2,008,081	2,054,149	3.8%	(816,477)	6	125,246	14	941,593	\$89.86
2013	4,569	55,011,845	1,814,531	1,846,528	3.4%	(465,044)	7	202,265	10	581,688	\$93.84
2012	4,584	55,031,364	1,319,328	1,401,003	2.5%	(113,214)	3	23,388	10	369,661	\$94.77
2011	4,598	55,174,098	1,409,197	1,430,523	2.6%	363,739	6	416,298	9	334,461	\$70.55
2010	4,608	54,909,821	1,504,210	1,529,985	2.8%	439,943	9	278,481	7	477,778	\$92.99
2009	4,597	54,611,054	1,646,344	1,671,161	3.1%	773,979	7	143,258	13	660,251	\$86.27

Source: CoStar Property®

OVERVIEW

The New York City retail market did not experience much change in market conditions in the fourth quarter 2018. The vacancy rate went from 4.2% in the previous quarter to 4.4% in the current quarter. Net absorption was negative (66,009) square feet, and vacant sublease space increased by 21,021 square feet. Quoted rental rates decreased from third quarter 2018 levels, ending at \$110.30 per square foot per year. A total of 3 retail buildings with 61,881 square feet of retail space were delivered to the market in the quarter, with 2,511,282 square feet still under construction at the end of the quarter.

NET ABSORPTION

Retail net absorption was slightly negative in New York City fourth quarter 2018, with negative (66,009) square feet absorbed in the quarter. In third quarter 2018, net absorption was negative (241,288) square feet, while in second quarter 2018, absorption came in at positive 157,004 square feet. In first quarter 2018, positive 64,917 square feet was absorbed in the market.

Tenants moving into large blocks of space in 2018 include: Morton Williams Supermarket moving into 29,535 square feet of new space at 1 W End Ave; and ESPN moving into 19,000 square feet at South Street Seaport aka Pier 17. There were no large retail move-outs.

VACANCY

New York City's retail vacancy rate increased in the fourth quarter 2018, ending the quarter at 4.4%. Over the past four quarters, the market has seen an overall increase in the vacancy rate, with the rate going from 3.8% in the first quarter 2018, to 3.7% at the end of the second quarter 2018, 4.2% at the end of the third quarter 2018, to 4.4% in the current quarter.

The amount of vacant sublease space in the New York City market has trended up over the past four quarters. At the end of the first quarter 2018, there were 82,420 square feet of vacant sublease space. Currently, there are 129,724 square feet vacant in the market.

LARGEST LEASE SIGNINGS

The largest lease signings occurring in 2018 included: the 45,000-square-foot-deal signed by Alamo Drafthouse Cinema at 28 Liberty St; and the 42,595-square-foot-lease signed by Forever 21 at 435 Seventh Ave.

RENTAL RATES

Average quoted asking rental rates in the New York City retail market are down over previous quarter levels, and up from their levels four quarters ago. Quoted rents ended the fourth quarter 2018 at \$110.30 per square foot per year. That compares to \$112.49 per square foot in the third quarter 2018, and \$102.54 per square foot at the end of the first quarter 2018. This represents a 1.9% decrease in rental rates in the current quarter, and a 7.04% increase from four quarters ago.

INVENTORY AND CONSTRUCTION

During the fourth quarter 2018, three buildings totaling 61,881 square feet were completed in the New York City retail market. Over the past four quarters, a total of 350,089 square feet of retail space has been built in New York City. In addition to the current quarter, two buildings with 29,680 square feet were completed in third quarter 2018, three buildings totaling 117,750 square feet completed in second quarter 2018, and 140,778 square feet in three buildings completed in first quarter 2018. There were 2,511,282 square feet of retail space under construction at the end of the fourth quarter 2018.

Some of the notable 2018 deliveries include: 432 Park Ave S, a 109,625-square-foot facility that delivered in first quarter 2018 and is now 100% occupied, and 1 W End Ave, a 96,300-square-foot building that delivered in second quarter 2018 and is now 97% occupied. Total retail inventory in the New York City market area amounted to 55,130,202 square feet in 4,482 buildings and 12 centers as of the end of the fourth quarter 2018.

GENERAL RETAIL PROPERTIES

The General Retail sector of the market, which includes all freestanding retail buildings, except those contained within a center, reported a vacancy rate of 4.5% at the end of the fourth quarter 2018. There was a total of 2,349,821 square feet vacant at that time. The General Retail sector in New York City currently has average rental rates of \$110.30 per square foot per year. There are 2,511,282 square feet of space under construction in this sector, with 61,881 square feet having been completed in the fourth quarter. In all, there are a total of 4,466 buildings with 52,649,910 square feet of General Retail space in New York City.

SALES ACTIVITY

Tallying retail building sales of 15,000 square feet or larger New York City retail sales figures rose during the third quarter 2018 in terms of dollar volume compared to the second quarter of 2018.

In the third quarter, four retail transactions closed with a total volume of \$574,550,000. The four buildings totaled 136,648 square feet and the average price per square foot equated to \$4,204.60 per square foot. That compares to two transactions totaling \$64,200,000 in the second quarter 2018. The total square footage in the second quarter was 65,019 square feet for an average price per square foot of \$987.40.

Total retail center sales activity in 2018 was up compared to 2017. In the first nine months of 2018, the market saw nine retail sales transactions with a total volume of \$679,600,000. The price per square foot averaged \$2,520.77. In the same first nine months of 2017, the market posted 10 transactions with a total volume of \$332,871,000. The price per square foot averaged \$1,340.09. Cap rates have been higher in 2018, averaging 3.80% compared to the same period in 2017 when they averaged 2.31%.

One of the largest transactions that has occurred within the last four quarters in the New York City market is the sale of 1535 Broadway in New York. This 56,160 square foot retail center sold for \$442,000,000, or \$7,870.37 per square foot. The property sold on 9/21/2018, at a 2.00% cap rate.

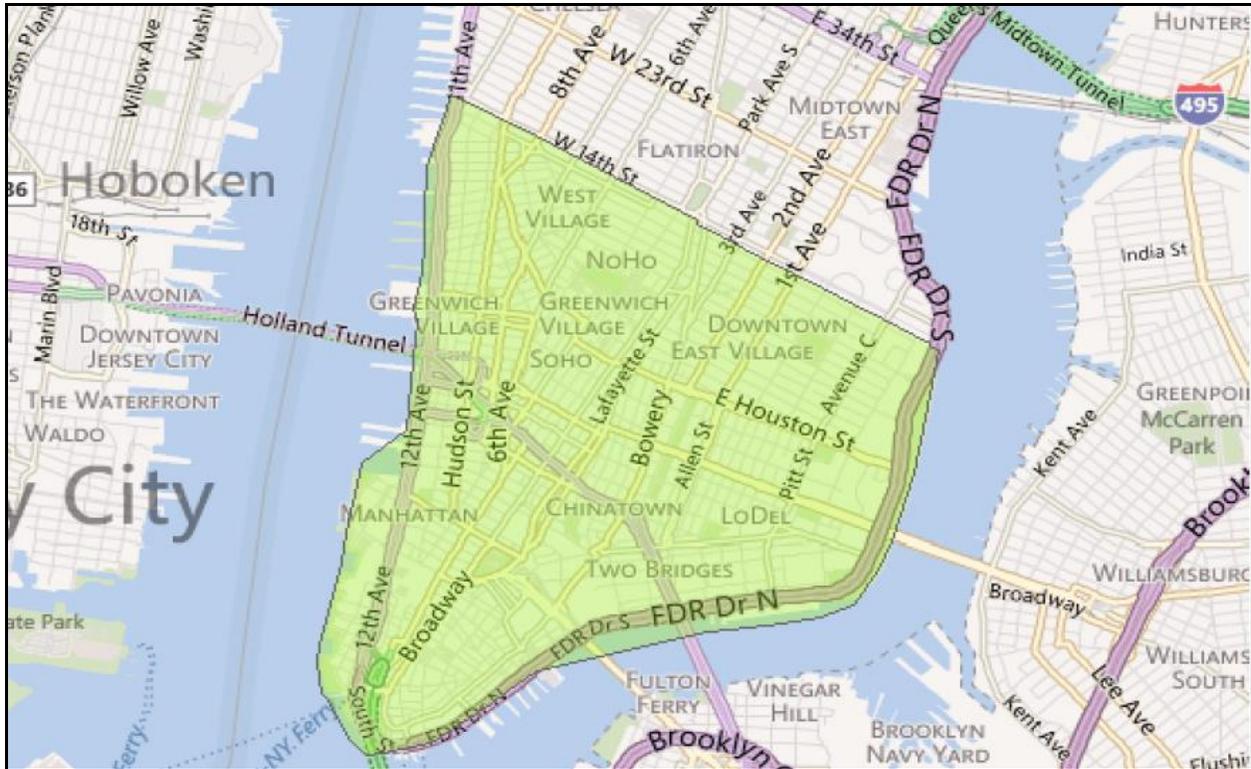
General Retail Submarket Statistics

Year-End 2018

Market	Existing Inventory		Vacancy			YTD Net	YTD	Under	Quoted
	# Bids	Total GLA	Direct SF	Total SF	Vac %	Absorption	Deliveries	Const SF	Rates
Chelsea	492	5,498,582	294,326	307,538	5.6%	(18,065)	35,850	212,069	\$128.28
City Hall	202	1,705,034	72,277	74,277	4.4%	9,600	0	0	\$63.03
Columbus Circle	79	2,674,689	21,650	26,539	1.0%	91,856	96,300	137,407	\$0.00
Financial District	24	411,064	113,565	113,565	27.6%	(113,565)	0	0	\$0.00
Gramercy Park	235	2,093,431	27,636	34,836	1.7%	21,091	0	0	\$128.82
Grand Central	41	212,737	8,240	8,240	3.9%	2,900	0	0	\$146.67
Greenwich Village	256	2,139,308	38,563	55,296	2.6%	10,331	0	10,000	\$124.16
Harlem/North Manhattan	723	7,668,095	376,892	380,792	5.0%	(69,954)	0	210,235	\$95.36
Hudson Square	300	1,644,130	82,256	84,436	5.1%	(19,622)	19,680	75,130	\$99.88
Insurance District	38	621,197	135,272	135,272	21.8%	(190)	0	67,514	\$0.00
Murray Hill	79	648,843	19,294	21,194	3.3%	20,591	0	0	\$37.11
Penn Plaza/Garment	165	5,435,219	113,203	126,803	2.3%	(48,048)	0	1,120,000	\$181.85
Plaza District	258	4,576,293	270,496	272,096	5.9%	108,170	139,829	28,940	\$200.69
Soho	688	5,822,528	360,849	388,340	6.7%	(99,244)	58,430	537,987	\$89.37
Times Square	174	2,568,214	136,439	137,039	5.3%	23,778	0	112,000	\$113.28
Tribeca	85	941,564	10,200	10,200	1.1%	(3,814)	0	0	\$110.00
U.N. Plaza	9	35,970	11,071	11,071	30.8%	(8,671)	0	0	\$0.00
Upper East Side	381	3,617,728	94,067	104,969	2.9%	(8,783)	0	0	\$143.98
Upper West Side	222	3,781,306	42,158	44,858	1.2%	5,845	0	0	\$0.00
World Trade Center	15	553,978	12,460	12,460	2.2%	16,097	0	0	\$0.00
Totals	4,466	52,649,910	2,240,914	2,349,821	4.5%	(79,697)	350,089	2,511,282	\$110.30

Source: CoStar Property®

RESIDENTIAL MARKET ANALYSIS
(WEST VILLAGE/DOWNTOWN SUBMARKET)



MARKET DATA SOURCE

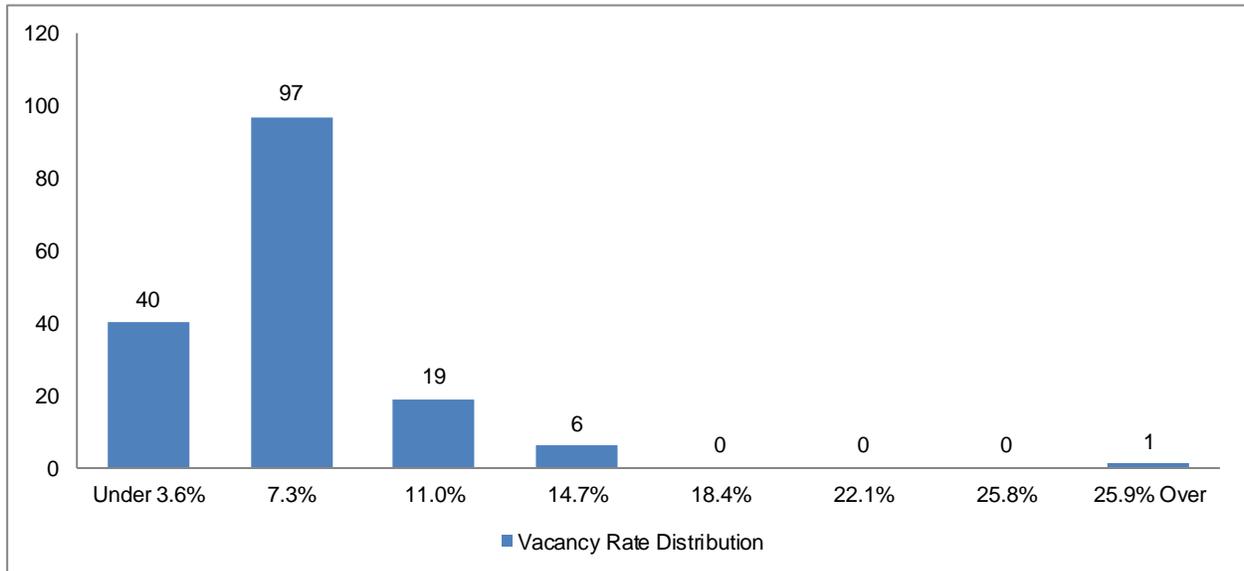
The data related in this section is reported by Reis, Inc., an internationally recognized subscription service providing real-estate focused economic data. It is our experience that Reis is widely considered by market participants of all types, including investors, lenders, and analysts.

We note that this report is a survey sample of property owners, reflecting the performance of 163 assets and 22,761 housing units. Like other statistical readings, this study is meant to be generally instructive regarding specific performance, but individual characteristics may lead to divergence. Overall, however, it is our experience that the broad tone of the Sub Market Trend Report is often consistent with performance at the property level. Thus, given the breadth of the availability and market reliance on this data, we feel this is not only a strong indication of current local conditions, but of the assumptions investors would apply in valuing a specific asset.

VACANCY

Most recently, Reis reports median submarket-market vacancy at 4.6%, while the average rate is 4.6%. The overall range of results is 0.0% to 11.8%, with the high end of the range reflective of properties in their initial lease-up.

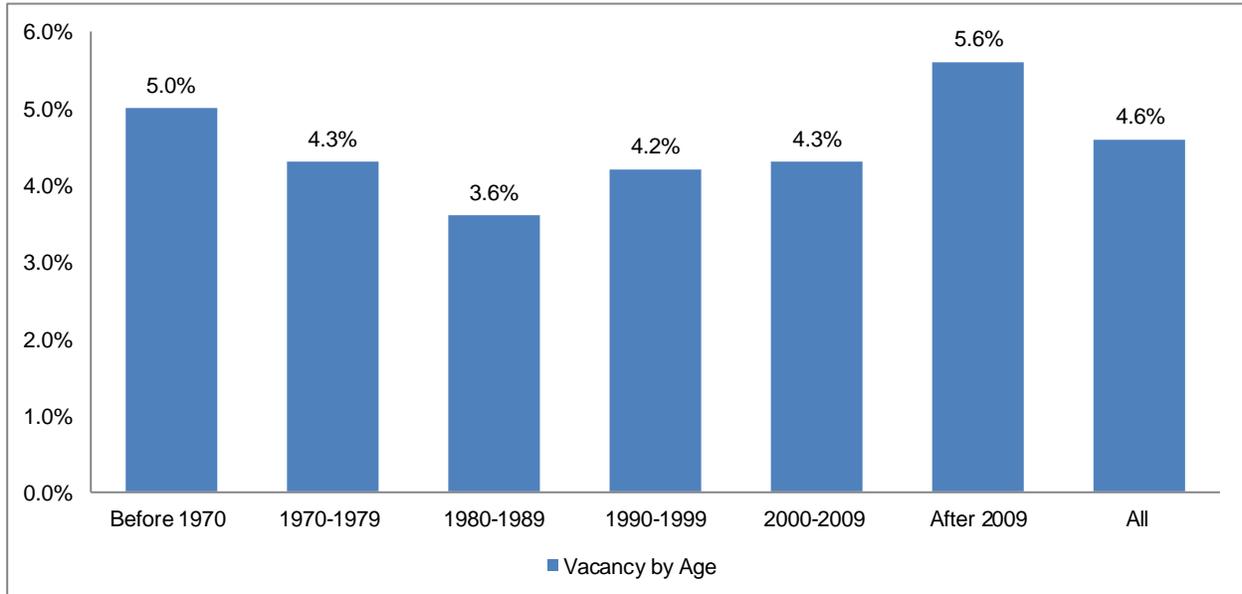
VACANCY RATE DISTRIBUTION



Source: Reis 2018

Reis indicates that newer projects, those which are likely to have the highest rental rates, and several of which are in their initial stabilization period exhibit above average vacancy with a predominant rate of 4.6% in the most recent quarter.

VACANCY RATE BY AGE



Source: Reis 2018

Vacancy in the submarket has been stable of late, as the most recent quarter's rate of 4.6% is in line with the year-to-date average of 4.8%, and slightly above the prior quarter's reading of 4.6%. Overall, the 5-year vacancy rate in West Village/ Downtown has been 3.6% consistent over the past three years has been 3.6%.

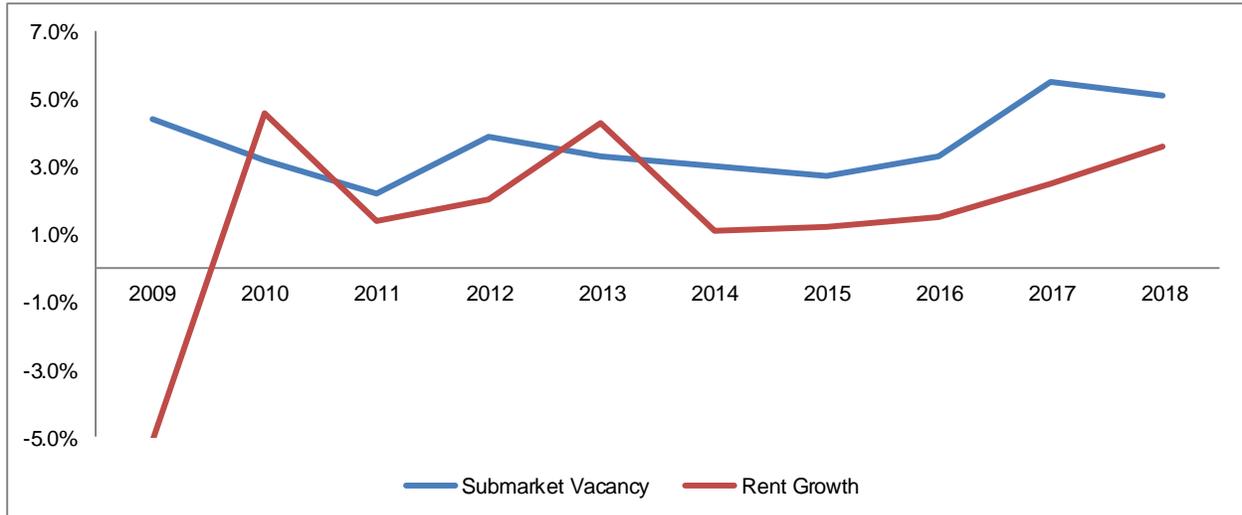
With respect to the regional and national markets, the current quarter reflects stable rates exhibited in the past year. In this regard, Northeast year-to-date average is 4.5%, a rate slightly above the 3-year performance of 3.9%. The national average for the most recent quarter is 4.8%, in line with the YTD at 4.7%. National occupancy has been stable, as the five-year average is 4.4%.

	Vacancy Rates						
	Quarterly			Annualized			
	3Q18	2Q18	YTD Avg	1 Year	3 Year	5 Year	5 Yr Forecast
West Village/ Downtown	4.6%	4.6%	4.8%	4.4%	3.6%	3.6%	6.4%
NY Metro	5.2%	5.1%	5.2%	4.4%	3.7%	3.5%	5.9%
Northeast	4.6%	4.6%	4.5%	4.1%	3.9%	3.8%	5.2%
United States	4.8%	4.7%	4.7%	4.4%	4.4%	4.4%	5.2%
Period Ending:	09/30/18	06/30/18	09/30/18	12/31/17	12/31/17	12/31/17	12/31/22

Source: Reis 2018

Below we have contrasted vacancy and rent trends. Observe that while rent growth has been expectedly erratic, vacancy has been stable.

