REFUNDING ISSUE

In the opinion of Nixon Peabody LLP and Bryant Rabbino LLP, Co-Bond Counsel, under existing law and assuming compliance with the tax covenants described herein, and the accuracy of certain representations and certifications made by the Corporation described herein, interest on the Series 2022 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended (the "Code"). Co-Bond Counsel is also of the opinion that interest on the Series 2022 Bonds is not treated as a preference item in calculating the alternative minimum tax imposed under the Code. Co-Bond Counsel is further of the opinion that interest on the Series 2022 Bonds is exempt from personal income taxation imposed by the State of New York or any political subdivision of the State of New York, including The City of New York. See "SECTION XII: TAX MATTERS" herein regarding certain other tax considerations.

$454,140,000
HUDSON YARDS INFRASTRUCTURE CORPORATION
HUDSON YARDS REVENUE BONDS
FISCAL 2022 SERIES A
(GREEN BONDS)

Dated: Date of Delivery **Due: As shown on the inside cover page**

The Hudson Yards Infrastructure Corporation (the "Corporation"), a local development corporation organized by The City of New York (the "City") under the Not-For-Profit Corporation Law of the State of New York (the "State") that is separate and apart from the City, is issuing its Hudson Yards Revenue Bonds, Fiscal 2022 Series A (Green Bonds) (the "Series 2022 Bonds") pursuant to a trust indenture dated as of May 1, 2017, as amended and supplemented (the "Indenture"), by and between the Corporation and U.S. Bank National Association, New York, New York, as trustee (the "Trustee"). The Series 2022 Bonds will be issued on parity with two outstanding series of revenue bonds issued in 2017 (the "Series 2017 Bonds") pursuant to the Indenture. Additional Bonds may be issued under the Indenture from time to time on a parity with the Series 2017 Bonds and the Series 2022 Bonds upon meeting certain requirements under the Indenture, as described herein.

The Corporation previously issued revenue bonds (the "Outstanding 2006 Indenture Bonds") under a trust indenture, dated as of December 1, 2006, as amended and restated (the "2006 Indenture"), by and between the Corporation and U.S. Bank National Association, as trustee, all of which Outstanding 2006 Indenture Bonds are being refunded by the proceeds of the Series 2022 Bonds. Upon delivery of the Series 2022 Bonds, the Outstanding 2006 Indenture Bonds will be defeased, the 2006 Indenture and the lien created thereby will be terminated, and the pledge and lien on Revenues created by the Indenture will become a first pledge and lien in favor of the owners of the Series 2017 Bonds, the Series 2022 Bonds and all Bonds (as defined herein) hereafter issued on parity therewith, as described herein. No additional bonds may be issued under the 2006 Indenture.

The bonds issued under the 2006 Indenture were issued to encourage development within the Hudson Yards Financing District (as defined herein) by financing the cost of the extension of the No. 7 subway line and creation of a public park. As a result of such infrastructure improvements and development incentives, described herein, significant new office, residential, and hotel development has occurred and is continuing to occur in the Hudson Yards Financing District.

Interest on the Series 2022 Bonds will be payable on February 15 and August 15 of each year, beginning February 15, 2022. The Series 2022 Bonds can be purchased in principal amounts of $5,000 or any integral multiple thereof. Other terms of the Series 2022 Bonds, including redemption provisions, are described herein. The Series 2022 Bonds will be issued as registered bonds and DTC will act as securities depository for the Series 2022 Bonds. **The Series 2022 Bonds have been identified as "Green Bonds" by Kestrel Verifiers. See "SECTION IV: THE SERIES 2022 BONDS-Designation of the Bonds as Green Bonds" and APPENDIX H herein.**

INVESTORS SHOULD READ THIS ENTIRE OFFICIAL STATEMENT TO OBTAIN INFORMATION ESSENTIAL TO MAKING AN INFORMED INVESTMENT DECISION INCLUDING "SECTION IX: RISK FACTORS" IN THIS OFFICIAL STATEMENT. THE SERIES 2022 BONDS ARE NOT A DEBT OF THE CITY, AND THE CITY HAS NO OBLIGATION TO PAY PRINCIPAL OF OR, ABSENT AN APPROPRIATION THEREFOR AS DESCRIBED HEREIN, INTEREST ON, THE SERIES 2022 BONDS. THE CORPORATION HAS NO TAXING POWER.

The Series 2022 Bonds are offered when, as and if issued and accepted by the Underwriters. The issuance of the Series 2022 Bonds is subject to the approval of legality by Nixon Peabody LLP, New York, New York, and Bryant Rabbino LLP, New York, New York, Co-Bond Counsel. Certain legal matters with respect to the Corporation and the City will be passed upon by the City's Corporation Counsel, and certain legal matters with respect to the City's disclosure in Appendix D to this Official Statement will be passed upon by Orrick, Herrington & Sutcliffe LLP, New York, New York, Special Disclosure Counsel to the City and the Corporation. Certain legal matters will be passed upon for the Underwriters of the Series 2022 Bonds by Norton Rose Fulbright US LLP, New York, New York, and D. Seaton and Associates, P.A., P.C., New York, New York. It is expected that the Series 2022 Bonds will be available for delivery to DTC on or about October 27, 2021.

Goldman Sachs & Co. LLC **Ramirez & Co., Inc.**

BofA Securities	**Barclays**	**Citigroup**
J.P. Morgan	**Jefferies**	**Loop Capital Markets**
Raymond James	**RBC Capital Markets**	**Siebert Williams Shank & Co., LLC**
UBS	**Wells Fargo Securities**	
Academy Securities Inc.	**Blaylock Van, LLC**	**Cabrera Capital Markets LLC**
Drexel Hamilton, LLC	**Great Pacific Securities**	**Rice Financial Products Company**
	Roosevelt & Cross Incorporated	

Dated: October 21, 2021

$454,140,000

HUDSON YARDS INFRASTRUCTURE CORPORATION

HUDSON YARDS REVENUE BONDS
FISCAL 2022 SERIES A (GREEN BONDS)

Due February 15,	Principal Amount	Interest Rate	Yield	CUSIP[1] (Base CUSIP 44420R)
2026	$7,050,000	5%	0.51%	BK5
2027	7,420,000	5	0.68	BL3
2028	12,085,000	5	0.94	BM1
2029	14,655,000	5	1.09	BN9
2030	15,390,000	5	1.23	BP4
2031	16,160,000	5	1.34	BQ2
2032	16,965,000	5	1.42	BR0
2033	17,815,000	5	1.50[2]	BS8
2034	18,700,000	5	1.57[2]	BT6
2035	8,945,000	4	1.81[2]	BV1
2035	10,695,000	5	1.63[2]	BU3
2036	14,000,000	4	1.85[2]	BX7
2036	6,530,000	5	1.69[2]	BW9
2037	21,420,000	4	1.92[2]	BY5
2038	22,275,000	4	1.95[2]	BZ2
2039	23,170,000	4	1.98[2]	CA6
2040	24,095,000	4	2.00[2]	CB4
2041	25,055,000	4	2.03[2]	CC2
2042	26,060,000	4	2.06[2]	CD0
2043	27,100,000	4	2.09[2]	CE8
2044	28,180,000	4	2.11[2]	CF5

$90,375,000 2¾% Term Bonds due February 15, 2047, Yield 2.74%[2], CUSIP[1] 44420RCG3

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(1) Copyright, American Bankers Association ("ABA"). CUSIP data herein are provided by CUSIP Global Services ("CGS"), operated on behalf of the ABA by S&P Global Market Intelligence, a division of S&P Global Inc. This data is not intended to create a database and does not serve in any way as a substitute for the CGS database. Any CUSIP numbers listed above have been assigned by an independent company not affiliated with the Corporation and are being provided solely for the convenience of Bondholders only at the time of issuance of the Series 2022 Bonds, and the Corporation and the Underwriters make no representation with respect to such numbers nor undertake any responsibility for their accuracy now or at any time in the future. The CUSIP number for a specific maturity is subject to being changed after the issuance of the Series 2022 Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the Series 2022 Bonds.

(2) Priced to first optional par call on February 15, 2032.

No dealer, broker, salesperson or other person has been authorized by the Corporation, the City, or the Underwriters to give any information or to make any representations in connection with the Series 2022 Bonds or the matters described herein, other than those contained in this Official Statement, and, if given or made, such other information or representations must not be relied upon as having been authorized by the Corporation, the City or the Underwriters. This Official Statement does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Series 2022 Bonds, by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information and expressions of opinion contained herein are subject to change without notice, and neither the delivery of this Official Statement, nor any sale made hereunder, shall, under any circumstances, create any implication that there has been no change in the matters described herein since the date hereof. This Official Statement is submitted in connection with the sale of the Series 2022 Bonds referred to herein and may not be reproduced or used, in whole or in part, for any other purpose. The Underwriters may offer and sell Series 2022 Bonds to certain dealers and others at prices lower than the offering prices stated on the inside cover page hereof. The offering prices may be changed from time to time by the Underwriters. No representations are made or implied by the Corporation or the Underwriters as to any offering of any derivative instruments. The Underwriters have reviewed the information in this Official Statement in accordance with their responsibilities to investors under the securities laws as applied to the facts and circumstances of this transaction, but the Underwriters do not guaranty the accuracy or completeness of such information.

The factors affecting the Corporation are complex. This Official Statement should be considered in its entirety and no one factor considered less important than any other by reason of its location herein. Where agreements, reports or other documents are referred to herein, reference should be made to such agreements, reports or other documents for more complete information regarding the rights and obligations of parties thereto, facts and opinions contained therein and the subject matter thereof.

This Official Statement contains forecasts, projections and estimates that are based on expectations and assumptions which existed at the time such forecasts, projections and estimates were prepared. In light of the important factors that may materially affect economic conditions in the City, the inclusion in this Official Statement of such forecasts, projections and estimates should not be regarded as a representation by the Corporation, its independent auditors, the City, Hudson Yards Development Corporation, Cushman & Wakefield, Inc., or the Underwriters that such forecasts, projections and estimates will occur. Such forecasts, projections and estimates are not intended as representations of fact or guarantees of results. If and when included in this Official Statement the words "expects," "forecasts," "projects," "intends," "anticipates," "estimates" and analogous expressions are intended to identify forward-looking statements and any such statements inherently are subject to a variety of risks and uncertainties that could cause actual results to differ materially from those projected. Such risks and uncertainties include, among others, general economic and business conditions, changes in political, social and economic conditions, regulatory initiatives and compliance with governmental regulations, litigation and various other events, conditions and circumstances, many of which are beyond the control of the Corporation. These forward-looking statements speak only as of the date they were prepared. The Corporation disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained herein (except as required by law) to reflect any change in the Corporation's expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

This Official Statement is intended to reflect facts and circumstances on the date of this Official Statement or on such other date or at such other time as identified herein. No assurance can be given that such information will not have changed or be incomplete at a later date. Consequently, there should be no reliance on this Official Statement at times subsequent to the issuance of the Series 2022 Bonds described herein on the assumption that such facts or circumstances are unchanged.

Marks Paneth LLP, the Corporation's independent auditor, has not reviewed, commented on or approved, and is not associated with, this Official Statement. The report of Marks Paneth LLP relating to the Corporation's financial statements for the Fiscal Years ended June 30, 2021 and 2020, which is a matter of public record, is included in this Official Statement. However, Marks Paneth LLP has not performed any procedures on any financial statements or other financial information of the Corporation, including without

limitation any of the information contained in this Official Statement, since the date of such report and has not been asked to consent to the inclusion of its report in this Official Statement.

References to website addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader's convenience. Unless specified otherwise, such websites and the information or links contained therein are not incorporated into, and are not part of, this Official Statement for purposes of Rule 15c2-12 adopted by the United States Securities and Exchange Commission under the Securities Exchange Act of 1934.

IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN MARKET PRICES OF THE SERIES 2022 BONDS AT LEVELS ABOVE THOSE WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

THESE SECURITIES HAVE NOT BEEN RECOMMENDED BY ANY FEDERAL OR STATE SECURITIES COMMISSION OR REGULATORY AUTHORITY. FURTHERMORE, THE FOREGOING AUTHORITIES HAVE NOT CONFIRMED THE ACCURACY OR DETERMINED THE ADEQUACY OF THIS DOCUMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE. IN MAKING AN INVESTMENT DECISION, INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THIS OFFICIAL STATEMENT AND THE TERMS OF THE OFFERING, INCLUDING THE MERITS AND RISKS INVOLVED.

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PROJECT AREA MAP

Set forth below is a map showing the boundaries of the Hudson Yards Financing District outlined in red.

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SUMMARY STATEMENT

This Summary Statement is subject in all respects to more complete information contained in this Official Statement and should not be considered a complete statement of the facts material to making an investment decision. The offering of the Series 2022 Bonds to potential investors is made only by means of the entire Official Statement. Capitalized terms used in this Summary Statement and not otherwise defined shall have the meanings given such terms in the Indenture. See "APPENDIX A: CERTAIN DEFINITIONS AND SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE – Definitions of Certain Terms."

Overview .... The Hudson Yards Infrastructure Corporation (the "Corporation") is issuing $454,140,000 aggregate principal amount of its Hudson Yards Revenue Bonds, Fiscal 2022 Series A (Green Bonds) (the "Series 2022 Bonds"), pursuant to a trust indenture, dated as of May 1, 2017, as amended and supplemented (the "Indenture"), by and between the Corporation and U.S. Bank National Association, New York, New York, as trustee (the "Trustee").

The Series 2022 Bonds will be issued on parity with two series of revenue bonds issued in 2017 (the "Series 2017 Bonds") under the Indenture, of which $2,141,760,000 are currently outstanding. All bonds issued pursuant to the Indenture on parity with the Series 2017 Bonds, including the Series 2022 Bonds, are collectively referred to herein as the "Bonds." Additional Bonds may only be issued under the Indenture from time to time on a parity with the Series 2017 Bonds and the Series 2022 Bonds upon meeting certain requirements under the Indenture, as described herein.

The Corporation previously issued revenue bonds under a trust indenture, dated as of December 1, 2006, as amended and restated through October 1, 2011 (the "2006 Indenture"), by and between the Corporation and the Trustee, of which $533,565,000 are currently outstanding (the "Outstanding 2006 Indenture Bonds"). Upon delivery of the Series 2022 Bonds, the Outstanding 2006 Indenture Bonds will be defeased, the 2006 Indenture and the lien created thereby will be terminated, and the pledge and lien on Revenues created by the Indenture will become a first pledge and lien in favor of the owners of the Bonds, including the Series 2022 Bonds, as described herein. No additional bonds may be issued under the 2006 Indenture. The bonds issued under the 2006 Indenture were issued to encourage development within the Hudson Yards Financing District (as defined herein) by financing the cost of the extension of the No. 7 subway line and creation of a public park.

Proceeds of the Series 2022 Bonds will be applied, with other available funds, to refund all of the Outstanding 2006 Indenture Bonds, as more fully described herein. See "SECTION III: PLAN OF FINANCE.

For a discussion of risk factors which could have a material effect on the Corporation's Revenues, including the COVID-19 pandemic, see SECTION I: INTRODUCTION – COVID-19 Pandemic," "SECTION VII: HUDSON YARDS FINANCING DISTRICT DEVELOPMENT AND REVENUE REPORT – COVID-19 Pandemic" and "SECTION IX: RISK FACTORS."

The Project....................................	The "Hudson Yards Financing District," or the "Project Area," describes the approximately 45 square block area generally bounded by West 43rd Street on the north, West 29th and 30th Streets on the south, Seventh and Eighth Avenues on the east, and Eleventh and Twelfth Avenues on the west, which is outlined in red on the map preceding this Summary Statement and is more specifically described in Appendix C to this Official Statement. The Corporation derives its Revenues (other than Interest Support Payments, as herein defined) from the Project Area. The Project originally consisted of (a) the design and construction of an extension of the No. 7 subway line from Times Square to a new terminal station in the Project Area (the "Subway Extension"), which began operations in September 2015, (b) the construction of a three-block park and boulevard, located between West 33rd and West 36th Streets and known as "Bella Abzug Park" ("Phase I"), which opened in August 2015, and (c) the acquisition of certain transferable development rights (the "ERY Transferable Development Rights") associated with the Eastern Rail Yards ("ERY"). Subsequently, the Project was expanded to include a second phase for the park ("Phase II"), which will expand the park north to 39th Street. The implementation of the Project is managed by the Hudson Yards Development Corporation ("HYDC"), a City-controlled local development corporation. Phase II of the park is being financed initially, along with closeout costs of Phase I, through a Term Loan Agreement with Bank of America, N.A, dated as of February 1, 2019 (the "Subordinate Loan Facility"), which currently permits the Corporation to draw up to $200 million for Project Costs. As of September 1, 2021, the Corporation has drawn approximately $2.4 million under the Subordinate Loan Facility. Principal and interest on the term loans drawn under the Subordinate Loan Facility (the "Subordinate Term Loans") are payable on a basis subordinate to the payment of debt service on the Bonds. The Corporation has funded certain interest reserves under the Subordinate Loan Facility and the City has executed an Additional Borrowing Hudson Yards Support Agreement to provide for Interest Support Payments on the Subordinate Term Loans. The Corporation expects to seek an extension to the term of the Subordinate Loan Facility, which expires on June 30, 2022. The total cost of Phase II of the park is projected to be approximately $380 million. In addition, the Corporation expects that $3.6 million of closeout costs for the Subway Extension will be financed through the Subordinate Loan Facility. The Corporation expects to repay amounts drawn under the Subordinate Loan Facility and finance the remaining costs of Phase II of the park with the proceeds of Additional Bonds in the future. See "SECTION V: SECURITY AND SOURCES OF PAYMENT OF BONDS – Additional Bonds."
Securities Offered..................................	The Corporation expects to issue the Series 2022 Bonds bearing interest as provided in the inside cover page of this Official Statement. Interest on the Series 2022 Bonds is payable on February 15 and August 15 of each year, beginning February 15, 2022.

Optional Redemption of the Series 2022 Bonds	The Series 2022 Bonds maturing on February 15, 2033 and thereafter are subject to redemption on or after February 15, 2032 at a redemption price equal to 100% of the principal amount of Series 2022 Bonds to be redeemed, plus accrued interest, if any, to the redemption date, as described herein. See "SECTION IV: THE SERIES 2022 BONDS – Redemption of the Series 2022 Bonds."
Mandatory Redemption of the Series 2022 Bonds from Sinking Fund Installments	The Series 2022 Bonds maturing on February 15, 2047 are subject to mandatory redemption from sinking fund installments prior to maturity as described herein. See "SECTION IV: THE SERIES 2022 BONDS – Redemption of the Series 2022 Bonds."
Security and Sources of Payment for the Series 2022 Bonds	The Series 2022 Bonds are special obligations of the Corporation secured by and payable solely from the Revenues as described herein in accordance with the Indenture. The Corporation's Revenues, except for Interest Support Payments, are generated from private properties in the Project Area. Most Revenues are paid directly to the Corporation by property owners, except for Interest Support Payments and Tax Equivalency Payments (as defined below), which are paid by the City, subject to annual appropriation, pursuant to the Support and Development Agreement, as amended and restated on May 1, 2017 (the "Support and Development Agreement"), by and among the Corporation, the City and HYDC. The Corporation does not expect to need Interest Support Payments in the future.
Recurring Revenues	The following Revenues of the Corporation are recurring revenues with respect to properties in the Project Area (the "Recurring Revenues"): (i) payments in lieu of real property taxes ("PILOT Payments") paid by property owners to the Corporation pursuant to agreements between property owners and the New York City Industrial Development Agency ("IDA"), and (ii) payments by the City equal to real property taxes or payments in lieu of taxes received by the City on New Development (as defined herein, which includes substantial rehabilitation of existing buildings) in the Project Area ("Tax Equivalency Payments" or "TEP"), which are subject to annual appropriation by the City. See "SECTION V: SECURITY AND SOURCES OF PAYMENT OF BONDS – Recurring Revenues" for a discussion of all potential Recurring Revenues.
Non-Recurring Revenues..................	The following Revenues of the Corporation are non-recurring revenues to be paid directly to the Corporation (the "Non-Recurring Revenues"): (i) payments in lieu of mortgage recording taxes made pursuant to agreements between owners of property in the Project Area and the IDA and (ii) payments by property owners pursuant to density bonus programs offered by the City for development in the Project Area.
Support and Development Agreement	The Support and Development Agreement obligates the City, subject to annual appropriation, to make Interest Support Payments and Tax Equivalency Payments to the Corporation. Pursuant to the Support and Development Agreement, the Mayor of the City has agreed to submit to the City Council for each Fiscal Year an appropriation for

	the amount necessary to permit the City to pay Interest Support Payments and Tax Equivalency Payments in the succeeding Fiscal Year.
	INTEREST SUPPORT PAYMENTS AND TAX EQUIVALENCY PAYMENTS ARE SUBJECT TO ANNUAL APPROPRIATION BY THE CITY AND TO THE AVAILABILITY OF MONEY FOR SUCH PAYMENTS. THE SUPPORT AND DEVELOPMENT AGREEMENT AND THE CITY'S OBLIGATION TO MAKE SUCH PAYMENTS DO NOT CONSTITUTE DEBT OF THE CITY UNDER OR WITHIN THE MEANING OF THE STATE OF NEW YORK (THE "STATE") CONSTITUTION OR THE LOCAL FINANCE LAW OF THE STATE. THE CITY IS NOT LEGALLY REQUIRED TO MAKE ANNUAL APPROPRIATIONS FOR SUCH PAYMENTS.
Interest Support Payments	In 2005 and 2006, the City Council adopted resolutions that authorized Interest Support Payments for up to $3 billion of borrowings to finance infrastructure projects in the Project Area. The Corporation issued $3 billion of bonds under the 2006 Indenture that were secured by Interest Support Payments. In connection with the issuance of the Series 2017 Bonds, the Corporation, HYDC and the City amended and restated the original support and development agreement, and, pursuant to the current Support and Development Agreement, the City has agreed to make Interest Support Payments, subject to appropriation, in connection with all Bonds issued under the Indenture that refund bonds issued under the 2006 Indenture. In 2018, the City Council adopted a resolution that authorized Interest Support Payments for up to an additional $500 million aggregate principal amount in borrowings to finance the completion of infrastructure projects in the Project Area, and ratified, confirmed and authorized that Interest Support Payments may be made by the City, subject to appropriation, in connection with interest on any borrowings theretofore or thereafter issued by the Corporation to refund or refinance any Corporation bonds for which the City was or is currently obligated to provide interest support. All borrowings for which Interest Support Payments are authorized to be made are hereafter referred to as the "Supported Bonds." The Support and Development Agreement obligates the City, subject to annual appropriation, to make Interest Support Payments to the Corporation as long as Supported Bonds are outstanding, if the Corporation receives insufficient Revenues to pay debt service, when due on Bonds. However, in no event may any Interest Support Payments exceed the interest due on outstanding Supported Bonds payable on the next succeeding Interest Payment Date. The Mayor of the City has agreed to include in the expense budget submitted to the City Council for the succeeding Fiscal Year of the City an amount sufficient to make the Interest Support Payments projected to be made during such Fiscal Year.
Tax Equivalency Payments...............	Pursuant to the Support and Development Agreement, the Mayor of the City has agreed to submit to the City Council for each Fiscal Year an appropriation for the amount necessary to permit the City to pay Tax Equivalency Payments in the succeeding Fiscal Year. Such payment is to be made each year in two installments, occurring not

	later than the first day of August and the first day of February of each Fiscal Year, subject to adjustments described in the Support and Development Agreement.
Additional Bonds...............................	Additional Bonds Test. Under the Indenture, Additional Bonds, including Supported Bonds, may only be issued if (i) the amount of the Net Recurring Revenues for the immediately preceding Fiscal Year for which audited financial statements of the Corporation are available is at least equal to 125% of the Maximum Annual Debt Service on Bonds Outstanding, in each case excluding Funded Bonds, after giving effect to the Bonds then to be issued (the "Debt Service Coverage Test"), or (ii) such bonds are issued for the refunding of Bonds and Maximum Annual Debt Service on all Bonds Outstanding, in each case excluding Funded Bonds, after giving effect to the issuance of such refunding bonds is not greater than Maximum Annual Debt Service on all Bonds (which, in the case of the Series 2022 Bonds only, includes debt service on the Outstanding 2006 Indenture Bonds) immediately preceding issuance of the refunding bonds (the "Refunding Test"). See "SECTION V: SECURITY AND SOURCES OF PAYMENT OF BONDS – Additional Bonds."
	Additional Bonds that are Supported Bonds. Additional Bonds may be issued pursuant to the Indenture to finance Project Costs, including future improvements to, or expansion of, the Subway Extension and Phase II of the park, up to $500 million of which may be Supported Bonds.
	The Corporation expects to issue Additional Bonds in the future to repay amounts drawn under the Subordinate Loan Facility and finance the remaining costs of Phase II of the park.
	Additional Bonds that are Unsupported Bonds. Other Bonds, which may be bonds for which Interest Support Payment will not be made (the "Unsupported Bonds"), may be issued to finance Project Costs without limitation as to amount, upon compliance with the additional bonds tests.
Hudson Yards Financing District Development and Revenue Report ...	In connection with the Series 2022 Bonds, the Corporation retained Cushman & Wakefield, Inc. ("C&W") to prepare a development and revenue report ("C&W 2021 Report"). The C&W 2021 Report is included herein as Appendix E.
	As a result of the Project and development incentives, described herein, significant new office, residential, and hotel development has occurred and is continuing to occur in the Hudson Yards Financing District. According to the C&W 2021 Report, as of September 2021, seven completed office buildings added a total of approximately 10.9 million square feet of office space to the Project Area. An additional three office buildings are nearing completion and have significant pre-leasing activity, totaling approximately 6.9 million square feet. With respect to residential development, 32 new or rehabilitated residential properties have been completed, resulting in nearly 10,000 units of rental and condominium residences brought to market. With respect to hotel development, 34 new hotels have been completed, adding nearly 8,500 rooms for hotel use. In addition, along with ancillary retail spaces in office and residential buildings, a retail and restaurant

complex known as "The Shops and Restaurants at Hudson Yards" has been completed.