VACANCY RATE TRENDS AND FORECAST



Source: Reis 2018

RENTAL RATES

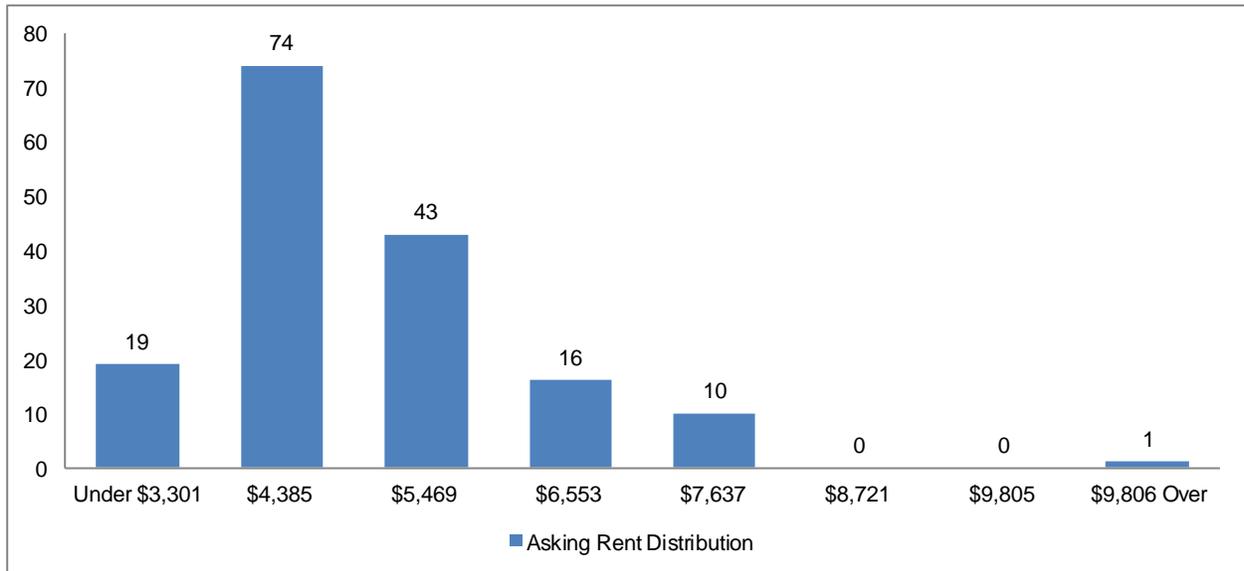
As indicated below, predominant rental rates in the submarket are near \$4,625 per month, with a range between \$2,438 and \$7,058 per month.

RENT RATES

	Low	25%	Mean	Median	75%	High
Asking Rents	\$2,438	\$3,640	\$4,625	\$4,214	\$4,897	\$7,058
Rent Growth Rates	-10.2%	-1.0%	40.0%	1.5%	3.4%	10.6%

Source: Reis 2018

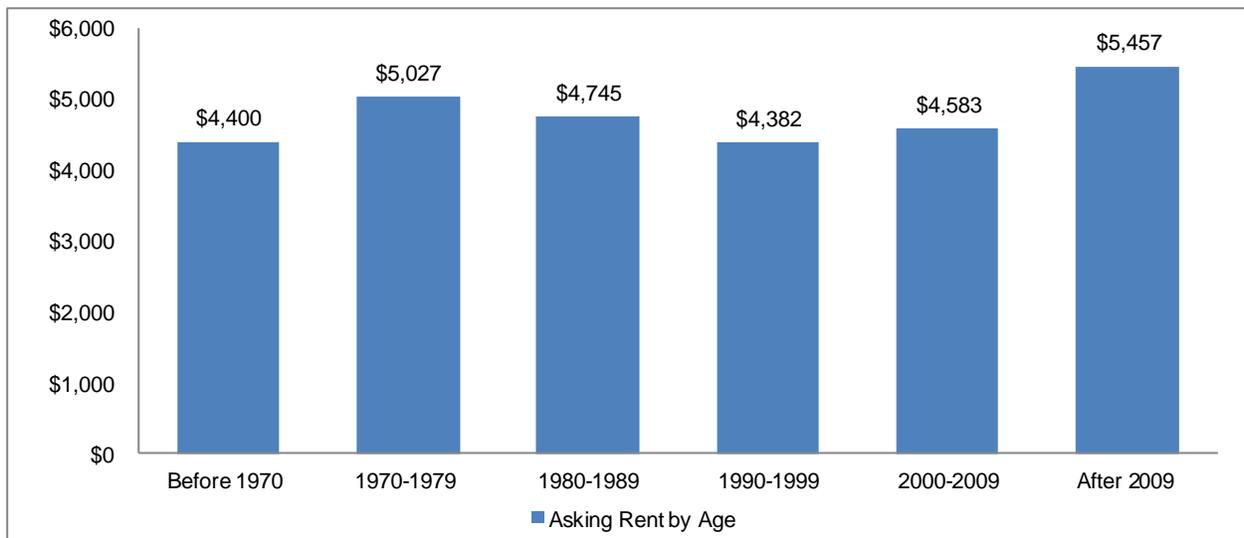
ASKING RENT DISTRIBUTION



Source: Reis 2018

Distinguishing between the ages of properties reveals that newer properties tend to outperform. Rents per square foot for projects built after 2009 are generally the highest, reflecting a new standard of finishes and luxury services.

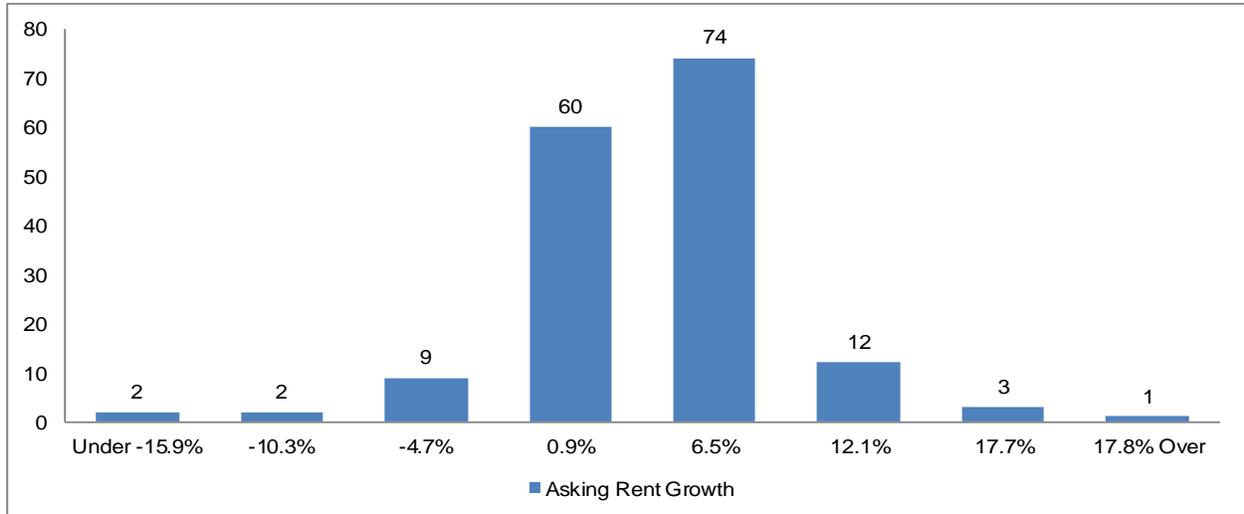
ASKING RENT BY AGE



Source: Reis 2018

Overall, growth has remained positive. Year-to-date appreciation was 1.0% while rents grew 2.5% in the past year. The recent slowdown of growth is evident in that the 3-year average rate of growth is 1.7%. However, rent growth is expected to grow as the 5-year forecast is 3.1% locally, and 2.3% in the Metro NYC market.

ASKING RENT GROWTH



Source: Reis 2018

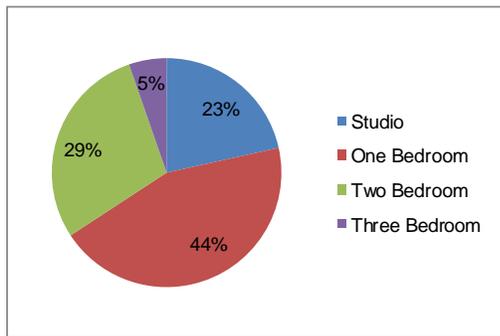
Despite slowing recently, rents appreciated steadily from 2009 to 2018, exhibiting a 1.35% compound rate of change. Having the benefit of hindsight, we can see that though rent growth slowed in 2009, housing costs continued to appreciate after pausing slightly in 2008-2009.

In terms of overall performance, the Metro and submarket have generally mirrored trends in the Northeast region and the nation as a whole. To this end, rent growth has slowed this year, with 0.4% recorded in the submarket, and 1.2% growth nationwide. In contrast five-year forecasts are at 3.1% and 3.1% respectively. The comparison of rental trends in the sub and Metro markets, Northeast, and Nation are illustrated below:

	Asking Rent Growth						
	Quarterly			Annualized			
	3Q18	2Q18	YTD Avg	1 Year	3 Year	5 Year	5 Yr Forecast
West Village/ Downtown	0.4%	0.9%	1.0%	2.5%	1.7%	2.1%	3.1%
NY Metro	0.7%	1.2%	0.8%	2.7%	2.8%	3.3%	2.3%
Northeast	0.8%	1.5%	1.1%	4.3%	4.0%	3.9%	3.0%
United States	1.2%	1.4%	1.2%	4.5%	4.8%	4.4%	3.1%
Period Ending:	09/30/18	06/30/18	09/30/18	12/31/17	12/31/17	12/31/17	12/31/22

Source: Reis 2018

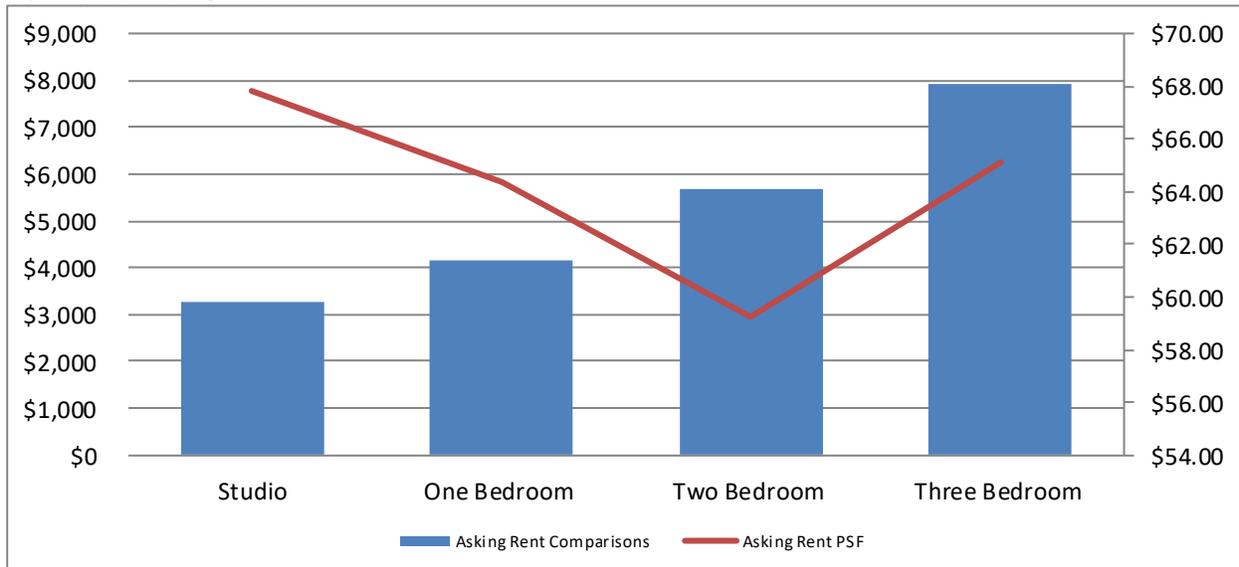
UNIT MIX



Source: Reis 2018

Reflecting the transience of the population, combined with a demand for space, we point out that one and two-bedrooms are the overwhelming majority of the stock at 44% and 29% of the total, while family-sized, three bedrooms are just 5%. While primarily relegated to the urban core, studios make up a fair share at 23%.

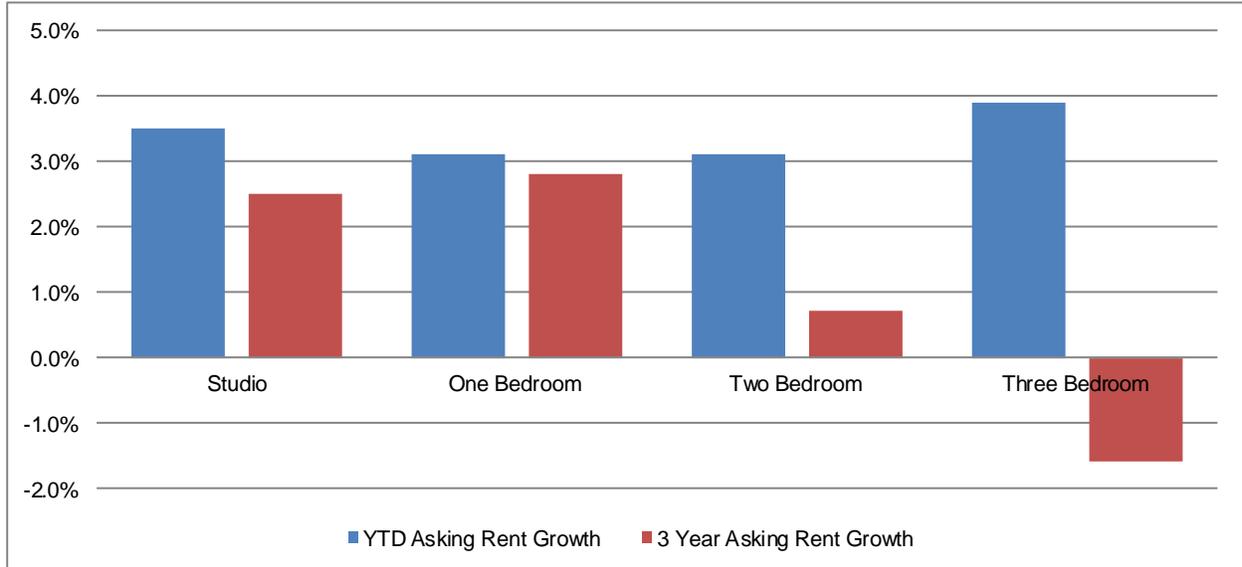
ASKING RENT BY UNIT TYPE



Source: Reis 2018

As indicated, rents per square foot generally vary inversely with size, as larger units' command less per square foot. However, given the rarity of family-sized units and their concentration in luxury buildings, two-bedrooms outperform in this regard.

UNIT MIX RENT DETAILS

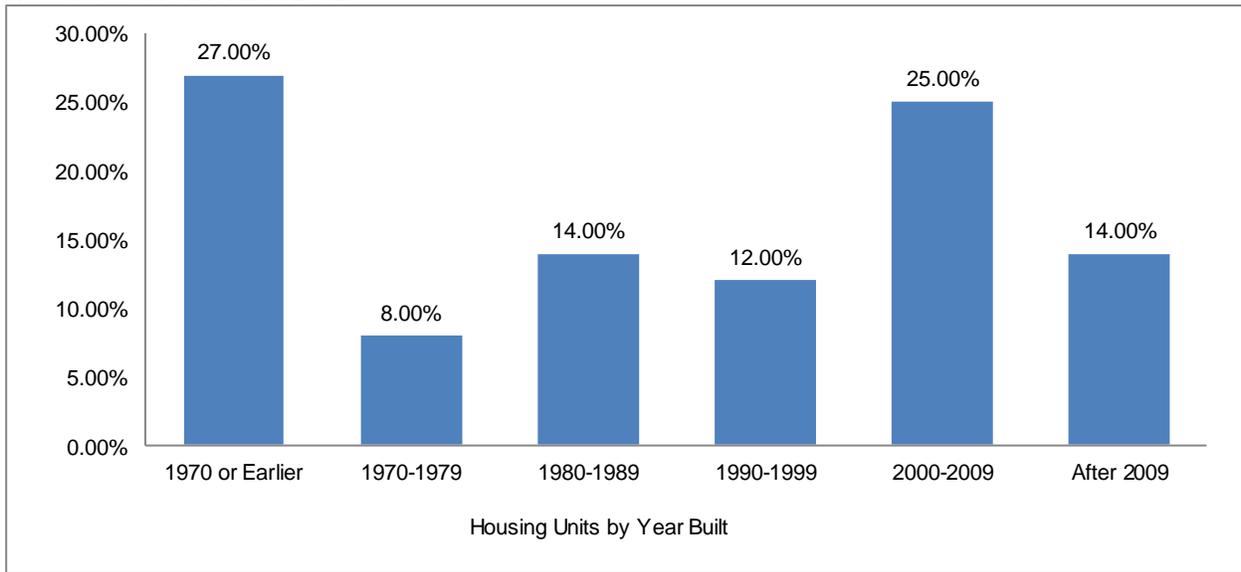


Source: Reis 2018

INVENTORY TRENDS

As indicated below, most housing units were delivered between 2000 and 2009 and before 1970, with over half built before 1960. Though there has been a major revitalization in the submarket, new additions to supply have been inconsequential in terms of total inventory. As a result, new construction is absorbed rapidly and commands the highest rents.

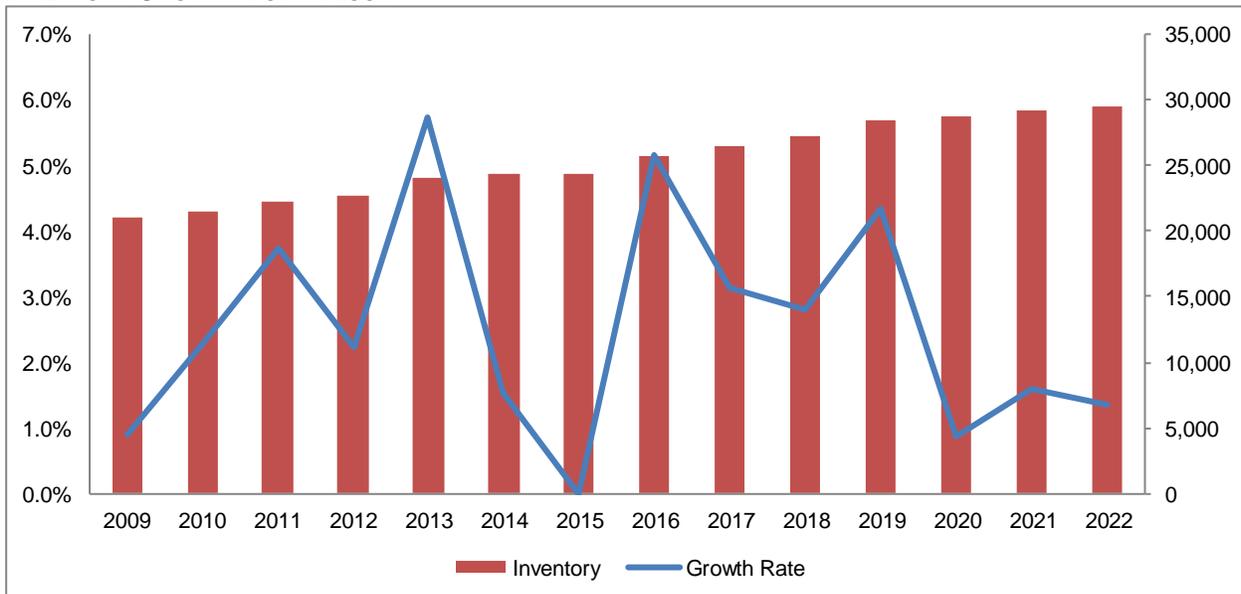
HOUSING UNITS BY YEAR BUILT



Source: Claritas, New York County

Supply growth was reported at 0.0% in the sub market and 0.5% in the metro market, reflecting a slowdown of the 3-year averages of 2.7% and 4.3%. Historically, the rates of growth both locally and in the Metro Market significantly exceed that exhibited in the Northeast Region and Nationally.

INVENTORY GROWTH COMPARISON



Source: Reis 2018

Going forward, local supply growth of 2.2% is expected over the next five years, while nationally inventory will increase only 1.3%. This dynamic is reflective of the high demand for housing in the area, and though there are still relatively high barriers to entry with high development costs, investors/builders view the sub and metro markets favorably.

INVENTORY GROWTH COMPARISON

	Inventory Growth Comparison						
	Quarterly			Annualized			
	3Q18	2Q18	YTD Avg	1 Year	3 Year	5 Year	5 Yr Forecast
West Village/ Downtown	0.0%	0.0%	0.1%	3.1%	2.7%	3.1%	2.2%
NY Metro	0.5%	1.1%	0.8%	6.9%	4.3%	4.0%	3.0%
Northeast	0.3%	0.7%	0.5%	2.6%	2.1%	1.9%	1.4%
United States	0.5%	0.6%	0.5%	2.2%	2.1%	1.9%	1.3%
Period Ending:	09/30/18	06/30/18	09/30/18	12/31/17	12/31/17	12/31/17	12/31/22

Source: Reis 2018

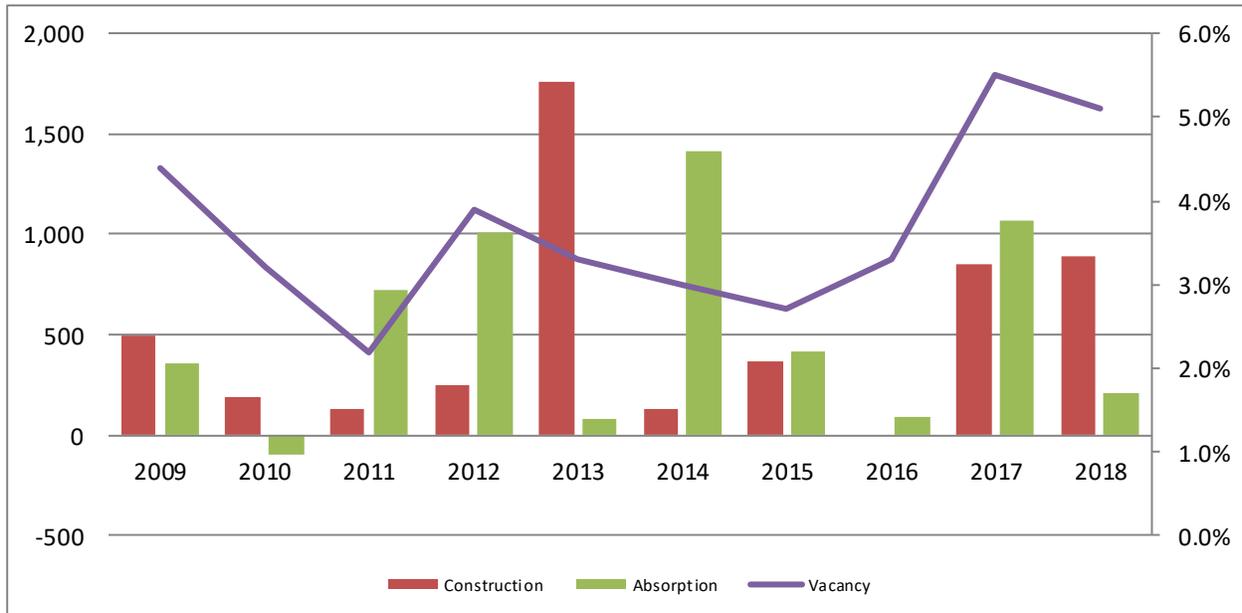
HOUSING UNIT DELIVERIES

City	Proposed	Planned	Under Constr.	Complete	Grand Total
Apartment	1,951	3,753	1,458	1,575	8,737
Condominiums	204	727	3,299	1,590	5,820
Subsidized/Low Income	270	0	205	0	475
Mixed Income	2,086	0	458	412	2,956
Other	0	0	0	0	0
Total	4,511	4,480	5,420	3,577	17,988

Source: Reis 2018

For proposed projects, the developer has proposed to build a project (either formally or informally) but has not submitted any plans for review. A planned project is in one of the many phases of the planning process: site plan review, design review, environmental compliance review, zoning review, etc.

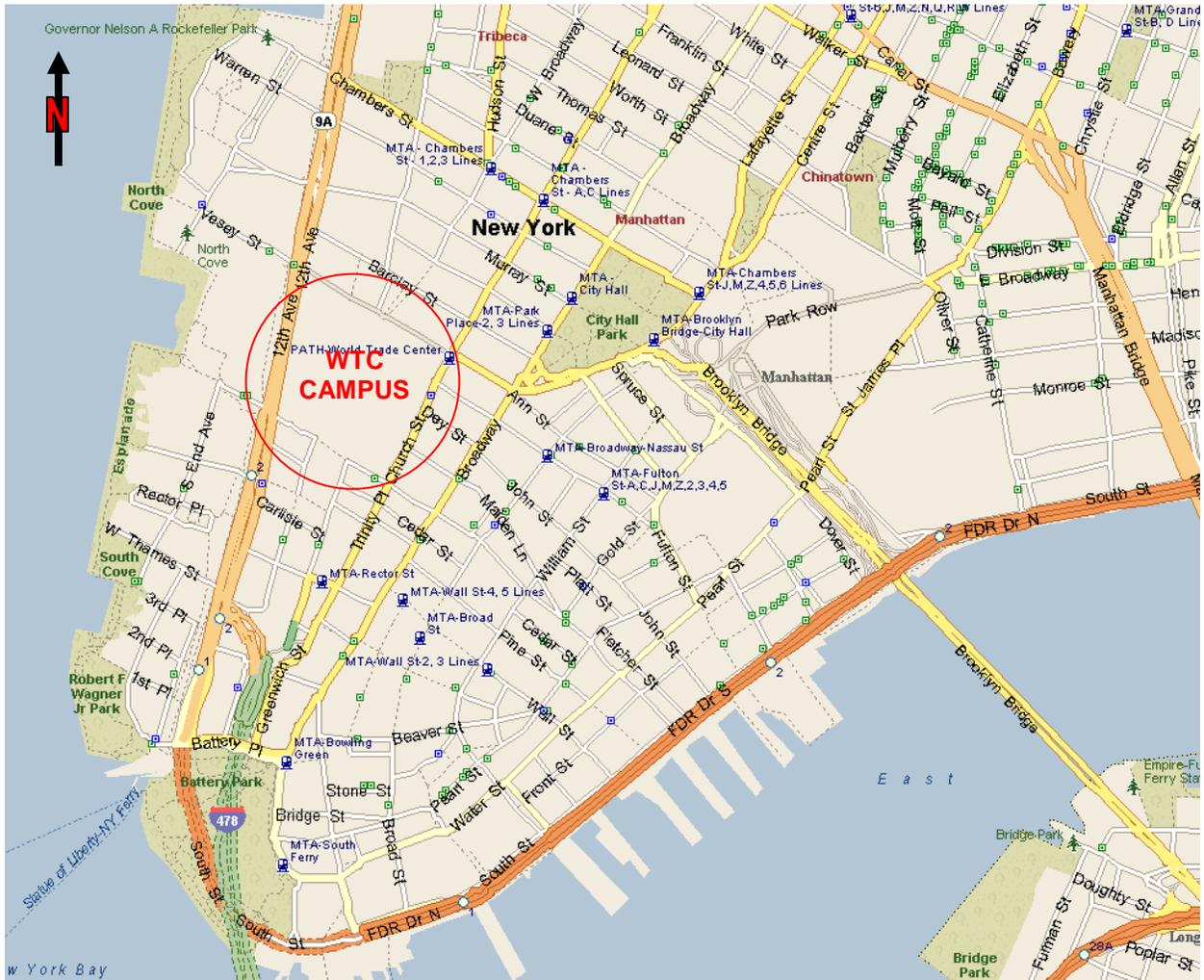
CONSTRUCTION ABSORPTION AND VACANCY



Source: Reis 2018

As indicated, 4,511 competitive units are proposed (16.6% of supply of 27,256 total housing units), 4,480 competitive units (16.4% of supply) are planned, and 5,420 apartments (19.9% of units) are under construction. Further, 3,577 units were recently delivered, reflecting 13.1% of existing supply. Of the units proposed or planned, 5,704, or 63% are rentals, while there are 931 condominium units in the pipeline.

NEIGHBORHOOD MAP



NEIGHBORHOOD ANALYSIS

Location

The subject property is located in the Financial District section of Lower Manhattan. Lower Manhattan is the southernmost part of the island of Manhattan and center of business and government of the City of New York. Lower Manhattan or "Downtown" is delineated on the north by 14th Street, on the west by the Hudson River, on the east by the East River, and on the south by New York Harbor (also known as Upper New York Bay). When referring specifically to the Lower Manhattan business district and its immediate environs, the northern border is commonly designated by Chambers Street. Two other major arteries are also sometimes identified as the northern border of "Lower" or "Downtown Manhattan," i.e. Canal Street, roughly one-half mile north of Chambers Street, and 23rd Street, roughly one-half mile north of 14th Street. Anchored by Wall Street in Lower Manhattan, New York City is, alongside the City of London, the financial capital of the world and is home to the New York Stock Exchange, the world's largest stock exchange by market capitalization of its listed companies.

The Lower Manhattan business district forms the core of the area below Chambers Street. It includes the Financial District (often referred to as Wall Street, after its primary artery) and the World Trade Center. At the island's southern tip is Battery Park; City Hall is just to the north of the Financial District. Also south of Chambers Street are the planned community of Battery Park City and the South Street Seaport historic area. The neighborhood of TriBeCa straddles Chambers Street on the west side and at the street's east end, is the giant Manhattan Municipal Building. North of Chambers Street and the Brooklyn Bridge and south of Canal Street lies most of New York's oldest Chinatown neighborhood.

Many court buildings and other government offices are also located in this area. The Lower East Side neighborhood straddles Canal Street. North of Canal Street and south of 14th Street are the neighborhoods of SoHo, the Meatpacking District, the West Village, Greenwich Village, Little Italy, Nolita, and the East Village. Between 14th and 23rd Streets are Lower Chelsea, Union Square, the Flatiron District, Gramercy, and the large residential development Peter Cooper Village—Stuyvesant Town.

Accessibility

The subject's immediate area is well served by New York City's extensive public transportation system, which includes buses and subways. There are numerous subway stations near the subject property that provide access to the 2, 3, 4, 5, A, C, E, J, N, R and Z trains. The Fulton Street Transit Center finished construction in 2016. The \$1.4 billion MTA project includes station rehabilitations, new underground passageways, and an above-ground station entrance building at the intersection of Fulton Street and Broadway, above several existing stations.

The purpose of the project is to improve access to and connections between 11 MTA subway services stopping at Manhattan's Fulton Street, PATH service and the World Trade Center station in Lower Manhattan. Funding for the construction project, which began in 2005, dried up for several years, with no final approved plan and no schedule for completion. Plans for the transit center, however, were rejuvenated by the American Recovery and Reinvestment Act of 2009, and the project was completed in mid-2016.

The Fulton Street Transit Center connects a total of six subway stations, providing a total of eleven services:

-   Fulton Street on the IRT Broadway – Seventh Avenue Line
-   Fulton Street on the IRT Lexington Avenue Line
-   Fulton Street on the IND Eighth Avenue Line
-  World Trade Center on the IND Eighth Avenue Line
-   Fulton Street on the BMT Nassau Street Line
-   Cortlandt Street on the BMT Broadway Line

Bus service in the area is provided by the M5, M9, M22, and M103. Major thoroughfares include the FDR Drive and the West Side Highway. The subject property also has good accessibility to the Brooklyn and Manhattan Bridges.

Historic Sites

Perhaps Lower Manhattan's most renowned landmark is now the World Trade Center site. Before the September 11 attacks, the Twin Towers were iconic of Lower Manhattan's global financial significance. The projected visitors to the future completed World Trade Center skyscrapers and the 9/11 memorial are six million people, and the new office towers (including existing One, Three and Four World Trade Center) will restore the Lower Manhattan skyline and given it the title of the third largest central business district in the United States, behind Midtown Manhattan and the Chicago Loop.

The area of Lower Manhattan contains many old and historic building and sites, including Castle Garden, originally the fort Castle Clinton, Bowling Green, the old United States Customs House, now the National Museum of the American Indian, Federal Hall, where George Washington was inaugurated as the first U.S. President, Fraunces Tavern, City Hall, the New York Stock Exchange, renovated original mercantile buildings of the South Street Seaport (and a modern tourist building), the Brooklyn Bridge, South Ferry, embarkation point for the Staten Island Ferry and ferries to Liberty Island and Ellis Island, and Trinity Church.

Lower Manhattan is home to some of New York City's most spectacular skyscrapers, including the Woolworth Building, 40 Wall Street (also known as the Trump Building), the Standard Oil Building at 26 Broadway, One World Trade Center, and the American International Building.

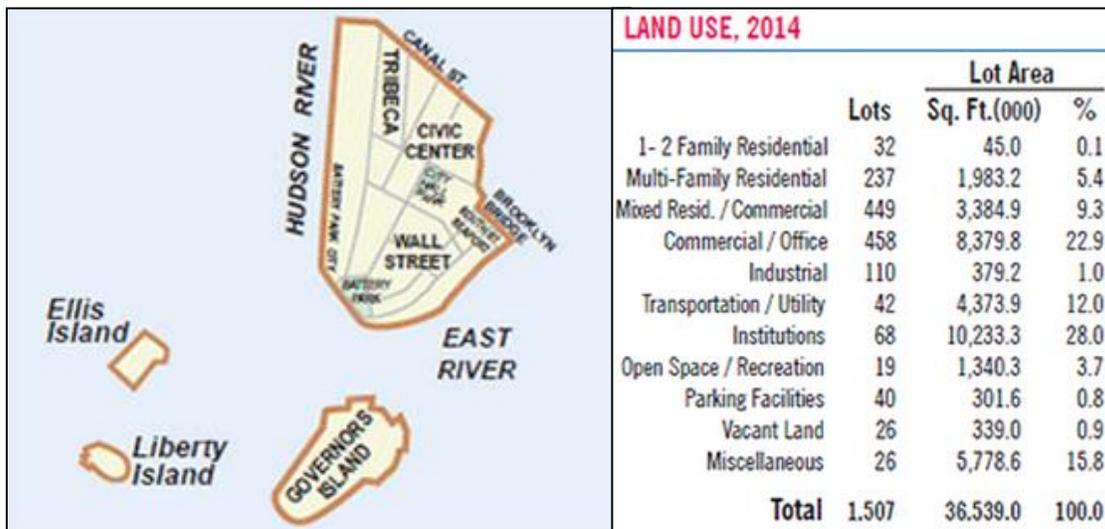
Manhattan Community District Number One

The subject property is located within the perimeters of Manhattan Community District Number One. Community District Number One is made up of five distinct neighborhoods: Battery Park City, Civic Center, Financial District, Greenwich South, Seaport, and Tribeca. The district also includes Governors Island, Ellis Island, and Liberty Island.

Community District Number One encompasses 955.6 acres, or 1.5 acres of land area, and is delimited by Baxter Street and the East River on the east, Upper New York Bay on the south, the Hudson River on the west and Canal Street on the north. Currently, the district is experiencing a rapid demographic transformation from office to residential.

Land Use

According to the New York City Department of Planning, Manhattan Community District Number One is comprised of 1,507 tax lots. On a scale measured by development of lot area, institutions represent 28.0% of the lot area development, followed by commercial/office at 22.9%, miscellaneous at 15.8%, transportation/utility at 12.0%, and mixed residential/commercial at 9.3%.



Economy

Before the completion of One World Trade Center, Lower Manhattan was the fourth largest business district in the United States, after Midtown Manhattan, the Chicago Loop, and Washington, D.C. It is now the third largest business district in the United States.

55 Water Street houses the headquarters of EmblemHealth and Standard & Poor's HIP Health Plan of New York, which moved there with 2,000 employees in October 2004. It was the largest corporate relocation in Downtown Manhattan following the September 11 attacks.

Many major corporations have a significant presence in Lower Manhattan. AOL's headquarters is located at 770 Broadway, Goldman Sachs's headquarters is located at 200 West Street, and the headquarters of Verizon Communications is located at 140 West Street. Other notable corporate headquarters in Lower Manhattan include Ambac Financial Group, PR Newswire, the Nielsen Company and subsidiary Nielsen Media Research.

The Financial District of New York City (sometimes called FiDi) is a neighborhood on the southernmost section of the borough of Manhattan, which comprises the offices and headquarters of many of the city's major financial institutions, including the New York Stock Exchange and the Federal Reserve Bank of New York. The former World Trade Center existed in the neighborhood until the September 11 attacks and is now home to the National September 11 Memorial and Museum and One World Trade Center. The neighborhood roughly overlaps the boundaries of the New Amsterdam settlement in the late 17th century and has a residential population of about 61,000. During the day, the population swells to about 300,000.

As a district, it encompasses roughly the area south of City Hall Park but excluding Battery Park and Battery Park City. The heart of the Financial District is often considered to be the corner of Wall Street and Broad Street, both of which are contained entirely within the district. The northeastern part of the financial district (along Fulton and John Streets) was known in the early 20th century as the Insurance District, due to the large number of insurance companies who were either headquartered or maintained their New York offices in the area.

Market Trends

Previously, the subject's neighborhood was considered to be primarily a destination for daytime traders and office workers from around New York City and the surrounding areas. The neighborhood now has a growing number of full-time residents, with estimates in 2014 indicating that there are approximately 61,000 people living in the area. This figure is a significant increase of 15,000 to 20,000 living in the area before 2001. Many office buildings have been converted to apartments and condominiums during the 1990s and into the 2000s. To date, market trends of residential conversions continue with hotel conversions in the market area on the rise as well.

Lower Manhattan also has a growing number of tourist attractions such as the adjacent South Street Seaport Historic District, New York City Police Museum, and Museum of American Finance. Bowling Green is the starting point of traditional ticker-tape parades on Broadway, known as the Canyon of Heroes. The Museum of Jewish Heritage and the Skyscraper Museum are both in adjacent Battery Park City, which is also home to the World Financial Center. The National September 11 Memorial and Museum and the observatory on top of One World Trade are also major tourist destinations.

Conclusion

Lower Manhattan is one of the most well-known and established financial centers in the entire world. The neighborhood's established and still growing business and historical presence attracts millions of tourists annually, which is a contributing factor for the growing demand of retail and hotel space. Such demands are being met by developers and are reflected in development projects throughout the market area. Historically, the Financial District is most commonly known as being an office market; however, over the past decade the neighborhood has experienced tremendous change, which is best defined by the many office to residential conversions projects that have been completed.

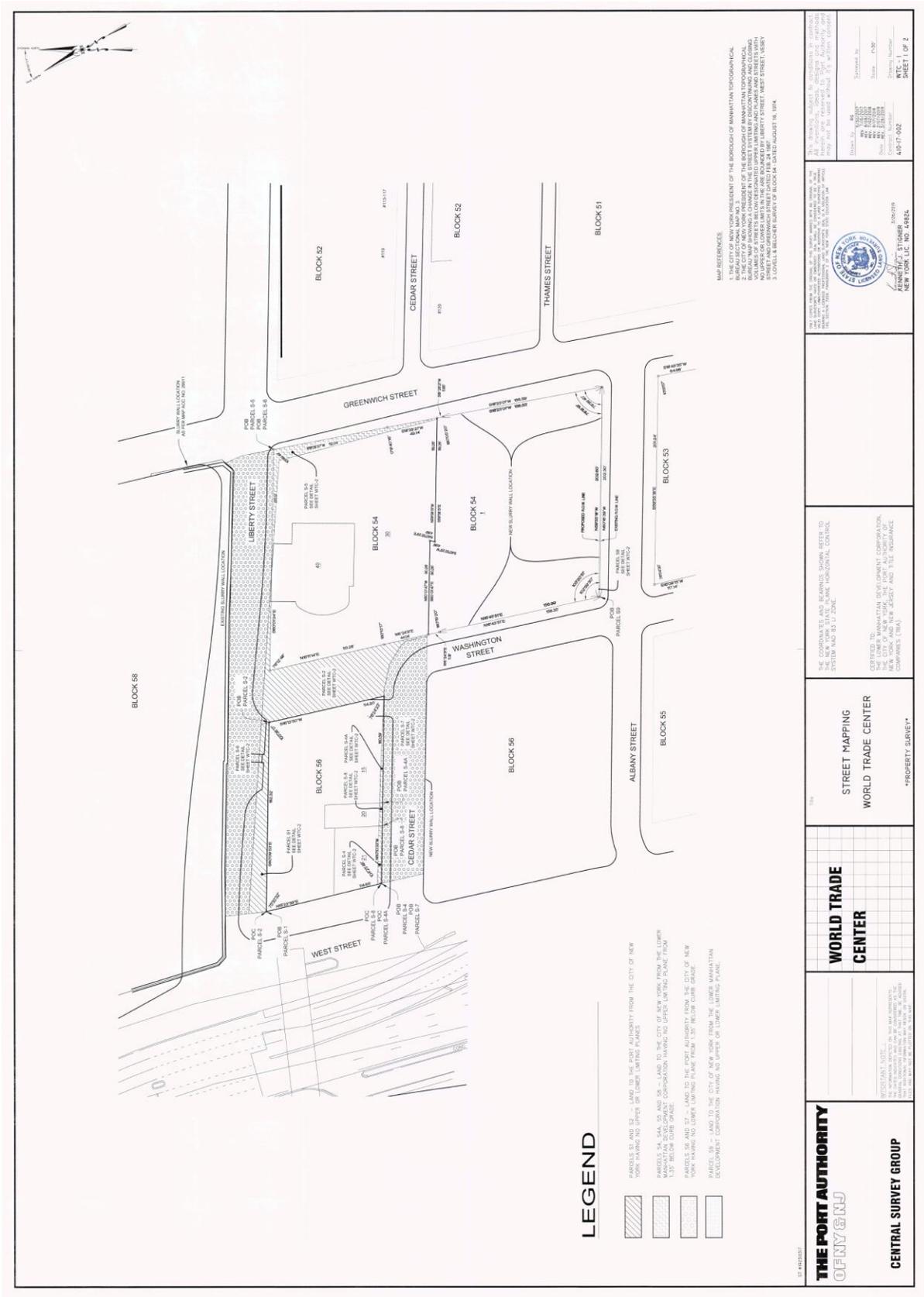
As the residential market has become more established, retailers such as supermarkets have begun moving to the area to meet residents' needs. The opening of the Fulton Street Transit Center is also expected to have an overall positive impact on the area's real estate market.