Subject to the Limiting Conditions comprising Chapter 1B of the C&W 2021 Report, C&W concludes that estimates by the City's Office of Management and Budget ("OMB") and the Corporation of Revenues projected to be received by the Corporation from existing and future office, residential, hotel and retail development aggregating approximately $27.1 billion during the period beginning July 1, 2021 and ending June 30, 2047 (the "Forecast Period") are reasonable, as described below.

Projected Revenues .... The Corporation's projected Revenues from development in the Project Area during the Forecast Period were provided by OMB. Generally, OMB projects that the Corporation's primary source of Revenues will come from Recurring Revenues (i.e., PILOT Payments and TEP). See "SECTION VIII: PROJECTED REVENUES."

During the Forecast Period, Recurring Revenues from Existing Development (as defined herein) are projected to generate a total of approximately $20.2 billion, 57.3% of which is expected to be generated from office development, 24.0% of which is expected to be generated from residential development, and 18.6% of which is expected to be generated from hotel and other development.

Together Recurring Revenues from Existing Development and Future Development (as defined herein) are projected to generate a total of approximately $26.6 billion, 56.5% of which is expected to be generated from office development, 27.5% of which is expected to be generated from residential development, and 16.0% of which is expected to be generated from hotel and other development, during Fiscal Years 2022 through 2047.

Risk Factors .... Investment in the Series 2022 Bonds involves certain risks. Investors should read this entire Official Statement to obtain information essential to making an informed investment decision including "SECTION IX: RISK FACTORS."

The Corporation .... The Corporation is a local development corporation organized by the City under the Not-for-Profit Corporation Law of the State. The Corporation is an instrumentality of, but separate, distinct and apart from, the City.

Tax Matters .... In the opinion of Nixon Peabody LLP and Bryant Rabbino LLP, Co-Bond Counsel, under existing law and assuming compliance with the tax covenants described herein, and the accuracy of certain representations and certifications made by the Corporation described herein, interest on the Series 2022 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Internal Revenue Code of 1986, as amended. Co-Bond Counsel is also of the opinion that interest on the Series 2022 Bonds is not treated as a preference item in calculating the alternative minimum tax imposed under the Code. Co-Bond Counsel is further of the opinion that interest on the Series 2022 Bonds is exempt from personal income taxation imposed by the State of New York or any political subdivision

	of the State of New York, including The City of New York. See "SECTION XII: TAX MATTERS."
Green Bond Certification	The Series 2022 Bonds have been designated as "Green Bonds" as further described in "SECTION IV: THE SERIES 2022 BONDS – Designation of the Bonds as Green Bonds" and Appendix H.
Ratings..	The Series 2022 Bonds are rated "Aa2" (stable outlook) by Moody's Investors Service, "AA-" (positive outlook) by S&P Global Ratings and "A+" (stable outlook) by Fitch, Inc. "See SECTION XV: RATINGS."
Trustee..	U.S. Bank National Association, New York, New York, is serving as trustee under the 2006 Indenture and the Indenture.
Corporation Contact	David M. Womack, President Phone Number: (212) 788-5872 Email: womackd@omb.nyc.gov

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OFFICIAL STATEMENT
OF
HUDSON YARDS INFRASTRUCTURE CORPORATION
RELATING TO
$454,140,000
HUDSON YARDS REVENUE BONDS,
FISCAL 2022 SERIES A (GREEN BONDS)

SECTION I: INTRODUCTION

This Official Statement (which includes the inside cover page, summary statement and appendices hereto) sets forth certain information concerning the Hudson Yards Infrastructure Corporation (the "Corporation") in connection with the sale of $454,140,000 aggregate principal amount of the Corporation's Hudson Yards Revenue Bonds, Fiscal 2022 Series A (Green Bonds) (the "Series 2022 Bonds"), pursuant to a trust indenture dated as of May 1, 2017, as amended and supplemented (the "Indenture") by and between the Corporation and U.S. Bank National Association, New York, New York, as trustee (the "Trustee"). A summary of certain provisions of the Indenture, together with certain defined terms used therein and in this Official Statement, is contained in Appendix A hereto. Capitalized terms not otherwise defined in this Official Statement have the meanings set forth in Appendix A.

The Series 2022 Bonds will be issued on parity with the outstanding $2,108,465,000 Hudson Yards Second Indenture Revenue Bonds, Fiscal 2017 Series A (Tax-Exempt) and $33,295,000 Hudson Yards Second Indenture Revenue Bonds, Fiscal 2017 Series B (Taxable), dated May 30, 2017 (collectively, the "Series 2017 Bonds") issued under the Indenture, totaling $2,141,760,000. Additional Bonds may be issued under the Indenture for Project Costs from time to time on a parity with the Series 2017 Bonds and the Series 2022 Bonds upon meeting certain requirements under the Indenture, as described herein (the "Additional Bonds"). See "SECTION V: SECURITY AND SOURCES OF PAYMENT OF BONDS." All bonds issued pursuant to the Indenture on parity with the Series 2017 Bonds, including the Series 2022 Bonds, are collectively referred to herein as the "Bonds."

The Corporation previously issued revenue bonds under a trust indenture, dated as of December 1, 2006, as amended and restated through October 1, 2011 (the "2006 Indenture"), by and between the Corporation and the Trustee, of which $533,565,000 are currently outstanding (the "Outstanding 2006 Indenture Bonds"). The bonds issued under the 2006 Indenture were issued to encourage development within the Hudson Yards Financing District (as defined herein) by financing the cost of the extension of the No. 7 subway line, which began operations in September 2015, and creation of a public park, which opened in August 2015. Upon delivery of the Series 2022 Bonds, the Outstanding 2006 Indenture Bonds will be defeased, the 2006 Indenture and the lien created thereby will be terminated, and the pledge and lien on Revenues created by the Indenture will become a first pledge and lien in favor of the owners of the Bonds. No additional bonds may be issued under the 2006 Indenture.

Proceeds of the Series 2022 Bonds will be applied, with other available funds, to refund all Outstanding 2006 Indenture Bonds, as more particularly described herein. See "SECTION III: PLAN OF FINANCE."

The "Hudson Yards Financing District," or the "Project Area," describes the approximately 45 square block area generally bounded by West 43rd Street on the north, West 29th and 30th Streets on the south, Seventh and Eighth Avenues on the east, and Eleventh and Twelfth Avenues on the west, as is more specifically described in Appendix C to this Official Statement, from which the Corporation derives its Revenues (other than Interest Support Payments).

Since a 2005 rezoning affecting the Project Area and the funding of the Project (as defined herein), the landscape and skyline of the Project Area has been transformed. The Project Area now contains modern office, residential, hotel, and retail properties, along with Phase I of Bella Abzug Park, a visual and performing arts institution called "The Shed," and a spiral staircase interactive artwork called the Vessel.

The Corporation retained Cushman & Wakefield, Inc. ("C&W" or "Cushman & Wakefield") to prepare a Hudson Yards Financing District Development and Revenue Report (the "C&W 2021 Report"), attached hereto as Appendix E. According to the C&W 2021 Report, as of September 2021, seven completed office buildings added a total of approximately 10.9 million square feet of office space to the Project Area. An additional three office buildings are nearing completion and have significant pre-leasing activity, totaling approximately 6.9 million square feet. With respect to residential development, 32 new or rehabilitated residential properties have been completed, resulting in nearly 10,000 units of rental and condominium residences brought to market. With respect to hotel development, 34 new hotels have been completed, adding nearly 8,500 rooms for hotel use. In addition, along with ancillary retail spaces in office and residential buildings, a retail and restaurant complex known as"The Shops and Restaurants at Hudson Yards" has been completed.

COVID-19 Pandemic

The City of New York (the "City") has been severely affected by the coronavirus disease, referred to herein as "COVID-19." For a discussion of the impact of COVID-19 on the City, see "APPENDIX D: THE CITY OF NEW YORK." As a result of the pandemic, the assessed values of many properties were reduced throughout the City including in the Project Area. See page 68 of the C&W 2021 Report. Within the Project Area, large commercial office buildings as well as Class 2 multifamily buildings saw minimal negative impact, while hotels experienced a more significant reduction in assessed values. Consequently, Recurring Revenues are projected to decline from $291.1 million in fiscal year 2021 to $273.5 million in fiscal year 2022, before increasing to $279.5 million in fiscal year 2023. See "SECTION VIII: PROJECTED REVENUES."

The delinquency rate for real property taxes paid by non-PILOT properties in the Project Area was approximately 0.6% at the end of Fiscal Year 2019, 1.0% at the end of Fiscal Year 2020, and 6.2% at the end of Fiscal Year 2021. The increase in Fiscal Year 2021 was largely attributable to delinquencies from hotel properties. Currently, three hotels in the Project Area remain delinquent in their Fiscal Year 2021 property taxes totaling approximately $6 million. These three hotels, along with one other hotel, are also delinquent in their first semiannual property tax payment in Fiscal Year 2022 totaling approximately $3.4 million. The projected Recurring Revenues assume that non-PILOT property owners will pay their real property taxes and PILOT property owners will pay their PILOT Payments. See SECTION XI: RISK FACTORS-Projected Revenues May Not be Realized."

The C&W 2021 Report states that the pandemic is not expected to have a long-term impact on the property in the Project Area. See "SECTION VII: HUDSON YARDS FINANCING DISTRICT DEVELOPMENT AND REVENUE REPORT- COVID-19 Pandemic" and Chapter 2 of the C&W 2021 Report in Appendix E, which analyzed the existing market conditions prior to the pandemic, the market conditions during the pandemic, and the future outlook for each type of property.

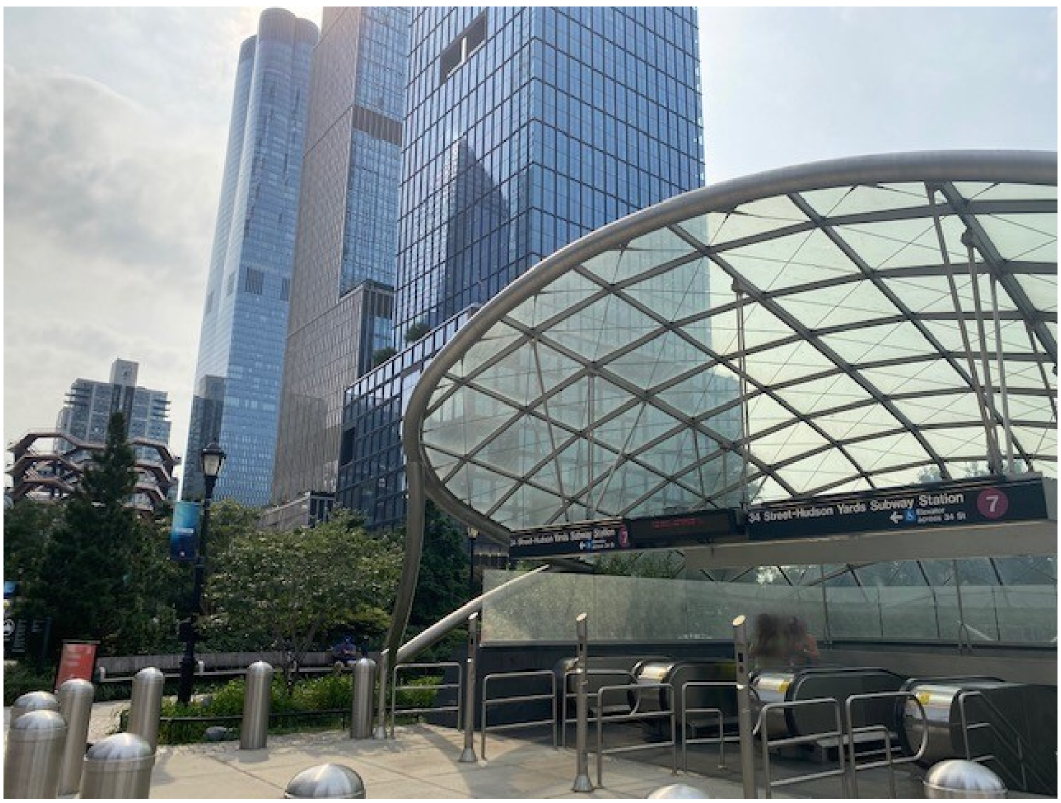
See also "SECTION IX: RISK FACTORS- Public Health Emergencies, including the COVID-19 Pandemic" herein. The ultimate impact of the COVID-19 pandemic on the City's economy and the Corporation's Revenues cannot be determined at this time. No assurance can be provided that the COVID-19 pandemic and the resulting economic and social disruption will not result in revenues to the Corporation that are lower than projected herein. In addition, such projections are subject to a variety of risks and uncertainties that could cause actual results to differ materially from those projected. See "SECTION IX: RISK FACTORS" for a discussion of certain risk factors.

SECTION II:THE PROJECT

Project Overview

The proceeds of the 2006 Indenture Bonds financed: (a) the design and construction of an extension of the No. 7 subway line to a new terminal station in the Project Area (the “Subway Extension”); (b) the construction of a three-block park and boulevard previously known “Hudson Park and Boulevard” and currently renamed “Bella Abzug Park” (“Phase I”); and (c) the acquisition of certain transferable development rights associated with the Eastern Rail Yards (“ERY”) (the “ERY Transferable Development Rights”), which were subsequently made available to property owners for purchase to permit increasing the density of properties undergoing construction within the Project Area (collectively, the “Project”). The Project has fostered the development of the Project Area to create a pedestrian-friendly, mass transit-oriented mixed-use district, accommodating an expansion of the Midtown central business district, as well as job growth, hospitality space and new housing for the City's growing population. See “SECTION VII: HUDSON YARDS FINANCING DISTRICT DEVELOPMENT AND REVENUE REPORT.”

Exhibit 2-1: View of the No. 7 Subway Station Entrance at West 34th Street



The No. 7 subway line, originally terminating in Times Square, now extends to West 34th Street and Eleventh Avenue. This station was opened to passengers in September 2015, making the Project Area more accessible to all subway lines in Manhattan. A second entrance to the station opened for service in 2018. The Corporation expects that $3.6 million of closeout costs for the Subway Extension will be financed through the Subordinate Loan Facility (defined below).

Exhibit 2-2: View inside Bella Abzug Park

Phase I of Bella Abzug Park, located between West 33rd and West 36th Streets, opened in August 2015. The park provides open space for the Project Area's residents, workers and visitors, and is bordered by a pedestrian-friendly boulevard. The park contains grassy areas, patios, fountains, a playground and paved areas for public events. Planning and design for a second phase to expand the park north to 39th Street have commenced ("Phase II," and together with the Project, the "Expanded Project"). Phase II of the park is being financed initially, along with closeout costs of Phase I, through a term loan facility from Bank of America, N.A. (the "Lender"), dated as of February 1, 2019 (the "Subordinate Loan Facility"), which currently permits the Corporation to draw up to $200 million for Project Costs. As of September 1, 2021, the Corporation has drawn approximately $2.4 million under the Subordinate Loan Facility. The Corporation expects to seek an extension to the term of the Subordinate Loan Facility, which expires on June 30, 2022. The Corporation expects to repay amounts drawn under the Subordinate Loan Facility and finance the remaining costs of Phase II of the park with the proceeds of Additional Bonds. The total cost of Phase II of the park is projected to be approximately $380 million. See "SECTION V: SECURITY AND SOURCES OF PAYMENT OF BONDS – Additional Bonds."

Hudson Yards Development Corporation

The City created the Hudson Yards Development Corporation ("HYDC"), a local development corporation organized under Section 1411 of the Not-For-Profit Corporation Law of the State of New York (the "State"), to manage the implementation of the Expanded Project. As provided in the Support and Development Agreement, as amended and restated as of May 1, 2017 (the "Support and Development Agreement"), by and between the Corporation, the City and HYDC, the Corporation is responsible for paying HYDC's expenses but is not responsible for any liabilities of HYDC except as set forth in the Support and Development Agreement. The Corporation and HYDC are separate legal entities.

SECTION III:PLAN OF FINANCE

Use of Proceeds of Series 2022 Bonds

The proceeds of the Series 2022 Bonds will be used to redeem all of the Outstanding 2006 Indenture Bonds identified below by providing, with other Corporation funds, for the payment of the redemption price of and interest on such bonds shown below in Exhibit 2-1. The proceeds of the Series 2022 Bonds will also be used to pay certain costs of issuance.

The estimated sources and uses of funds are as follows:

Sources of Funds

Principal Amount of Series 2022 Bonds	$454,140,000.00
Original Issue Premium	83,810,981.95
Other Available Funds	6,755,175.00
Total Sources	$544,706,156.95

Uses of Funds

Escrow for Refunding of Outstanding 2006 Indenture Bonds	$540,320,175.00
Deposit to Costs of Issuance Account	1,693,342.46
Underwriters' Discount	2,692,639.49
Total Uses	$544,706,156.95

Refunding of Outstanding 2006 Indenture Bonds

In 2011, the Corporation issued its Hudson Yards Senior Revenue Bonds, Fiscal 2012 Series A (the "Series 2012A Bonds"), in an aggregate principal amount of $1,000,000,000, of which $533,565,000 aggregate principal amount are currently outstanding, which constitute all of the Outstanding 2006 Indenture Bonds. The Series 2012A Bonds were issued as Term Bonds maturing on February 15, 2047.

The Corporation is now issuing the Series 2022 Bonds under the Indenture, to refund the $533,565,000 aggregate principal amount outstanding of the Series 2012A Bonds, as further identified below. The Series 2012A Bonds to be refunded will be defeased in accordance with the 2006 Indenture and redeemed on November 9, 2021.

Exhibit 2-1: Bonds to be Refunded

Hudson Yards Senior Revenue Bonds, Fiscal 2012 Series A

Maturity Date	Outstanding Principal	Principal Amount to be Refunded	Interest Rate	CUSIP	Redemption Date
2/15/2047	$210,775,000	$210,775,000	5.75%	44420PDL5	11/9/2021
2/15/2047	276,675,000	276,675,000	5.25%	44420PDP6	11/9/2021
2/15/2047	46,115,000	46,115,000	5.00%	44420PDQ4	11/9/2021
	$533,565,000	$533,565,000			

No Additional 2006 Indenture Bonds

In May 2017, the Corporation covenanted in the Indenture that no 2006 Indenture Bonds may be issued in the future (or any Hedge Agreements or Liquidity Facilities relating thereto). Upon delivery of the Series 2022 Bonds, the Outstanding 2006 Indenture Bonds will be defeased, the 2006 Indenture and the lien created thereby will be terminated, and the pledge and lien on Revenues created by the Indenture will become a first pledge and lien in favor of the owners of the Series 2022 Bonds and the Series 2017 Bonds and all Bonds hereafter issued on parity therewith.

SECTION IV: THE SERIES 2022 BONDS

General

The Series 2022 Bonds will be issued as Bonds, dated their date of delivery and will bear interest as described on the inside cover of this Official Statement. The Series 2022 Bonds are subject to optional and mandatory redemption prior to maturity as described under "Redemption of the Series 2022 Bonds."

Principal of, redemption premium, if any, and interest on, the Series 2022 Bonds will be payable in lawful money of the United States of America. The Series 2022 Bonds will be issued only as fully registered bonds without coupons in denominations of $5,000 or any integral multiple thereof. Interest on the Series 2022 Bonds will be computed on the basis of a 360-day year of twelve 30-day months.

Interest on the Series 2022 Bonds will be payable to the registered owner thereof as shown on the registration books kept by the Trustee at the close of business on the Record Date which will be the last day (whether or not a Business Day) of the calendar month next preceding an interest payment date.

Designation of the Series 2022 Bonds as Green Bonds

The Series 2022 Bonds have been designated as "Green Bonds." This designation is intended to allow investors the opportunity to invest in bonds that finance or refinance projects including clean transportation projects. Such designation is based on the application of proceeds of the Series 2022 Bonds to refinance the outstanding 2006 Indenture Bonds, in addition to the payment of costs of issuance. A portion of the proceeds of the 2006 Indenture Bonds, in the amount of $887.64 million, was applied to finance the Subway Extension. This designation is not intended to provide or imply that the holders of the Series 2022 Bonds are entitled to any additional terms or security other than those provided for in the Indenture. The Corporation has retained Kestrel Verifiers to conduct an independent external review of the use of proceeds of the Series 2022 Bonds and to evaluate conformance of the Series 2022 Bonds with the International Capital Market Association (the "ICMA") Green Bonds Principles (June 2021) (the "Green Bond Principles").

Kestrel Verifiers has issued its Second Party Opinion which concludes that the Series 2022 Bonds are aligned with the four core components of the Green Bond Principles. Kestrel Verifiers' Second Party Opinion is attached hereto as Appendix H.

Redemption of the Series 2022 Bonds

Optional Redemption of the Series 2022 Bonds

The Series 2022 Bonds maturing on or before February 15, 2032 are not subject to optional redemption prior to their stated maturity dates. The Series 2022 Bonds maturing on February 15, 2033 and thereafter are subject to redemption prior to maturity at the option of the Corporation, in whole or in part, on any date on or after February 15, 2032, upon 30 days' notice, at a redemption price equal to 100% of the principal amount of the Series 2022 Bonds to be redeemed plus accrued interest to their redemption date. Any Series 2022 Bond that is defeased to maturity will remain subject to optional redemption by the Corporation.

Mandatory Redemption of the Series 2022 Bonds from Sinking Fund Installments

The Series 2022 Bonds maturing February 15, 2047 are term bonds subject to mandatory redemption from Sinking Fund Installments at a redemption price equal to 100% of the principal amount thereof, plus accrued interest, without premium, on the dates and in the amounts set forth below:

February 15,	Sinking Fund Installments
2045	$29,310,000
2046	30,120,000
2047*	30,945,000

*Stated maturity.

The Corporation may apply or credit against any annual amount subject to mandatory redemption, the principal amount of any Series 2022 Bonds of the same maturity that have been defeased, purchased or redeemed and not previously so applied or credited. See "Selection of Series 2022 Bonds to be Redeemed" and "—Notice of Redemption" below for information on the manner of selection of the Series 2022 Bonds to be redeemed as described under this subheading "Mandatory Redemption of the Series 2022 Bonds from Sinking Fund Installments."

Selection of Series 2022 Bonds to be Redeemed

In the event less than all of the Series 2022 Bonds of like Series, maturity, interest rate and yield are to be redeemed prior to maturity either at the option of the Corporation or through mandatory Sinking Fund Installments, the Trustee is to select by lot the particular Series 2022 Bonds of such Series, maturity, interest rate and yield to be redeemed, using such method of selection as it deems proper in its discretion.

Notice of Redemption

The Trustee, not less than 30 days or more than 60 days prior to the redemption date, will give notice by first-class mail, postage prepaid, to the registered owners of Series 2022 Bonds to be redeemed, at their last addresses as the same appear on the bond registration books of the Trustee. So long as Cede & Co., as nominee of DTC, is the registered owner of the Series 2022 Bonds, notice of redemption is to be sent to DTC. No assurance can be given by the Corporation that DTC and DTC participants will promptly transmit notices of redemption to Beneficial Owners.

Conditional Redemption Process

If the Trustee gives an unconditional notice of redemption, then on the redemption date the Series 2022 Bonds called for redemption will become due and payable. If the Trustee gives a conditional notice of redemption and holds money to pay the redemption price of the affected Series 2022 Bonds, and any other conditions included in such notice have been satisfied, then on the redemption date the Series 2022 Bonds called for redemption will become due and payable. In either case, after the redemption date, no interest will accrue on those Series 2022 Bonds, and an owner's only right will be to receive payment of the redemption price upon surrender of those Series 2022 Bonds.

Book-Entry Only System

DTC, as an automated clearinghouse for securities transactions, will act as securities depository for the Series 2022 Bonds. Purchasers of beneficial ownership interests in the Series 2022 Bonds will not receive certificates representing their interests in the Series 2022 Bonds purchased. The Series 2022 Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered bond certificate will be issued for each series and maturity of the Series 2022 Bonds, each in the aggregate principal amount of such maturity, and will be deposited with DTC. If, however, the aggregate principal amount of any such maturity exceeds $500 million, one bond certificate will be issued with respect to each $500 million of principal amount of such maturity and an additional bond certificate will be issued with respect to any remaining principal amount of such maturity.

DTC is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, corporate and municipal debt issues, and money market instruments from over 100 countries that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions, in deposited securities through electronic computerized book-entry transfers and pledges between Direct Participants' accounts, thereby eliminating the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC National Securities Clearing Corporation and Fixed Income Securities Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). The DTC rules applicable to its Participants are on file with the Securities and Exchange Commission.

Purchases of the Series 2022 Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Series 2022 Bonds on DTC's records. The ownership interest of each actual purchaser of each Series 2022 Bond (a "Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase, but Beneficial Owners are expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Series 2022 Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive bond certificates representing their ownership interests in the Series 2022 Bonds, except in the event that use of the book-entry system for the Series 2022 Bonds is discontinued.

To facilitate subsequent transfers, all Series 2022 Bonds deposited by Direct Participants with DTC are registered in the name of Cede & Co. or such other name as may be requested by an authorized representative of DTC. The deposit of the Series 2022 Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee effect no change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Series 2022 Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Series 2022 Bonds are credited, which may or may not be the Beneficial Owners. The Direct Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Redemption notices will be sent to Cede & Co. If less than all of the Series 2022 Bonds within a maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such maturity to be redeemed.

Neither DTC nor Cede & Co. (nor such other DTC nominee) will consent or vote with respect to the Series 2022 Bonds unless authorized by a Direct Participant in accordance with DTC's procedures. Under its usual procedures, DTC mails an omnibus proxy (the "Omnibus Proxy") to the Corporation as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Series 2022 Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Payment of redemption proceeds and principal and interest on the Series 2022 Bonds will be made to Cede & Co. or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Corporation or the Trustee on the payment date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Trustee or the Corporation, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds and principal and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Corporation or the Trustee, disbursement of such payments to the Direct Participants is the responsibility of DTC, and disbursement of such payments to the Beneficial Owners is the responsibility of Direct and Indirect Participants.