Residential apartment rents in the Financial District have increased, which supports the growth experienced since the onset of the residential development and conversion trend. Such growth is expected to continue in the foreseeable future as the neighborhood's character further transitions with the completion of major development projects.

With the addition of numerous amenities and cultural attractions, numerous hotels have also been established in the area.

Overall, the subject's neighborhood is currently in transition and is transforming from an area that once only catered to the financial service industry into a more dynamic neighborhood with a growing residential population and a more diverse business center. The area is experiencing upgrades in its public transportation network and is attracting new retailers to the area as well. In addition, new cultural attractions will help drive interest in the area. The long-term prospects for the area are positive.

PARCEL MAP (SOUTHERN SITE PARCELS)



LEGEND

- PARCELS 51 AND 52 - LAND TO THE PORT AUTHORITY FROM THE CITY OF NEW YORK HAVING NO UPPER OR LOWER LIMITING PLANE
- PARCELS 54, 54A, 55 AND 58 - LAND TO THE CITY OF NEW YORK FROM THE LOWER MANTHAN DEVELOPMENT CORPORATION HAVING NO UPPER LIMITING PLANE FROM 1.32' BELOW CURB GRADE
- PARCELS 56 AND 57 - LAND TO THE PORT AUTHORITY FROM THE CITY OF NEW YORK HAVING NO LOWER LIMITING PLANE FROM 1.32' BELOW CURB GRADE
- PARCELS 53 - LAND TO THE CITY OF NEW YORK FROM THE LOWER MANTHAN DEVELOPMENT CORPORATION HAVING NO UPPER OR LOWER LIMITING PLANE

MAP REFERENCES:

1. THE CITY OF NEW YORK (PRESIDENT OF THE BOROUGH OF MANHATTAN TOPOGRAPHICAL MAP)
2. THE CITY OF NEW YORK (PRESIDENT OF THE BOROUGH OF MANHATTAN TOPOGRAPHICAL MAP)
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9. THE CITY OF NEW YORK (PRESIDENT OF THE BOROUGH OF MANHATTAN TOPOGRAPHICAL MAP)
10. THE CITY OF NEW YORK (PRESIDENT OF THE BOROUGH OF MANHATTAN TOPOGRAPHICAL MAP)

THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY
 OFFICE OF THE CHIEF ENGINEER
 120 WEST STREET, 12TH FLOOR
 NEW YORK, N.Y. 10038
 (212) 512-2000
 DATE: 4/17/02
 SHEET 1 OF 2

THE COORDINATES AND BEARINGS SHOWN REFER TO THE NAD 83 DATUM. HORIZONTAL CONTROL IS PROVIDED BY THE STATE OF NEW YORK AND NEW JERSEY AND TITLE INSURANCE COMPANIES (SIN).

CONFIRMED TO:
 THE LOWER MANTHAN DEVELOPMENT CORPORATION,
 100 WEST STREET, 12TH FLOOR,
 NEW YORK, N.Y. 10038

WORLD TRADE CENTER

STREET MAPPING
WORLD TRADE CENTER
 "PROPERTY SURVEY"

THE PORT AUTHORITY OF NY & NJ

CENTRAL SURVEY GROUP

PROFESSIONAL SEAL OF THE CITY OF NEW YORK

4/17/02

DESCRIPTION OF PROPERTY

Project Location and Description

For purposes hereof, the Project Site consists of the WTC Site, the Southern Site, and the Northern Site, all of which are located in Lower Manhattan, New York, New York.

The WTC Site is bounded as follows:

- Beginning at the intersection of the eastern right of way line of Route 9A/West Street and the northern curb line of Vesey Street,
- East along the northern curb line of Vesey Street to the western right of way line of West Broadway,
- North along the western curb line of West Broadway to the northern right of way line of Vesey Street,
- East along the northern right of way line of Vesey Street to the eastern right of way line of Church Street,
- South along the eastern right of way line of Church Street to the southern right of way line of Liberty Street,
- West along the southern right of way line of Liberty Street to the intersection with the eastern right of way line of Route 9A/West Street,
- North along the eastern right of way line of Route 9A/West Street to the point of beginning.

The Southern Site is immediately to the south of the WTC Site and is bounded as follows:

- Beginning at the intersection of the eastern right of way line of Route 9A/West Street and the southern right of way line of Liberty Street,
- East along the southern right of way line of Liberty Street to the eastern right way line of Greenwich Street,
- South along the eastern right of way line of Greenwich Street to the southern right of way line of Cedar Street,
- West along the southern right of way line of Cedar Street to the western curb line of Greenwich Street,
- South along the western curb line of Greenwich Street to the northern curb line of Albany Street,
- West along the northern curb line of Albany Street to the eastern curb line of Washington Street,

- North along the eastern curb line of Washington Street to the southern right of way line of Cedar Street,
- West along the southern right of way line of Cedar Street to the intersection with the eastern right of way line of Route 9A/West Street, and
- North along the eastern right of way line of Route 9A/West Street to the point of beginning.

The Northern Site is located immediately to the north of the WTC Site and is only included within the Project Site in order to facilitate the transfers of certain property interests therein and not to subject the Northern Site to any other requirements or procedures or for any other purpose. The Northern Site is bounded as follows:

- Beginning at the intersection of the northern curb line of Vesey Street and the eastern right of way line of Washington Street,
- North along the eastern right of way line of Washington Street to the southern curb line of Barclay Street,
- East along the southern curb line of Barclay Street to the western curb line of West Broadway,
- South along the western curb line of West Broadway to the northern curb line of Vesey Street,
- West along the northern curb line of Vesey Street to the point of beginning.

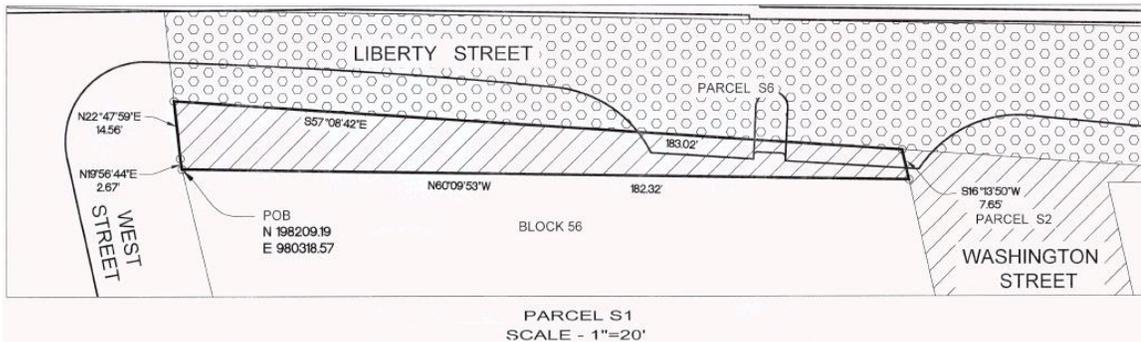
The property interests of the City, proposed to be condemned by LMDC and as thereafter to be promptly transferred by LMDC to the PA are generally described in the attached Schedule 1. The property interests to be voluntarily transferred by LMDC to the City or the PA to LMDC and thereafter promptly transferred to the City are generally described in the attached Schedules 2 and 5. The Easement Agreements are generally described in the attached Schedule 3 (Oculus) and Schedule 4 (PAC).

No existing agreements or understandings by or between the City and PA with respect to any of the above-noted property interests including, without limitation, their use, operation, repair, restriction or maintenance, whether direct, or indirect, shall be affected or modified by their condemnation, acquisition or transfer by LMDC except as expressly set forth in the Easement Agreements.

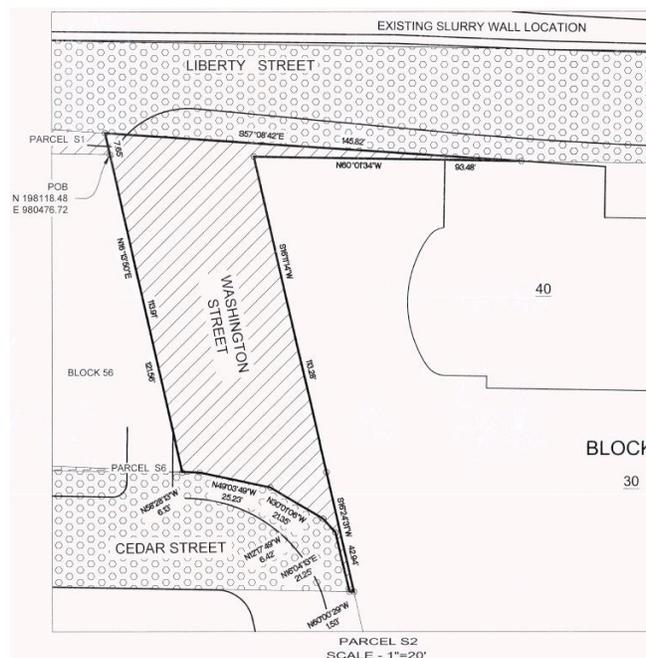
SCHEDULE 1

**PARCELS FROM CITY TO LMDC VIA CONDEMNATION
AND FROM LMDC TO PA BY DEED**

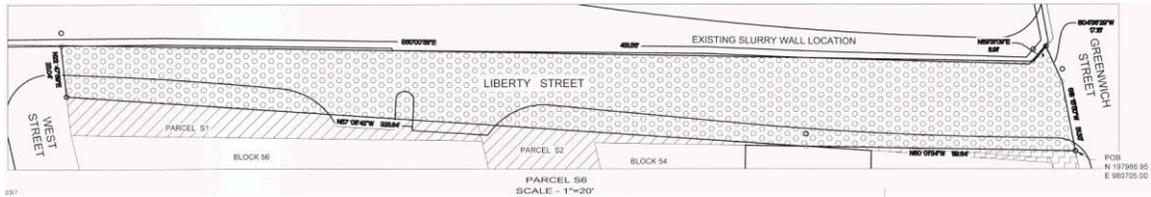
- **PARCEL S1** Fee simple interest in a parcel of land located in the bed of Liberty Street, along the southerly side of the street between Washington and West Streets. The parcel has an area of 2,229 square feet with no upper or lower limiting planes.



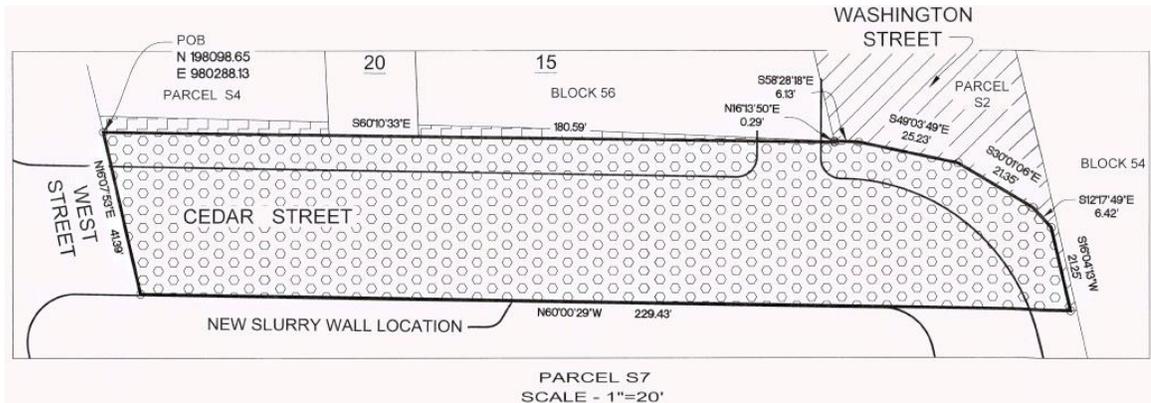
- **PARCEL S2** Fee simple interest in a parcel of land located in the beds of Washington and Liberty Streets, extending southerly to Cedar Street. The parcel has an area of 6,458 square feet with no upper or lower limiting planes.



- **PARCEL S6** Subsurface rights in a portion of the bed of Liberty Street between Greenwich and West Streets. The subsurface rights have an upper limiting plane 1.35 feet below top of curb and no lower limiting plane. The parcel contains an area of 14,809 square feet.



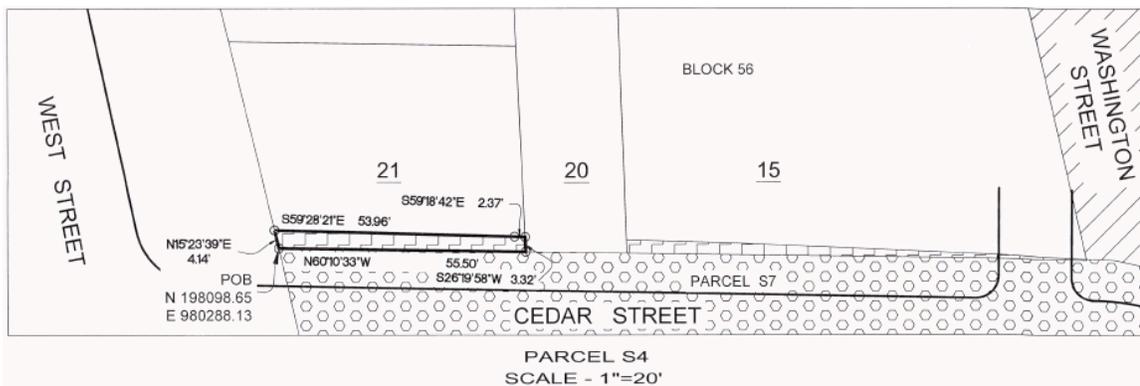
- **PARCEL S7** Subsurface rights in a portion of the bed of Cedar Street between West and Washington Streets. The subsurface rights have an upper limiting plane 1.35 feet below top of curb and no lower limiting plane. The parcel contains an area of 9,025 square feet.



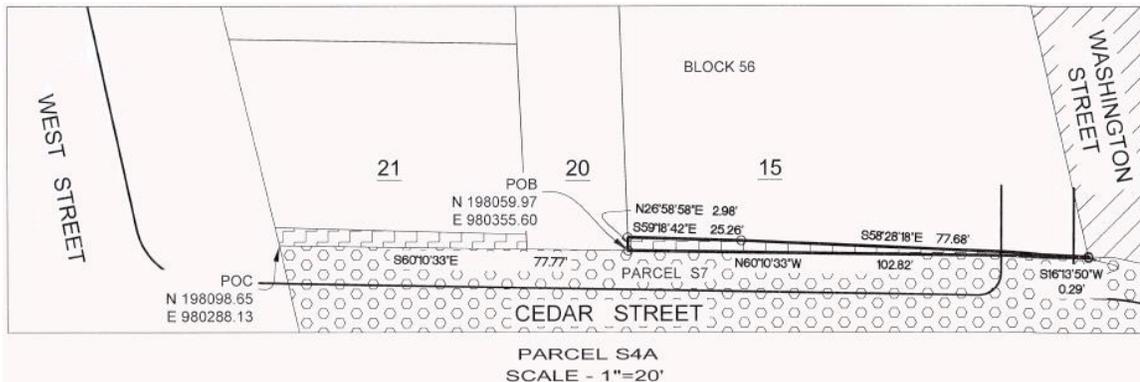
SCHEDULE 2

**PARCELS FROM PA TO LMDC BY DEED AND
FROM LMDC TO CITY BY DEED⁶**

- **PARCEL S4** Surface rights above 1.35 feet below top of curb in the remapped bed of Cedar Street located on the northerly side of Cedar Street, extending 55.5 feet east of West Street. The surface rights have a lower limiting plane 1.35 feet below top of curb and no upper limiting plane. The parcel contains an area of 205 square feet.

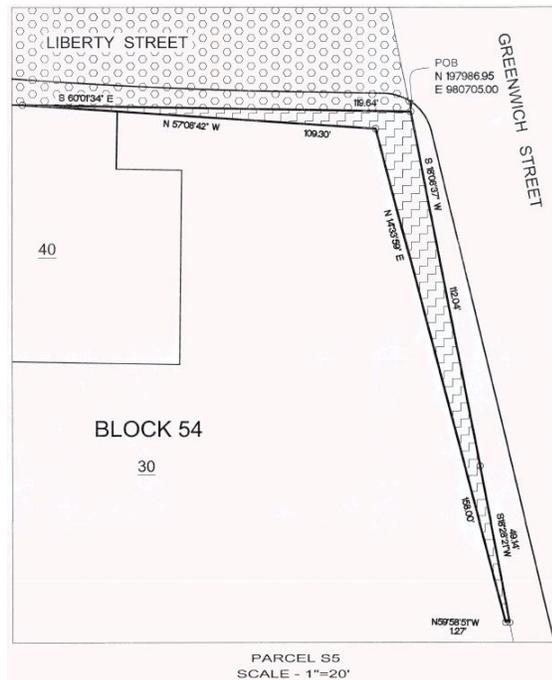


- **PARCEL S4A** Surface rights above 1.35 feet below top of curb in the remapped bed of Cedar Street located on the northerly side of Cedar Street, extending 102.82 feet west of Washington Street. The surface rights have a lower limiting plane 1.35 feet below top of curb and no upper limiting plane. The parcel contains an area of 182 square feet.

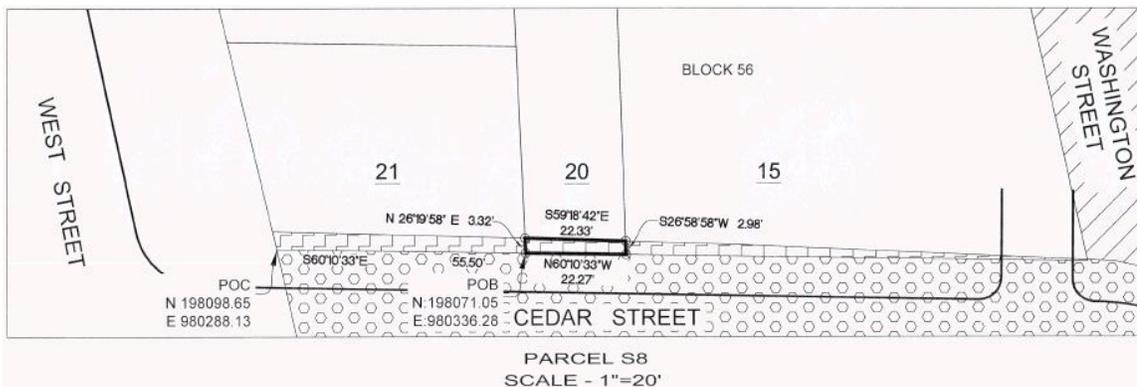


⁶ Parcels S4, S4A and S5 are part of the properties formerly known as 140 Liberty Street (Tax Lots 15 and 21) and part of 130 Liberty Street (Tax Lot 30). LMDC currently holds fee title to these parcels because they were held back from LMDC's 2017 transfer of the remainder of those lots to the PA in anticipation of the PA's direction to transfer them to the City in the current transactions, as set forth in the Request Letter.

- **PARCEL S5** Surface rights above 1.35 feet below top of curb in the remapped beds of Greenwich and Liberty Streets. The parcel is L-shaped and located at the southwest corner of Liberty and Greenwich Streets, extending 119.64 feet east of Greenwich Street and extending 161.18 feet south of Liberty Street. The surface rights have a lower limiting plane 1.35 feet below top of curb and no upper limiting plane. The parcel contains an area of 1,358 square feet.



- **PARCEL S8 (Greek Church Parcel)** Surface rights above 1.35 feet below top of curb in the remapped bed of Cedar Street located on the northerly side of Cedar Street, 55.5 feet east of West Street. The surface rights have a lower limiting plane 1.35 feet below top of curb and no upper limiting plane. The parcel contains an area of 70 square feet.