The Corporation and the Trustee may treat DTC (or its nominee) as the sole and exclusive registered owner of the Series 2022 Bonds registered in its name for the purpose of payment of the principal of or interest on the Series 2022 Bonds, giving any notice permitted or required to be given to registered owners under the Indenture registering the transfer of the Series 2022 Bonds, or other action to be taken by registered owners and for all other purposes whatsoever. The Corporation and the Trustee do not have any responsibility or obligation to any Participant, any person claiming a beneficial ownership interest in the Series 2022 Bonds under or through DTC or any Participant, or any other person which is not shown on the registration books of the Corporation (kept by the Trustee) as being a registered owner, with respect to: the accuracy of any records maintained by DTC or any Participant; the payment by DTC or any Participant of any amount in respect of the principal of or interest on the Series 2022 Bonds; any notice which is permitted or required to be given to registered owners thereunder or under the conditions to transfers or exchanges adopted by the Corporation; or other action taken by DTC as a registered owner. Interest and principal will be paid by the Trustee to DTC, or its nominee. Disbursement of such payments to the Participants is the responsibility of DTC and disbursement of such payments to the Beneficial Owners is the responsibility of the Participants or the Indirect Participants.

No assurance can be given by the Corporation that DTC will make prompt transfer of payments to the Participants or that Participants will make prompt transfer or payments to Beneficial Owners. The Corporation is not responsible or liable for payment by DTC or Participants, or for sending transaction statements, or for maintaining, supervising or reviewing records maintained by DTC or Participants.

SO LONG AS CEDE & CO., AS NOMINEE OF DTC, IS THE REGISTERED OWNER OF ALL OF THE SERIES 2022 BONDS, REFERENCES HEREIN TO THE OWNERS, HOLDERS OR BONDHOLDERS OF THE SERIES 2022 BONDS (OTHER THAN UNDER "SECTION XII: TAX MATTERS") MEANS CEDE & CO.

For every transfer and exchange of beneficial ownership of the Series 2022 Bonds, a Beneficial Owner may be charged a sum sufficient to cover any tax, fee or other governmental charge that may be imposed in relation thereto.

DTC may discontinue providing its service with respect to the Series 2022 Bonds at any time by giving reasonable notice to the Corporation or the Trustee and discharging its responsibilities with respect thereto under applicable law, or the Corporation may terminate its participation in the system of book-entry transfer through DTC at any time by giving notice to DTC. In either event the Corporation may retain another securities depository for the Series 2022 Bonds as appropriate or may direct the Trustee to deliver bond certificates in accordance with instructions from DTC or its successor. If the Corporation directs the Trustee to deliver such bond certificates, such Series 2022 Bonds may thereafter be exchanged for denominations and of the same maturity as set forth in the Indenture, upon surrender thereof at the principal corporate trust office of the Trustee, who will then be responsible for maintaining the registration books of the Corporation. The record date for payment of interest on the Series 2022 Bonds is the last day (whether or not a Business Day) of the calendar month next preceding an interest payment date.

The information under this subheading "*Book-Entry Only System*" concerning DTC and DTC's book-entry system has been obtained from sources that the Corporation believes to be reliable, but the Corporation takes no responsibility for the accuracy thereof.

Unless otherwise noted, certain of the information contained under this subheading "*Book-Entry Only System*" has been extracted from information furnished by DTC. The Corporation does not make any representation as to the completeness or the accuracy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof.

Other Information

For additional information regarding the Series 2022 Bonds and the Indenture including the events of default under the Indenture and the remedies of the Bondholders thereunder, see "APPENDIX A: CERTAIN DEFINITIONS AND SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE."

SECTION V: SECURITY AND SOURCES OF PAYMENT OF BONDS

General

The Series 2022 Bonds are special obligations of the Corporation secured by and payable solely from the Revenues as described herein in accordance with the Indenture. All Bonds, including the Series 2022 Bonds, are payable from the Corporation's Revenues subject to prior application of the Revenues to the Corporation's expenses The rights to receive all Revenues described below have been pledged and assigned to the Trustee.

The Corporation receives two types of Revenues: Recurring Revenues and Non-Recurring Revenues (each as described below).

"Recurring Revenues" consist of the following:

(i) Payments in lieu of real property taxes ("PILOT Payments") made pursuant to agreements with property owners in the Project Area ("PILOT Agreements"). PILOT Payments consist primarily of payments made pursuant to PILOT Agreements ("IDA PILOT Agreements") between property owners and the New York City Industrial Development Agency ("IDA PILOT Payments"). In addition, PILOT Payments include payments that may be made pursuant to PILOT Agreements between property owners and the Metropolitan Transportation Authority ("MTA") with respect to the ERY and WRY (as defined herein), which are paid directly by property owners to the Corporation ("Railyard PILOT Payments"). In addition, PILOT Payments include payments that may be received by the Corporation from certain other governmental entities that enter into PILOT Agreements; and

(ii) Payments by the City, subject to annual appropriation, equal to real property taxes and payments in lieu of real property taxes received by the City from owners of New Development (as defined herein) in the Project Area that do not otherwise enter into a PILOT Agreement as described above ("Tax Equivalency Payments" or "TEP").

"Non-Recurring Revenues" consist of the following:

(i) Payments by property owners pursuant to certain density bonus programs offered by the City for development in the Project Area ("DIB Payments"); and

(ii) Payments in lieu of mortgage recording taxes ("PILOMRT Payments") made pursuant to agreements between property owners in the Project Area and the IDA.

In addition, the Corporation may also receive, as Revenues, Interest Support Payments from the City, subject to annual appropriation, to enable the Corporation to pay debt service on Bonds but not in excess of the interest payable on any Interest Payment Date on Supported Bonds in the event other Revenues are insufficient to pay such debt service. The Corporation does not expect to need Interest Support Payments in the future.

THE CORPORATION HAS NO TAXING POWERS. BONDS ISSUED BY THE CORPORATION ("HYIC BONDS") ARE NOT A DEBT OF THE CITY AND, EXCEPT AS EXPRESSLY STATED HEREIN, THE CITY HAS NO OBLIGATION TO PAY OR PROVIDE FOR ANY OF THE DEBT SERVICE ON THE HYIC BONDS.

TAX EQUIVALENCY PAYMENTS ARE SUBJECT TO ANNUAL APPROPRIATION BY THE CITY AND TO THE AVAILABILITY OF MONEY FOR SUCH PAYMENTS. THE SUPPORT AND DEVELOPMENT AGREEMENT AND THE CITY'S OBLIGATION TO MAKE SUCH PAYMENTS DO NOT CONSTITUTE DEBT OF THE CITY UNDER OR WITHIN THE MEANING OF THE STATE CONSTITUTION OR THE LOCAL FINANCE LAW OF THE STATE. THE CITY IS NOT LEGALLY REQUIRED TO MAKE ANNUAL APPROPRIATIONS FOR SUCH PAYMENTS. THE ABILITY OF THE CITY TO MAKE TAX EQUIVALENCY PAYMENTS UNDER THE SUPPORT AND DEVELOPMENT AGREEMENT MAY DEPEND ON THE FINANCIAL CONDITION OF THE CITY. SEE APPENDIX D FOR INFORMATION ABOUT THE CITY.

HYIC Bonds, for purposes of this Official Statement, refer to borrowings of the Corporation that finance projects within the Project Area and include, for example, the Bonds and the Subordinate Loan Facility.

Recurring Revenues

Payments in Lieu of Real Property Taxes.

General. Privately-owned commercial developments in the City on privately-owned sites are subject to City property taxes. Under certain circumstances, privately-owned commercial developments can be granted discretionary real property tax exemption benefits by the IDA under its statutory authority, provided that the IDA takes leasehold title to the privately-owned site. Other governmental entities, such as the MTA, may own sites which by virtue of their ownership and use are exempt from City real property taxes. In those cases, the IDA or other governmental entities may enter into a payment in lieu of real property taxes arrangement with the owner of the commercial development. Such arrangements are generally known as PILOT agreements.

Project Area UTEP. As an inducement to commercial development in the Project Area and to encourage job growth and the economic well-being of the City, the IDA adopted a Uniform Tax Exemption Policy for the Project Area, except for the western portion of the railyard located between West 30th and West 33rd Streets from 11th to 12th Avenues (the "WRY" or "Western Rail Yard") and the full block located between West 33rd Street and West 34th Street at Eleventh Avenue (the "Javits Marshaling Yard"), in August 2006, which was amended and restated on August 3, 2010, and then further amended on November 9, 2010 (the "Project Area UTEP") that includes a schedule (set forth as Exhibit 4-2 in Chapter 4 of the C&W 2021 Report) for IDA PILOT Payments for property owners that enter into IDA PILOT Agreements.

The schedule provides a discount (which varies depending on the location of the property in specified zones in the Project Area and the square footage of property provided such benefits previously within each zone) from the real property taxes that would otherwise be due for 19 years after the completion of construction of a project. Such IDA PILOT Payments are subject to an annual rate of increase equal to 3% over the prior year's payment in years five through fifteen after completion of construction and then a phase out of the discount in the last four years with payments equal to the greater of a 3% increase over the prior year's amount and a set discount which decreases in each year (provided that each year's PILOT Payment may never exceed actual taxes for any tax year). Beginning with the twentieth year after the completion of construction of a project, the amount payable is equal to 100% of the amount of real property taxes due to the City without any discount.

IDA PILOT Agreements for the Project Area currently are and are expected to continue to last for at least 29 years with automatic annual one-year extensions, unless IDA provides notice of termination within 60 days preceding the expiration of the then current term; provided, however, that such IDA PILOT Agreements automatically terminate within 60 days after the repayment in full or defeasance of all HYIC Bonds for which an assignment of PILOT Payments payable under the PILOT Agreement is used to repay the bondholders. Developers entering into IDA PILOT Agreements may also receive an exemption of up to 100% of sales taxes due on construction materials and tenant improvement materials. Developers of eligible projects have participated, and are expected to continue to participate, in the IDA PILOT Payment program because the IDA PILOT Payments during the first 19 years after the completion of construction of a project will be lower than the otherwise applicable real estate taxes on their projects. Residential properties and hotels are not eligible for PILOT Agreements under the Project Area UTEP.

IDA PILOT Payments. The Corporation, the IDA and the City entered into the IDA Amended and Restated PILOT Assignment and Agreement dated as of December 1, 2006, as amended and restated as of May 1, 2017 (the "IDA Assignment Agreement") pursuant to which the IDA has assigned the IDA PILOT Payments to the Corporation and the City has agreed to such assignment. In accordance with the IDA Assignment Agreement, IDA PILOT Payments will be made to the Trustee. The IDA and the City have each agreed in the IDA Assignment Agreement that if any such payments are received by the IDA or the City, they will be promptly paid to the Trustee. The IDA has also agreed in the IDA Assignment Agreement not to directly or indirectly rescind, amend, modify or deviate from the Project Area UTEP in any respect without the prior written consent of the Corporation except that the IDA may, without the consent of the Corporation, amend or modify the Project Area UTEP if (1) as a result of a change in State law, the Project Area UTEP is no longer consistent therewith, (2) such amendment or modification is required in order for the Project Area UTEP to conform to the applicable State laws, (3) the IDA, not less than 30 days prior to it taking any action to amend or modify the Project Area UTEP, delivered to the Corporation a copy of the proposed amendment or modification of the Project Area UTEP and (4) the IDA certified to the Corporation, in writing, that such amendment or modification is solely required in order for the Project Area UTEP to conform to the applicable State law.

The City has agreed in the IDA Assignment Agreement not to take any action that would limit or alter the rights vested in the Corporation under the IDA Assignment Agreement, any IDA PILOT Agreement, PILOT Mortgage (defined below) or instrument of assignment executed pursuant to the IDA Assignment Agreement or in or to the IDA PILOT Payments or that would in any way impair the rights and remedies of the holders of or the security for the HYIC Bonds. The Corporation covenants in the Indenture not to consent or acquiesce in any amendment to or deviation from the Project Area UTEP unless the Corporation delivers a written certification to the Trustee that the proposed amendment or deviation will facilitate the further commercial development of the Project Area or such amendment or deviation is consented to by holders of not less than a majority in aggregate principal amount of the Outstanding HYIC Bonds affected by any such amendment as specified in the Indenture. The IDA Assignment Agreement terminates when all principal and interest has been paid on the HYIC Bonds.

Each property owner that enters into an IDA PILOT Agreement with the IDA will secure its payment obligations under such agreement by first mortgages (collectively, the "PILOT Mortgage") to the IDA. The IDA will assign each IDA PILOT Agreement and each PILOT Mortgage to the Corporation which will collaterally assign such obligations to the Trustee. Upon a failure of a property owner to make the IDA PILOT Payment in accordance with the IDA PILOT Agreement, the Corporation, or, if an Event of Default has occurred under the Indenture, the Trustee may exercise the rights and remedies set forth in the corresponding PILOT Mortgage, which include the right to institute proceedings to foreclose the lien of a PILOT Mortgage. Failure of a property owner to make IDA PILOT Payments could result in loss of the property owner's interest in the property.

Railyard PILOT Payments. The MTA has agreed in the City-MTA Railyards Agreement that, if it leased the ERY or the WRY for development, such leases will require the developer to pay Railyard PILOT Payments on UTEP Eligible Commercial Projects in amounts no less than the PILOT amounts payable according to the Project Area UTEP, and Railyard PILOT Payments for other development equal to full real property taxes in the amounts that would have been levied by the City if the ERY or the WRY were privately owned. The MTA has further agreed that it shall direct payment to, or pay over to the Corporation (or to the City upon the Corporation's direction) all such Railyard PILOT Payments. The Corporation has covenanted in the Indenture that as long as any Bonds are Outstanding, it will not consent to the payment of any Railyard PILOT Payments to any person other than the Corporation. The MTA did not enter into any PILOT agreements with respect to the ERY and is not expected to enter into any PILOT agreements with respect to the WRY. Consequently, revenues with respect to the ERY are being paid, and revenues with respect to the WRY are expected to be paid, to the Corporation pursuant to IDA PILOT Agreements.

Other PILOT Payments. Real property taxes are not payable on property owned and used by the State, Empire State Development ("ESD"), (including its subsidiaries), MTA, or The Port Authority of New York and New Jersey (the "Port Authority"). The State may from time to time create additional entities whose property is exempt from real property taxation. Commercial and residential developments on such property within the Project Area would result in real property tax revenues to the City or PILOT revenues to the Corporation, if the State, ESD (or a subsidiary), or the Port Authority agrees to require PILOT Payments be made to the City or the Corporation (which PILOT Payments, if made to the City, would be included in the City's calculation of Tax Equivalency Payments payable to the Corporation). The Support and Development Agreement provides that any PILOT Payments made by other governmental entities to the City as the result of development in the Project Area will be treated as Tax Receipts in the calculation of Tax Equivalency Payments to be made by the City as described below. The Corporation does not expect to receive any PILOT Payments with respect to the Moynihan Train Hall project while the Bonds are outstanding.

Tax Equivalency Payments

The Support and Development Agreement also obligates the City to pay to the Corporation, subject to annual appropriation, an amount equal to the amount of real property taxes and payments in lieu of real property taxes collected by the City on New Development (as defined below, which includes substantial rehabilitation of existing buildings) in the Project Area. Property taxes collected before the building receives a certificate of occupancy are not included in Tax Equivalency Payments. Although Tax Equivalency Payments are expected to be generated primarily from residential and hotel development, such payments will also be generated from taxable commercial developments that are not eligible to enter into PILOT Agreements or that have elected not to enter into PILOT Agreements and from any payments in lieu of real property taxes received by the City pursuant to agreements between developers of New Developments in the Project Area and governmental bodies other than the IDA or, with respect to the ERY and WRY, MTA.

Tax Equivalency Payments are to be made each year in two installments, occurring not later than the first day of August and the first day of February of each Fiscal Year, subject to adjustment as provided in the next sentence, each semiannual payment in an amount equal to 50% of (1) the *ad valorem* real property taxes levied by the City on New Developments in the Project Area not subject to a PILOT Agreement that are payable during such Fiscal Year, and (2) the PILOT Payments projected by the City to be received during such Fiscal Year. The amount payable by the City on each such date is to be adjusted to reflect the amount, if any, by which the Tax Receipts (as defined below) collected during the six-month period that commenced on the earlier of the January 1st or July 1st immediately preceding such payment date either exceeded or was less than the amount payable on such payment date. In resolutions adopted January 19, 2005, October 27, 2005, October 11, 2006 and December 21, 2009, the City Council recognized the importance to the City of the redevelopment of the Project Area and supported an undertaking by the City, subject to appropriation, to make the Tax Equivalency Payments. A summary of the Support and Development Agreement is attached hereto as Appendix B.

For purposes hereof, the terms listed below have the following meanings:

New Development means the construction of a building or other improvement within the Project Area for residential, commercial or other use or uses, or the Substantial Rehabilitation of an existing building or improvement within the Project Area, in each case evidenced by the issuance of a temporary or permanent certificate of occupancy on or after January 19, 2005.

Substantial Rehabilitation means any one or a combination of (1) work necessary to bring a building into compliance with all applicable laws and regulations, including but not limited to the installation, replacement or repair of heating, plumbing, electrical and related systems and the elimination of hazardous violations in the building in accordance with state and local laws and regulations, (2) reconstruction or work to improve the habitability or prolong the useful life of a structure or (3) an addition to an existing building that substantially increases the square footage or floor area thereof which, in each case, results in at least a 20% increase over the prior year's assessed value of the building or structure.

Tax Receipts means all *ad valorem* real property taxes and PILOT Payments collected by the City in respect of New Developments, including any amounts collected (1) as a consequence or result of enforcement proceedings, (2) as interest or penalties for the failure to make timely payment to the City of the *ad valorem* real property taxes levied against such New Development, (3) as the proceeds of any sale of tax liens related to a New Development, and (4) as a consequence or result of the enforcement of a PILOT Agreement, including the foreclose of any mortgage securing the same.

The Support and Development Agreement obligates the City to retain in its possession for a reasonable period of years records of all Tax Receipts collected during a Fiscal Year sufficient to identify each New Development, not subject to a PILOT Agreement, the *ad valorem* real property taxes levied against each such New Development during such Fiscal Year and the Tax Receipts collected during such Fiscal Year in connection with each such New Development, which records are to be subject at all reasonable times during normal business hours to the inspection of the Corporation, the Trustee and their respective agents and representatives. At the written request of the Corporation or the Trustee, copies of such records shall be delivered to the Corporation and the Trustee.

The City has established procedures that allow it to identify New Developments and to identify payments of real property taxes by the owners of New Developments or the proceeds of the sale of tax liens if such taxes are not paid. Pursuant to the Support and Development Agreement, the Mayor of the City has agreed to submit to the City Council for each Fiscal Year an appropriation for the amount necessary to permit the City to pay the Tax Equivalency Payment in the succeeding Fiscal Year. The City has no obligation to appropriate funds to make Tax Equivalency Payments and the City's agreement to make such payments is not debt of the City.

Property Taxes

IDA PILOT Payments and Tax Equivalency Payments are based on otherwise applicable real property taxes levied by the City following classification and assessment of the real property subject to such levy. However, as described previously, IDA PILOT Payments are based on a schedule of discounted real property taxes (which varies depending on the location of the property in specified zones in the Project Area and the square footage of property provided such benefits previously within each zone).

State law provides for the classification of all real property in the City into one of four statutory classes. Class 1 primarily includes one-, two- and three-family homes; class 2 includes certain other residential property not included in class 1; class 3 includes most utility real property; and class 4 includes all other real property. The majority of new development in the Project Area will be classified as either Class 2 or Class 4 properties.

All properties are assessed each year and a tentative tax roll of tax values for each property is produced in mid-January to be applied to the new Fiscal Year beginning July 1. Tax payers are allowed to dispute their assessment by initiating an appeal with the City's Tax Commission. Adjustments are then reflected in the final tax roll which is published in May of each year.

Property taxes are assessed at a ratio to full market value. For Class 2 and Class 4 properties, the assessment ratio has held stable at approximately 45% since the mid-1990's.

Increases in assessments due to market conditions for properties in large Class 2 and Class 4, are phased in over a five-year time period at 20% per year. This phase-in period results in an interim assessment referred to as the transitional assessment. The lower of the actual or transitional assessed value is then used to determine the billable assessed value to compute taxes. Changes in assessments due to physical improvements are immediately recognized.

In periods of market downturns and declining assessments, billable assessed value will be based on the lower of the actual value or transitional value. This may result in lower billable assessments, however, in some instances billable assessed values can continue to rise as a result of prior year assessment increases. For a discussion of the impact of COVID-19 on assessed values in Manhattan in Fiscal Year 2022, see page 68 of the C&W 2021 Report. In market upturns billable assessments will typically lag increases in the actual assessed value.

Buildings under construction are assessed based on the percentage completed. During the construction period, a tentative assessment is made, using the income and expense approach typically used in assessments. During the construction period, the tentative or progress assessment for new buildings is not reflected in the final tax roll, for a maximum of one or three years depending on property type and tax characteristics, but serves merely as a progress assessment. After the construction period ends, properties are fully assessed based on the income approach. Demolition and alterations and changes in taxable status are not subject to the phase-in and are immediately assessed at market value.

Class 2 and Class 4 properties are generally assessed as income-producing properties. All properties having assessed values greater than $40,000 are required to file RPIE (Real Property Income and Expense Statement) with the New York City Department of Finance ("NYCDOF"). Assessments are made for both buildings and the underlying land.

Reported revenues and expenses are compared to the averages for similar properties. Physical characteristics, amenities offered, and geographic locations are all factors considered in determining comparable properties for comparison purposes. Assessors examine deviations in reported income and expenses from averages in comparable buildings and markets and have the discretion to make adjustments. For example, reported income in Class 4 properties with vacancy rates exceeding 50% of the market average are adjusted upwards, treating "excess" vacant space as occupied at market rates.

Assessors also compare rent levels and income in comparable buildings to determine whether rents accurately reflect current market conditions. A marked-to-market approach is used in assessing rental income. Properties that have higher rental incomes because of leases stipulated in more favorable times and that can expect rental rates to fall on renewal are assessed at lower values.

The NYCDOF market value is then determined by dividing net operating income by a capitalization rate. Capitalization rates are determined through a formula that takes into account the cost and composition of capital by looking at the following factors: mortgage to equity ratios, interest rates, mortgage terms, equity returns and the holding period. Classes 2 and 4, which are expected to represent most of the properties developed within the Project Area, have experienced average assessed value growth of 5.8% for Class 2 and 4.8% for Class 4 from 1985 to 2021.

For a description of certain litigation challenging the City's real property tax system and valuation methodology, see "APPENDIX D: THE CITY OF NEW YORK: SECTION X: OTHER INFORMATION – Litigation - *Taxes.*"

Affordable New York Housing Program

The Affordable New York Housing Program (formerly known as the 421-a Program), is established pursuant to Section 421-a of the New York State Real Property Tax Law. Under the Affordable New York Housing Program, which is to expire in 2022, developers of new residential rental projects with 300 units or more in certain areas of Manhattan (including the Project Area), Brooklyn and Queens, that create a specific number of rental units to remain affordable for 40 years, and pay construction workers average wage and benefits above a certain threshold, would be eligible for a full property tax exemption on the improvements to the property for 35 years. All other qualifying residential rental projects that provide the required levels of affordability would be eligible for a 25 year 100 percent exemption on the improvements, followed by 10 additional years of exemption at a rate tied to the level of affordability. Condominium developments are not eligible for the benefits of the Affordable New York Housing Program in Manhattan. There can be no assurance that the Affordable New York Housing Program will be extended or renewed or, if so extended, what incentives might then be included. See "SECTION IX: RISK FACTORS- Zoning or Development Incentives Could Change in the Project Area or Competing Areas" herein

Non-Recurring Revenues

District Improvement Fund Bonus Payments

As authorized in the Project Area Zoning Regulations, commercial and residential developments in certain portions of the Project Area are eligible to increase their density in exchange for DIB Payments. The Project Area Zoning Regulations establish as-of-right base floor area ratios ("FAR") in the Project Area for development, generally 6.5 for residential development and 10 for commercial development. Developments in certain portions of the Project Area may increase their FAR, up to an amount specified in the Project Area Zoning Regulations, in exchange for DIB Payments. See the C&W 2021 Report attached hereto as Appendix E for a discussion of FAR.

In the case of lots zoned for residential use, acquisition of additional density in exchange for DIB Payments (the "DIB Program") also requires participation in the Inclusionary Housing Bonus ("IHB") program, which requires that DIB Program square footage be applied for in a fixed ratio, on a *pari passu* basis, with IHB square footage. In a situation where the base residential zoning is 6.5 FAR and the maximum residential FAR is 12, there would be two bonus tiers. In the first tier, from 6.5 FAR to 9 FAR, 5/11ths of the bonus would be achieved through the DIB Program and 6/11ths would be achieved through participation in the IHB program, resulting in a requirement that 10-15% of the total residential square footage on the zoning lot meet affordable housing guidelines set by the City's Department of Housing Preservation and Development. In the second tier from 9 FAR to 12 FAR, 5/11ths of the bonus would be achieved through the DIB Program and 6/11ths through participation in the IHB program, resulting in an additional 10-15% of the total residential square footage on the zoning lot meeting affordable housing guidelines. Therefore, if application of the DIB/IHB programs causes the zoning lot to achieve more than 9 FAR, 20-30% of the total residential square footage on the zoning lot must meet affordable housing guidelines.

The amount per square foot of the DIB Payment required by the Project Area Zoning Regulations is currently $142.75 per zoning square feet of bonus received. The Chair of the City Planning Commission is required to adjust the amount of DIB Payment per square foot on August 1 of each year based on changes in the Consumer Price Index established by the U.S. Bureau of Labor Statistics.

The Corporation and the City have entered into the Amended and Restated DIB Assignment Agreement, dated as of December 1, 2006, as amended and restated as of May 1, 2017 (the "DIB Assignment Agreement") pursuant to which and in accordance with the Project Area Zoning Regulations adopted by the City Council, the City has assigned to the Corporation the DIB Payments. The Project Area Zoning Regulations direct that the DIB Payments be paid directly to the Corporation. The City has agreed in the DIB Assignment Agreement that the City will not take any action that would limit or alter the rights vested in the Corporation under the Project Area Zoning Regulations or the DIB Assignment Agreement or in and to the DIB Payments and that the City will not take any action that would in any way impair the rights and remedies of the holders or the security for the HYIC Bonds.

The Project Area Zoning Regulations also provide an incentive mechanism that encourages property owners in the Project Area to convey to the City privately-owned property, for the future expansion of the Hudson Boulevard and Park three blocks north of 36th Street, or to fund construction of portions of the expansion of the Hudson Boulevard and Park in lieu of DIB Payments.

Payments In Lieu of Mortgage Recording Taxes

The Project Area UTEP provides an IDA exemption, to the extent permitted by law, from the mortgage recording tax with respect to any mortgage securing construction or permanent financing for UTEP Eligible Commercial Projects in the Project Area. However, the Project Area UTEP requires the recipient of such exemption to make a payment in lieu of the mortgage recording tax ("PILOMRT") in an amount equal to 100% of the exempted amount of the mortgage recording tax. In addition, pursuant to the City-MTA Railyards Agreement, the City and the MTA have agreed that with respect to PILOMRTs in any and all leasehold dispositions of development sites within the ERY or WRY, the MTA shall require PILOMRT to be paid in an amount equal to 100% of the mortgage recording taxes that would otherwise be payable under the law existing at the time of the recording of the mortgage.

Pursuant to the City-MTA Railyards Agreement, the City agreed that the MTA will retain the portion of the PILOMRT it is entitled to under existing mortgage recording tax laws, and the remaining PILOMRT will be paid, and is assigned, to the Corporation, until such time the Corporation directs that such PILOMRT payment be made to the City. Pursuant to the IDA Assignment Agreement, the IDA and the City assigned to the Corporation their respective interests in the portion of the PILOMRT that the City is entitled to receive (i.e., excluding that portion of the PILOMRT granted to or retained by the MTA pursuant to the City-MTA Railyards Agreement). The IDA and the City have each agreed in the IDA Assignment Agreement that any such PILOMRT resulting from an IDA exemption received by the IDA or the City will be promptly paid to the Corporation or the Trustee.

Pursuant to current State law, the IDA no longer has statutory authority to exempt the portion of the mortgage recording tax imposed by State Tax Law Section 253(2). Since July 1, 2017, with respect to UTEP Eligible Commercial Projects outside of the ERY, for any mortgage of $500,000 or more for which the IDA is providing an exemption, the PILOMRT will be $2.50 for each $100, or major fraction thereof, of the principal amount of such mortgage. Since July 1, 2017, with respect to UTEP Eligible Commercial Projects in the ERY for which the IDA is providing an exemption, the MTA receives approximately 25% of the $2.50 for each $100, or major fraction thereof, of PILOMRTs made, reflecting the amount of the exempted mortgage recording tax which the MTA or its affiliates would generally receive under State law, and for the remaining PILOMRT, approximately $1.875 per $100, or major fraction thereof, is promptly paid to the Corporation or the Trustee.

For all leasehold dispositions of development sites within the ERY or WRY for which the MTA is providing a mortgage recording tax exemption, the MTA will retain such portion of the PILOMRT equal to the percentage of mortgage recording tax which the MTA and its affiliates generally receive under State law, which is currently approximately 33% of the $2.80 for each $100, or major fraction thereof, of the principal amount of the mortgage, and for the remaining PILOMRT, approximately $1.875 per $100, or major fraction thereof, will be promptly paid to the Corporation or at the Corporation's direction, to the City.

Interest Support Payments

In 2005 and 2006, the City Council adopted resolutions that authorized Interest Support Payments for up to $3 billion of borrowings to finance infrastructure projects in the Project Area. The Corporation issued $3 billion of bonds under the 2006 Indenture that were secured by Interest Support Payments. In connection with the issuance of the Series 2017 Bonds, the Corporation, HYDC and the City amended and restated the original support and development agreement, and, pursuant to the current Support and Development Agreement, the City has agreed to make Interest Support Payments, subject to appropriation, in connection with all Bonds issued under the Indenture that refund bonds issued under the 2006 Indenture.

In 2018, the City Council adopted a resolution that authorized Interest Support Payments for up to an additional $500 million aggregate principal amount in HYIC Bonds to finance the completion of infrastructure projects in the Project Area, and ratified, confirmed and authorized that Interest Support Payments may be made by the City, subject to appropriation, in connection with interest on any HYIC Bonds theretofore or thereafter issued to refund or refinance any HYIC Bonds for which the City was or is currently obligated to provide interest support.

All borrowings for which Interest Support Payments are authorized to be made are referred to in this Official Statement as the "Supported Bonds."

In February 1, 2019, the Corporation and the City entered into an Additional Borrowing Hudson Yards Support Agreement in connection with the Subordinate Loan Facility, pursuant to which the City has agreed to make additional interest support payments (the "Additional Borrowing Interest Support Payments") in connection with the Subordinate Term Loans. The obligation of the City to make the Additional Borrowing Interest Support Payments is an obligation of the City, subject to appropriation, in addition to its obligation to make payment of all Interest Support Payments under the Support and Development Agreement relating to the Bonds. However, the Trustee shall not deposit any of the Additional Borrowing Interest Support Payments into the subaccount created under the Supplemental Indenture to provide for the payment of interest on the Subordinate Term Loans until the Trustee has confirmed that all Interest Support Payments relating to the Bonds have been paid in full by the City. To the extent the Trustee determines that any such Interest Support Payments relating to the Bonds have not been paid by the City, the Trustee shall transfer amounts it has received as Additional Borrowing Interest Support Payments to the

Supported Bond Interest Subaccount of the Debt Service Account under the Indenture in the amount of any deficiency in the Interest Support Payments relating to the Bonds, with any remainder to be deposited into the subaccount created for the payment of the Subordinate Term Loans. For more information on the Corporation's expectations to issue Additional Bonds to refinance the Subordinate Term Loans, see "—Additional Bonds" below.

The Corporation expects to generate sufficient Revenues from development in the Project Area to pay the principal and interest when due on the Bonds. In the event such Revenues are not sufficient to pay debt service on the Bonds on any Interest Payment Date (the "Debt Service Deficiency"), the Corporation expects that it will receive from the City Interest Support Payments in an amount equal to the lesser of such Debt Service Deficiency and the interest payable on such Interest Payment Date on all outstanding Supported Bonds (other than Funded Bonds (as defined in Appendix A herein)). In no event, however, will Interest Support Payments in connection with any Interest Payment Date exceed the interest payable on all then outstanding Supported Bonds (other than Funded Bonds). The commitment of the City to make such Interest Support Payments continues as long as any Supported Bonds are outstanding.

Interest Support Payments made in connection with Bonds will be made directly to the Trustee. Interest Support Payments made to the Trustee will be deposited in the Supported Bond Interest Subaccount of the Debt Service Account, up to the lesser of the Debt Service Deficiency and the interest payable on the Bonds that are Supported Bonds on such Interest Payment Date. The balance of such Interest Support Payments, if any, will be deposited in the Debt Service Account up to the amount sufficient, together with all other money in the Debt Service Account (including the Supported Bonds Interest Subaccount), to pay the debt service due on the Outstanding Bonds (other than Funded Bonds) on the next succeeding Interest Payment Date.

The Support and Development Agreement obligates the City, subject to annual appropriation, to pay Interest Support Payments to the Corporation not later than four business days prior to each Interest Payment Date on Supported Bonds, including the Series 2022 Bonds. It also requires the Mayor of the City to include in the expense budget submitted each Fiscal Year to the City Council for the succeeding Fiscal Year an amount, taking into account expected Revenues of the Corporation, sufficient to make the Interest Support Payments projected to be required to be made in such subsequent Fiscal Year. No Interest Support Payments were required in Fiscal Years 2016 through 2021. The Corporation does not expect such payments will be required in future Fiscal Years.

INTEREST SUPPORT PAYMENTS ARE SUBJECT TO ANNUAL APPROPRIATION BY THE CITY AND TO THE AVAILABILITY OF MONEY FOR SUCH PAYMENTS. THE SUPPORT AND DEVELOPMENT AGREEMENT AND THE CITY'S OBLIGATION TO MAKE SUCH PAYMENTS DO NOT CONSTITUTE DEBT OF THE CITY UNDER OR WITHIN THE MEANING OF THE STATE CONSTITUTION OR THE LOCAL FINANCE LAW OF THE STATE. THE CITY IS NOT LEGALLY REQUIRED TO MAKE ANNUAL APPROPRIATIONS FOR SUCH PAYMENTS. THE ABILITY OF THE CITY TO MAKE INTEREST SUPPORT PAYMENTS UNDER THE SUPPORT AND DEVELOPMENT AGREEMENT MAY DEPEND ON THE FINANCIAL CONDITION OF THE CITY. SEE APPENDIX D FOR INFORMATION ABOUT THE CITY.

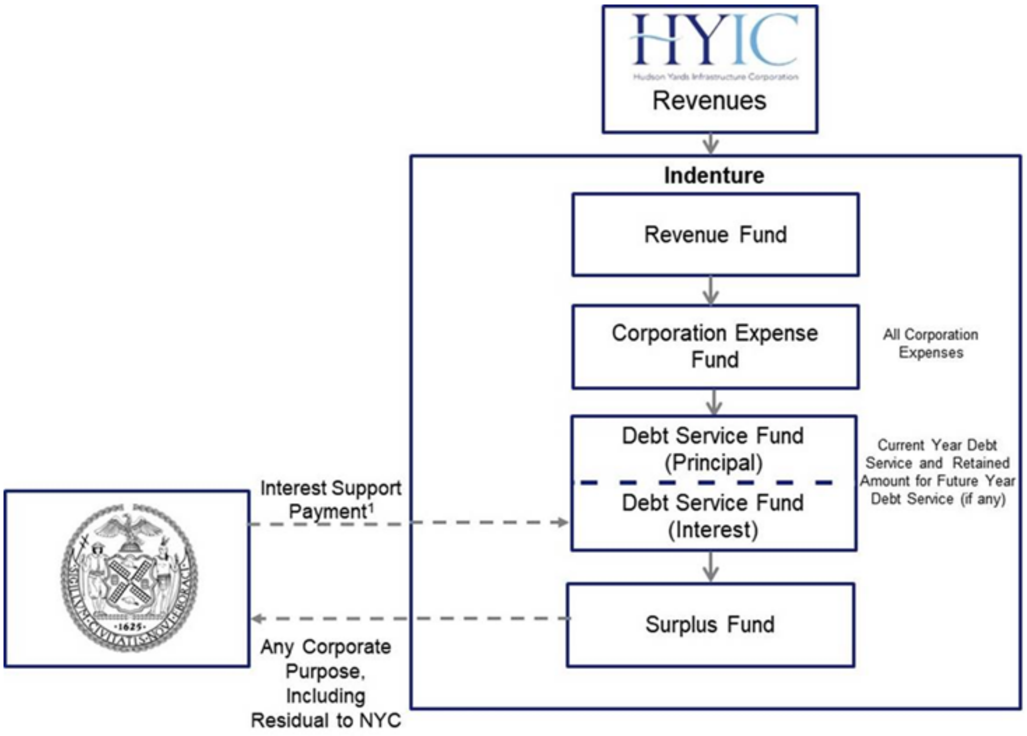
If on any Interest Payment Date the debt service on all outstanding Bonds payable on such Interest Payment Date exceeds the Revenues available to pay such debt service by an amount that is greater than the interest payable on the Supported Bonds, a Payment Default may occur.

Funds and Accounts

The Indenture has created specific funds and separate accounts within the funds to be held and maintained by the Trustee as security for the payment of the principal and Redemption Price of and interest on the Bonds, including the Series 2022 Bonds. These funds include: (i) the Revenue Fund; (ii) the Construction Fund; and (iii) the Debt Service Fund. Except as provided in the Indenture, all money at any time deposited in any of such funds will be held in trust for the benefit of the holders of the Bonds, including the Series 2022 Bonds, but will nevertheless be disbursed, allocated and applied solely for the uses and purposes as described under the Indenture. The Surplus Fund and the Corporation Expense Fund created under the Indenture are not pledged as security for the payment of the Bonds. Moneys in the Surplus Fund may be applied to the payment of debt service on HYIC Bonds issued on a basis subordinate to the Bonds, including, for example, the Subordinate Loan Facility.

Application of Revenues

Set forth below is a chart showing the flow of funds for Revenues received by the Corporation unless a Payment Default has occurred:



(1) As per the Support and Development Agreement among the City, the Corporation and HYDC, if necessary

Indenture

Upon delivery of the Series 2022 Bonds, the Outstanding 2006 Indenture Bonds will be defeased, the 2006 Indenture and the lien created thereby will be terminated, and the pledge and lien on Revenues created by the Indenture will become a first pledge and lien in favor of the owners of the Series 2017 Bonds, the Series 2022 Bonds and all Bonds hereafter issued on parity therewith, as described herein.

The Revenues (other than Interest Support Payments that are to be deposited as hereinafter provided below) are received in the Revenue Fund and during a Fiscal Year will, if no Payment Default has occurred, be applied by the Trustee to the funds and accounts established under the Indenture in the following order of priority:

> First: To the Corporation Expense Fund, the amount required to make the amount deposited therein during such Fiscal Year equal to the amount of Corporation Expenses certified by the Corporation for such Fiscal Year;
>
> Second: To the Debt Service Account of the Debt Service Fund, the amount required (i) to pay the Debt Service remaining to be paid during the then current Fiscal Year on Outstanding Bonds, (ii) to pay Hedge Agreement Payments and principal of and interest on any Parity Reimbursement Obligations as the same is due and payable during such Fiscal Year, and (iii) to maintain in the Debt Service Account the Future Year Debt Service Requirement; and
>
> Third: To the Surplus Fund, the balance of such Revenues for application to any corporate purpose of the Corporation, including, but not limited to, Termination Payments, and payments to the City at such times and in such amounts as may be set forth in the written direction

of the Corporation. Moneys in the Surplus Fund may be applied to the payment of debt service on HYIC Bonds issued on a basis subordinate to the Bonds, including, for example, the Subordinate Loan Facility.

For purposes of the foregoing, a Funded Bond is not considered to be an Outstanding Bond as long as it remains a Funded Bond.

Interest Support Payments, up to the lesser of the interest payable on Outstanding Supported Bonds (other than Funded Bonds) on the next succeeding Interest Payment Date and the Debt Service Deficiency on the day of such deposit, will be deposited in the Supported Bond Interest Subaccount of the Debt Service Account. The balance of such Interest Support Payments, if any, will be deposited directly in the Debt Service Account up to the amount sufficient, together with the other money then therein, to pay the Debt Service payable on Outstanding Bonds (other than Funded Bonds) on the next succeeding Interest Payment Date.

The Trustee is required to pay from the Debt Service Account the following amounts and in the following order of priority:

First: the principal and Sinking Fund Installments of all Outstanding Bonds (other than Funded Bonds) and the principal of any Parity Reimbursement Obligations related to Bonds, in each case as the same is due and payable;

Second: the interest on Outstanding Bonds (other than Funded Bonds) that are Supported Bonds, including from money on deposit in the Supported Bond Interest Subaccount; and

Third: the interest on Outstanding Bonds that are not Supported Bonds or Funded Bonds, the interest on Parity Reimbursement Obligations relating to Bonds, and Hedge Agreement Payments, *pro rata*, as the same become due and payable.

Future Year Debt Service Requirement. The Future Year Debt Service Requirement will be determined by the Corporation and certified to the Trustee not later than June 30th of each Fiscal Year as the amount required to be retained in the Debt Service Account during the next succeeding Fiscal Year for the payment of Debt Service on Outstanding Bonds (other than Funded Bonds) payable in the second succeeding Fiscal Year. Such amount is to be determined by the Corporation as follows: (a) projected Debt Service on such Bonds in the second succeeding Fiscal Year, less (b) the amount projected to be available in the Debt Service Account as of July 1 of the second succeeding Fiscal Year, less (c) Recurring Revenues projected to be received by the Corporation during the second succeeding Fiscal Year available for Debt Service on such Bonds; taking into account in each case, the projected receipt dates for the revenues and payment dates for the obligations.

The Corporation may at any time and from time to time during the Fiscal Year next succeeding such certification amend such determination and recertify to the Trustee the Future Year Debt Service Requirement.

The Revenues received on and after a Payment Default are to be applied by the Trustee in the following order of priority:

First: Interest Support Payments received by the Trustee will, up to the amount of interest coming due during the then current Fiscal Year on Outstanding Bonds that are Supported Bonds, be deposited in the Supported Bond Interest Subaccount and applied to pay the interest on Outstanding Bonds that are Supported Bonds;

Second: To the Corporation Expense Fund, the amount required to make the amount deposited therein during such Fiscal Year equal to the Corporation Expenses for such Fiscal Year; and

Third: To the Redemption Account, the balance of such Revenues for application in the following priority (i) *first*, to the payment to the registered owners of the Outstanding Bonds, interest on all arrears in payment of the principal of or interest on Outstanding Bonds at the respective rates of interest specified in such Bond, *pro rata* based upon the amount of principal and interest payable to each such registered owner, (ii) *second*, on each Interest Payment Date, to the interest due and past due on such Interest Payment Date on all Outstanding Bonds (including interest on Bonds that are Supported Bonds not paid from money in the Supported Bond Interest Subaccount), *pro rata* based upon the amount of interest payable to each person entitled thereto and (iii) *third*, to redeem Outstanding Bonds on February 15th of each Fiscal Year, at a Redemption Price equal to 100% of the principal amount of the Bonds to be redeemed, *pro rata* based upon the principal amount of each Outstanding Bonds.

Events of Default

The Indenture specifies certain events which, if they occur, will result in an event of default and provides certain remedies in case of an event of default which are discussed below. An event of default will exist under the Indenture if:

(a) payment of the principal or Sinking Fund Installment of or interest on any Bond is not made by the Corporation when the same is due and payable; or

(b) with respect to a Tax-Exempt Bond, there has been a Determination of Taxability, as defined in the Indenture; or

(c) the Corporation defaults in the due and punctual performance of any other of the covenants, conditions, agreements and provisions contained in the Indenture or in the Bonds or in any Supplemental Indenture on the part of the Corporation to be performed and such default continues for 30 days after written notice specifying such default and requiring same to be remedied has been given to the Corporation by the Trustee, which may give such notice in its discretion and must give such notice at the written request of the Holders of not less than 25% in principal amount of the Outstanding Bonds, unless, if such default is not capable of being cured within 30 days, the Corporation has commenced to cure such default within said 30 days and diligently prosecutes the cure thereof; or

(d) the Corporation (1) is generally not paying its debts as they become due, (2) commences a voluntary case or other proceeding seeking liquidation, reorganization, dissolution, rehabilitation or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of it or any substantial part of its property, or consents to any such relief or to the appointment of or taking possession by any such official in an involuntary case or other proceeding commenced against it, (3) makes a general assignment for the benefit of its creditors, (4) declares a moratorium or (5) takes any corporate action to authorize any of the foregoing; or

(e) a trustee in bankruptcy, custodian or receiver for the Corporation or any substantial part of its property has been appointed and the same has not been discharged within 60 days after such appointment.

Upon the happening and continuance of any event of default specified in the provisions of the Indenture described above, other than a Payment Default, then and in every such case, the Trustee may proceed, and upon the written request of the Holders of not less than a majority in principal amount of the Outstanding Bonds or, in the case of a happening and continuance of an event of default specified in paragraph (b) above, upon the written request of the Holders of not less than a majority in principal amount of the Outstanding Bonds of the Series affected thereby, must proceed (subject to the provisions of the Indenture), to protect and enforce its rights and the rights of the Bondholders under the Indenture or under any Supplemental Indenture or under the laws of the State by such suits, actions or special proceedings in equity or at law, either for the specific performance of any covenant contained in the Indenture or under any Supplemental Indenture or in aid or execution of any power therein granted, or for an accounting against the Corporation as if the Corporation were the trustee of an express trust, or for the enforcement of any proper legal or equitable remedy as the Trustee deems most effectual to protect and enforce such rights, including the enforcement of its rights and remedies, as assignee, under any Agreement assigned to it.

In the enforcement of any remedy under the Indenture and under each Supplemental Indenture, the Trustee is entitled to sue for, enforce payment of, and receive any and all amounts then, or during any default becoming, and at any time remaining, due from the Corporation for principal or interest or otherwise under any of the provisions of the Indenture or of any Supplemental Indenture or of the Bonds, with interest on overdue payments of the principal of or interest on the Bonds at the rate or rates of interest specified in such Bonds, together with any and all costs and expenses of collection and of all proceedings under the Indenture and under any Supplemental Indenture and under such Bonds, without prejudice to any other right or remedy of the Trustee or of the Holders of such Bonds, and to recover and enforce judgment or decree against the Corporation but solely as provided in the Indenture, in any Supplemental Indenture and in such Bonds, for any portion of such amounts remaining unpaid, with interest, costs and expenses, and to collect in any manner provided by law, the money adjudged or decreed to be payable.

In no event, however, may the Trustee or any Bondholder declare the principal of any Bond or the interest thereon immediately due and payable other than in accordance with its terms.

In any calculation of the principal amount of Outstanding Bonds for any purpose required or permitted with respect to the foregoing, no Funded Bond shall be considered to be Outstanding and no Holder of a Funded Bond may exercise any right to give any consent or direction required or permitted with respect to the foregoing.

Additional Bonds

No Additional Bonds May be Issued Under the 2006 Indenture. As described herein, the Corporation previously issued certain revenue bonds under the 2006 Indenture. Upon delivery of the Series 2022 Bonds, the Outstanding 2006 Indenture Bonds will be defeased, the 2006 Indenture and the lien created thereby will be terminated, and the pledge and lien on Revenues created by the Indenture will become a first pledge and lien in favor of the owners of the Bonds. Moreover, no additional bonds may be issued under the 2006 Indenture

The Additional Bonds Test Under the Indenture. Except for certain refunding Bonds described in clause (b) of the next paragraph, Additional Bonds, including Supported Bonds, may be issued if the amount of the Net Recurring Revenues for the immediately preceding Fiscal Year for which audited financial statements of the Corporation are available is at least equal to 125% of the Maximum Annual Debt Service on Bonds Outstanding, in each case exclusive of Funded Bonds, after giving effect to the Bonds then to be issued (the "Debt Service Coverage Test").

The Indenture also permits Additional Bonds to be issued for the refunding of Bonds if (a) such refunding bonds meet the requirements of the Debt Service Coverage Test, or (b) Maximum Annual Debt Service on all Bonds Outstanding, in each case exclusive of Funded Bonds, after giving effect to the issuance of such refunding bonds, is not greater than Maximum Annual Debt Service on all Bonds (which, in the case of the Series 2022 Bonds only, includes debt service on the Outstanding 2006 Indenture Bonds) immediately preceding issuance of the refunding bonds. See "APPENDIX A – CERTAIN DEFINITIONS AND SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE."

Additional Bonds That Are Supported Bonds Under the Indenture. Additional Bonds may be issued pursuant to the Indenture to finance Project Costs, including future improvements to, or expansion of, the Subway Extension and Phase II of the park, up to $500 million of which may be Supported Bonds.

In 2018, the City Council adopted a resolution that authorized Interest Support Payments for up to an additional $500 million aggregate principal amount in borrowings to finance the completion of infrastructure projects in the Project Area, and ratified, confirmed and authorized that Interest Support Payments may be made by the City, subject to appropriation, in connection with interest on any HYIC Bonds theretofore or thereafter issued by the Corporation to refund or refinance any Supported Bonds.

In February 2019, the Corporation entered into the Subordinate Loan Facility to provide initial financing for certain additional improvements in the Project Area. Under the Subordinate Loan Facility, the Corporation is authorized to request that the Lender make term loans (the "Subordinate Term Loans") through June 30, 2022, unless the Subordinate Loan Facility is terminated earlier or extended, currently in an amount not to exceed $200,000,000. As of September 1, 2021, the Corporation has drawn approximately $2.4 million under the Subordinate Loan Facility. Principal and interest on the Subordinate Term Loans are payable on a basis subordinate to the payment of debt service on the Bonds, including the Series 2022 Bonds. The Corporation has funded certain interest reserves under the Subordinate Loan Facility and the City has executed an Additional Borrowing Hudson Yards Support Agreement to provide for Interest Support Payments on the Subordinate Term Loans. The Corporation expects to issue Additional Bonds in the future to repay amounts drawn under the Subordinate Loan Facility and finance the remaining costs of Phase II of the park.

Additional Bonds That Are Unsupported Bonds Under the Indenture. Other Bonds, which may be bonds for which Interest Support Payment will not be made (the "Unsupported Bonds"), may be issued to finance Project Costs without limitation as to amount, upon compliance with the additional bonds tests described above.

SECTION VI: HISTORICAL REVENUES, EXPENSES & DISTRIBUTIONS TO THE CITY

This section contains unaudited cash flows provided by the Corporation regarding the Corporation's Revenues received during the period from July 1, 2005 through June 30, 2021 ("FY 2006-2021"). Exhibit 6-1 shows the Corporation's Revenues in categories, including, Recurring Revenues, Non-Recurring Revenues, and Other Revenues. This information is presented on a cash basis and differs from the Corporation's financial statements that are presented on an accrual basis. See "Appendix F: Financial Statements of the Corporation." All years described in this section are Fiscal Years, unless otherwise stated.

The Corporation began in 2006 with $11.1 million in Revenues which has exponentially grown to approximately $300 million in 2021. During FY 2006-2021, the Corporation received a total of approximately $3.0 billion in Revenues, comprised of $1.2 billion in Recurring Revenues, $1.1 billion in Non-Recurring Revenues, and $643.6 million in Other Revenues.

Recurring Revenues. Recurring Revenues totaled approximately $1.2 billion, comprised of $398.6 million in PILOT Payments and $812.3 million in Tax Equivalency Payments. Revenues received as Tax Equivalency Payments increased dramatically from $8.8 million in 2008 to $154.4 million in 2021. As of 2021, 32 residential properties and 34 hotels have reached substantial completion or completion. Revenues received as PILOT Payments were first received in 2014 and increased gradually through 2018, then since 2020 increased to over $100 million annually. As of 2021, the PILOT Payments were paid by owners of 8 office buildings to the Corporation, pursuant to the respective IDA PILOT Agreements.

Non-Recurring Revenues. Non-Recurring Revenues totaled approximately $1.1 billion. Each source of the Corporation's Non-Recurring Revenues represents payments by developers purchasing additional developable square footage (ERY Transferable Development Rights and DIB) or financing construction activities (PILOMRT). As such, the receipt of Non-Recurring Revenues is an indicator that future development will occur, resulting in the probable future receipt of additional Recurring Revenues. The majority of the Non-Recurring Revenues received have come from DIB Payments, totaling $596.3 million. The remainder of the Non-Recurring Revenues were received from PILOMRT Payments totaling $219.1 million and ERY Transferable Development Rights totaling $294.5 million. The Corporation received its last ERY Transferable Development Rights payment in 2018 of approximately $104.8 million.