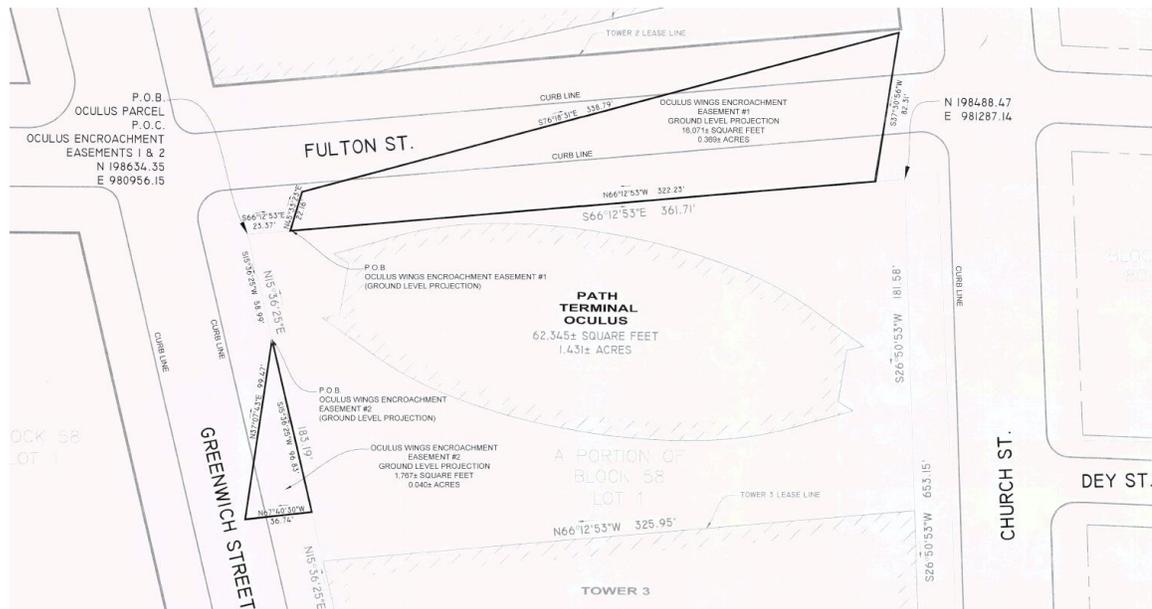


SCHEDULE 3

OCULUS EASEMENTS

- **OCULUS WINGS ENCROACHMENT EASEMENT #1** Permanent easement to contain the encroachment of the northern wings of the Oculus over Fulton Street, between Church and Greenwich Streets. The easement has a ground level projection of 16,071 square feet, with a lower limiting plane 30 feet above top of existing curb, and an upper limiting plane 212 feet above top of existing curb.
- **OCULUS WINGS ENCROACHMENT EASEMENT #2** Permanent easement to contain the encroachment of the southern wings of the Oculus over Greenwich Street, 58.99 feet south of Fulton Street. The easement has a ground level projection of 1,767 square feet, with a lower limiting plane 38 feet above top of existing curb, and an upper limiting plane 170 feet above top of existing curb.

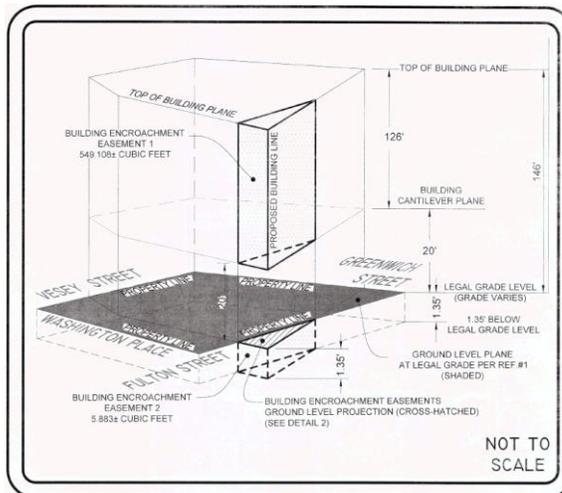
The easements will not have any significant impact on the use of the underlying fee as public rights-of-way.



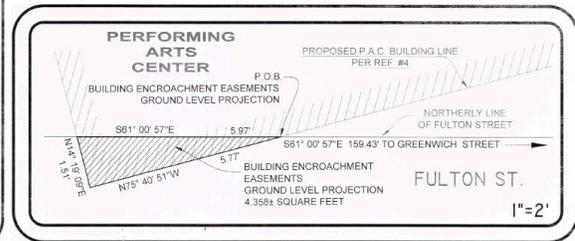
SCHEDULE 4

PAC EASEMENTS

- **PERFORMING ARTS CENTER BUILDING ENCROACHMENT EASEMENT #1**
Permanent easement to contain the encroachment of the PAC building over Fulton Street, between Washington Place and Greenwich Street. The easement has a lower limiting plane 20 feet above the top of legal curb grade and an upper limiting plane 146 feet above the top of legal curb grade. The easement has a ground level projection of 4.358 square feet. This easement is effectively a cantilever easement over Fulton Street.
- **PERFORMING ARTS CENTER BUILDING ENCROACHMENT EASEMENT #2**
Permanent subsurface easement to contain the encroachment of the PAC building under Fulton Street, between Washington Place and Greenwich Street. The easement has a lower limiting plane 1.35 feet below the top of legal curb grade and an upper limiting plane at the top of legal curb grade. The easement has a ground level projection of 4.358 square feet.



DETAIL 1 - BUILDING ENCROACHMENT EASEMENTS
(LOOKING WEST FROM WASHINGTON PLACE)

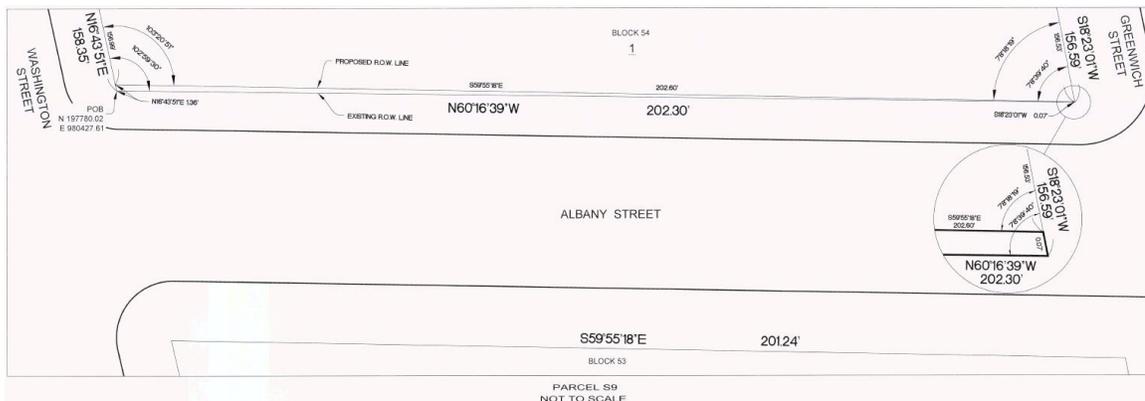


DETAIL 2 - BUILDING ENCROACHMENT EASEMENTS
(GROUND LEVEL PROJECTION)

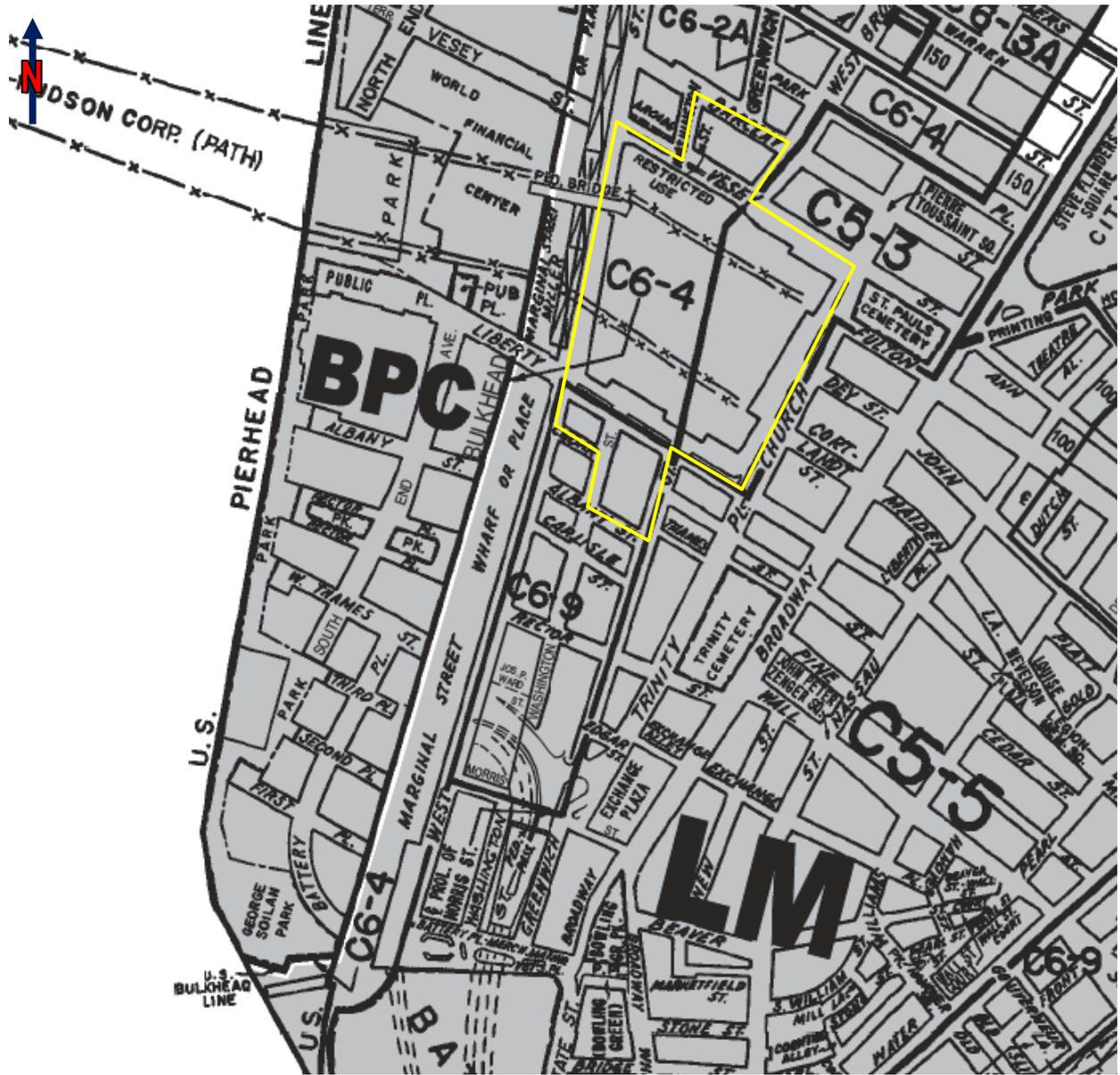
SCHEDULE 5

PARCEL FROM LMDC TO CITY BY DEED

- **PARCEL S9 (ALBANY STREET PARCEL)** Fee simple interest in a parcel of land located in the bed of Albany Street, along the northerly side of the street between Washington and Greenwich Streets. The parcel has an area of 140.41 square feet with no upper or lower limiting planes. The City holds a permanent easement over this parcel for street purposes. This transaction will transfer fee title of the easement parcel from LMDC to the City.



ZONING MAP



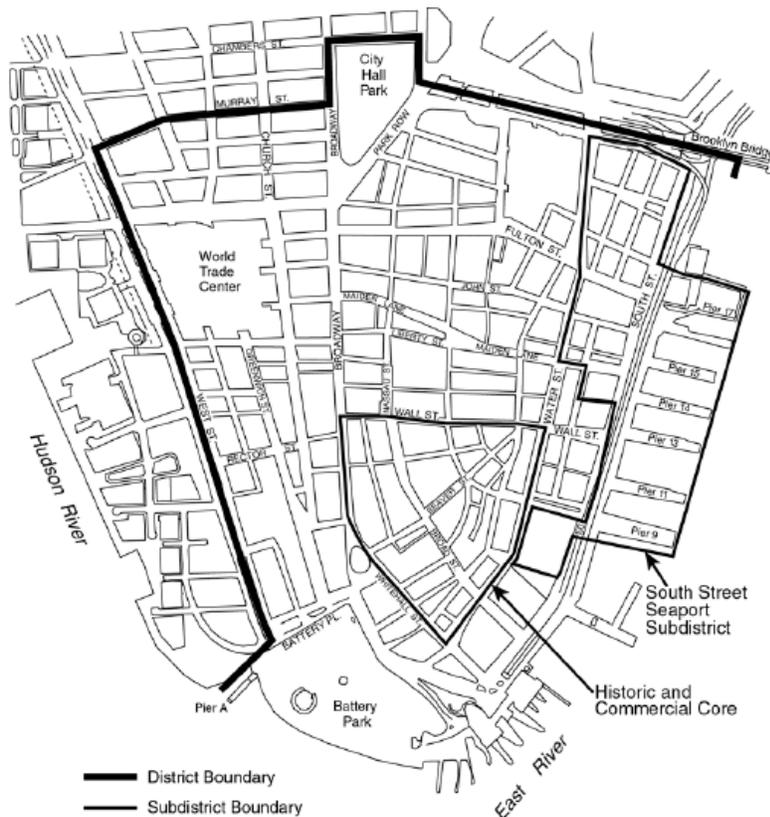
C1-1	C1-2	C1-3	C1-4	C1-5	C2-1	C2-2	C2-3	C2-4	C2-5

NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.

ZONING ANALYSIS

The subject WTC campus area is comprised of three distinct zoning districts and is located within the Special Lower Manhattan District (LM). The westerly portion of the area is within a C6-4 district. The easterly portion is within a C5-3 district. The southerly portion is within a C6-9 district. The C6-4 district allows an FAR (exclusive of bonus provisions) of 10.0, for both commercial uses and for the residential portion of a mixed-use building. The C5-3 and C6-9 zoning both provide for an FAR of 15.0 for commercial uses, but only 10.0 FAR for the residential portion of a mixed-use building. By agreement, we have employed a combined FAR unit of 13.61, to reflect the so-called World Trade Center zoning FAR. That FAR ratio has been applied to all parcels that are considered to have transferable development rights.

Special Lower Manhattan District Map



BASIC AND MAXIMUM FLOOR AREA RATIOS (FAR)

Means for Achieving Permitted FAR Levels on a #Zoning Lot#	#Special Lower Manhattan District# except within Core or Subdistrict				Historic & Comm Core	South Street Seaport Subdistrict and all waterfront #zoning lots#				
	R8	C6-4	C5-3 C5-5 C6-9	M1-4		C5-5	C2-8	C4-6	C6-2A	C5-3
Basic maximum FAR	6.02 ¹ 6.5 ³	10.0 ^{2,3,4}	10.0 ⁴ 15.0 ^{2,3}	2.0 ² 6.5 ³	10.0 ⁴ 15.0 ^{2,3}	2.0 ² 3.4 ³ 10.0 ⁴	3.4 ^{2,3,4}	6.0 ² 6.02 ⁴ 6.5 ³	10.0 ⁴ 15.0 ^{2,3}	15.0
Maximum as-of-right #floor area# bonus for #public plazas#	NA	2.0	3.0	NA	NA	NA	NA	NA	NA	NA
Maximum as-of-right #floor area# bonus for Inclusionary Housing (23-90)	NA	2.0	NA	NA	NA	NA	NA	NA	NA	NA
Maximum FAR with as-of-right #floor area# bonuses	6.02 ¹ 6.5 ³	12.0	18.0	2.0 ² 6.5 ³	15.0	2.0 ² 3.4 ³ 10.0 ⁴	3.4	6.0 ² 6.02 ⁴ 6.5 ³	15.0	15.0
Maximum special permit #floor area# bonuses: subway station improvements and #covered pedestrian spaces#	NA	2.0	3.0	NA	3.0	NA	NA	NA	NA	NA
Maximum FAR with as-of-right and/or special permit #floor area# bonuses	6.02 ¹ 6.5 ³	12.0	18.0	2.0 ² 6.5 ³	18.0	2.0 ² 3.4 ³ 10.0 ⁴	3.4	6.0 ² 6.02 ⁴ 6.5 ³	15.0	15.0
Development rights (FAR) of a landmark lot for transfer purposes			15.0 ⁵							

(74-79)	NA	10.0	18.0 ⁶	NA	15.0	NA	NA	NA	NA	NA
Maximum total FAR of designated receiving sites in South Street Seaport Subdistrict (91-60)	NA	NA	NA	NA	NA	NA	3.4	8.02	21.6 ⁷	21.6 ⁷
Maximum FAR with transferred development rights from landmark #zoning lot# and as-of-right and special permit #floor area# bonuses	6.02 ¹ 6.5 ³	14.0	21.6	2.4 ² 7.8 ³	21.6	NA	3.4	8.02	21.6 ⁷	21.6 ⁷

- 1 maximum #floor area ratio# and minimum #open space ratio# shall be determined in accordance with the provisions of Article II, Chapter 3
- 2 for a #commercial# or, where permitted, #manufacturing use#
- 3 for a #community facility use#
- 4 for a #residential use#
- 5 if receiving lot is located in a zoning district with a basic maximum FAR of less than 15
- 6 if receiving lot is located in a zoning district with a basic maximum FAR of 15
- 7 maximum FAR for receiving lots less than 30,000 square feet

HISTORY OF THE SUBJECT PROPERTY

Prior to commencement of the construction of the World Trade Center in 1967, various streets were closed and other adjoining parcels were acquired by the Port Authority. Various other parcels remained in the ownership of the city, but were incorporated into the project area.

In order to expedite and facilitate the rebuilding of the WTC site, including the Memorial and Cultural Program, LMDC re-introduced streets that had been closed and re-aligned other streets, pursuant to the General Project Plan. LMDC has and will, therefore, expedite and facilitate the prompt acquisition and transfer of various property interests, between the City and the PA; and the PA and the City.

The parcels and easements listed in the five schedules previously presented herein represent the group of parcels necessary for the correction of the street re-alignments, street openings and other legal and title considerations.

HIGHEST AND BEST USE ANALYSIS

The subject parcels are of various shapes, sizes and ownership interests (i.e., surface rights, below-grade rights, full fee rights, easements, use restrictions, etc.). Our analysis is based on the existing zoning at the site, with the so-called World Trade Center zoning FAR of 13.61. The C5 and C6 zoning will allow both commercial and residential uses. Hotel uses are also allowed.

Due to the nature of the properties, we cannot perform a meaningful highest and best use analysis. We note, however, that the parcels can be transferred to adjoining owners to facilitate development of the uses noted above.

VALUATION

The appraisal property consists of a group of parcels of varying ownerships, sizes, shapes and property interests. In fact, several are now in the beds of mapped streets. The parcels have no opportunity of being combined, to form a single, cohesive, plot, since they are, for the most part, physically separated. In fact, they are within a Project area that extends a total distance of six blocks, north to south, from Barclay Street on the north, to Cedar Street on the south. The Project area also extends from Church Street on the east to West Street on the west, a distance of four blocks east to west.

The best that can be accomplished with the potential development value inherent in the various parcels is the transfer of the development rights to adjoining owners. That is the basis for our appraisal of the several parcels. The transference of development area has attained great significance in today's lower Manhattan real estate market, due to the great demand for development FAR.

The valuation of development "land" (i.e., a "footprint" site) or of transferable development rights is generally accomplished by use of the Sales Comparison Approach, when applicable. The appraisal of real property typically utilizes three traditional methods of valuation: the Income Capitalization Approach, the Sales Comparison Approach and the Cost Approach.

The **Income Capitalization Approach** is based on the principle of anticipation, which states that value is created by the expectation of future benefits. In this approach, the appraiser analyzes the actual operating performance of the subject property as well as other similar properties. From this, an estimate of stabilized net income is developed for a single year or period of years. This data is then processed into value using the appropriate capitalization technique to produce an indication of value.

In this case, the subject parcels are considered as vacant land or as potential development area. An income analysis would not be feasible. Therefore, that method is not applicable in this case.

The **Sales Comparison Approach** is based on the principle of substitution. In this technique, the sales data for similar properties are researched and analyzed. The sales prices for these transactions are converted to a unit indication of value such as price per square foot of gross building area. These figures are then adjusted for any elements of difference between the property sold and the property being appraised. Such elements may include location, physical characteristics, date of sale and financing. The final unit of value derived is then multiplied by the unit size of the subject property to produce an indication of value.

The Sales Comparison Approach is the most common technique for valuing land and is the preferred method when comparable land sales are available. We have relied solely on the Sales Comparison Approach in this appraisal, to provide our client with our opinions of the value of the WTC Transfer Parcels and Easements.

The **Cost Approach** is based on the principle of substitution, which states that an informed purchaser will pay no more for a property than the cost of producing a substitute property with the same or similar utility. In this approach, the cost of constructing or otherwise producing a similar property is estimated. Depreciation from physical, functional and economic sources is deducted from this cost. The value of the underlying land is then added to this cost to produce an opinion of value.

In this case, there are no improvements that exist on any of the parcels, or they are to be considered as if vacant. Therefore, this approach to value is not applicable here.