Other Revenues. Other Revenues totaled approximately $643.6 million, comprised of $284.9 million in investment earnings and $358.8 million in Interest Support Payments received from the City. Since 2016, the Corporation has not received any Interest Support Payments because other revenues were sufficient to pay interest on the Corporation's outstanding bonds and operating expenses. The Corporation does not expect to need Interest Support Payments in the future.

Expenses. All of the Corporation's Revenues since 2006 have been expended solely: (i) to pay operating expenses of the Corporation in the aggregate amount of $30.6 million, and (ii) to pay all debt service on the Corporation's Bonds to the extent not paid from capitalized interest amounts, including the redemption of a portion of the Corporation's Bonds, in the aggregate amount of $1.916 billion.

Distributions to the City. Since 2019, the strength of the Corporation's Revenues has enabled it to transfer a total of approximately $662.8 million in revenues to the City.

Exhibit 6-1

Historical Summary of Cash Flows for Nonbond Proceeds[1] Accounts -- Unaudited

(Amounts in thousands)

	Fiscal Year Ended June 30								
	2006	2007	2008	2009	2010	2011	2012	2013	2014
CASH RECEIPTS									
Recurring Revenues									
Payments in Lieu of Real Estate Taxes	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,950
Tax Equivalency Payments (from NYC)	-	-	8,800	5,731	13,318	25,938	27,679	32,647	38,554
Total Recurring Revenues	**$ -**	**$ -**	**$ 8,800**	**$ 5,731**	**$ 13,318**	**$ 25,938**	**$ 27,679**	**$ 32,647**	**$ 40,504**
Non-Recurring Revenues									
District Improvement Bonus	$ 11,120	$ 52,330	$ 12,538	$ 4,488	$ -	$ 4,635	$ 2,951	$ 3,261	$ 10,827
Payments in Lieu of Mortgage Recording Taxes	-	-	-	-	-	-	-	8,661	4,688
ERY Transferable Development Rights	-	-	-	-	-	-	-	-	-
Total Non-Recurring Revenues	**$ 11,120**	**$ 52,330**	**$ 12,538**	**$ 4,488**	**$ -**	**$ 4,635**	**$ 2,951**	**$ 11,922**	**$ 15,515**
Other Revenues									
Interest Support Payments & Prepayments (From NYC)[2]	$ -	$ -	$ -	$ 15,000	$ -	$ 42,667	$ 234,942	$ -	$ 38,130
Interest Receipts	59	12,878	90,111	70,368	46,728	30,676	1,050	2,087	1,042
Total Other Revenues	**$ 59**	**$ 12,878**	**$ 90,111**	**$ 85,368**	**$ 46,728**	**$ 73,343**	**$ 235,992**	**$ 2,087**	**$ 39,172**
Miscellaneous[3]	-	-	-	-	-	-	-	5,511	11,381
TOTAL CASH RECEIPTS	**$ 11,179**	**$ 65,208**	**$ 111,449**	**$ 95,587**	**$ 60,046**	**$ 103,916**	**$ 266,622**	**$ 52,167**	**$ 106,572**
CASH DISBURSMENTS									
Operating	$ 1,500	$ 2,931	$ 594	$ 617	$ 4,844	$ 843	$ 9,521	$ 459	$ 426
Debt Service (inc. Defeasance Costs)	-	-	112,125	97,500	97,500	97,500	114,342	153,125	153,125
Transfers to NYC/ TFA	-	-	-	-	-	-	-	-	-
TOTAL CASH DISBURSMENTS	**$ 1,500**	**$ 2,931**	**$ 112,719**	**$ 98,117**	**$ 102,344**	**$ 98,343**	**$ 123,863**	**$ 153,584**	**$ 153,551**
NET RECEIPTS/DISBURSEMENTS	**$ 9,679**	**$ 62,277**	**$ (1,270)**	**$ (2,530)**	**$ (42,298)**	**$ 5,573**	**$ 142,759**	**$ (101,417)**	**$ (46,979)**
Cash & Investments[4] -- Beginning Balance	-	9,679	71,956	70,686	68,156	25,858	31,431	174,190	72,773
Transfer from Construction Fund[5]	-	-	-	-	-	-	-	-	-
Cash & Investments[4] -- Ending Balance	**$ 9,679**	**$ 71,956**	**$ 70,686**	**$ 68,156**	**$ 25,858**	**$ 31,431**	**$ 174,190**	**$ 72,773**	**$ 25,794**

[1] This summary excludes bond issuance and all project costs paid out of bond proceeds.
[2] Includes grants of $15 million in 2009 and $156 million in 2012, which were used to prepay subsequent year debt service.
[3] Includes miscellaneous application or document fees associated with PILOMRT and ERY Transferable Development Rights. Miscellaneous receipts are not considered Revenues under the Indenture.
[4] Cash and investments, which are included at cost on the summary of cash flows, do not include bond proceeds.
[5] Reflects a transfer of remaining 2012A bond proceeds to the debt service fund and used for a partial redemption of 2012A bonds.
Totals may not add up due to rounding.

Exhibit 6-1 Continued
Historical Summary of Cash Flows for Nonbond Proceeds[1] Accounts -- Unaudited
(Amounts in thousands)

	Fiscal Year Ended June 30							
	2015	2016	2017	2018	2019	2020	2021	Totals
CASH RECEIPTS								
Recurring Revenues								
Payments in Lieu of Real Estate Taxes	$ 4,577	$ 7,994	$ 21,376	$ 30,879	$ 76,148	$ 118,897	$ 136,785	$ 398,606
Tax Equivalency Payments (from NYC)	48,563	58,656	70,545	84,332	113,347	129,847	154,361	812,318
Total Recurring Revenues	**$ 53,140**	**$ 66,650**	**$ 91,921**	**$ 115,211**	**$ 189,495**	**$ 248,744**	**$ 291,146**	**$ 1,210,924**
Non-Recurring Revenues								
District Improvement Bonus	$ 193,652	$ 45,183	$ 20,705	$ 75,099	$ 38,638	$ 120,907	$ -	$ 596,334
Payments in Lieu of Mortgage Recording Taxes	-	22,496	31,384	17,782	70,532	57,130	6,423	219,096
ERY Transferable Development Rights	90,547	99,154	-	104,840	-	-	-	294,541
Total Non-Recurring Revenues	**$ 284,199**	**$ 166,833**	**$ 52,089**	**$ 197,721**	**$ 109,170**	**$ 178,037**	**$ 6,423**	**$ 1,109,971**
Other Revenues								
Interest Support Payments & Prepayments (From NYC)[2]	$ 28,047	$ -	$ -	$ -	$ -	$ -	$ -	$ 358,786
Interest Receipts	705	2,346	2,161	4,093	10,475	10,426	(353)	284,852
Total Other Revenues	**$ 28,752**	**$ 2,346**	**$ 2,161**	**$ 4,093**	**$ 10,475**	**$ 10,426**	**$ (353)**	**$ 643,638**
Miscellaneous[3]	4,681	29	10	9,011	8,834	1,776	-	41,233
TOTAL CASH RECEIPTS	**$ 370,772**	**$ 235,858**	**$ 146,181**	**$ 326,036**	**$ 317,974**	**$ 438,983**	**$ 297,216**	**$ 3,005,766**
CASH DISBURSMENTS								
Operating	$ 525	$ 500	$ 1,152	$ 1,187	$ 1,012	$ 2,323	$ 2,204	$ 30,638
Debt Service (inc. Defeasance Costs)	153,125	153,125	204,991	133,925	132,250	132,252	181,567	1,916,452
Transfers to NYC/ TFA	-	-	112,793	-	100,000	350,000	100,000	662,793
TOTAL CASH DISBURSMENTS	**$ 153,650**	**$ 153,625**	**$ 318,936**	**$ 135,112**	**$ 233,262**	**$ 484,575**	**$ 283,771**	**$ 2,609,883**
NET RECEIPTS/DISBURSEMENTS	**$ 217,122**	**$ 82,233**	**$ (172,755)**	**$ 190,924**	**$ 84,712**	**$ (45,592)**	**$ 13,445**	**$ 395,883**
Cash & Investments[4] -- Beginning Balance	25,794	242,916	325,149	152,394	343,318	428,031	382,438	
Transfer from Construction Fund[5]	-	-	-	-	-	-	28,088	
Cash & Investments[4] -- Ending Balance	**$ 242,916**	**$ 325,149**	**$ 152,394**	**$ 343,318**	**$ 428,031**	**$ 382,438**	**$ 423,971**	

[1] This summary excludes bond issuance and all project costs paid out of bond proceeds.
[2] Includes grants of $15 million in 2009 and $156 million in 2012, which were used to prepay subsequent year debt service.
[3] Includes miscellaneous application or document fees associated with PILOMRT and ERY Transferable Development Rights. Miscellaneous receipts are not considered Revenues under the Indenture.
[4] Cash and investments, which are included at cost on the summary of cash flows, do not include bond proceeds.
[5] Reflects a transfer of remaining 2012A bond proceeds to the debt service fund and used for a partial redemption of 2012A bonds.
Totals may not add up due to rounding.

SECTION VII: HUDSON YARDS FINANCING DISTRICT DEVELOPMENT AND REVENUE REPORT

This section contains excerpts from Chapters 1 and 2 of the C&W 2021 Report and only select information pertaining to the development of the Project Area and real estate demand forecast has been included herein. Prospective investors should read the C&W 2021 Report in its entirety. The conclusions of the C&W 2021 Report are premised on numerous assumptions, reliances, and limiting conditions that are sourced or detailed in the C&W 2021 Report and particularly in Chapter 1B of the C&W 2021 Report (collectively, "Limiting Conditions of the C&W 2021 Report"). In the event that assumptions or reliances upon which the C&W 2021 Report are premised prove to be incorrect, the Corporation may not receive the Revenues in the amounts or at the times expected. Additional risks exist which may cause the Revenues not to be realized in the amounts or at the times projected. See "SECTION IX: RISK FACTORS." Potential risks arising from unforeseen economic, political and fiscal policy changes or events are not accounted for in the forecasts.

All the statements in this section, except cross references to other sections in this Official Statement, were sourced from the C&W 2021 Report. In some instances, however, the appearance of the tables in this section may differ in appearance from the corresponding table in the C&W 2021 Report. Certain words or phrases used in the C&W 2021 Report may have been changed in this section to be consistent with terms defined herein. Any statement in this section is qualified by reference to the entire C&W 2021 Report attached hereto.

The information contained in this "SECTION VII: HUDSON YARDS FINANCING DISTRICT DEVELOPMENT AND REVENUE REPORT" and information contained in the C&W 2021 Report, except for revenue projections, was provided by C&W and has not been independently verified by the Corporation.

C&W and its affiliates and alliance partners constitute one of the largest international real estate service providers with over 300 offices in 60 countries across the world. C&W represents clients in the buying, selling, financing, leasing, managing and valuing of assets, and provides strategic planning and research, portfolio analysis, site selection and space location, among other advisory services. From time to time, C&W and its affiliates may have provided and in the future may provide or seek to provide real estate related services to private entities developing in the Project Area, the Corporation, HYDC or the City.

General

The Corporation retained Cushman & Wakefield to prepare a Hudson Yards Financing District Development and Revenue Report, attached hereto as Appendix E, which analyzes assessed values and taxes of real estate assets, presents market analyses, and reviews the reasonableness of the City Office of Management and Budget's ("OMB") revenue forecasts. Incorporating current market data, the C&W 2021 Report maintains a similar analytical framework to the report prepared by C&W in 2017 ("2017 Report") to forecast revenues and real estate market fundamentals over a new projection period, July 1, 2021 through June 30, 2047 ("Fiscal Years 2022 - 2047"), for the Project Area, as shown in the Project Area Map herein. C&W has concluded that OMB's projected real estate-related revenues from existing and future development within the Project Area are reasonable. The majority of the forecast revenue is projected to be generated by 17 assets profiled in Chapter 5 of the C&W 2021 Report, which include trophy and Class A office buildings and top tier residential, hotel, and retail properties. Fourteen of these buildings are completed and three are under construction. These 17 profiled assets account for $15.4 billion or 57% of the total projected revenues.

Summary of Revenue Conclusions

C&W considers the revenue projections prepared by OMB to be reasonable and well supported. A summary of all projected revenues during Fiscal Years 2022 – 2047 is provided below. See "SECTION VIII: PROJECTED REVENUES" herein. For the definition of "Recurring Revenue" and "Non-Recurring Revenue" as used in Exhibit 7-1, see "SECTION V: SECURITY AND SOURCES OF PAYMENT FOR THE SERIES 2022 BONDS."

Exhibit 7-1: Total Revenues Fiscal Years 2022 - 2047

RECURRING REVENUE	**PILOT Office**	**TEP Residential**	**TEP Hotel & Other**	**Total**
Existing Revenue	$11.6 Billion	$4.9 Billion	$3.8 Billion	$20.2 Billion
Future Revenue	$3.4 Billion	$2.5 Billion	$0.5 Billion	$6.3 Billion
Total Recurring Revenue	$15.0 Billion	$7.3 Billion	$4.2 Billion	$26.6 Billion
NON-RECURRING REVENUE	**DIB**	**PILOMRT**		**Total**
	$430.7 Million	$86.9 Million		$517.6 Million
TOTAL REVENUE				$27.1 Billion

Note: Figures may not sum due to rounding and PILOT Office includes 20 Hudson Yards.

The projected revenues are contingent on the realization of all the economic and real estate assumptions, analyses, existing zoning, and completion of key infrastructure, and are subject to the Limiting Conditions of the C&W 2021 Report.

Successful Completion of Initial Goals of the Project Area

The City, in collaboration with the MTA and the State, began planning the Hudson Yards project in 2002. The zoning controls adopted for Hudson Yards in January 2005 provide for a mix of commercial and residential uses, with a high-density commercial core running along West 33rd Street from Pennsylvania Station to the Eastern Rail Yards, and north between Tenth and Eleventh Avenues from West 33rd to West 41st Streets.

The five key elements of the Hudson Yards redevelopment plan to support its evolution into a mixed-use, 24/7 district were: (1) zoning for mixed-use development; (2) access to mass-transit; (3) availability of large commercial sites; (4) creation of new public open spaces and cultural amenities; and 5) renovation and expansion of the Javits Center. All of these goals have been accomplished. Since the 2005 rezoning, these accomplishments have included:

- The $2.4 billion extension project of the Number 7 subway line
- The construction or renovation of approximately 17.8 million square feet of office space[1]
- Nearly 10,000 new rental and condominium apartments
- The addition of nearly 8,500 new hotel rooms
- The completion of Phase I of Bella Abzug Park
- The completion of the final phase of the High Line
- The renovation and expansion of the Javits Center

[1] Gross building area, inclusive of three office buildings (50 Hudson Yards, 66 Hudson Boulevard, and Two Manhattan West) that are significantly pre-leased and nearing completion

Completed, Under Construction and Future Developments

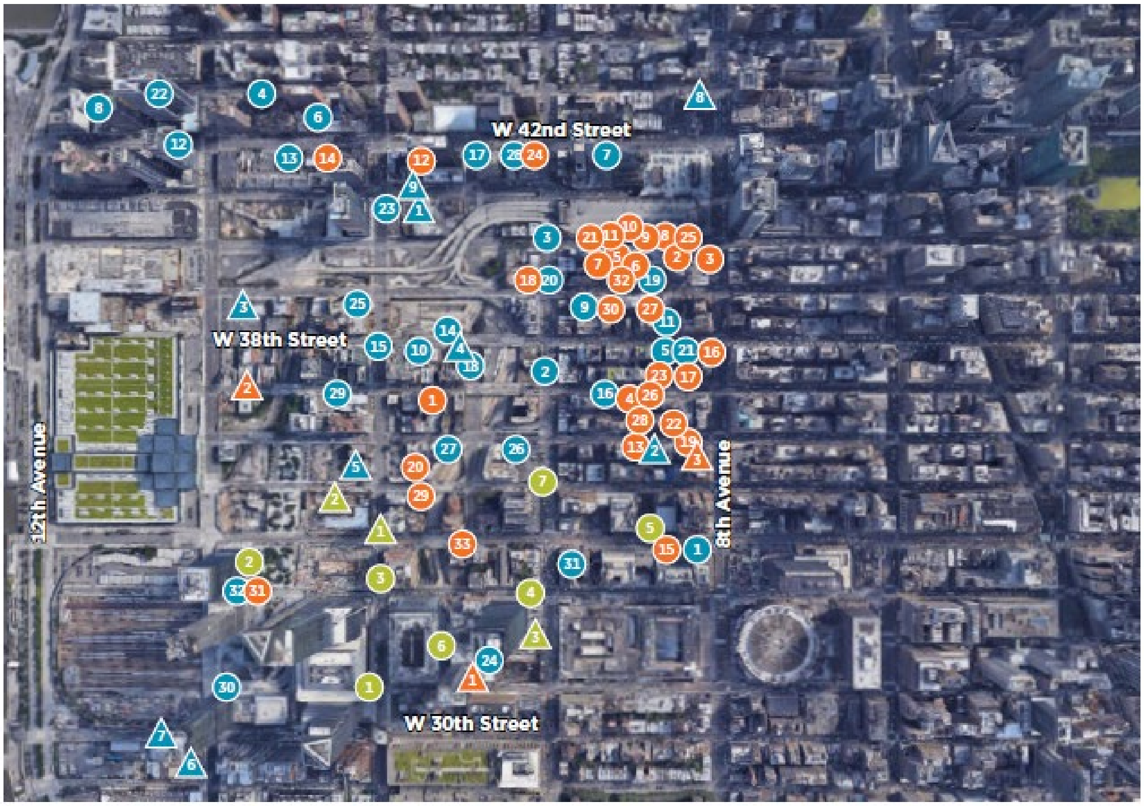
Since the 2005 rezoning, nearly 10.9 million square feet ("msf") of office, 10.7 msf of residential, and 3.6 msf of hotel construction has been developed or redeveloped within the Project Area. The completed office square footages reported in the C&W 2021 Report include 20 Hudson Yards, known as "The Shops and Restaurants at Hudson Yards". The completed residential buildings consist of nearly 10,000 rental and condominium units and the completed hotels consists of nearly 8,500 rooms. The scale of the completed developments demonstrates the strong desirability of the area for office, residential, retail, and hotel uses.

In addition to the completed developments, approximately 6.9 msf of office space, 3.2 msf of residential, and 449,538 square feet of hotel space is currently under construction in the Project Area.

Based on the analyses of the respective markets, and the competitive position Hudson Yards holds as the City's newest office subdistrict, the recent recession and shape of recovery, C&W projects that the pace of future completions will be two years delayed from the projections determined by C&W in its 2017 Report. As a result, the total future development projected equates to 9.8 msf of office, 6.8 msf of residential, 291,135 sf of hotel, and 534,420 sf of retail uses.

The completed developments and developments under construction are illustrated in the map on the following page.

Exhibit 7-2: Map of Completed and Under Construction Developments in the Project Area



OFFICE

● *Completed*
10.9 MSF

1. 10 Hudson Yards
2. 55 Hudson Yards
3. 20/30 Hudson Yards
4. 1 Manhattan West
5. 330 West 34th St.
6. 5 Manhattan West
7. Hudson Commons

▲ *Under Construction*
6.9 MSF

1. 50 Hudson Yards
2. 66 Hudson Boulevard
3. 2 Manhattan West

RESIDENTIAL

● *Completed*
10.7 MSF

1. 315 W. 33rd St.
2. 400 W. 37th St.
3. 402 W. 40th St.
4. 552 W. 43rd St.
5. 325 W. 37th St.
6. 521 W. 42nd St.
7. 350 W. 42nd St.
8. 635 W. 42nd St.
9. 502 Ninth Ave.
10. 455 W. 37th St.
11. 320 W. 38th St.
12. 600 W. 42nd St.
13. 534 W. 42nd St.
14. 446 W. 38th St.
15. 505 W. 37th St.
16. 350 W. 37th St.
17. 450 W. 42nd St.
18. 433 W. 37th St.
19. 330 W. 39th St.
20. 515 Ninth Ave
21. 321 W. 37th St.
22. 605 W. 42nd St.
23. 555 Tenth Ave.
24. 435 W. 31St. St.
25. 515 W. 38th St.
26. 411 W. 35th St.
27. 445 W. 35th St.
28. 400 W. 42nd St.
29. 515 W. 36th St.
30. 15 Hudson Yards
31. 401 W. 33rd St.
32. 35 Hudson Yards

▲ *Under Construction*
3.2 MSF

1. 460 W. 41st St.
2. 335 W. 35th St.
3. 555 W. 38th St.
4. 441 W. 37th St.
5. 451 Tenth Ave.
6. 601 W. 29th St.
7. 606 W. 30th St.
8. 308 W. 43rd St.
9. 550 Tenth Ave.

HOTEL

● *Completed*
3.6 MSF

1. 449 W. 36th St.
2. 309 W. 39th St.
3. 305 W. 39th St.
4. 341 W. 36th St.
5. 341 W. 39th St.
6. 337 W. 39th St.
7. 343 W. 39th St.
8. 326 W. 40th St.
9. 330 W. 40th St.
10. 334 W. 40th St.
11. 342 W. 40th St.
12. 570 10th Ave
13. 345 W. 35th St.
14. 510 W. 42nd St.
15. 325 W. 33rd St.
16. 307 W. 37th St.
17. 312 W. 37th St.
18. 515 9th Ave
19. 321 W. 35th St.
20. 444 10th Ave
21. 350 W. 40th St.
22. 320 W. 36th St.
23. 326 W. 37th St.
24. 400 W. 42nd St.
25. 310 W. 40th St.
26. 337 W. 36th St.
27. 333 W. 38th St.
28. 338 W. 36th St.
29. 461 W. 34th St.
30. 351 W. 38th St.
31. 35 Hudson Yards
32. 338 W. 39th St.
33. 438 W. 33rd St.

▲ *Under Construction*
450K SF

1. 432 W. 31st St.
2. 450 11th Ave.
3. 319 W. 35th St.

Key Findings of the C&W 2021 Report

Emerging trends for national and Manhattan office inventory include:

- Flight to quality by tenants to Class A and Trophy assets.
- Surging tenant tour activity
- Superior fundamentals for Class A and Trophy office assets including higher occupancy, stronger leasing and absorption, and greater net effective rents.
- Desirability of Leadership in Energy and Environmental Design ("LEED") certified and green office buildings.

C&W concludes corporations will continue to require office space long term, with a decline in workforce physically present therein reduced 5 percent to 10 percent from pre-pandemic levels. This decline will be offset by a reversal of densification trends and office using employment growth long term.

Based on C&W analyses, most of the higher office vacancy rate attributed to trends related to employees working from home will be incurred in Class B and C buildings rather than in Class A and Trophy assets. If a material increase in vacancy rates occurs, affected Class B and C structures will be considered for adaptive re-use by market participants, a well- defined trend in the Manhattan markets over the past three decades. Manhattan's Class A and Trophy office assets have superior tenant rosters, stronger and more durable cash flows, achieve higher rents and are capturing greater absorption than Class B and C buildings. The existing and proposed office building assets in Hudson Yards share these qualities, as described in Chapter 5 of the C&W 2021 Report. The analysis of rent levels and absorption trends is presented in Chapter 2 of the C&W 2021 Report.

C&W analyses indicate that companies will continue to evaluate their real estate needs focusing on providing a secure and safe workplace, but as is the case in all recessions and recoveries, a greater emphasis on cost containment will be a primary focus. In addition, C&W analyses indicate that companies are looking to develop new strategies to utilize office space more effectively. C&W notes that the new office buildings in Hudson Yards are designed with this efficiency in mind, with features like column-free spacing.

Hudson Yards Office Desirability

C&W reports that Hudson Yards' master planned concept with incentivized zoning has successfully attracted top tier companies and tenants or owners within new trophy quality office towers. The infrastructure improvement including the No. 7 train extension, new Moynihan Train Hall, on-going renovation to Pennsylvania Station, updating of AMTRAK's infrastructure (over $150 million expended for expansion of platforms and replacement of tracks and switches), and improved public space including Bella Abzug Park (Phase I completed, Phase II proposed), have contributed to a dynamic office subdistrict. The LEED certified buildings are also attractive to retain and recruit talent by tenants/occupants. The office market analysis presented in Chapter 2 of the C&W 2021 Report contains details of major corporations which have relocated to new development in Hudson Yards, creating a vibrant office subdistrict.

C&W concludes that while the last 18 months have been a tumultuous time for the New York City real estate market, the economic and real estate effects of COVID-19 are expected to be temporary. The Manhattan office market will recover and perform well in the long term. Hybrid occupancy, with employees rotating between working at home and in an office, may continue to be popular but offices will be an essential part of the corporate environment. New Class A and trophy office assets, which are well amenitized and designed to be more efficient for occupier use with top LEED certifications, are expected to continue to experience strong future leasing activity and occupancy while meeting tenant needs.

C&W reports that the Project Area has proven to be well positioned to withstand the economic pressure created by the pandemic. Office leasing brokers report that tenant tours of Hudson Yards have been consistent since social distancing restrictions were lifted. While Class A sublease space has significantly increased throughout the pandemic in Midtown and Manhattan overall, almost no sublease space is available in the Hudson Yards and Manhattan West developments. Class A average asking rents in the Penn Station subdistrict registered $109.31 per square foot in the second quarter of 2021. Removing the average asking rents from Hudson Yards located assets from the statistical sample, Penn Station subdistrict average asking rents decrease to $65.20 per square foot. Asking rents in the Hudson Yards area alone average to $118.54 per square foot, higher than any Class A submarket in the City.

C&W indicates that office buildings in Hudson Yards will continue to outperform compared to the Manhattan market. Hudson Yards office buildings are generally trophy quality, LEED-certified and green, and are positioned to continue to attract high quality credit tenants. The buildings in the Project Area have the highest rents and absorption rates in the Penn Station subdistrict, and are representative of the type of asset desired most by investors as well as tenants in the Manhattan market. This is a direct result of the master-plan concept for the broader Hudson Yards rezoning which includes expanded public transportation (No. 7 subway extension), renovations to Pennsylvania Station, the new Moynihan train station, Phase I of Bella Abzug Park, and the final phase of the High Line park.

C&W reports that Class A asking rents in the Penn Station subdistrict are $109.31 per square foot, 27.3 percent greater than for Midtown overall. Asking rents for Class A space in completed Hudson Yards buildings, profiled in Chapter 5 of the C&W 2021 Report, range from $105 to $200 per square foot. The occupancy rates in these completed office buildings range from 72.2 percent to 100 percent. Only 501,643 square feet of space is available as of the first quarter of 2021, indicating an average vacancy rate of 4.6 percent for five completed assets, which is lower than the Penn Station subdistrict and Manhattan overall. Asking rents within the office assets nearing completion and substantially leased (50 Hudson Yards, 66 Hudson Boulevard, and Two Manhattan West) range from $103 to $200 per square foot. Initial rents for large anchor tenants in Hudson Yards were in the $75 to $85 per-square-foot range in late 2011. The growth in office rents (from $80 per square foot in 2011 to the average asking rent of $118.54 per square foot) is 4.01 percent annually, and demonstrates the area's desirability as a proven office destination.

COVID-19 Pandemic

The C&W 2021 Report states that, considering the study period extends from 2022 through 2047, the pandemic is not expected to have a long-term impact on the assets in Hudson Yards. See Chapter 2 of the C&W 2021 Report for analyses of the existing market conditions prior to the pandemic, the market conditions during the pandemic, and the future outlook for each major asset class in Hudson Yards: office, residential, hotel, and retail.

Office Market. Though impacted in the short-term, the Hudson Yards office market has outperformed the Manhattan market, owing to its composition of Class A and trophy quality assets with efficient design, credit-worthy tenants, and green building features. As a result, the outlook for the office market is positive.

Residential Market. The overall Manhattan and Hudson Yards rental markets have fully recovered from the effects of the pandemic, with respect to leasing activity, occupancy, and concession levels. Rents have begun to increase and are expected to continue increasing into 2022. The condominium market is still recovering from the effects of the pandemic, though recent contract activity suggests that the remainder of 2021 will be a strengthening market. As a result, the outlook for the residential market is positive.

Hotel Market. The hotel market was negatively impacted by the restrictions on travel and closures of area venues which drew a record level of tourists to New York City in 2019. As of September 2021, national travel restrictions have been rescinded, office employees are returning, Broadway theatres are reopening, and sports venues, museums, and restaurants no longer have capacity limits. Coupled with vaccine mandates, the long-term outlook for hotel performance is good.

Retail Market. Hudson Yards' retail assets were not immune to the pandemic's negative impact on the New York City retail market. In particular, the bankruptcy of Neiman Marcus in May 2020 led to a significant increase in vacancy. However, the vacant space is currently being reconfigured for office use. Although the effects of the pandemic are presenting significant challenges to the Manhattan retail market, positive market activity such as increased tenant tours, and leasing activity are starting to show positive trends. While some market metrics are improving, the overall leasing activity, rental rates and availabilities remain significantly off from pre-pandemic levels.

Real Estate Tax and Assessment Growth Assumptions

The C&W 2021 Report uses the following property tax and assessment growth rate assumptions modeled for office, residential, and hotel assets within the Project Area. The assessment of retail space within office and residential buildings is determined by the dominant use. In addition, the revenue models assume taxes will grow at the same conservative rates used in the office and residential forecasts. The data supporting the property tax and assessment growth rate conclusions for each asset class is detailed in Chapter 3 of the C&W 2021 Report.

Exhibit 7-3: C&W Modeling Assumptions

Property Type	Taxes / SF	Annual Growth Rate(s)
Office	$23.00	0% in FY 2023, 3.5% thereafter
20 Hudson Yards (The Shops & Restaurant)		-10% in FY 2023, 0% in FY 2024, and 3.5% thereafter
Residential		
Condominium	$27.50	4.0% FY 2023 through 2047
Rental	$20.00	4.0% FY 2023 through 2047
Hotel	$18.00	-7.5% in FY 2023, 2.5% thereafter

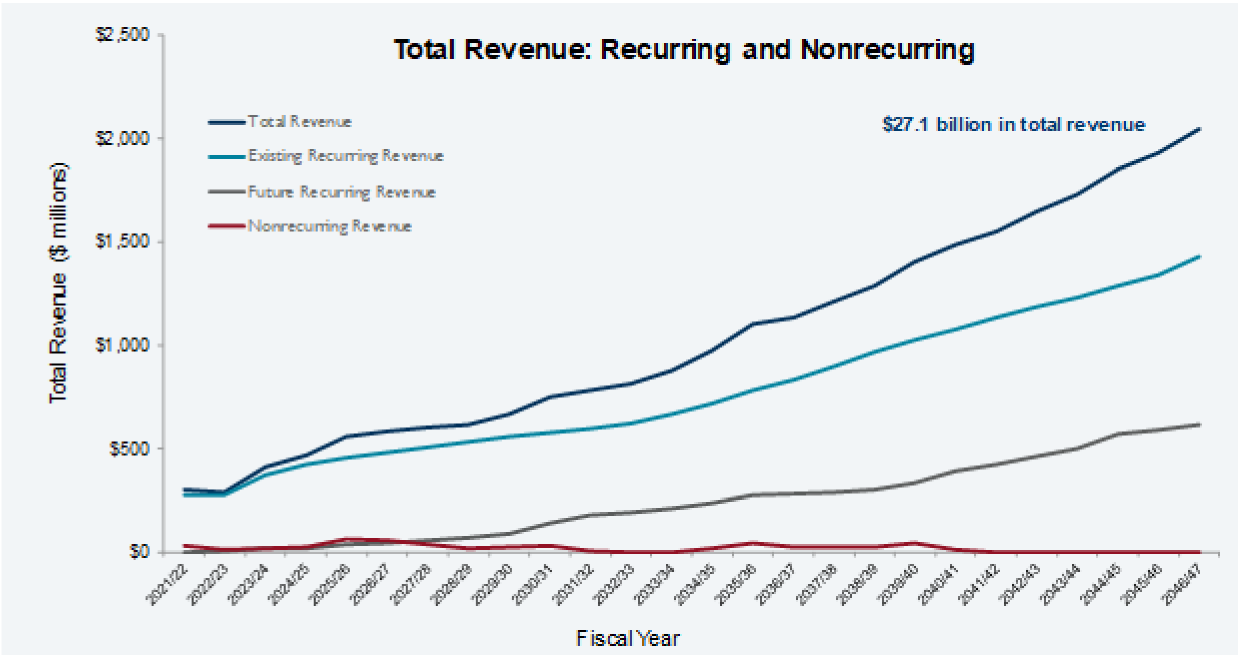
Summary of the Revenues Projected

The Project Area is projected to generate total Recurring Revenues and Nonrecurring Revenues of approximately $27.1 billion from Fiscal Year 2022 – 2047, inclusive of existing, under construction and future developments.

Exhibit 7-4: Total Projected Revenues and Annual Change During Forecast Period

Fiscal Year	Total Projected Revenue	Annual Chg.
2022	$302,935,363	-
2023	290,907,921	-3.97%
2024	409,743,913	40.85%
2025	466,037,289	13.74%
2026	555,659,928	19.23%
2027	582,170,808	4.77%
2028	599,767,464	3.02%
2029	617,422,990	2.94%
2030	669,506,204	8.44%
2031	750,199,401	12.05%
2032	781,988,000	4.24%
2033	814,346,318	4.14%
2034	877,756,692	7.79%
2035	975,974,485	11.19%
2036	1,101,336,817	12.84%
2037	1,138,582,135	3.38%
2038	1,211,006,653	6.36%
2039	1,290,957,572	6.60%
2040	1,406,047,651	8.92%
2041	1,486,981,083	5.76%
2042	1,553,425,751	4.47%
2043	1,646,285,745	5.98%
2044	1,731,642,325	5.18%
2045	1,855,445,206	7.15%
2046	1,930,072,901	4.02%
2047	2,048,128,285	6.12%
Total	**$27,094,328,900**	

Exhibit 7-5: Total Projected Revenues During Forecast Period



For a detailed discussion of the Projected Revenues, see "SECTION VIII: PROJECTED REVENUES" herein.

SECTION VIII:PROJECTED REVENUES

General

This section contains information provided by OMB regarding the Corporation's projected Revenues from development in the Project Area during the Forecast Period (July 1, 2021 through June 30, 2047). Generally, during the Forecast Period, OMB projects that the Corporation's primary source of Revenues will come from Recurring Revenues (i.e., PILOT Payments and TEP). The analysis provided in this Section for projected Recurring Revenues includes separate analyses for Existing Development and Future Development as such terms are defined below. All years described in this section are Fiscal Years, unless otherwise stated.

Existing Development means all properties identified in Exhibit 8-1 below, which include:

(i) completed and under construction office properties ("Existing Office Development"), and The Shops and Restaurants (20 Hudson Yards);

(ii) completed residential properties ("Existing Residential Development"); and

(iii) completed hotel properties and other rehabilitated non-hotel commercial properties generating Tax Equivalency Payments, referred to as "Other Commercial TEP Properties" (collectively, the "Existing Hotel and Other Development").

Within each category above, retail development associated with identified properties is included in the Revenues projection. All properties defined as Existing Development are paying PILOT Payments or generating Tax Equivalency Payments as of July 1, 2021.

Future Development means C&W's forecast completions in square feet (excluding expected square feet of properties identified in Exhibit 8-1 below) relating to:

(i) future office development ("Future Office Development") and associated forecast retail development;

(ii) under construction or future residential development ("Future Residential Development") and associated forecast retail development; and

(iii) under construction or future hotel development ("Future Hotel Development") and does not include forecast retail development.

In developing OMB's projection of Revenues from PILOT Payments and Tax Equivalency Payments contained herein, it relied on a number of variables and assumptions, including certain information contained in the C&W 2021 Report. OMB's projection of Revenue from Existing Development incorporates current NYCDOF real property tax liability modified by any applicable tax exemption schedule and includes an assumption of future value growth. OMB's projection of Revenues from Future Development was developed using forecasts contained in the C&W 2021 Report including completion forecasts, estimates of current assessed values, estimated tax exemption schedules, and projected future growth in property value. In projecting Recurring Revenues from Existing Development and Future Development, the City's real property tax rates were assumed as described in Exhibit 7-3 of "SECTION VII: HUDSON YARDS FINANCING DISTRICT DEVELOPMENT AND REVENUE REPORT-Real Estate Tax and Assessment Growth Assumptions" herein.

The forecasts contained herein are inherently subject to a variety of risks and uncertainties that may cause actual results to differ materially from those projected. See "SECTION IX: RISK FACTORS."

Since the assessment of retail space within office and residential buildings is determined by the dominant use of the building, the applicable PILOT Payments or Tax Equivalency Payments from office and residential developments are applied to the retail portion within each building to obtain the forecast total retail revenues. As a result, the retail revenues projected in this section are incorporated in the office or residential revenues.

Reasonableness of Projected Revenues

C&W reviewed the City's projected Revenues in the C&W 2021 Report, and concluded that subject to the Limiting Conditions of the C&W 2021 Report, OMB's tax revenue projections of Revenues are reasonable. The projected Revenues are contingent on the realization of all the economic and real estate assumptions, analyses, existing zoning, and are subject to the Limiting Conditions of the C&W 2021 Report. One of the limitations of the C&W 2021 Report is that their conclusions are based on the analysis of data provided to C&W by the City, which is assumed to be correct. See "SECTION IX: RISK FACTORS."

Projected Recurring Revenues from Existing Development

Existing Development, as identified in Exhibit 8-1 below, include eight completed and under construction office properties, 32 completed residential properties and 43 completed hotel and other properties (includes 11 Other Commercial TEP Properties). The projected Recurring Revenues from Existing Development are generated from PILOT Payments paid directly to the Corporation from completed and under construction office properties and Tax Equivalency Payments, which are annually appropriated by the City, from completed residential and hotel properties and certain other properties. In addition, projected revenues for retail associated with the properties listed in Exhibit 8-1 are included in such properties' respective category. Residential and hotel properties which are under construction are not included in Existing Development because, until they are substantially complete and receive a certificate of occupancy, the property taxes paid by such properties are not included in the City's Tax Equivalency Payments.

Exhibit 8-1: Existing Development

Completed & Under Construction Office	Completed Residential Properties		Completed Hotels & Other Commercial TEP Properties [4]	
Building Name	Building Name	Address	Building Name	Address
1 10 Hudson Yards	1 One Family Home	402 W 40 St	1 GEM Hotel	449 W 36 St
2 55 Hudson Yards	2 Hudson Crossing Rental [1]	400 W 37 St	2 Comfort Inn	305 W 39 St
3 20 Hudson Yards	3 Olivia Rental [1]	315-319 W 33 St	3 Wyndham Garden Hotel	341 W 36 St
4 30 Hudson Yards	4 The Orion	350 W 42 St	4 Candlewood Suites	341 W 39 St
5 1 Manhattan West	5 420-C Rental	521 W 42 St	5 Hampton Inn	337 W 39 St
6 50 Hudson Yards	6 Atelier Condo	635 W 42 St	6 Four Points by Sheraton	326 W 40 St
7 66 Hudson Boulevard	7 38NINE Condo	502 9th Ave	7 Fairfield Inn	330 W 40 St
8 2 Manhattan West	8 Condo	552 W 43 St	8 Holiday Inn Express	343 W 39 St
	9 455W37 Rental (TF Cornerstone)	453 W 37 St	9 Element NY Times Square South	309 W 39 St
	10 Silver Towers	601 W 41 St/533 11 Ave	10 Staybridge Suites Hotel	334 W 40 St
	11 Emerald Green Rental	320-328 W 38 St	11 Distrikt Hotel	342 W 40 St
	12 505W37 Rental	505 W 37 St	12 TRYP Time Square South	345-351 W 35 St
	13 Townsend Rental	352 W 37 St	13 The OUT NYC Hotel	510-515 W 42 St
	14 MiMA	420 W 42 St	14 Fairfield Inn and Suites	325 W 33 St
	15 534W42 Condo (formally Deuce)	534 W 42 St	15 Courtyard by Marriot/Time Square W (8th&37St.)	307-311 W 37 St
	16 Mantena Apt Rental	431 W 37 St	16 Homewood Suites by Hilton NY Midtown Manhattan/Times Square - South	312 W 37 St
	17 446 W 38th St Rental	446 W 38 St	17 EVEN Hotels	321 W 35 St
	18 Crystal Green Luxury Rental	334 W 39 St	18 Four Point by Sheraton	444 10th Ave
	19 LANA New York	511 9th Ave	19 Double Tree by Hilton	346-354 W 40 St
	20 325 W 37th St Rental	325 W 37 St	20 Crown Plaza HY36	328 W 36 St
	21 Sienna37 Rental	313- 321 W 37 St	21 Hilton Garden Inn	326 W 37 St
	22 SKY Rental	605 W 42ND St	22 Pod Hotel	577 9th Ave
	23 Henry Hall	509 W 38 St	23 Equinox Hotel	33 Hudson Yards
	24 Eugene	427 W 31 St	24 Marriott Fairfield Inn & Suites	338 W 36th St
	25 555TEN Rental	551 10th Ave	25 Staypineapple New York	337 W 36th St
	26 The Lewis	421 W 35 St	26 Aliz Hotel Time Square	310 W 40th St
	27 Pod Pads Rental	577 9th Ave	27 Courtyard by Marriot/Midtown W (10tl	461 W 34 St
	28 35 Hudson Yards	560 W 33RD St	28 Hyatt Place Hotel	350 W 39 St
	29 15 Hudson Yards	501 W 30TH St	29 La Quinta Inn & Suites by Wyndham T	333 W 38 St
	30 Hudson 36	515 W 36th St	30 Arlo Hotel	351 W 38 St
	31 The Eleni	411 9th AVE	31 Cassa Hotel and Residences	511 9th Ave
	32 445 Rental	453 W 35TH St	32 YOTEL	420 W 42 St
			Other Commercial TEP Properties: (1) 424 W 33 St, (2) 521-523 W 37 St, (3) 505-507 W 38 St, (4) 405 W 39 St, (5) 501 10th Ave, (6) 536 W 39 St, (7) 330-352 W 34 St, (8) 5 Manhattan West, (9) 433 9th Ave, (10) 450 W 36 St, (11) 315 W 35 St	

Source: NYC Office of Management and Budget

(1) 315 W. 33rd St. and 400 W. 37th St. were substantially complete at the time of rezoning in 2005.

Note: C&W's count of total completed hotels (34) listed on page 237 of the C&W 2021 Report includes the Pendry and Pestana CR7 hotels which are not included above. These hotels were physically complete as of August 2021, but had not yet contributed TEP payments (projected in FY 2023).

As shown in Exhibit 8-2, the Existing Development in the Project Area is projected to generate approximately $273.5 million in 2022, $556.8 million in 2030, $1.0 billion in 2040, and $1.4 billion annually by 2047. During the Forecast Period and over the life of the Series 2022 Bonds, Existing Development is projected to generate a total of $20.2 billion, 57.3% of which is expected to be generated from Existing Office Development, 24.0% of which is expected to be generated from Existing Residential Development, and 18.6% of which is expected to be generated from Existing Hotel and Other Development.

Exhibit 8-2: Projected Recurring Revenue From Existing Development

Fiscal Year	PILOT Office[2]	TEP Residential	TEP Hotel & Other	Total
2022	$136,212,312	$45,711,199	$91,624,855	$273,548,366
2023	134,956,331	50,295,424	87,158,340	272,410,095
2024	219,167,742	60,028,215	92,024,407	371,220,365
2025	259,523,873	65,020,546	97,574,987	422,119,406
2026	274,689,262	76,067,236	104,100,642	454,857,140
2027	285,523,706	83,539,623	110,782,871	479,846,200
2028	294,282,267	96,110,893	115,024,742	505,417,902
2029	303,110,981	104,804,831	121,910,954	529,826,765
2030	312,204,565	119,072,254	125,596,014	556,872,832
2031	321,570,966	126,328,783	130,099,151	577,998,900
2032	331,218,368	132,520,997	134,007,857	597,747,222
2033	344,261,799	141,549,380	137,974,475	623,785,653
2034	359,149,362	164,822,933	142,061,832	666,034,127
2035	398,856,979	172,072,209	146,273,703	717,202,891
2036	433,352,891	198,086,104	150,613,982	782,052,977
2037	469,774,997	205,870,536	155,086,689	830,732,222
2038	503,199,217	234,876,968	159,695,970	897,772,154
2039	557,233,698	244,154,872	164,446,108	965,834,678
2040	593,403,863	266,712,614	169,341,520	1,029,457,997
2041	628,188,626	277,284,777	174,386,766	1,079,860,169
2042	664,691,205	288,279,826	179,586,553	1,132,557,584
2043	702,969,288	299,714,677	184,945,740	1,187,629,705
2044	731,029,961	311,606,922	190,469,339	1,233,106,221
2045	756,616,009	335,019,384	196,162,526	1,287,797,919
2046	783,097,569	353,482,409	202,030,644	1,338,610,622
2047	810,505,984	413,372,789	208,079,207	1,431,957,981
Total	**$11,608,791,821**	**$4,866,406,399**	**$3,771,059,873**	**$20,246,258,092**

Source: NYC Office of Management and Budget

(1) Retail revenues are included in all three revenue categories

(2) Office revenues include 20 Hudson Yards

Projected Revenues from Existing Office Development

Existing Office Development is forecasted to generate approximately $136.2 million in 2022 rising to approximately $312.2 million in 2030 and $810.5 million annually by 2047.

According to the C&W 2021 Report, as a result of the impact of COVID-19, Class 4 billable assessed values decreased 11.65% in fiscal year 2022, and actual assessed values decreased 17.2 % in fiscal year 2022. The sharp decrease was unprecedented over the prior 38 years. See Chapter 3 of the C&W 2021 Report. Although Class 4 billable assessed values decreased sharply in fiscal year 2022 (11.65%), the decrease was mitigated for trophy office buildings in Manhattan. Most of the completed office properties in Hudson Yards are trophy assets. According to NYCDOF, assessed values for trophy office buildings in Manhattan declined 7.07% in fiscal year 2022. The lower than average decrease reflects the resiliency of trophy buildings, which typically consist of newly completed, well-located buildings with high occupancy rates and strong rent rolls comprised of institutional and credit-worthy tenants with long-term leases. Four of the ten office assets (10 Hudson Yards, 1 Manhattan West, 30 Hudson Yards, and 5 Manhattan West) were complete and stabilized in fiscal years 2021 and 2022 and billable assessments for these four assets decreased an average of 0.82% in fiscal year 2022. See page 68 of the C&W 2021 Report.

Projected Revenues from Existing Residential Development

Existing Residential Development is forecasted to generate approximately $45.7 million in 2022 rising to approximately $119.0 million in 2030, $266.7 million in 2040 and $413.4 million annually by 2047. During the Forecast Period, the 32 completed residential properties identified in Exhibit 8-1 are projected to generate a total of $4.9 billion in Tax Equivalency Payments, which accounts for 24.0% of the total $20.2 billion projected Recurring Revenues from Existing Development.

Many of the completed residential properties have received tax exemption benefits through the 421-a Program for periods of ten or twenty years from their completion date. As these residential properties begin phasing out of the 421-a Program, the property owners will be required to pay real property taxes based on the assessed value of the improvements made to the property rather than on just the value of the land.

The projected Recurring Revenues from Existing Residential Development do not include projected revenues from residential properties currently under construction because, until such properties are substantially complete and receive a certificate of occupancy, the City will not include real property taxes received from those properties in its Tax Equivalency Payments to the Corporation.

Projected Revenues from Existing Hotel and Other Development

Existing Hotel and Other Development are forecast to generate approximately $91.6 million in 2022 rising to approximately $125.6 million in 2030 and $208.0 million annually by 2047. During the Forecast Period, the 32 completed hotel properties identified in Exhibit 8-1, along with 11 Other Commercial TEP Properties, are projected to generate a total $3.8 billion in Tax Equivalency Payments, which accounts for 18.8% of the total $20.2 billion projected Recurring Revenues from Existing Development.

The Other Commercial TEP Properties are small non-hotel commercial properties in the Project Area that currently pay and are expected to continue to pay real property taxes, generating Tax Equivalency Payments during the Forecast Period, and were included in the Existing Hotel and Other Development for convenience of this analysis.

The projected Recurring Revenues from Existing Hotel and Other Development do not include projected revenues from hotel properties currently under construction because such properties do not begin paying real property taxes until they are substantially complete and receive a certificate of occupancy.

Projected Recurring Revenues from Future Development

As shown in Exhibit 8-3 below, Future Development in the Project Area is projected to generate approximately $7.1 million beginning in 2023, $89.1 million in 2030, $331.4 million in 2040 and $616.2 million annually by 2047. During the Forecast Period and over the life of the Series 2022 Bonds, Future Development is projected to generate a total of $6.3 billion, 53.8% of which is expected to be generated from Future Office Development, 38.8% of which is expected to be generated from Future Residential Development, and 7.5% of which is expected to be generated from Future Hotel Development.

Exhibit 8-3: Projected Recurring Revenue From Future Development

Fiscal Year	PILOT Office[3]	TEP Residential	TEP Hotel & Other	Total
2022	-	-	-	-
2023	-	$2,412,540	$4,670,758	$7,083,298
2024	-	11,964,116	4,787,527	16,751,643
2025	-	13,447,237	5,943,670	19,390,907
2026	-	27,151,977	10,933,047	38,085,023
2027	-	33,083,528	13,417,470	46,500,998
2028	-	44,384,021	13,752,907	58,136,928
2029	-	57,378,514	14,503,819	71,882,333
2030	-	73,845,440	15,287,837	89,133,277
2031	$35,116,397	90,890,875	16,106,313	142,113,585
2032	54,083,296	105,548,824	16,960,628	176,592,748
2033	64,336,257	108,372,170	17,852,238	190,560,665
2034	81,035,798	111,308,450	18,782,613	211,126,861
2035	105,255,025	114,362,180	19,753,320	239,370,526
2036	135,824,143	117,538,060	20,247,153	273,609,357
2037	140,223,836	120,840,976	20,753,332	281,818,144
2038	144,686,801	124,276,008	21,817,218	290,780,026
2039	149,173,006	127,848,441	22,926,913	299,948,360
2040	175,760,729	131,563,771	24,084,259	331,408,759
2041	232,197,541	135,427,715	25,232,090	392,857,345
2042	255,559,059	139,446,216	25,862,892	420,868,167
2043	288,521,118	143,625,458	26,509,464	458,656,040
2044	323,392,034	147,971,869	27,172,201	498,536,104
2045	387,303,645	152,492,137	27,851,506	567,647,287
2046	405,721,270	157,193,215	28,547,794	591,462,279
2047	424,826,479	162,082,336	29,261,489	616,170,304
Total	**$3,403,016,431**	**$2,454,456,073**	**$473,018,458**	**$6,330,490,962**

Source: NYC Office of Management and Budget
(1) Retail revenues are included in the projected revenues.
(2) Retail revenues are not included in the projected revenues.
(3) Office revenues include 20 Hudson Yards

Projected Revenues from Future Office Development

Future Office Development is forecasted to generate approximately $35.1 million beginning in 2031 rising to approximately $175.8 million in 2040 and $424.8 million annually by 2047. During the Forecast Period, the approximately 6.9 msf of office building completions projected in fiscal years 2022 through 2047 by C&W are expected to generate a total of $3.4 billion in PILOT Payments, which accounts for 53.8% of the total $6.3 billion projected Recurring Revenues from Future Development.

The revenue projections for Future Office Development assume that new buildings properties will pay PILOT Payments. The PILOT payments provide a discount to full property taxes, and are set by the IDA pursuant to the Project Area UTEP. As structured, PILOT payments will extend for a 15-year period following construction and then are subject to phase-out to the equivalent of full taxes over the ensuing five-year period. In order to qualify for the PILOT program, commercial projects must equal or exceed 90% of the maximum zoning floor area applicable to a development site (including available bonus floor area) as set forth in the Hudson Yards Special District Zoning Resolution. Projects smaller than 1.0 million zoning square feet are not eligible. Given the projected demand and tax advantage offered by the IDA PILOT Agreements, developers to date have utilized the maximum zoning FAR, and it is assumed they will continue to do so. The IDA retains discretion to qualify a project that does not meet the size and density requirement for PILOT payments.