SALES COMPARISON APPROACH

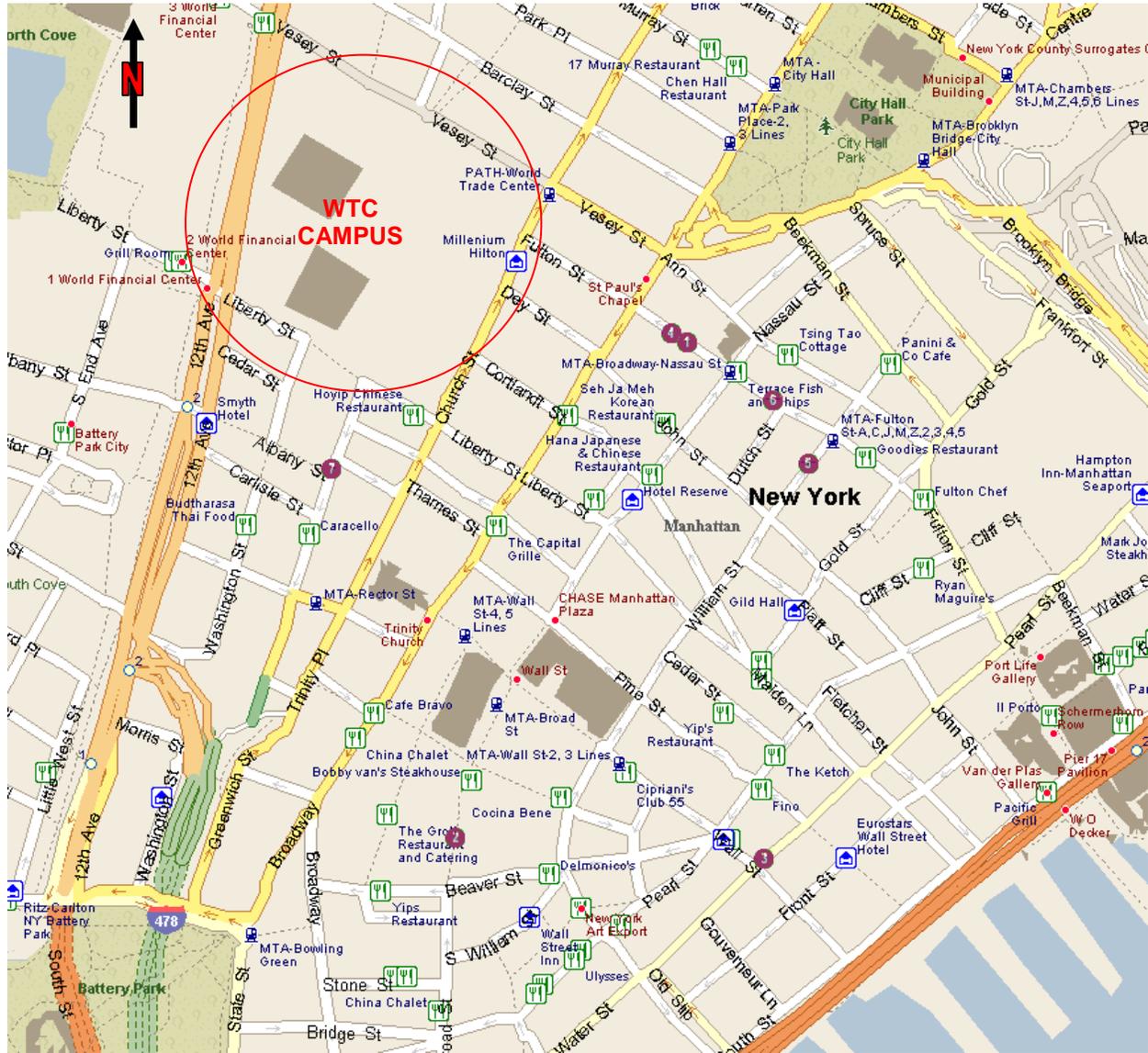
The subject parcels involve a wide array of parcels. As previously noted, they differ not only in size, shape and location, but they differ in the property rights associated with each. Many involve only subsurface rights; others, only surface rights above a specified distance below the top of curb; others have full fee rights, including sub-surface and full surface rights; and others are easement rights in certain defined spaces, subject to use limitations.

The Sales Comparison Approach enables us to compare the typical subject parcel to each sale. We have prepared a Land Sales Analysis Grid, which indicates the various adjustments required to relate each sale to the subject. The following section provides a comparable sales location map, a summary chart of the comparable sales, details of each sale, including photographs, followed by a sales adjustment grid.

COMPARABLE LAND SALES SUMMARY CHART WITHOUT ADJUSTMENTS

WTC - Parcels and Easements Phase 2 New York, New York												
COMPARABLE LAND SALES SUMMARY: WITHOUT ADJUSTMENTS												
COMP NO.	ADDRESS	BLOCK/LOT	CONTRACT DATE	DEED DATE	LOT AREA(SF)	ZONING	Use	FAR	DEV AREA(SF)	SALE PRICE	PRICE/SF/FAR	
1	140-142 Fulton Street (Btwn Broadway & Nassau Street)	79/26,27+TDRs	6/29/18-12/27/18	10/17/18-12/27/18	5,612	C5-5 (LM)	N/A	15.00	121,089	\$49,710,524	\$410.53	
2	45 Broad Street (Btwn Exchange Place & Beaver Street)	257+TDRs	6/1/2015	10/23/2015	13,202	C5-5 (LM)	Mixed Use	15.00	273,186	\$86,000,000	\$314.80	
3	120-122 Water Street (Btwn Wall & Pine Streets)	39/40,41	3/18/2015	10/1/2015	2,877	C5-5 (LM)	Hotel	15.00	43,155	\$20,125,000	\$466.34	
4	144 Fulton Street (Btwn Broadway & Nassau Street)	79/25	3/11/2015	7/27/2015	3,003	C5-5 (LM)	N/A	15.00	45,045	\$25,000,000	\$555.00	
5	130 William Street/90-94 Fulton Street (Btwn Fulton & John Streets)	77/15,21,22,23+TDRs	5/9/14-5/7/15	5/9/14-5/14/15	17,384	C6-4 (LM)	Mixed Use	10.00	321,971	\$104,429,194	\$324.34	
6	114 Fulton Street (S/W/C Fulton & Dutch Streets)	78/47	5/28/2014	9/22/2014	8,320	C6-4 (LM)	Mixed Use	10.00	302,591	\$171,000,000	\$565.12	
7	125 Greenwich Street (SEC Greenwich & Thames Streets)	51/14+TDRs	5/23/2014	8/28/2014	9,086	C5-5 (LM)	N/A	15.00	359,500	\$186,940,000	\$520.00	
Subject		WTC - Parcels and Easements Phase 2	Typical Lot		10,000	C5-3/C6-4 (LM)		13.61	136,100			Minimum Maximum Average Median
											\$314.80	
											\$565.12	
											\$450.88	
											\$466.34	

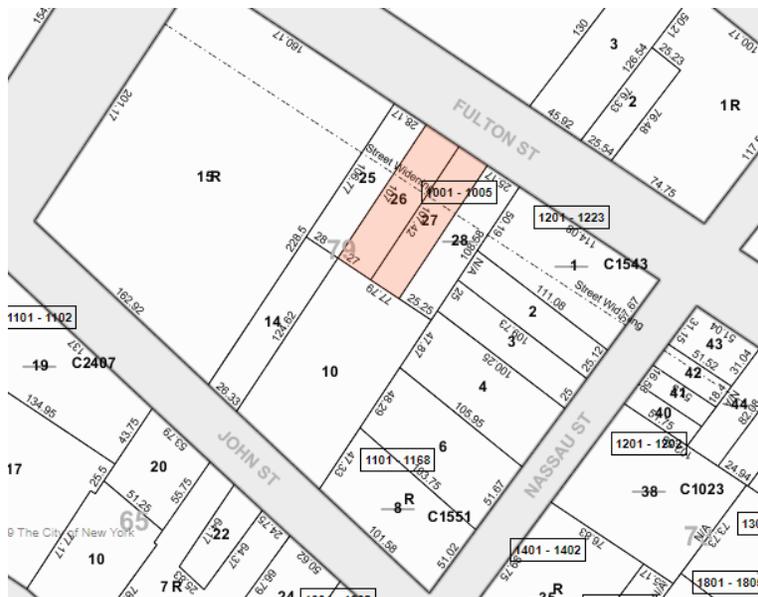
COMPARABLE LAND SALES LOCATION MAP



COMPARABLE LAND SALE NUMBER 1



140-142 Fulton Street



Block 79, Lots 26, 27 and TDRs from Lot 25

COMPARABLE LAND SALE NUMBER 1

<u>Addresses:</u>	140-142 Fulton Street New York, New York
<u>Block/Lots:</u>	79/26, 27 and TDRs from 25
<u>Location:</u>	South Side of Fulton Street, between Broadway and Nassau Street
<u>Description:</u>	Lot 26: Six-story residential apartment building with ground- level retail and 13,194 square feet of gross building area Lot 27: Vacant Land
<u>Lot Shape and Area:</u>	Rectangular; 5,612 square feet of lot area
<u>Zoning/FAR:</u>	C5-5 (Special Lower Manhattan District)/ 15.0 Commercial FAR, 10.0 Residential FAR
<u>Developable Area:</u>	84,180 square feet (Lots 26 and 27) <u>36,909</u> square feet (Lot 25 TDRs) 121,089 square feet (Total)
<u>Grantors:</u>	142 Fulton LLC (Lot 26) Gindisons Fulton Blue TIC LLC, et al (Lot 27) Crown 144 Fulton LLC (Lot 25 TDRs)
<u>Grantee:</u>	140 Fulton Associates LLC c/o Hidrock Properties
<u>Purchase Prices:</u>	\$21,160,100 (Lot 26) \$19,839,900 (Lot 27) <u>\$ 8,710,524</u> (Lot 25 TDRs) \$49,710,524 (Total)
<u>Contract Dates:</u>	June 29, 2018 (Lots 26 and 27) N/A (Lot 25 TDRs)
<u>Sales Dates:</u>	October 17, 2018 (Lots 26 and 27) December 27, 2018 (Lot 25 TDRs)
<u>Recorded Dates:</u>	October 24, 2018 (Lots 26 and 27) January 9, 2019 (Lot 25 TDRs)

Comparable Land Sale Number 1 (continued)

Analysis of Sale

Price/Sq. Ft. of Lot Area: \$8,857.90

Price/Sq. Ft. of Developable Area: \$410.53

Possession: Unknown

Demolition: Estimated at \$25 per square foot for the 13,194 square feet of structures on the site at the time of the sale, or \$329,850. Estimated demolition costs add \$2.72 per square foot to the base land cost.

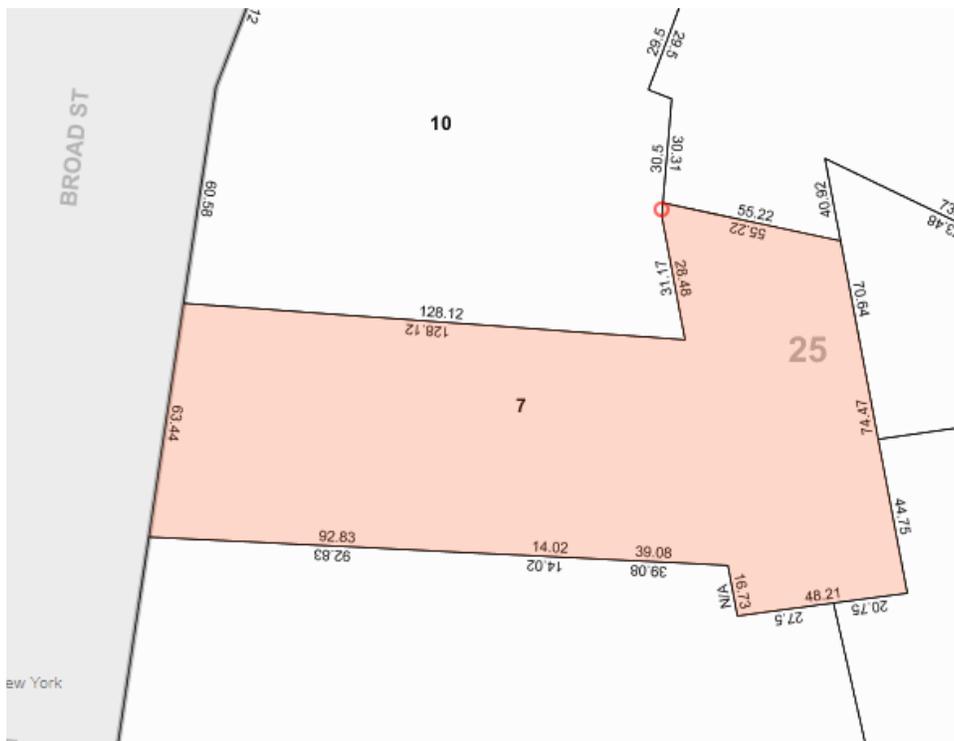
Proposed Development: No development plans have been announced for this site.

Verification: As per deed, Department of Finance, ACRIS

COMPARABLE LAND SALE NUMBER 2



45 Broad Street



Block 25, Lot 7 and TDRs from Lot 10

COMPARABLE LAND SALE NUMBER 2

Address: 45 Broad Street
New York, New York

Block/Lot: 25/7 and TDRs from 10

Location: East side of Broad Street, between Exchange Place and
Beaver Street

Description: Vacant Land

Lot Shape and Area: Irregular; 13,202 square feet of lot area

Zoning/FAR: C5-5 (Special Lower Manhattan District)/
15.0 Commercial FAR, 10.0 Residential FAR

Developable Area: 198,030 square feet (Lot 7)
75,156 square feet (Lot 10 TDRs)
273,186 square feet (Total)

Grantor: 45 Broad Street L/CAL LLC

Grantee: Madison 45 Broad Development LLC

Purchase Price: \$86,000,000

Contract Date: June 1, 2015

Sales Date: October 23, 2015

Recorded Date: November 2, 2015

Analysis of Sale

Price/Sq. Ft.
of Lot Area: \$6,514.16

Price/Sq. Ft.
of Developable Area: \$314.80

Comparable Land Sale Number 2 (continued)

<u>Possession:</u>	Unknown
<u>Demolition:</u>	The site was vacant at the time of sale.
<u>Proposed Development:</u>	Mixed-Use (Residential/Commercial)
<u>Verification:</u>	As per deed, Department of Finance, ACRIS

COMPARABLE LAND SALE NUMBER 3



120-122 Water Street



Block 29, Lots 40 and 41

COMPARABLE LAND SALE NUMBER 3

Addresses: 120-122 Water Street
New York, New York

Block/Lots: 39/40 and 41

Location: West side of Water Street, between Wall and Pine Streets

Description: Lot 40: Four-story residential apartment building with ground-level retail and 5,811 square feet of gross building area
Lot 41: Five-story residential apartment building with ground-level retail and 7,270 square feet of gross building area

Lot Shape and Area: Irregular; 2,877 square feet of lot area

Zoning/FAR: C5-5 (Special Lower Manhattan District)/
15.0 Commercial FAR, 10.0 Residential FAR

Developable Area: 43,155 square feet

Grantor: NY Times Square Hotel Group LLC

Grantee: 120-122 Water Street LLC

Purchase Price: \$20,125,000

Contract Date: March 18, 2015

Sales Date: October 1, 2015

Recorded Date: October 14, 2015

Analysis of Sale

Price/Sq. Ft. of Lot Area: \$6,995.13

Price/Sq. Ft. of Developable Area: \$466.34

Comparable Land Sale Number 3 (continued)

Possession: Unknown

Demolition: Estimated at \$25 per square foot for the 13,281 square feet of structures on the site at the time of the sale, or \$332,025. Estimated demolition costs add \$7.69 per square foot to the base land cost.

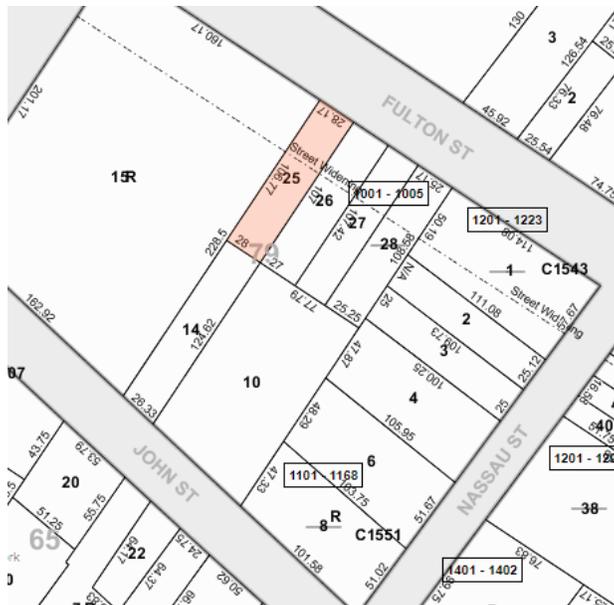
Proposed Development: Hotel

Verification: As per deed, Department of Finance, ACRIS

COMPARABLE LAND SALE NUMBER 4



144 Fulton Street



Block 79, Lot 25

COMPARABLE LAND SALE NUMBER 4

Address: 144 Fulton Street
New York, New York

Block/Lot: 79/25

Location: South side of Fulton Street, between Broadway and
Nassau Street

Description: Three-story retail building with 8,071 square feet of gross
building area

Lot Shape and Area: Rectangular; 3,003 square feet of lot area

Zoning/FAR: C5-5 (Special Lower Manhattan District)/
15.0 Commercial FAR, 10.0 Residential FAR

Developable Area: 45,045 square feet

Grantor: ERIBRO LLC, et al

Grantee: Crown 144 Fulton LLC

Purchase Price: \$25,000,000

Contract Date: March 11, 2015

Sales Date: July 27, 2015

Recorded Date: August 6, 2015

Analysis of Sale

**Price/Sq. Ft.
of Lot Area:** \$8,325.01

**Price/Sq. Ft.
of Developable Area:** \$555.00

Comparable Land Sale Number 4 (continued)

<u>Possession:</u>	Unknown
<u>Demolition:</u>	Estimated at \$25 per square foot for the 8,071 square feet of structures on the site at the time of the sale, or \$201,775. Estimated demolition costs add \$4.48 per square foot to the base land cost.
<u>Proposed Development:</u>	Unknown
<u>Comments:</u>	The grantee subsequently elected to keep the retail building on the site and sold its unused development rights to the adjacent development site (Comparable Land Sale Number 1).
<u>Verification:</u>	As per deed, Department of Finance, ACRIS

COMPARABLE LAND SALE NUMBER 5



130 William Street/90-94 Fulton Street



Block 77, Lots 15, 21, 22, 23 and TDRs from Lots 18 and 24

COMPARABLE LAND SALE NUMBER 5

Addresses: 130 William Street/90-94 Fulton Street
New York, New York

Block/Lots: 77/15, 21, 22, 23 and TDRs from 18 and 24

Location: East side of William Street, between Fulton and John Street,
extending through block to the south side of Fulton Street,
between William and Gold Streets

Description: Lot 15: 12-story office building with 107,124 square feet of
gross building area
Lot 21: Six-story residential building with ground-level retail
and 10,490 square feet of gross building area
Lot 22: Vacant Land
Lot 23: Five-story commercial building with
5,195 square feet of gross building area

Lot Shape and Area: Irregular; 17,384 square feet of lot area

Zoning/FAR: C6-4 (Special Lower Manhattan District)/
10.0 Commercial FAR, 10.0 Residential FAR

Developable Area: 321,971 square feet (Total)

Grantors: 130 William St. Holding Co. LLC (Lot 15 and Lot 18 TDRs)
33 BRE Inc. (Lot 24 TDRs)
94 Fulton Street LLC (Lot 21)
Madison Title Agency LLC (Lot 22)
L & S Realty of Massapequa Inc. (Lot 23)

Grantee: The Lightstone Group

Purchase Prices: \$ 60,000,000 (Lot 15 and Lot 18 TDRs)
\$ 15,379,194 (Lot 24 TDRs)
\$ 12,000,000 (Lot 21)
\$ 11,250,000 (Lot 22)
\$ 5,800,000 (Lot 23)
\$104,429,194 (Total)

Comparable Land Sale Number 5 (continued)

Contract Dates: May 9, 2014 (Lot 15 and Lot 18 TDRs)
March 2, 2015 (Lot 24 TDRs)
May 7, 2015 (Lot 21)
April 2, 2015 (Lot 22)
April 29, 2015(Lot 23)

Sales Dates: May 9, 2014 (Lot 15 and Lot 18 TDRs)
March 2, 2015 (Lot 24 TDRs)
May 7, 2015 (Lot 21)
May 7, 2015 (Lot 22)
May 14, 2015(Lot 23)

Recorded Dates: May 15, 2014 (Lot 15 and Lot 18 TDRs)
March 30, 2015 (Lot 24 TDRs)
May 26, 2015 (Lot 21)
May 26, 2015 (Lot 22)
May 26, 2015 (Lot 23)

Analysis of Sale

Price/Sq. Ft. of Lot Area: \$6,007.20

Price/Sq. Ft. of Developable Area: \$324.34

Possession: Unknown

Demolition: Estimated at \$25 per square foot for the 122,809 square feet of structures on the site at the time of the sales, or \$3,070,225. Estimated demolition costs add \$9.54 per square foot to the base land cost.

Proposed Development: The grantee subsequently developed the site with an 800-foot, 800-unit residential tower.