Following the expiration of the IDA PILOT Agreements, each office property will be subject to the full amount of real property taxes on Class 4 properties.

The assumption used in the revenue model of forecast growth rate in PILOT Payments of 0.0% in fiscal year 2023 and, thereafter, 3.5% per year over the remainder of the forecast period is based on analysis presented in the C&W 2021 Report, which concluded that average growth rate in billable assessed value for Class 4 properties from 1985 through 2022 was 5.1%. Various factors could cause growth in any given year to deviate from this long-term trend.

Projected Revenues from Future Residential Development

Future Residential Development is forecasted to generate approximately $2.4 million in 2023 rising to approximately $73.8 million in 2030, $131.6 million in 2040 and $162.1 million annually by 2047. During the Forecast Period, the 3.2 msf and 3,248 units of forecasted residential building completions projected by C&W generate a total $2.5 billion in Tax Equivalency Payments, which accounts for 38.8% of the total $6.3 billion projected Recurring Revenues from Future Development.

The assumption used in the revenue model of forecast growth rate in a values and assessments of 4.0% per year over the forecast period is based upon analysis presented in the C&W 2021 Report, which concluded that the average growth rate in billable assessed value for Class 2 properties from 1985 to 2022 was 5.9%. Various factors could cause growth in any given year to deviate from this long-term trend.

OMB projects that rental residences would account for two-thirds of the total forecasted Future Residential Development units and condominium would account for the remaining one-third. OMB's projected Recurring Revenues from Future Residential Development assumes that a 421-a Program or similar program will be available to developers of residential rental properties (Class 2) in the Project Area during the Forecast Period, and eligible projects will qualify for a 100% exemption for 25 years and then a 25% exemption for the next 10 years for a total benefit period of 35 years. Such assumptions are consistent with the tax exemption options available to developers under the new Affordable New York Housing Program. See "SECTION V: SECURITY AND SOURCES OF PAYMENT OF BONDS – Recurring Revenues – Affordable New York Housing Program." With respect to condominium properties, the revenues do not assume any incentives are offered under a 421-a Program.

Projected Revenues from Future Hotel Development

Future Hotel Development is forecasted to generate approximately $4.7 million in 2023 rising to approximately $15.3 million in 2030, $24.1 million in 2040 and $29.3 million annually by 2047. During the Forecast Period, the 0.4 msf and approximately 765 rooms of forecast hotel building completions projected by C&W generate a total $473.0 million in Tax Equivalency Payments, which accounts for 7.5% of the total $6.3 billion projected Recurring Revenues from Future Development.

To project the revenues over the forecast period, the revenue model assumes constant growth rates for taxes from 2023 through 2047. These taxes are assumed to decrease 7.5% in 2023, then stabilize at a 2.5% annual growth rate, thereafter, based on analysis provided by C&W. The growth rate is considered to provide a sufficient margin to compensate for downturns during the forecast period.

Projected Recurring Revenues from Existing Development and Future Development

As shown in Exhibit 8-4 below, Existing Development and Future Development ("Existing and Future Development") in the Project Area are projected to generate approximately $273.5 million in 2022, a decline from $291.1 million in 2021 due to the COVID-19 pandemic. Existing and Future Development are projected to generate approximately $646.0 million in 2030, $1.4 billion in 2040 and $2.0 billion annually by 2047. During the Forecast Period and over the life of the Series 2022 Bonds, the Existing and Future Development are projected to generate a total of $26.6 billion, 56.5% of which is expected to be generated from Office Development, 27.5% of which is expected to be generated from Residential Development, and 16.0% of which is generated from Hotel Development.

Exhibit 8-4: Projected Recurring Revenue From Existing and Future Development

Fiscal Year	PILOT Office(2)	TEP Residential	TEP Hotel & Other	Total
2022	$136,212,312	$45,711,199	$91,624,855	$273,548,366
2023	134,956,331	52,707,964	91,829,098	279,493,393
2024	219,167,742	71,992,330	96,811,934	387,972,007
2025	259,523,873	78,467,783	103,518,657	441,510,312
2026	274,689,262	103,219,212	115,033,689	492,942,163
2027	285,523,706	116,623,151	124,200,341	526,347,198
2028	294,282,267	140,494,915	128,777,648	563,554,829
2029	303,110,981	162,183,345	136,414,772	601,709,098
2030	312,204,565	192,917,693	140,883,851	646,006,109
2031	356,687,362	217,219,658	146,205,464	720,112,484
2032	385,301,663	238,069,821	150,968,485	774,339,969
2033	408,598,056	249,921,550	155,826,713	814,346,318
2034	440,185,160	276,131,383	160,844,445	877,160,988
2035	504,112,003	286,434,390	166,027,023	956,573,416
2036	569,177,034	315,624,165	170,861,135	1,055,662,334
2037	609,998,833	326,711,512	175,840,021	1,112,550,365
2038	647,886,017	359,152,975	181,513,188	1,188,552,181
2039	706,406,704	372,003,313	187,373,021	1,265,783,038
2040	769,164,592	398,276,385	193,425,779	1,360,866,756
2041	860,386,167	412,712,492	199,618,856	1,472,717,515
2042	920,250,263	427,726,042	205,449,446	1,553,425,751
2043	991,490,406	443,340,135	211,455,204	1,646,285,745
2044	1,054,421,995	459,578,791	217,641,540	1,731,642,325
2045	1,143,919,654	487,511,520	224,014,032	1,855,445,206
2046	1,188,818,839	510,675,624	230,578,438	1,930,072,901
2047	1,235,332,464	575,455,125	237,340,696	2,048,128,285
Total	**$15,011,808,252**	**$7,320,862,472**	**$4,244,078,330**	**$26,576,749,054**

Source: NYC Office of Management and Budget

(1) Retail revenues are included in all three revenue categories.

(2) Office revenues include 20 Hudson Yards

Projected Non-Recurring Revenues

During the Forecast Period and over the life of the Series 2022 Bonds, the projected Non-Recurring Revenues are expected to generate approximately \$517.6 million, 83.2% of which is expected to be generated from DIB Payments and 16.8% of which is expected to be generated from PILOMRT. Non-Recurring Revenues are projected to be 1.9% of the total projected Revenues for the Forecast Period.

C&W, OMB, NYCDOF, and HYDC calculated the estimated amount of remaining DIB available to be 2,578,506 msf and forecasted the DIB annual utilization in zoning square feet. See C&W 2021 Report in Appendix E. C&W calculated the resulting estimated DIB revenues by multiplying the estimated annual DIB zoning square footage by the inflated DIB pricing amount in such year. In total, DIB revenues are forecast to be \$430.7 million through 2047.

In total, PILOMRT Payments are forecast to be \$86.9 million through 2041. OMB estimated mortgage-recording tax by multiplying the projected square footage of commercial office and retail development for eligible projects by the expected cost of construction and the 2.8% tax rate. The assessor's market value was estimated dividing the inflated stabilized taxes on a per square foot basis (\$23.00 per square foot in fiscal year 2022), by the current Class 4 tax rate (10.755%), by the assessor equalization ratio (45%).

The Corporation will no longer receive ERY Transferable Development Rights payments, the last payment of which was received in 2018.

SECTION IX: RISK FACTORS

Certain factors that could, singly or in combination, affect Revenues and the ability of the Corporation to pay debt service on Series 2022 Bonds are described below. These described risks and uncertainties are not intended to be, nor can they be, a complete description of the risks and uncertainties involved in the purchase and ownership of the Series 2022 Bonds. Additional risks and uncertainties not described herein, not presently known, or not currently believed to be material, might also ultimately affect payment of the Series 2022 Bonds. This section should be read in conjunction with the rest of this Official Statement, including the Appendices hereto.

The Corporation has no significant assets other than the Corporation's right to receive the Revenues. Future Revenues are dependent upon payments generated by current and future development in the Project Area. Revenues also include Interest Support Payments from the City to the Corporation, subject to annual appropriation, in respect of interest on the Supported Bonds (including the Series 2017 Bonds, the Subordinate Loan Facility and, upon issuance the Series 2022 Bonds) if the Corporation has not received enough other Revenues to make interest payments on the Supported Bonds. Such Interest Support Payments are limited in amount to the amount of interest coming due on Supported Bonds.

Public Health Emergencies, including the COVID-19 Pandemic

An outbreak of disease or similar public health emergency, such as the COVID-19 pandemic, or fear of such an event, could have an adverse impact on the Corporation's Revenues. While public health conditions related to COVID-19 have improved substantially since wide-scale vaccinations commenced, there can be no assurances against a resurgence of the disease and imposition of public health restrictions in response. Variants of the coronavirus responsible for COVID-19 could lead to greater disease rates. The longer-term effectiveness of vaccines is yet unproven, and future vaccination rates cannot be predicted with certainty. Thus, the duration, severity and economic effects of the pandemic remain uncertain in many respects. The ultimate impact of COVID-19 on the Revenues of the Corporation is not fully known, and it may be some time before the full adverse impact of the COVID-19 pandemic is known. No assurance can be provided that the COVID-19 pandemic and resulting economic disruption will not result in revenues to the Corporation that are lower than projected herein. See "SECTION I: INTRODUCTION – COVID-19 Pandemic" and Chapter 2 of the C&W 2021 Report.

Development May Not Occur as Projected in the C&W 2021 Report

In developing the forecast for future real estate demand and building completions over the Forecast Period contained in the C&W 2021 Report, C&W relied on a number of variables and assumptions, as further described in the C&W 2021 Report attached hereto as Appendix E. C&W also relied on historical tax revenue data provided by the NYCDOF to develop current market valuations and future property value growth. The C&W 2021 Report relies on numerous assumptions and the Limiting Conditions of the C&W 2021 Report, some or all of which may prove to be incorrect. If any assumptions prove to be incorrect, the development projected in the C&W 2021 Report may not occur as projected. Each prospective investor should read the C&W 2021 Report in its entirety and reach his or her own conclusion regarding the reasonableness of the assumptions on which they are based.

Actual Revenues May be Different Than Projected by OMB

OMB's Revenue projections are based on assumptions that may not be realized including the projected development in the C&W 2021 Report. In developing its projection of Revenues from PILOT Payments and Tax Equivalency Payments contained herein, OMB relied on a number of variables and assumptions, including certain information contained in the C&W 2021 Report. OMB's projection of Revenue from Existing Development incorporates current NYCDOF tax liability including the appropriate tax exemption schedule and an assumption of future assessed value. OMB's projection of Revenues from Future Development were developed using forecasts contained in the C&W 2021 Report including completion forecasts, estimates of current assessed values, estimated tax exemption schedules, and projected future growth in property value.

Projected Revenues May Not be Realized

Although the C&W 2021 Report indicates that Existing Development and development underway in the Project Area are projected to produce Revenues sufficient, when combined with other available funds, to pay debt service on the Bonds over the period they are outstanding, projected Revenues from expected future development which is not yet underway comprise a portion of total projected Revenues over the life of the Series 2022 Bonds.

The extent and timing of future development in the Project Area is dependent on, among other factors, general economic conditions, the willingness of developers to undertake development of the sites available in the Project Area, the availability of construction financing and real estate market conditions nationally, locally and in the Project Area. In the event development in the Project Area does not proceed, as quickly as described in the C&W 2021 Report, Revenues may be less than projected.

The ability of owners of developed properties to continually make the PILOT Payments, pay real estate taxes, make PILOMRT Payments and pay for other density bonus rights in connection with the development of parcels in the Project Area is subject to contingencies (such as COVID-19) outside the control of the Corporation. Owners of developed properties are frequently entities specifically created to limit liabilities of related persons or entities, whose ability to pay are dependent upon cash flow generated from such properties. See "SECTION I: INTRODUCTION – COVID-19 Pandemic" for a discussion of the delinquency rate for real property taxes paid by non-PILOT properties in the Project Area.

PILOT Payments and TEP Revenues are Proportionate to Assessed Values and Tax Rates

A substantial component of the Corporation's Revenues consists of PILOT and TEP Revenues. The calculation of PILOT and TEP Revenues are generally based upon the (i) the billable assessed value of the properties in the Project Area, as determined by the City, (ii) any tax exemption provided for such properties and (iii) the real property tax rate levied by the City. Each of the foregoing components is subject to change. For example, the assessed valuation for any building in the Project Area may be reduced as a result of administrative appeals or court challenges prosecuted or appealed by property owners or major space tenants. There also may be reductions in City tax rates. These or other changes may reduce PILOT or TEP payments by property owners in the Project Area and accordingly reduce Revenues. See Chapter 3 of the C&W 2021 Report.

The City's Real Property Tax System is Subject to Change, Which Could Affect Revenues

The City's real property tax system and valuation methodology are subject to change as a result of State or local legislation, litigation or for other reasons. Any such changes could result in changes to the Revenues projected herein. For a description of a pending legal challenge to the City's real property tax system and valuation methodology see "APPENDIX D: THE CITY OF NEW YORK: SECTION X: OTHER INFORMATION – Litigation - *Taxes*."

The Project Area is Compact and Subject to Localized Physical and Economic Risks

Events which cause slower or reduced development within, or impair the usefulness of, the Project Area, such as a major accident, a criminal or terrorist act or an act of war physically or economically affecting the Project Area or the City, may cause Revenues to be less than projected.

The Project Area is Subject to Risks Related to the Environment and Climate Change

Environmental hazards including the results of climate change may cause reduced demand in the Project Area and, consequently, Revenues could be less than projected. Potential risks related to climate change include, among other things, rising sea levels, severe flooding and erosion hazards, and more intense storms. Storms have caused infrastructure damage and economic losses to areas of Manhattan adjacent to the Hudson River. The Project Area is located in close proximity to the Hudson River and parts of the Project Area are located in flood zones, as designated by the Federal Emergency Management Agency's preliminary updated flood insurance rate maps. In addition, according to the City's stormwater flood maps, certain areas within the Project Area are susceptible to both moderate and extreme stormwater flooding scenarios due to extreme rainfall. Although many newly constructed buildings in the Project Area have reportedly been built to withstand increased environmental hazards, there can be no assurance that such mitigation efforts will be successful. Although the Corporation is unable to predict the ultimate impact of climate change, severe weather events, and sea-level rises and other environmental risks to properties in the Project Area and related infrastructure therein, such impact could be significant.

The City Cannot be Legally Compelled to Appropriate Interest Support Payments or Tax Equivalency Payments

The City has agreed in the Support and Development Agreement to make Interest Support Payments to the Corporation to pay interest on Supported Bonds, including an additional $500 million of HYIC Bonds approved in 2018, to the extent that the Corporation does not have sufficient other Revenues to make such payments. The City has also agreed to make Tax Equivalency Payments to the Corporation. Interest Support Payments and Tax Equivalency Payments are subject to annual appropriation by the City.

The City cannot be legally compelled to appropriate any such payments. There can be no assurance that such amounts will be appropriated and, if an appropriation is not made, the City cannot make such payments. The City's obligation to make Interest Support Payments and the City's obligation to make Tax Equivalency Payments do not constitute debt of the City under or within the meaning of the State Constitution or the Local Finance Law of the State. A decision to appropriate the Interest Support Payments and to make Tax Equivalency Payments may depend on the financial condition of the City at the times payments are required and the relative importance of competing City needs at such times. See Appendix D to this Official Statement for information about the City.

Some Development in the Project Area May Not Produce Revenues

The assumptions on which projections of Recurring Revenues were based include the assumption that owners of commercial sites in the Project Area will continue to either (i) enter into IDA PILOT Agreements, or (ii) pay real property taxes to the City. The projections of Non-Recurring Revenues were based on the assumption that owners of commercial sites in the Project Area will make certain amounts of DIB Payments in exchange for the right to increase the density of their New Development in the Project Area.

In addition to the IDA, the New York State Urban Development Corporation (now doing business as ESD, and its subsidiaries), have statutory powers that may be used in the Project Area, which give ESD and its subsidiaries the power to enter into agreements with developers in the Project Area to reduce or eliminate real property taxes otherwise payable to the City without a PILOT Agreement with the IDA and to build larger buildings without making DIB Payments.

Real property taxes are not payable on property owned and used by the State, ESD (including its subsidiaries), MTA, or The Port Authority of New York and New Jersey (the "Port Authority"). The State may from time to time create additional entities whose property is exempt from real property taxation. Commercial and residential developments on such property within the Project Area would result in real property tax revenues to the City or PILOT revenues to the Corporation, if the State, ESD (or a subsidiary), MTA (or other additional exempt entity) or the Port Authority agrees to require PILOT Payments be made to the City or the Corporation (which PILOT Payments, if made to the City, would be included in the City's calculation of Tax Equivalency Payments payable to the Corporation).

Development on State-owned or tax-exempt property in the Project Area other than the WRY could fill some of the demand projected by C&W for commercial and residential developments within the Project Area without resulting in Revenues to the Corporation. Governmental agencies entering into the PILOT Agreements may compensate the City pursuant to an assignment of payments in lieu of real property taxes which will be assigned to the Corporation or paid to the Corporation as Tax Equivalency Payments, but there can be no assurance that compensation for such lost real property taxes will take place. The C&W 2021 Report does not include sites presently owned by ESD (or a subsidiary), MTA or the Port Authority.

Property owned or in some cases used by not-for-profit or other tax-exempt entities can also be exempt from real property taxation.

Foreclosure of PILOT Mortgages Securing PILOT Payments May Be a Time-Consuming, Complex Process From Which Adequate Proceeds May Not Be Realized

Each property owner that enters into an IDA PILOT Agreement with the IDA will secure its payment obligations under such agreement by granting PILOT Mortgages to the IDA, which PILOT Mortgages will be assigned by the IDA to the Corporation, and collaterally assigned by the Corporation to the Trustee. If the property owner defaults under the IDA PILOT Agreement, the Corporation, or, if an Event of Default has occurred under the Indenture, the Trustee, could attempt to collect of amounts due by seeking to foreclose the PILOT Mortgage. In New York, foreclosure of a mortgage requires judicial action and requires careful compliance with a number of procedural requirements. It is subject to most of the delays, uncertainties and expenses of other lawsuits and sometimes requires several years to complete. The property owner would have the opportunity to raise defenses and to assert counterclaims which can significantly increase the time and cost of completing a foreclosure. Other parties with liens, judgments or other interests in the property may also seek to prevent or delay a foreclosure action. New York law restricts the right of a mortgagee to simultaneously bring a foreclosure action and an action to recover the mortgage debt. Upon completion of a foreclosure action, a foreclosure sale might not net an amount equal to the amount unpaid.

A foreclosure action can be stayed at any time if the property owner or any other party with an interest in the property files for bankruptcy. Any such stay would likely increase the cost and time required to foreclose. Under certain circumstances, moreover, the bankruptcy court could modify the terms of a PILOT Mortgage.

Bankruptcy or Insolvency of the Corporation May Affect Rights, Remedies and Revenues

The enforceability of the rights and remedies of the owners of the Bonds and the Indenture, and of claims against other persons, are subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted, and to the exercise of judicial discretion in appropriate cases. The Corporation would not be subject to an involuntary petition or case under section 303 of the U.S. Federal Bankruptcy Code unless it were determined to be a moneyed, business or commercial corporation within the meaning of the Federal Bankruptcy Code. The Corporation has no secured creditors other than the owners of HYIC Bonds.

Bankruptcy or Insolvency of the Property Owner or Tenant May Affect Revenues

Generally under the U.S. Federal Bankruptcy Code, individuals and business entities in financial distress may settle debts through a liquidation of assets or may provide for the settlement of claims through either a plan of reorganization or a plan of adjustment of the debtor's financial affairs. Bankruptcy courts are courts of equitable jurisdiction and, as such, have the judicial discretion to examine a broad range of issues affecting the debtor. If a debtor owning or occupying space within the Project Area obtains relief from the bankruptcy court, PILOT payments or TEP payments could be delayed or reduced.

Judicial or Administrative Actions or Investigations May Commence

The status of legal proceedings concerning the Corporation is described in "SECTION XVI: LITIGATION." There can be no assurance that judicial or administrative actions or investigations challenging the issuance of the Series 2022 Bonds or any of the other activities or transactions contemplated by this Official Statement will not be filed or commenced in the future or, if they are filed or commenced, that they will not adversely affect the ability of the Corporation to pay debt service on the Series 2022 Bonds.

Economic Circumstances are Unpredictable

General economic circumstances are inherently unpredictable. Poor economic circumstances could adversely affect the financial condition of occupants of the Project Area and, consequently, the ability of property owners to make required PILOT payments or property tax payments. Neither the Corporation nor C&W has reviewed the financial position or analyzed the creditworthiness of any property owner or tenant in the Project Area. The Corporation is unable to predict how any property owner or tenant will be affected by economic factors.

General economic circumstances could also have an effect on City tax policy and assessments as they relate to real property in the Project Area, which could adversely affect Revenues.

Security for the Series 2022 Bonds Could Become Diluted

The Indenture permits the Corporation to issue Additional Bonds payable from the Revenues on a parity with the Series 2022 Bonds, to pay Project Costs as described herein, which could decrease the then projected debt service coverage for the Bonds. However, the issuance of any such Additional Bonds would need to comply with the requirements of the Indenture. The Corporation expects to issue Additional Bonds in the future to repay amounts drawn under the Subordinate Loan Facility and finance the remaining costs of Phase II of the park. See "SECTION V: SECURITY AND SOURCES OF PAYMENT OF BONDS — Additional Bonds."

Remediation of Hazardous Substances and Environmental Compliance Could be Required

The presence of hazardous substances in the Project Area at levels requiring remediation could increase the costs of construction and could cause delays of development in the Project Area.

Regulations governing, among other things, air pollution, noise abatement and control, hazardous waste, solid waste and water quality are stringent and may become more stringent in the future, possibly requiring additional compliance and resulting in additional costs or delays in the further development of the Project Area.

Zoning or Development Incentives Could Change in the Project Area or Competing Areas

The Project Area Zoning Regulations are intended to encourage new medium to large scale commercial, residential, hotel and retail development in the Project Area and were approved by the New York City Planning Commission (the "Planning Commission") and adopted by the City Council in 2005 and 2009. The Planning Commission, the majority of the commissioners of which are Mayoral appointees, and the City Council, could enact changes in the Project Area Zoning Regulations in the future that reduce available density bonuses, reduce the amount of DIB Payments, or make the cost of such payments prohibitive for developers, or make other changes to the zoning regulations that would discourage development in the Project Area.

Changes in State law could have similar effects. For example, although the IDA has agreed not to modify the Project Area UTEP without the prior consent of the Corporation except to comply with State law, changes in State law could require a reduction of the incentives provided by the Project Area UTEP. In addition, the 421-a Program, which provides certain incentives to develop residential housing, expired in January 2016. As described herein, a similar incentive program called the Affordable New York Housing Program has replaced the 421-a Program and is set to expire in 2022. There can be no assurance that the Affordable New York Housing Program will be extended or renewed or, if so extended, what incentives might then be included. The C&W 2021 Report assumes there will be a 421-a Program or similar incentive program in place during the forecast period. Changes to Affordable New York Housing Program may have the effect of reducing the incentives for residential development and, consequently, Revenues. See "SECTION V: SECURITY AND SOURCES OF PAYMENT OF BONDS – Recurring Revenues – Affordable New York Housing Program."

The Planning Commission and the City Council could also make zoning changes elsewhere in the City which reduce the relative attractiveness of development in the Project Area. Projected development in the Project Area has been analyzed in the C&W 2021 Report based on assumptions and limitations regarding the likelihood of development in other areas of the New York City metropolitan region (the "Region") that will compete with the Project Area for development. If such assumptions prove incorrect, it is possible that more development could occur in other areas of the Region that would diminish the demand for development in the Project Area and negatively affect Revenues. Policy decisions by the City or the State or by neighboring states to encourage development in other areas could slow or reduce development in the Project Area. See the C&W 2021 Report attached hereto as Appendix E for a brief description of certain competing development activities.

Continuance of an Efficient Secondary Market for the Series 2022 Bonds

While an efficient secondary market for the bonds issued under the 2006 Indenture developed and for the Series 2017 Bonds continues, there can be no assurance that any secondary market for the Bonds will continue, or if a secondary market does continue, that it will provide Bondholders with liquidity or that it will continue for the life of the Series 2022 Bonds. Consequently, any purchaser of the Series 2022 Bonds must be prepared to hold such securities until the maturity or redemption of such securities.

Cybersecurity

The Corporation utilizes the City's computers and information technology systems for its operations. As such, the Corporation is subject to similar cybersecurity risks that the City faces and any cyber-attacks on the City may have an impact on the Corporation's operations. Cybersecurity threats could also impact the City's Department of Finance. See additional information regarding cybersecurity and recent cybersecurity attacks in "Appendix D: THE CITY OF NEW YORK: SECTION X: OTHER INFORMATION-Cybersecurity." In addition, cybersecurity risks could interrupt or otherwise impact the flow of Revenues. Such risks include cybersecurity threats to parties to PILOT Agreements, real estate taxpayers, the Trustee and other parties.

SECTION X: SERIES 2022 DEBT SERVICE AND COVERAGE TABLES

The following tables set forth the debt service requirements and the projected debt service coverage for the Bonds, including the Series 2022 Bonds.

Exhibit 10-1 sets forth the expected gross debt service to be paid on the Bonds, including the Series 2022 Bonds on a cash basis within each fiscal year. See "SECTION V: SECURITY AND SOURCES OF PAYMENT OF BONDS – Additional Bonds."