Verification: As per deed, Department of Finance, ACRIS

COMPARABLE LAND SALE NUMBER 6



114 Fulton Street



Block 78, Lot 47 and TDRs from Multiple Lots

COMPARABLE LAND SALE NUMBER 6

Address: 114 Fulton Street
New York, New York

Block/Lot: 78/47+TDRs from multiple lots

Location: SWC of Fulton Street and Dutch Street

Description: Vacant Land

Lot Shape and Area: Rectangular; 8,320 square feet of lot area

Zoning/FAR: C6-4 (Special Lower Manhattan District)/
10.0 Commercial FAR, 10.0 Residential FAR

Developable Area: 302,591 square feet
(According to the zoning diagram for the proposed development, the zoning lot for this development site is comprised of Lot 47 – the development site – and nine other lots on the block that contribute TDRs to the fee parcel.)

Grantor: LSG Fulton Street LLC

Grantee: CP V TS Fulton Owner LLC

Purchase Price: \$171,000,000

Contract Date: May 28, 2014

Sales Date: September 22, 2014

Recorded Date: September 29, 2014

Analysis of Sale

Price/Sq. Ft. of Lot Area: \$20,552.88

Price/Sq. Ft. of Developable Area: \$565.12

Comparable Land Sale Number 6 (continued)

<u>Possession:</u>	Unknown
<u>Demolition:</u>	The site was vacant at the time of sale.
<u>Proposed Development:</u>	Mixed-Use (Residential/Commercial)
<u>Verification:</u>	As per deed, Department of Finance, ACRIS

COMPARABLE LAND SALE NUMBER 7



125 Greenwich Street



Block 51, Lot 14 and TDRs from Lot 13

COMPARABLE LAND SALE NUMBER 7

Address: 125 Greenwich Street
New York, New York

Block/Lot: 51/14 and TDRs from 13

Location: Southeast corner of Greenwich and Thames Streets

Description: Vacant Land

Lot Shape and Area: Irregular; 9,086.33 square feet of lot area

Zoning/FAR: C5-5 (Special Lower Manhattan District)/
15.0 Commercial FAR, 10.0 Residential FAR

Developable Area: 136,295 square feet (Lot 14)
223,205 square feet (Lot 13 TDRs acquired in 2012)
358,550 square feet (Total)

Grantor: Henry II Thames LP

Grantee: VS 125 LLC

Purchase Price: \$186,940,000

Contract Date: May 23, 2014

Sales Date: August 28, 2014

Recorded Date: September 10, 2014

Analysis of Sale

**Price/Sq. Ft.
of Lot Area:** \$20,573.76

**Price/Sq. Ft.
of Developable Area:** \$520.00

Comparable Land Sale Number 7 (continued)

<u>Possession:</u>	Unknown
<u>Demolition:</u>	The site was vacant at the time of sale.
<u>Proposed Development:</u>	The site was subsequently developed with a residential condominium apartment building.
<u>Verification:</u>	As per deed, Department of Finance, ACRIS

		SUBJECT: WTC - Parcels and Easements Phase 2 New York, New York														
		TYPICAL LOT AREA: 10,000 Square Feet														
		DEVELOPABLE AREA: 136,100 Square Feet														
		LAND SALES ADJUSTMENT GRID														
COMP NO.	ADDRESS	PRICE SF FAR	COND. OF SALE	ADJ. UNIT	TIME ADJ.*	ADJ. UNIT	POSS	SUB-TOTAL	LOC.	SIZE	CONFIG	ZONING	TOTAL ADJ.	ADJ. UNIT	DEMO.	FINAL ADJ. UNIT
1	140-142 Fulton Street (Btwn Broadway & Nassau Street)	\$410.53	0%	\$410.53	1.74%	\$417.66	\$0.00	\$417.66	-15%	0%	0%	0%	-15%	\$355.01	\$2.72	\$357.74
2	45 Broad Street (Btwn Exchange Place & Beaver Street)	\$314.80	0%	\$314.80	-7.07%	\$292.56	\$0.00	\$292.56	10%	-10%	10%	0%	10%	\$321.81	\$0.00	\$321.81
3	120-122 Water Street (Btwn Wall & Pine Streets)	\$466.34	0%	\$466.34	-5.79%	\$439.32	\$0.00	\$439.32	10%	15%	0%	0%	25%	\$549.15	\$7.69	\$556.85
4	144 Fulton Street (Btwn Broadway & Nassau Street)	\$555.00	0%	\$555.00	-5.79%	\$522.84	\$0.00	\$522.84	-15%	15%	0%	0%	0%	\$522.84	\$4.48	\$527.32
5	130 William Street/90-94 Fulton Street (Btwn Fulton & John Streets)	\$324.34	0%	\$324.34	-3.55%	\$312.84	\$0.00	\$312.84	-10%	-15%	10%	0%	-15%	\$265.91	\$9.54	\$275.45
6	114 Fulton Street (S/WC Fulton & Dutch Streets)	\$565.12	0%	\$565.12	-1.98%	\$553.96	\$0.00	\$553.96	-15%	-15%	0%	0%	-30%	\$387.77	\$0.00	\$387.77
7	125 Greenwich Street (SEC Greenwich & Thames Streets)	\$520.00	0%	\$520.00	-1.98%	\$509.73	\$0.00	\$509.73	0%	-15%	0%	0%	-15%	\$433.27	\$0.00	\$433.27
Notes		* When available and deemed appropriate, we have used the comparable land sale's contract date for market trending purposes.														
		Minimum \$275.45														
		Maximum \$556.85														
		Average \$408.60														
		Median \$387.77														

BASIC LAND VALUE – CONCLUSION OF VALUE

We have analyzed all recent, relevant sales of land and/or development sites in the Downtown Manhattan area. As indicated on the “Land Sales Analysis Grid,” (see preceding page) after providing for an adjustment for “time” (market factors), we have considered various additional adjustments to the sales, to reflect differences in location, size, configuration, zoning and other factors. The time adjustment reflects the change in land values in the Downtown Manhattan area during the last several years. The date of value is as of March 5, 2019. We have applied a rate of +0.5% per month for the period between January 2014 through December 2016, a rate of -1.5% per month for the period between January and December 2017, and a rate of +0.25% per month for the period between January 2018 and the March 5, 2019 date of value.

We have found that most downtown locations are desirable from a residential standpoint. We have also found that commercial development has now gained greater prominence, due to the rapid increase in office rents. Location adjustments ranged from -15% to +10%.

The size adjustment ranged from 0% to 15% (+ or -) to reflect the differences in size between the typical available FAR at the subject versus the comparable sale properties. The “typical” subject parcel has a basic FAR area of 136,100 square feet. Sale 1, for example, has a development area of 121,089 square feet. We included a 0% upward adjustment to reflect the generally similar area at the subject, from a transferable development standpoint.

Comparable Land Sale No. 3 has an area of 43,155 square feet. We applied an upward size adjustment of 15% to reflect the inferior area of this sale property.

In like manner, similar adjustments were made to each sale.

CONCLUSION OF BASIC LAND VALUE:

Based on the land sales presented in this section of the appraisal, including the comparable sales analysis grid and discussion of the sales, we believe that the subject site has a unit value of \$405 per square foot as of the date of value. We note that the property at 125 Greenwich Street is located closest to the subject property and sold on August 28, 2014, at a unit price of \$520.00 per square foot of FAR. The property at 140-142 Fulton Street is the most recent sale, occurring in late 2018 at a unit price of \$410.53 per square foot of FAR.

Estimated Basic Unit Value: \$405 per square foot FAR

The pre-adjusted range of the sales is from a low of \$314.80 per square foot of FAR to a high of \$565.12 per square foot, with a mean of \$450.88 per square foot. After the adjustment process, the unit values range from \$275.45 per square foot to a high of \$556.85, with a mean of \$408.60. Excluding the low and high unit values, the mean is \$405.58 per square foot.

Based on the above, we estimate that the typical base unit of FAR value for the subject parcels is \$405 per square foot. In some instances, where deemed appropriate, parcels closer to West Street were valued at \$400 per square foot, to reflect the more remote location (with the understanding that the World Financial Center is directly across, on the west side of West Street).

Discussion of Values

- a. We have applied a discount of 25% to the surface parcels, to reflect the restricted ability to employ the FAR directly on each parcel.
- b. In many cases, we have not applied the full FAR potential for a specific parcel, but the area of the parcel (the footprint) only. FAR was included in areas around the streets, including the existing buildings on parcels adjacent to the subject parcels. Therefore, for the beds of the streets, no additional FAR value was applied to those parcels within the beds of the streets.
- c. For transfers of parcels involving only subsurface rights within the beds of existing streets, we have applied a discount of 95% to the basic unit value to reflect the limited utility of such subsurface areas. Typically subsurface areas have viable uses as part of subsurface levels of buildings (cellars, etc.). In the case of the subject street parcels, the areas below the beds of the streets is unlikely to be improved to support or add further utility to the existing surface use.
- d. For the PA parcels, we have not added development rights to the value, only surface rights. Various parcels are in the beds of specific streets and, therefore, we have accorded no additional FAR to those New York City parcels.
- e. For the Oculus Encroachment Easements, the easements primarily encumber volumes of airspace over Fulton and Greenwich Streets. The Oculus wings that occupy the easement areas do not utilize zoning floor area and the utility of the streets below retain full utility for street use. However, the easement holder (PA) has the right to occupy the projection of the easement area at street grade for occasional maintenance, repairs and replacement of the Oculus structures situated within the easement areas. Given the limited utility of the easement areas and the easement's specific use restrictions (to accommodate decorative structures of a building), but recognizing the ability to occasionally occupy the street below, we have applied a 95% discount to the base unit land value that is the basis for the value of the easement areas.

- f. For the PAC Encroachment Easements, Easement 1 is effectively a cantilever easement 20 feet above top of curb, extending 126 feet vertically. The volume of the easement will contain a portion of the PAC to-be-built PAC building. For valuation purposes, we have assumed that the easement area will contain floor area for building stories with 11-foot heights. Therefore, Easement 1 represents 11 stories containing 4.358 square feet of zoning floor area, or 47.94 square feet of FAR.

Since cantilever rights are typically equated to transferable development rights, which are typically priced in the marketplace at 50% of fee simple land value, we have applied a 50% discount to the underlying base unit land value of the easement area.

Easement 2 represents an area comprised of subsurface rights and surface rights limited to the ability to install paving on a portion of the Fulton Street sidewalk that differs from the paving of the adjoining Fulton Street sidewalk. The utility of the easement area as a sidewalk is retained by the City as part of the public right-of-way. However, the easement holder will have the right to occupy the easement area for the regular maintenance, repair and replacement of the paving as needed. Given the terms of Easement 2, we have applied a 95% discount to the base unit land value that is the basis for the value of the easement area.

- g. Parcel S9 (LMDC to the City) is encumbered by permanent easements held by the City over the easement area for street purposes. The transaction between LMDC and the City will transfer fee title of the severely encumbered parcel to the easement holder (the City) which already owns the perpetual rights that comprise the full utility of the subject parcel. **Therefore, a \$0 value is ascribed to Parcel S9.**
- h. We have prepared the valuation analysis of the Transfer Parcels/Easements (excluding Parcel S9) in two groups, including the NYC to PA transfer parcels and the PA to NYC transfer parcels. Again, we note that the development rights from many of the parcels have already been employed in various developments adjoining the site, without prior actual legal transfer or payment to the legal owner.
- i. The valuation charts for the Transfer Parcels/Easements are presented on the following pages. We have included a summary chart of our conclusions of the opinion of value, on the page immediately following the valuation grids.

World Trade Center									
Analysis of Beds of Streets - Phase 2									
Parcels from City to PA (by Condemnation)									
FAR at 13.61, per WTC Zoning, where applicable									
<u>Parcel No.</u>	<u>Location</u>	<u>Area SF</u>	<u>Available FAR Area</u>	<u>Special Conditions</u>	<u>Basic FAR Unit \$/SF</u>	<u>% Discount</u>	<u>Adjusted Unit Value</u>	<u>Est. Parcel Value</u>	
S1	Parcel in bed of Liberty St., along southerly side of Street btwn Washington and West Streets	2,229.00	30,336.69	Fee Interest	\$405	0.00%	\$405	\$12,286,359	
S2	Parcel in beds of Washington and Liberty Streets, extending southerly to Cedar St.	6,458.00	87,893.38	Fee Interest	\$405	0.00%	\$405	\$35,596,819	
S6	Portion of Liberty St. btwn Greenwich and West Streets	14,809.00	14,809.00	Subsurface Rights 1.35' below top of curb	\$400	95.00%	\$20	\$296,180	
S7	Bed of Cedar St btwn West and Washington Streets, including a portion of Washington St.	9,025.00	9,025.00	Subsurface Rights 1.35' below top of curb	\$400	95.00%	\$20	\$180,500	
Easement Parcels									
Oculus 1	Encroachment easement over bed of Fulton Street btwn Church and Greenwich Streets	16,071.00	16,071.00	Volume between 30' and 212' above top of curb	\$405	95.00%	\$20	\$325,438	
Oculus 2	Encroachment easement over bed of Greenwich Street approx. 59' south of Fulton Street	1,767.00	1,767.00	Volume between 38' and 170' above top of curb	\$405	95.00%	\$20	\$35,782	
PAC 1	Encroachment easement over bed of Fulton Street, along northerly side of street btwn Washington Place and Greenwich Street	4,358	47.94 (Assumes 11 floors of 11' each)	Cantilever Rights 20' above top of curb to 146' above top of curb	\$400	50.00%	\$200	\$9,588	
PAC 2	Encroachment easement in bed of Fulton Street, along northerly side of street btwn Washington Place and Greenwich Street	4,358	4.36	Subsurface Rights from street grade to 1.35' below top of curb	\$400	95.00%	\$20	\$87	
								Total:	\$48,730,753

Valuation Units:	\$400
	\$405
Typical Surface Rights Discount:	25%

<u>World Trade Center</u>										
<u>Analysis of Beds of Streets - Phase 2</u>										
<u>Parcels from PA to NYC (by Negotiated Transfer)</u>										
<u>FAR at 13.61, per WTC Zoning, where applicable</u>										
<u>Parcel No.</u>	<u>Location</u>	<u>Area SF</u>	<u>Available FAR Area</u>	<u>Special Conditions</u>	<u>Basic FAR Unit \$/SF</u>	<u>% Discount</u>	<u>Adjusted Unit Value</u>	<u>Est. Parcel Value</u>		
S4	Northerly side of Cedar St., extending 55.5' east of West St.	205.00	205.00	Surface Rights, above 1.35' below top of curb	\$400	25.00%	\$300	\$61,500		
S8	Northerly side of Cedar St., 55.5' east of West St. (Greek Church Parcel)	70.00	70.00	Surface Rights, above 1.35' below top of curb	\$400	25.00%	\$300	\$21,000		
S4A	Northerly side of Cedar St., extending 102.82' west of Washington St.	182.00	182.00	Surface Rights, above 1.35' below top of curb	\$400	25.00%	\$300	\$54,600		
S5	L-shaped parcel at SW corner of Liberty and Greenwich Streets, extending 119.64' east of Greenwich St, and extending 161.18' south of Cedar St.	1,358.00	1,358.00	Surface Rights, above 1.35' below top of curb	\$405	25.00%	\$304	\$412,493		
								Total:	\$549,593	

<u>Valuation Units:</u>	\$400
	\$405
<u>Typical Surface Rights Discount:</u>	25%

VALUATION SUMMARY

Parcels from City to PA:		
Parcel		Value
S1	\$	12,286,359
S2	\$	35,596,819
S6	\$	296,180
S7	\$	180,500
Oculus Easement 1	\$	325,438
Oculus Easement 2	\$	35,782
PAC Easement 1	\$	9,588
PAC Easement 2	\$	87
Total:	\$	48,730,753

Parcels from PA to City:*		
Parcel		Value
S4	\$	61,500
S8	\$	21,000
S4A	\$	54,600
S5	\$	412,493
Total:	\$	549,593

Parcels from LMDC to City:		
Parcel		Value
S9	\$	0

*Parcels S4, S4A and S5 are part of the properties formerly known as 140 Liberty Street (Tax Lots 15 and 21) and part of 130 Liberty Street (Tax Lot 30). LMDC currently holds fee title to these parcels because they were held back from LMDC's 2017 transfer of the remainder of those lots to the PA in anticipation of the PA's direction to transfer them to the City in the current transactions, as set forth in the Request Letter.

We understand that PA has spent approximately \$206,923,000 and anticipates spending another approximately \$47,345,000 (\$254,268,000 in the aggregate) (the "PA Contribution") to design and construct improvements to the City's right-of-way in connection with the earlier transfer of those certain parcels (the "Prior Parcels") completed pursuant to the Request Letter and referenced in our appraisal of WTC street beds dated as of May 1, 2007 (the "Prior Appraisal") and of the transfer of those certain parcels contemplated hereunder (the "Current Parcels"). The Prior Appraisal reserved \$40,000,000 (the "Reserve Amount") for the cost of future improvements related to the Current Parcels, the entirety of which has been spent as part of the PA Contribution. For the avoidance of doubt, the PA Contribution is sufficient to offset the acquisition costs of the transfers of both the Current Parcels and the Prior Parcels.

CERTIFICATION

I certify that, to the best of my knowledge and belief:

- The statements of fact contained in this appraisal report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions, and my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this report, and I have no personal interest or bias with respect to the parties involved.
- I have performed appraisal services regarding the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- The reported analyses, opinions, and conclusions were developed, and this report has been prepared in conformity with the requirements of the *Uniform Standards of Professional Appraisal Practice (USPAP)* and the Code of Professional Ethics and the Standards of Professional Appraisal Practice of the Appraisal Institute.
- Yamil Arocho has made a personal exterior inspection of the property that is the subject of this report.
- No one provided significant real property appraisal assistance to the persons signing this certification.
- The use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
- As of the date of this report, I, Yamil N. Arocho, have completed the requirements of the continuing education program for Designated Members of the Appraisal Institute.



Yamil N. Arocho, MAI
Senior Appraiser
Certified New York State
General Real Estate Appraiser
Certificate No. 46000045109



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07-160019-01

Parcel S2

All that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, as indicated on the City of New York President of the Borough of Manhattan Topographical Bureau Sectional Map No. 3 being more particularly bounded and described as follows:

Beginning at the corner formed by the intersection of the southerly side of Liberty Street and the westerly side of Washington Street said corner having the coordinates of North 198118.48 East 980476.72;

Running thence North 16° 13' 50" East, through the bed of Liberty Street, a distance of 7.65 feet to a point;

Running thence South 57° 08' 42" East, still through the bed of Liberty Street, a distance of 145.82 feet to a point on the southerly side of Liberty Street;

Running thence North 60° 01' 34" West, along the southerly side of Liberty Street, a distance of 93.48 feet to the corner formed by the intersection of the southerly side of Liberty Street with the easterly side of Washington Street;

Running thence South 16° 11' 14" West, along the easterly side of Washington Street, a distance of 113.28 feet to a point;

Running thence South 16° 24' 31" West, still along the easterly side of Washington Street, a distance of 42.94 feet to a point;

Running thence the following 6 courses through the beds of Washington and Cedar Streets:

- 1) North 60° 00' 29" West a distance of 1.53 feet to a point;
- 2) North 16° 04' 13" East a distance of 21.25 feet to a point;
- 3) North 12° 17' 49" West a distance of 6.42 feet to a point;
- 4) North 30° 01' 06" West a distance of 21.35 feet to a point;
- 5) North 49° 03' 49" West a distance of 25.23 feet to a point;
- 6) North 58° 28' 13" West a distance of 6.13 feet to a point on the westerly side of Washington Street;

Running thence North 16° 13' 50" East, along the westerly side of Washington Street a distance of 113.91 feet to the corner formed by the intersection of the southerly side of Liberty Street and the westerly side of Washington Street, the PLACE AND POINT OF BEGINNING.

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Page 2

Containing 6,458 square feet or 0.148 acres more or less, and having no upper or lower limiting planes.

The coordinates and bearings shown refer to the New York State Plane Coordinate System NAD 83 (North American Datum) Long Island zone 3104.

Control Point Associates, Inc.



6/27/18

Kenneth J. Stigner
State Of New York
Professional Land Surveyor #049824-1



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Parcel S6

All that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, having an upper limiting plane lying 1.35 feet below top of legal curb grade as indicated on the City of New York President of the Borough of Manhattan Topographical Bureau Sectional Map Nos. 3 and 5 being more particularly bounded and described as follows:

Beginning at the corner formed by the intersection of the westerly side of Greenwich Street with the southerly side of Liberty Street or the northeast corner of Block 54; said corner having the coordinates of North 197986.95 East 980705.00;

Running thence North 60° 01' 34" West, along the southerly side of Liberty Street, a distance of 119.64 feet to a point;

Running thence North 57° 08' 42" West, through the bed of Liberty Street, a distance of 328.84 feet to a point on the easterly side of West Street;

Running thence North 22° 47' 59" East a distance of 23.04 feet to a point on the foundation perimeter wall, referenced in parcel 3 of indenture dated January 31, 1968 between The City of New York and The Port of New York Authority in record Liber 273, Page 34;

Running thence South 60° 00' 58" East along said perimeter wall, a distance of 431.56 feet to a point;

Running thence North 69° 31' 09" East a distance of 8.91 feet to a point;

Running thence South 04° 36' 29" West, through the intersection of Liberty and Greenwich Streets, a distance of 17.15 feet to a point;

Running thence South 18° 15' 50" West, through the intersection of Liberty and Greenwich Streets, a distance of 31.33 feet to the PLACE AND POINT OF BEGINNING.

Containing 14,809 square feet or 0.340 acres more or less, and having no lower limiting plane.

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 Page 1 OF 2

Parcel S7

All that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, having an upper limiting plane lying 1.35 feet below top of legal curb grade as indicated on the City of New York President of the Borough of Manhattan Topographical Bureau Sectional Map Nos. 3 and 5 being more particularly bounded and described as follows:

Beginning at the corner formed by the intersection of the easterly side of West Street (S.R. 9A) with the northerly side of Cedar Street or the southwest corner of Block 56, said corner having the coordinates of North 198098.65 East 980288.13;

Running thence South 60° 10' 33" East, along the northerly line of Cedar Street a distance of 180.59 feet to a point on the westerly side of Washington Street;

Running thence North 16° 13' 50" East, along the westerly side of Washington Street, a distance of 0.29 feet to a point;

Running thence the following 5 courses through the beds of Cedar Street and Washington Street:

- 1) South 58° 28' 18" East a distance 6.13 feet to a point;
- 2) South 49° 03' 49" East a distance of 25.23 feet to a point;
- 3) South 30° 01' 06" East a distance of 21.35 feet to a point;
- 4) South 12° 17' 49" East a distance of 6.42 feet to a point;
- 5) South 16° 04' 13" West a distance of 21.25 feet to a point;

Running thence North 60° 00' 29" West, through the beds of Washington and Cedar Streets, a distance of 229.43 feet to a point;

Running thence North 16° 07' 53" East a distance of 41.39 feet to the PLACE AND POINT OF BEGINNING.

Containing 9,025 square feet or 0.207 acres more or less, and having no lower limiting plane.

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Page 2 OF 2

The coordinates and bearings shown refer to the New York State Plane Coordinate System NAD 83 (North American Datum) Long Island zone 3104.

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6/27/18
Kenneth J. Stigner Date
State Of New York
Professional Land Surveyor #049824-1



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Parcel S4

All that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, having a lower limiting plane lying 1.35 feet below top of legal curb grade as indicated on the City of New York President of the Borough of Manhattan Topographical Bureau Sectional Map Nos. 3 and 5 being more particularly bounded and described as follows:

Beginning at the corner formed by the intersection of the easterly side of West Street (S.R. 9A) with the northerly side of Cedar Street or the southwest corner of Block 56, said corner having the coordinates of North 198098.65 East 980288.13;

Running thence North 15° 23' 39" East a distance of 4.14 feet to a point;

Running thence South 59° 28' 21" East a distance of 53.96 feet to a point;

Running thence South 59° 18' 42" East a distance of 2.37 feet to a point;

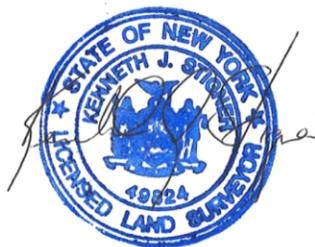
Running thence South 26° 19' 58" West a distance of 3.32 feet to a point on the northerly side of Cedar Street;

Running thence North 60° 10' 33" West, along the northerly side of Cedar Street, a distance of 55.50 feet to the PLACE AND POINT OF BEGINNING.

Containing 205 square feet or 0.005 acres more or less, and having no upper limiting plane.

The coordinates and bearings shown refer to the New York State Plane Coordinate System NAD 83 (North American Datum) Long Island zone 3104.

Control Point Associates, Inc.



6/27/18

Kenneth J. Stigner
State Of New York
Professional Land Surveyor #049824-1

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Parcel S4A

All that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, having a lower limiting plane lying 1.35 feet below top of legal curb grade as indicated on the City of New York President of the Borough of Manhattan Topographical Bureau Sectional Map Nos. 3 and 5 being more particularly bounded and described as follows:

Beginning at a point on the northerly side of Cedar Street, which point is distant 77.77 feet easterly from the corner formed by the intersection of the easterly side of West Street with the northerly side of Cedar Street, said corner having the coordinates of North 198059.97 East 980355.60;

Running thence North 26° 58' 58" East a distance of 2.98 feet to a point;

Running thence South 59° 18' 42" East a distance of 25.26 feet to a point;

Running thence South 58° 28' 18" East a distance of 77.68 feet to a point on the westerly side of Washington Street;

Running thence South 16° 13' 50" West, along the westerly side of Washington Street, a distance of 0.29 feet to a point formed by the intersection of the northerly side of Cedar Street and the westerly side of Washington Street;

Running thence North 60° 10' 33" West, along the northerly side of Cedar Street, a distance of 102.82 feet to the PLACE AND POINT OF BEGINNING.

Containing 182 square feet or 0.004 acres more or less, and having no upper limiting plane.

The coordinates and bearings shown refer to the New York State Plane Coordinate System NAD 83 (North American Datum) Long Island zone 3104.

Control Point Associates, Inc.



6/27/18
Kenneth J. Stigner Date
State Of New York
Professional Land Surveyor #049824-1

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Parcel S5

All that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, having a lower limiting plane lying 1.35 feet below top of legal curb grade as indicated on the City of New York President of the Borough of Manhattan Topographical Bureau Sectional Map Nos. 3 and 5 being more particularly bounded and described as follows:

Beginning at the corner formed by the intersection of the westerly side of Greenwich Street with the southerly side of Liberty Street or the northeast corner of Block 54; said corner having the coordinates of North 197986.95 East 980705.00;

Running thence South 18° 08' 37" West, along the westerly side of Greenwich Street, a distance of 112.04 feet to a point;

Running thence South 18° 28' 21" West, still along the westerly side of Greenwich Street, a distance of 49.14 feet to a point;

Running thence North 59° 58' 51" West a distance of 1.27 feet to a point;

Running thence North 14° 33' 59" East a distance of 158.00 feet to a point;

Running thence North 57° 08' 42" West a distance of 109.30 feet to a point on the southerly side of Liberty Street;

Running thence South 60° 01' 34" East, along the southerly side of Liberty Street, a distance of 119.64 feet to the PLACE AND POINT OF BEGINNING.

Containing 1,358 square feet or 0.031 acres more or less, and having no upper limiting plane.

The coordinates and bearings shown refer to the New York State Plane Coordinate System NAD 83 (North American Datum) Long Island zone 3104.

Control Point Associates, Inc.



Kenneth J. Stigner Date
State Of New York
Professional Land Surveyor #049824-1

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Parcel S8

All that certain plot, piece or parcel of land, situate, lying and being in the Borough of Manhattan, City, County and State of New York, having a lower limiting plane lying 1.35 feet below top of legal curb grade as indicated on the City of New York President of the Borough of Manhattan Topographical Bureau Sectional Map Nos. 3 and 5 being more particularly bounded and described as follows:

Beginning at a point on the northerly side of Cedar Street, which point is distant 55.50 feet easterly from the corner formed by the intersection of the easterly side of West Street with the northerly side of Cedar Street, said point having the coordinates of North 198071.05 East 980336.28;

Running thence North 26° 19' 58" East a distance of 3.32 feet to a point;

Running thence South 59° 18' 42" East a distance of 22.33 feet to a point;

Running thence South 26° 58' 58" West a distance of 2.98 feet to a point on the northerly side of Cedar Street;

Running thence North 60° 10' 33" West, along the northerly side of Cedar Street, a distance of 22.27 feet to the PLACE AND POINT OF BEGINNING.

Containing 70 square feet or 0.0016 acres more or less, and having no upper limiting plane.

The coordinates and bearings shown refer to the New York State Plane Coordinate System NAD 83 (North American Datum) Long Island zone 3104.

Control Point Associates, Inc.



6/27/18

Kenneth J. Stigner
State Of New York
Professional Land Surveyor #049824-1

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SHEET 1 OF 2

METES AND BOUNDS DESCRIPTION

PORTIONS OF LOT 1, BLOCK 58
BOROUGH OF MANHATTAN, CITY, COUNTY AND STATE OF NEW YORK

OCULUS WINGS ENCROACHMENT EASEMENT #1

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATED, LYING AND BEING IN THE BOROUGH OF MANHATTAN, CITY, COUNTY AND STATE OF NEW YORK, AT THE TOP OF LEGAL CURB GRADE AS INDICATED ON THE CITY OF NEW YORK PRESIDENT OF THE BOROUGH OF MANHATTAN TOPOGRAPHICAL BUREAU SECTIONAL MAP NOS. 3 AND 5 AS IT EXISTED ON NOVEMBER 16, 2006, AND HAVING AN UPPER LIMITING PLANE LYING 212 FEET ABOVE THE TOP OF SAID LEGAL CURB GRADE, AND HAVING A LOWER LIMITING PLANE LYING 30 FEET ABOVE THE TOP OF SAID LEGAL CURB GRADE, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE SOUTHERLY LINE OF FULTON STREET DISTANT SOUTH 66 DEGREES - 12 MINUTES - 53 SECONDS EAST, 23.37 FEET (23 FEET - 4 3/8 INCHES), FROM THE CORNER FORMED BY THE INTERSECTION OF THE SOUTHERLY LINE OF FULTON STREET WITH THE EASTERLY LINE OF GREENWICH STREET, SAID CORNER HAVING THE COORDINATES OF NORTH 198634.35 EAST 980956.15, RUNNING THENCE, THROUGH THE BED OF FULTON STREET, THE FOLLOWING THREE (3) COURSES AND DISTANCES:

- 1) NORTH 45 DEGREES - 33 MINUTES - 23 SECONDS EAST, A DISTANCE OF 22.16 FEET (22 FEET - 1 15/16 INCHES) TO A POINT, THENCE;
- 2) SOUTH 76 DEGREES - 18 MINUTES - 31 SECONDS EAST, A DISTANCE OF 338.79 FEET (338 FEET - 9 1/2 INCHES) TO A POINT, THENCE;
- 3) SOUTH 37 DEGREES - 30 MINUTES - 56 SECONDS WEST, A DISTANCE OF 82.31 FEET (82 FEET - 3 11/16 INCHES) TO A POINT ON THE SOUTHERLY LINE OF SAID FULTON STREET, THENCE;
- 4) ALONG THE SOUTHERLY LINE OF SAID FULTON STREET, NORTH 66 DEGREES - 12 MINUTES - 53 SECONDS WEST, A DISTANCE OF 322.23 FEET (322 FEET - 2 13/16 INCHES) TO THE PLACE AND POINT OF BEGINNING.

HAVING A PROJECTED AREA AT TOP OF LEGAL CURB GRADE PLANE OF 16,071 SQUARE FEET OR 0.369 ACRES OF LAND, MORE OR LESS.

OCULUS WINGS ENCROACHMENT EASEMENT #2

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATED, LYING AND BEING IN THE BOROUGH OF MANHATTAN, CITY, COUNTY AND STATE OF NEW YORK, AT THE TOP OF LEGAL CURB GRADE AS INDICATED ON THE CITY OF NEW YORK PRESIDENT OF THE BOROUGH OF MANHATTAN TOPOGRAPHICAL BUREAU SECTIONAL MAP NOS. 3 AND 5 AS IT EXISTED ON NOVEMBER 16, 2006, AND HAVING AN UPPER LIMITING PLANE LYING 170 FEET ABOVE THE TOP OF SAID LEGAL CURB GRADE, AND HAVING A LOWER LIMITING PLANE LYING 38 FEET ABOVE THE TOP OF SAID LEGAL CURB GRADE, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY LINE OF GREENWICH STREET DISTANT SOUTH 15 DEGREES - 36 MINUTES - 25 SECONDS WEST, 58.99 FEET (58 FEET - 11 13/16 INCHES), FROM THE CORNER

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35 Technology Drive, Warren, NJ 07059
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SHEET 2 OF 2

FORMED BY THE INTERSECTION OF THE SOUTHERLY LINE OF FULTON STREET WITH THE EASTERLY LINE OF GREENWICH STREET, SAID CORNER HAVING THE COORDINATES OF NORTH 198634.35 EAST 980956.15, RUNNING THENCE;

- 1) ALONG THE EASTERLY LINE OF SAID GREENWICH STREET, SOUTH 15 DEGREES - 36 MINUTES - 25 SECONDS WEST, A DISTANCE OF 96.83 FEET (96 FEET - 10 INCHES) TO A POINT, THENCE, THROUGH THE BED OF GREENWICH STREET, THE FOLLOWING TWO (2) COURSES AND DISTANCES:
- 2) NORTH 67 DEGREES - 40 MINUTES - 30 SECONDS WEST, A DISTANCE OF 36.74 FEET (36 FEET - 8 15/16 INCHES) TO A POINT, THENCE;
- 3) NORTH 37 DEGREES - 07 MINUTES - 43 SECONDS EAST, A DISTANCE OF 99.47 FEET (99 FEET - 5 5/8 INCHES) TO THE PLACE AND POINT OF BEGINNING.

HAVING A PROJECTED AREA AT TOP OF LEGAL CURB GRADE PLANE OF 1,767 SQUARE FEET OR 0.040 ACRES OF LAND, MORE OR LESS.

THIS DESCRIPTION IS BASED UPON A SURVEY ENTITLED "EASEMENT MAP WORLD TRADE CENTER PATH TERMINAL OCLUSUS WINGS @ GRADE PROPERTY SURVEY" PREPARED BY CONTROL POINT ASSOCIATES, INC. PC, DATED MARCH 05, 2019.

THIS PROPERTY MAY BE SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS EITHER WRITTEN OR IMPLIED.

CONTROL POINT ASSOCIATES, INC. PC



Kenneth J. Stigner

03-05-2019

KENNETH J. STIGNER
NEW YORK PROFESSIONAL
LAND SURVEYOR # 049824-1

DATE

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CONTROL POINT ASSOCIATES, INC.

traditional methods | modern approaches

14 Penn Plaza
225 West 34th Street,
Suite 812
New York, NY 10122
Tel: 646.780.0411

SHEET 1 OF 2

METES AND BOUNDS DESCRIPTION

A PORTION OF LOT 1, BLOCK 58

BOROUGH OF MANHATTAN, CITY, COUNTY AND STATE OF NEW YORK

PERFORMING ARTS CENTER BUILDING ENCROACHMENT EASEMENT 1

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATED, LYING AND BEING IN THE BOROUGH OF MANHATTAN, CITY, COUNTY AND STATE OF NEW YORK, HAVING A LOWER LIMITING PLANE LYING 20 FEET ABOVE THE TOP OF LEGAL CURB GRADE AS INDICATED ON THE CITY OF NEW YORK PRESIDENT OF THE BOROUGH OF MANHATTAN TOPOGRAPHICAL BUREAU SECTIONAL MAP NOS. 3 AND 5 AS IT EXISTED ON NOVEMBER 16, 2006, AND, HAVING AN UPPER LIMITING PLANE LYING 146 FEET ABOVE THE TOP OF SAID LEGAL CURB GRADE, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTHERLY LINE OF FULTON STREET DISTANT NORTH 61 DEGREES - 00 MINUTES - 57 SECONDS WEST, 159.43 FEET, FROM THE CORNER FORMED BY THE INTERSECTION OF THE NORTHERLY SIDE OF FULTON STREET WITH THE WESTERLY SIDE OF GREENWICH STREET, SAID CORNER HAVING THE COORDINATES OF NORTH 198763.82 EAST 980890.59, RUNNING THENCE, THROUGH THE BED OF FULTON STREET, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

- 1) NORTH 75 DEGREES - 40 MINUTES - 51 SECONDS WEST, A DISTANCE OF 5.77 FEET (5 FEET - 9 1/4 INCHES) TO A POINT, THENCE;
- 2) NORTH 14 DEGREES - 19 MINUTES - 09 SECONDS EAST, A DISTANCE OF 1.51 FEET (1 FOOT - 6 1/8 INCHES) TO A POINT ON THE NORTHERLY LINE OF SAID FULTON STREET, THENCE;
- 3) ALONG THE NORTHERLY LINE OF SAID FULTON STREET, SOUTH 61 DEGREES - 00 MINUTES - 57 SECONDS EAST, A DISTANCE OF 5.97 FEET (5 FEET - 11 9/16 INCHES) TO THE PLACE AND POINT OF BEGINNING.

HAVING A PROJECTED AREA AT TOP OF LEGAL CURB GRADE PLANE OF 4.358 SQUARE FEET OF LAND, MORE OR LESS AND CONTAINING 549.108 CUBIC FEET OF LAND, MORE OR LESS.

PERFORMING ARTS CENTER BUILDING ENCROACHMENT EASEMENT 2

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATED, LYING AND BEING IN THE BOROUGH OF MANHATTAN, CITY, COUNTY AND STATE OF NEW YORK, HAVING A LOWER LIMITING PLANE LYING 1.35 FEET BELOW THE TOP OF LEGAL CURB GRADE AS INDICATED ON THE CITY OF NEW YORK PRESIDENT OF THE BOROUGH OF MANHATTAN TOPOGRAPHICAL BUREAU SECTIONAL MAP NOS. 3 AND 5 AS IT EXISTED ON NOVEMBER 16, 2006, AND, HAVING AN UPPER LIMITING PLANE LYING AT TOP OF LEGAL CURB GRADE, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTHERLY LINE OF FULTON STREET DISTANT NORTH 61 DEGREES - 00 MINUTES - 57 SECONDS WEST, 159.43 FEET, FROM THE CORNER FORMED BY THE INTERSECTION OF THE NORTHERLY SIDE OF FULTON STREET WITH THE WESTERLY SIDE OF GREENWICH STREET, SAID CORNER HAVING THE COORDINATES OF NORTH 198763.82 EAST 980890.59, RUNNING THENCE, THROUGH THE BED OF FULTON STREET, THE FOLLOWING TWO (2) COURSES AND DISTANCES:

- 1) NORTH 75 DEGREES - 40 MINUTES - 51 SECONDS WEST, A DISTANCE OF 5.77 FEET (5 FEET - 9 1/4 INCHES) TO A POINT, THENCE;

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SHEET 2 OF 2

- 2) NORTH 14 DEGREES - 19 MINUTES - 09 SECONDS EAST, A DISTANCE OF 1.51 FEET (1 FOOT - 6 1/8 INCHES) TO A POINT ON THE NORTHERLY LINE OF SAID FULTON STREET, THENCE;
- 3) ALONG THE NORTHERLY LINE OF SAID FULTON STREET, SOUTH 61 DEGREES - 00 MINUTES - 57 SECONDS EAST, A DISTANCE OF 5.97 FEET (5 FEET - 11 9/16 INCHES) TO THE PLACE AND POINT OF BEGINNING.

HAVING A PROJECTED AREA AT TOP OF LEGAL CURB GRADE PLANE OF 4.358 SQUARE FEET OF LAND, MORE OR LESS AND CONTAINING 5.833 CUBIC FEET OF LAND, MORE OR LESS.

THIS DESCRIPTION IS BASED UPON A SURVEY ENTITLED "EASEMENT MAP WORLD TRADE CENTER PERFORMING ARTS CENTER @ GRADE PROPERTY SURVEY" PREPARED BY CONTROL POINT ASSOCIATES, INC. PC, DATED MARCH 5, 2019.

CONTROL POINT ASSOCIATES, INC. PC



03-05-2019

KENNETH J. STIGNER
NEW YORK PROFESSIONAL
LAND SURVEYOR # 049824-1

DATE



Yamil N. Arocho, MAI
Senior Appraiser
347-537-2159
yarocho@bbgres.com

PROFILE

Yamil Arocho is a Senior Appraiser at BBG, Inc. in the NYC office. With over 20 years of real estate appraisal and consulting experience, Yamil has appraised hundreds of properties located in the Metropolitan New York area and other areas, including New Jersey and Colorado. His primary market area is the five boroughs of New York City and his secondary market area includes Westchester, Long Island, and Northern New Jersey.

Yamil has extensive experience appraising a wide spectrum of properties that include: vacant land and development sites, residential properties, office buildings, retail properties, hotels, industrial properties, mixed-use properties, proposed developments, easements, rights-of-ways, and development rights. He also has extensive knowledge of New York City zoning regulations.

Yamil's focus is on valuation, litigation and support, expert witness testimony, arbitrations, appraisal review, discounted cash Flow Analysis, estate and gift tax planning, tax appeal, consulting, land valuation and the valuation of transferable development rights.

Yamil also specializes in the appraisal of real estate for both litigation and condemnation purposes pursuant to eminent domain, including providing expert witness testimony and the preparation of rebuttal reports.

Yamil has appeared as an expert witness on real estate valuation in New York State Supreme Courts in New York County (Manhattan) and Kings County (Brooklyn).

PROFESSIONAL AFFILIATIONS

MAI Designated Member of the Appraisal Institute

General Certified Appraiser:
State of New York (License # 46000045109)

EDUCATION

University of Colorado at Boulder, B.A.: English Literature