Exhibit 10-1: Debt Service for the Bonds

Fiscal Year Ending June 30	Fiscal 2017 Series A&B Principal	Interest	Debt Service	Fiscal 2022 Series A Principal	Interest	Debt Service	Total Debt Service
2022	$42,690,000	$100,570,981	$143,260,981	$0	$5,541,169	$5,541,169	$170,032,700 [1]
2023	44,675,000	98,584,981	143,259,981	0	18,470,563	18,470,563	161,730,544
2024	46,825,000	96,433,231	143,258,231	0	18,470,563	18,470,563	161,728,794
2025	49,090,000	94,169,281	143,259,281	0	18,470,563	18,470,563	161,729,844
2026	51,505,000	91,755,731	143,260,731	7,050,000	18,470,563	25,520,563	168,781,294
2027	54,075,000	89,186,781	143,261,781	7,420,000	18,118,063	25,538,063	168,799,844
2028	56,760,000	86,497,931	143,257,931	12,085,000	17,747,063	29,832,063	173,089,994
2029	59,600,000	83,659,931	143,259,931	14,655,000	17,142,813	31,797,813	175,057,744
2030	62,580,000	80,679,931	143,259,931	15,390,000	16,410,063	31,800,063	175,059,994
2031	65,710,000	77,550,931	143,260,931	16,160,000	15,640,563	31,800,563	175,061,494
2032	68,995,000	74,265,431	143,260,431	16,965,000	14,832,563	31,797,563	175,057,994
2033	72,375,000	70,885,881	143,260,881	17,815,000	13,984,313	31,799,313	175,060,194
2034	75,995,000	67,267,131	143,262,131	18,700,000	13,093,563	31,793,563	175,055,694
2035	79,795,000	63,467,381	143,262,381	19,640,000	12,158,563	31,798,563	175,060,944
2036	83,780,000	59,477,631	143,257,631	20,530,000	11,266,013	31,796,013	175,053,644
2037	87,630,000	55,630,031	143,260,031	21,420,000	10,379,513	31,799,513	175,059,544
2038	92,015,000	51,248,531	143,263,531	22,275,000	9,522,713	31,797,713	175,061,244
2039	95,955,000	47,303,900	143,258,900	23,170,000	8,631,713	31,801,713	175,060,613
2040	100,755,000	42,506,150	143,261,150	24,095,000	7,704,913	31,799,913	175,061,063
2041	105,790,000	37,468,400	143,258,400	25,055,000	6,741,113	31,796,113	175,054,513
2042	111,080,000	32,178,900	143,258,900	26,060,000	5,738,913	31,798,913	175,057,813
2043	116,635,000	26,624,900	143,259,900	27,100,000	4,696,513	31,796,513	175,056,413
2044	121,300,000	21,959,500	143,259,500	28,180,000	3,612,513	31,792,513	175,052,013
2045	126,150,000	17,107,500	143,257,500	29,310,000	2,485,313	31,795,313	175,052,813
2046	132,350,000	10,800,000	143,150,000	30,120,000	1,679,288	31,799,288	174,949,288
2047	137,650,000	5,506,000	143,156,000	30,945,000	850,988	31,795,988	174,951,988
Total	**2,141,760,000**	**1,582,786,981**	**3,724,546,981**	**$454,140,000**	**$291,860,481**	**$746,000,481**	**$4,491,778,013**

[1] Includes $14 million of Series 2012A interest paid on 08/15/2021 as well as Series 2012A accrued interest to be deposited into the escrow fund to be established for the purpose of refunding the Series 2012A Bonds (the “Escrow Fund”)

Exhibit 10-2 sets forth the coverage of the debt service shown in Exhibit 10-1 provided by the Projected Recurring Revenue from Existing Development, as detailed in "SECTION VIII: PROJECTED REVENUES – Projected Recurring Revenues from Existing Development," less the projected Corporation Expenses. The projected Corporation Expenses are based upon the Corporation's estimate of its operating expenses for FY 2022, inflated at 3% per year each year thereafter.

Exhibit 10-2: Debt Service Coverage Based Upon Projected Recurring Revenues from Existing Development

Fiscal Year Ending June 30	PILOT Revenues	TEP Revenues	Total Recurring Revenues	Corporation Expenses	Net Recurring Revenues	2017AB & 2022A Debt Service[1]	Coverage from Net PILOT Revenues	Coverage from Net Recurring Revenues
2022	$136,212,312	$137,336,054	$273,548,366	($1,500,000)	$272,048,366	$170,032,700	0.79 x	1.60 x
2023	134,956,331	137,453,764	272,410,095	(1,545,000)	270,865,095	161,730,544	0.82 x	1.67 x
2024	219,167,742	152,052,622	371,220,365	(1,591,350)	369,629,015	161,728,794	1.35 x	2.29 x
2025	259,523,873	162,595,533	422,119,406	(1,639,091)	420,480,315	161,729,844	1.59 x	2.60 x
2026	274,689,262	180,167,878	454,857,140	(1,688,263)	453,168,877	168,781,294	1.62 x	2.68 x
2027	285,523,706	194,322,494	479,846,200	(1,738,911)	478,107,289	168,799,844	1.68 x	2.83 x
2028	294,282,267	211,135,635	505,417,902	(1,791,078)	503,626,823	173,089,994	1.69 x	2.91 x
2029	303,110,981	226,715,784	529,826,765	(1,844,811)	527,981,954	175,057,744	1.72 x	3.02 x
2030	312,204,565	244,668,267	556,872,832	(1,900,155)	554,972,677	175,059,994	1.77 x	3.17 x
2031	321,570,966	256,427,934	577,998,900	(1,957,160)	576,041,740	175,061,494	1.83 x	3.29 x
2032	331,218,368	266,528,854	597,747,222	(2,015,875)	595,731,347	175,057,994	1.88 x	3.40 x
2033	344,261,799	279,523,854	623,785,653	(2,076,351)	621,709,303	175,060,194	1.95 x	3.55 x
2034	359,149,362	306,884,765	666,034,127	(2,138,641)	663,895,486	175,055,694	2.04 x	3.79 x
2035	398,856,979	318,345,912	717,202,891	(2,202,801)	715,000,090	175,060,944	2.27 x	4.08 x
2036	433,352,891	348,700,086	782,052,977	(2,268,885)	779,784,093	175,053,644	2.46 x	4.45 x
2037	469,774,997	360,957,224	830,732,222	(2,336,951)	828,395,271	175,059,544	2.67 x	4.73 x
2038	503,199,217	394,572,938	897,772,154	(2,407,060)	895,365,095	175,061,244	2.86 x	5.11 x
2039	557,233,698	408,600,980	965,834,678	(2,479,271)	963,355,407	175,060,613	3.17 x	5.50 x
2040	593,403,863	436,054,134	1,029,457,997	(2,553,650)	1,026,904,347	175,061,063	3.38 x	5.87 x
2041	628,188,626	451,671,543	1,079,860,169	(2,630,259)	1,077,229,910	175,054,513	3.57 x	6.15 x
2042	664,691,205	467,866,379	1,132,557,584	(2,709,167)	1,129,848,417	175,057,813	3.78 x	6.45 x
2043	702,969,288	484,660,416	1,187,629,705	(2,790,442)	1,184,839,263	175,056,413	4.00 x	6.77 x
2044	731,029,961	502,076,260	1,233,106,221	(2,874,155)	1,230,232,066	175,052,013	4.16 x	7.03 x
2045	756,616,009	531,181,910	1,287,797,919	(2,960,380)	1,284,837,539	175,052,813	4.31 x	7.34 x
2046	783,097,569	555,513,053	1,338,610,622	(3,049,191)	1,335,561,431	174,949,288	4.46 x	7.63 x
2047	810,505,984	621,451,996	1,431,957,981	(3,140,667)	1,428,817,314	174,951,988	4.61 x	8.17 x
Total	**$11,608,791,821**	**$8,637,466,271**	**$20,246,258,092**	**($57,829,563)**	**$20,188,428,529**	**$4,491,778,013**		

[1] Includes $14 million of Series 2012A interest paid on 08/15/2021 as well as Series 2012A accrued interest to be deposited into the Escrow Fund

Exhibit 10-3 sets forth the coverage of the debt service shown in Exhibit 10-1 provided by the Projected Net Recurring Revenues, which is equal to the Projected Recurring Revenue from Existing and Future Development, as detailed in "SECTION VIII: PROJECTED REVENUES – Projected Recurring Revenues from Existing Development and Future Development," and Pages 290 and 291 of the C &W 2021 Report in Appendix E, less the projected Corporation Expenses. The projected Corporation Expenses are based upon the Corporation's estimate of its operating expenses for FY 2022, inflated at 3% per year each year thereafter.

Exhibit 10-3: Debt Service Coverage Based Upon Projected Recurring Revenues from Existing and Future Development

Fiscal Year Ending June 30	PILOT Revenues	TEP Revenues	Total Recurring Revenues	Corporation Expenses	Net Recurring Revenues	2017AB & 2022A Debt Service[1]	Coverage from Net PILOT Revenues	Coverage from Net Recurring Revenues
2022	$136,212,312	$137,336,054	$273,548,366	($1,500,000)	$272,048,366	$170,032,700	0.79 x	1.60 x
2023	134,956,331	144,537,062	279,493,393	(1,545,000)	277,948,393	161,730,544	0.82 x	1.72 x
2024	219,167,742	168,804,265	387,972,007	(1,591,350)	386,380,657	161,728,794	1.35 x	2.39 x
2025	259,523,873	181,986,439	441,510,312	(1,639,091)	439,871,222	161,729,844	1.59 x	2.72 x
2026	274,689,262	218,252,901	492,942,163	(1,688,263)	491,253,900	168,781,294	1.62 x	2.91 x
2027	285,523,706	240,823,492	526,347,198	(1,738,911)	524,608,287	168,799,844	1.68 x	3.11 x
2028	294,282,267	269,272,563	563,554,829	(1,791,078)	561,763,751	173,089,994	1.69 x	3.25 x
2029	303,110,981	298,598,117	601,709,098	(1,844,811)	599,864,287	175,057,744	1.72 x	3.43 x
2030	312,204,565	333,801,544	646,006,109	(1,900,155)	644,105,954	175,059,994	1.77 x	3.68 x
2031	356,687,362	363,425,122	720,112,484	(1,957,160)	718,155,325	175,061,494	2.03 x	4.10 x
2032	385,301,663	389,038,306	774,339,969	(2,015,875)	772,324,095	175,057,994	2.19 x	4.41 x
2033	408,598,056	405,748,263	814,346,318	(2,076,351)	812,269,968	175,060,194	2.32 x	4.64 x
2034	440,185,160	436,975,828	877,160,988	(2,138,641)	875,022,347	175,055,694	2.50 x	5.00 x
2035	504,112,003	452,461,413	956,573,416	(2,202,801)	954,370,616	175,060,944	2.87 x	5.45 x
2036	569,177,034	486,485,300	1,055,662,334	(2,268,885)	1,053,393,449	175,053,644	3.24 x	6.02 x
2037	609,998,833	502,551,532	1,112,550,365	(2,336,951)	1,110,213,414	175,059,544	3.47 x	6.34 x
2038	647,886,017	540,666,163	1,188,552,181	(2,407,060)	1,186,145,121	175,061,244	3.69 x	6.78 x
2039	706,406,704	559,376,334	1,265,783,038	(2,479,271)	1,263,303,767	175,060,613	4.02 x	7.22 x
2040	769,164,592	591,702,164	1,360,866,756	(2,553,650)	1,358,313,107	175,061,063	4.38 x	7.76 x
2041	860,386,167	612,331,348	1,472,717,515	(2,630,259)	1,470,087,255	175,054,513	4.90 x	8.40 x
2042	920,250,263	633,175,488	1,553,425,751	(2,709,167)	1,550,716,584	175,057,813	5.24 x	8.86 x
2043	991,490,406	654,795,339	1,646,285,745	(2,790,442)	1,643,495,303	175,056,413	5.65 x	9.39 x
2044	1,054,421,995	677,220,330	1,731,642,325	(2,874,155)	1,728,768,170	175,052,013	6.01 x	9.88 x
2045	1,143,919,654	711,525,553	1,855,445,206	(2,960,380)	1,852,484,826	175,052,813	6.52 x	10.58 x
2046	1,188,818,839	741,254,061	1,930,072,901	(3,049,191)	1,927,023,710	174,949,288	6.78 x	11.01 x
2047	1,235,332,464	812,795,821	2,048,128,285	(3,140,667)	2,044,987,618	174,951,988	7.04 x	11.69 x
Total	**$15,011,808,252**	**$11,564,940,802**	**$26,576,749,054**	**($57,829,563)**	**$26,518,919,490**	**$4,491,778,013**		

[1] Includes $14 million of Series 2012A interest paid on 08/15/2021 as well as Series 2012A accrued interest to be deposited into the Escrow Fund

Exhibit 10-4 sets forth the coverage of the debt service shown in Exhibit 10-1 provided by the Total Projected Net Revenues, which is equal to the Projected Net Recurring Revenues, as shown in Exhibit 10-3, plus the Projected Non-Recurring Revenues, as detailed in Chapter 7 of the C&W 2021 Report in Appendix E.

Exhibit 10-4: Debt Service Coverage Based Upon Projected Recurring and Non-Recurring Revenues from Existing and Future Development

Fiscal Year Ending June 30	Net Recurring Revenues	Non-Recurring Revenues	Net Aggregate Revenues	2017AB & 2022A Debt Service[1]	Coverage from Net Aggregate Revenues
2022	$272,048,366	$29,386,997	$301,435,363	$170,032,700	1.77 x
2023	277,948,393	11,414,528	289,362,921	161,730,544	1.79 x
2024	386,380,657	21,771,906	408,152,563	161,728,794	2.52 x
2025	439,871,222	24,526,977	464,398,198	161,729,844	2.87 x
2026	491,253,900	62,717,765	553,971,665	168,781,294	3.28 x
2027	524,608,287	55,823,611	580,431,897	168,799,844	3.44 x
2028	561,763,751	36,212,635	597,976,386	173,089,994	3.45 x
2029	599,864,287	15,713,892	615,578,179	175,057,744	3.52 x
2030	644,105,954	23,500,095	667,606,049	175,059,994	3.81 x
2031	718,155,325	30,086,917	748,242,242	175,061,494	4.27 x
2032	772,324,095	7,648,031	779,972,125	175,057,994	4.46 x
2033	812,269,968	-	812,269,968	175,060,194	4.64 x
2034	875,022,347	595,704	875,618,050	175,055,694	5.00 x
2035	954,370,616	19,401,068	973,771,684	175,060,944	5.56 x
2036	1,053,393,449	45,674,483	1,099,067,932	175,053,644	6.28 x
2037	1,110,213,414	26,031,770	1,136,245,184	175,059,544	6.49 x
2038	1,186,145,121	22,454,473	1,208,599,594	175,061,244	6.90 x
2039	1,263,303,767	25,174,534	1,288,478,300	175,060,613	7.36 x
2040	1,358,313,107	45,180,895	1,403,494,001	175,061,063	8.02 x
2041	1,470,087,255	14,263,568	1,484,350,824	175,054,513	8.48 x
2042	1,550,716,584	-	1,550,716,584	175,057,813	8.86 x
2043	1,643,495,303	-	1,643,495,303	175,056,413	9.39 x
2044	1,728,768,170	-	1,728,768,170	175,052,013	9.88 x
2045	1,852,484,826	-	1,852,484,826	175,052,813	10.58 x
2046	1,927,023,710	-	1,927,023,710	174,949,288	11.01 x
2047	2,044,987,618	-	2,044,987,618	174,951,988	11.69 x
	$26,518,919,490	**$517,579,847**	**$27,036,499,337**	**$4,491,778,013**	

[1] Includes $14 million of Series 2012A interest paid on 08/15/2021 as well as Series 2012A accrued interest to be deposited into the Escrow Fund

SECTION XI: THE CORPORATION

The Corporation is a local development corporation incorporated under the provisions of Section 1411 of the New York State Not-For-Profit Corporation Law. The Corporation is a non-stock, membership corporation governed by a board of directors. The members of the Corporation are the same as the directors of the Corporation as listed below. The Board of Directors of the Corporation is comprised of five directors serving *ex-officio*, a majority of whom serve at the pleasure of the Mayor, consisting of the Deputy Mayor for Economic Development (Vicki Been), the Deputy Mayor for Operations (Laura Anglin), the Director of Management and Budget (Jacques Jiha, Ph.D.), the City Comptroller (Scott Stringer) and the Speaker of the City Council (Corey Johnson).

The following is a brief description of certain officers and staff members of the Corporation:

David M. Womack, President

Mr. Womack was appointed President of the Corporation in 2021. He is a graduate of Yale University and received an M.B.A. from the Tuck School of Business Administration at Dartmouth College. He also serves as Deputy Director of Financing Policy and Coordination at the Office of Management and Budget of the City.

Prescott D. Ulrey, Secretary

Mr. Ulrey was appointed Assistant Secretary on January 25, 2005, and Secretary in September 2013. Mr. Ulrey is a graduate of the University of California at Berkeley, the Fletcher School of Law and Diplomacy at Tufts University and Columbia Law School. He also serves as General Counsel to the Office of Management and Budget of the City.

F. Jay Olson, Vice President and Treasurer

Mr. Olson was appointed Deputy Treasurer on January 25, 2005 and was subsequently appointed Vice President and Treasurer on October 12, 2006. He is a graduate of Northwestern University, the University of Texas at Austin and the John F. Kennedy School of Government at Harvard University. He also serves as Senior Assistant Director at the Office of Management and Budget of the City.

Jeffrey M. Werner, Assistant Secretary

Mr. Werner was appointed Assistant Secretary on January 25, 2005. Mr. Werner is a graduate of Bowdoin College and Columbia University Law School. He also serves as Deputy General Counsel to the Office of Management and Budget of the City.

Robert Balducci, Comptroller

Mr. Balducci was appointed Deputy Comptroller in March 2011, and Comptroller in May 2014. He is a graduate of Baruch College of The City University of New York. He also serves as Assistant Director at the Office of Management and Budget of the City.

Kemraj Narine, Deputy Comptroller

Mr. Narine was appointed Assistant Comptroller in March 2011 and Deputy Comptroller in May 2014. He is a graduate of York College of The City University of New York. He also serves as Deputy Assistant Director at the Office of Management and Budget of the City.

Laura Tarbox, Deputy Treasurer

Ms. Tarbox was appointed Assistant Treasurer in May 2014 and Deputy Treasurer in 2021. She is a graduate of Cornell University. She also serves as Assistant Director at the Office of Management and Budget of the City.

SECTION XII: TAX MATTERS

Federal Income Taxes

The Internal Revenue Code of 1986, as amended (the "Code") imposes certain requirements that must be met subsequent to the issuance and delivery of the Series 2022 Bonds for interest thereon to be and remain excluded from gross income for federal income tax purposes. Noncompliance with such requirements could cause the interest on the Series 2022 Bonds to be included in gross income for federal income tax purposes retroactive to the date of issue of the Series 2022 Bonds. Pursuant to the Indenture and the Tax Certificate for the Series 2022 Bonds, the Corporation has covenanted to comply with the applicable requirements of the Code in order to maintain the exclusion of the interest on the Series 2022 Bonds from gross income for federal income tax purposes pursuant to Section 103 of the Code. In addition, the Corporation has made certain representations and certifications in the Indenture and the Tax Certificate. Co-Bond Counsel will not independently verify the accuracy of those representations and certifications.

In the opinion of Nixon Peabody LLP and Bryant Rabbino LLP, Co-Bond Counsel, under existing law and assuming compliance with the aforementioned covenant, and the accuracy of certain representations and certifications made by the Corporation described above, interest on the Series 2022 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Code. Co-Bond Counsel is also of the opinion that such interest is not treated as a preference item in calculating the alternative minimum tax imposed under the Code.

State Taxes

Co-Bond Counsel is also of the opinion that, under existing law, interest on the Series 2022 Bonds is exempt from personal income taxation imposed by the State of New York or any political subdivision of the State of New York, including The City of New York, assuming compliance with the tax covenants and the accuracy of the representations and certifications described under the heading "Federal Income Taxes". Co-Bond Counsel expresses no opinion as to other State of New York or local tax consequences arising with respect to the Series 2022 Bonds nor as to the taxability of the Series 2022 Bonds or the income therefrom under the laws of any state other than the State of New York.

Original Issue Premium

Series 2022 Bonds sold at prices in excess of their principal amounts are "Premium Bonds". An initial purchaser with an initial adjusted basis in a Premium Bond in excess of its principal amount will have amortizable bond premium which offsets the amount of tax-exempt interest and is not deductible from gross income for federal income tax purposes. The amount of amortizable bond premium for a taxable year is determined actuarially on a constant interest rate basis over the term of each Premium Bond based on the purchaser's yield to maturity (or, in the case of Premium Bonds callable prior to their maturity, over the period to the call date, based on the purchaser's yield to the call date and giving effect to any call premium). For purposes of determining gain or loss on the sale or other disposition of a Premium Bond, an initial purchaser who acquires such obligation with an amortizable bond premium is required to decrease such purchaser's adjusted basis in such Premium Bond annually by the amount of amortizable bond premium for the taxable year. The amortization of bond premium may be taken into account as a reduction in the amount of tax-exempt income for purposes of determining various other tax consequences of owning such Series 2022 Bonds. Owners of the Premium Bonds are advised that they should consult with their own advisors with respect to the state and local tax consequences of owning such Premium Bonds.

Ancillary Tax Matters

Ownership of the Series 2022 Bonds may result in other federal tax consequences to certain taxpayers, including, without limitation, certain S corporations, foreign corporations with branches in the United States, property and casualty insurance companies, individuals receiving Social Security or Railroad Retirement benefits, individuals seeking to claim the earned income credit, and taxpayers (including banks, thrift institutions and other financial institutions) who may be deemed to have incurred or continued indebtedness to purchase or to carry the Series 2022 Bonds. Prospective investors are advised to consult their own tax advisors regarding these rules.

Interest paid on tax-exempt obligations such as the Series 2022 Bonds is subject to information reporting to the Internal Revenue Service (the "IRS") in a manner similar to interest paid on taxable obligations. In addition, interest on the Series 2022 Bonds may be subject to backup withholding if such interest is paid to a registered owner that (a) fails to provide certain identifying information (such as the registered owner's taxpayer identification number) in the manner required by the IRS, or (b) has been identified by the IRS as being subject to backup withholding.

Co-Bond Counsel is not rendering any opinion as to any federal tax matters other than those described in the opinions attached as Appendix G. Prospective investors, particularly those who may be subject to special rules described above, are advised to consult their own tax advisors regarding the federal tax consequences of owning and disposing of the Series 2022 Bonds, as well as any tax consequences arising under the laws of any state or other taxing jurisdiction.

Changes in Law and Post Issuance Events

Legislative or administrative actions and court decisions, at either the federal or state level, could have an adverse impact on the potential benefits of the exclusion from gross income of the interest on the Series 2022 Bonds for federal or state income tax purposes, and thus on the value or marketability of the Series 2022 Bonds. This could result from changes to federal or state income tax rates, changes in the structure of federal or state income taxes (including replacement with another type of tax), repeal of the exclusion of the interest on the Series 2022 Bonds from gross income for federal or state income tax purposes, or otherwise. It is not possible to predict whether any legislative or administrative actions or court decisions having an adverse impact on the federal or state income tax treatment of holders of the Series 2022 Bonds may occur. Prospective purchasers of the Series 2022 Bonds should consult their own tax advisors regarding the impact of any change in law on the Series 2022 Bonds.

Co-Bond Counsel has not undertaken to advise in the future whether any events after the date of issuance and delivery of the Series 2022 Bonds may affect the tax status of interest on the Series 2022 Bonds. Co-Bond Counsel expresses no opinion as to any federal, state or local tax law consequences with respect to the Series 2022 Bonds, or the interest thereon, if any action is taken with respect to the Series 2022 Bonds or the proceeds thereof upon the advice or approval of other counsel.

SECTION XIII: UNDERWRITING

The Series 2022 Bonds are being purchased for reoffering by the Underwriters for whom Goldman Sachs & Co. LLC and Samuel A. Ramirez & Co., Inc., are acting as joint lead managers. The Underwriters will purchase the Series 2022 Bonds from the Corporation at an aggregate underwriters' discount of $2,692,639.49. The Underwriters will be obligated to purchase all the Series 2022 Bonds if any such Series 2022 Bonds are purchased.

The Series 2022 Bonds may be offered and sold to certain dealers (including the Underwriters) at prices lower than such public offering prices, and such public offering prices may be changed from time to time by the Underwriters.

In addition, certain of the Underwriters may have entered into distribution agreements with other broker-dealers (that have not been designated by the Corporation as Underwriters) for the distribution of the Series 2022 Bonds at the original issue prices. Such agreements generally provide that the relevant Underwriter will share a portion of its underwriting compensation with such broker-dealers.

Certain of the underwriters or their affiliates may own a portion of the Outstanding 2006 Indenture Bonds to be redeemed with the net proceeds of this offering and, therefore, may receive a portion of the net proceeds from this offering.

The Underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Certain of the Underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the Corporation for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (which may include bank loans and/or credit default swaps) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve securities and instruments of the Corporation.

SECTION XIV: VERIFICATION

The accuracy of (i) the mathematical computations of the adequacy of the maturing principal of and interest earned on the government obligations to be held in escrow to provide for the payment of the principal of and interest and redemption premium, if any, on the bonds to be refunded identified in "SECTION III: PLAN OF FINANCE" herein and (ii) certain mathematical computations supporting the conclusion that the Series 2022 Bonds are not "arbitrage bonds" under the Code will be verified by Robert Thomas CPA, LLC, as verification agent.

SECTION XV: RATINGS

The Series 2022 Bonds are rated "Aa2" (stable outlook) by Moody's Investors Service, "AA-" (positive outlook) by S&P Global Ratings and "A+" (stable outlook) by Fitch, Inc.

Each such rating above reflects only the view of the rating agency issuing such rating and is not a recommendation by such rating agency to purchase, sell or hold the obligations rated or as to the market price or suitability of such obligations for a particular investor. Generally, a rating agency bases its ratings and outlook (if any) on the information and material furnished to it and on investigations, studies and assumptions of its own. An explanation of the significance of any ratings may be obtained only from the rating agency furnishing the same. There is no assurance that such ratings will be in effect for any given period of time or that they will not be revised upward or downward or withdrawn entirely by such rating agencies if, in the judgment of such agencies, circumstances so warrant. Any such downward revision or withdrawal of any ratings may have an adverse effect on the market price of the Series 2022 Bonds.

SECTION XVI: LITIGATION

There is not now pending any litigation (i) restraining or enjoining the issuance or delivery of the Series 2022 Bonds or questioning or affecting the validity of the Series 2022 Bonds or the proceedings and authority under which they are issued; (ii) contesting the creation, organization or existence of the Corporation, or the title of the directors or officers of the Corporation to their respective offices; or (iii) questioning the right of the Corporation to enter into the Indenture and to pledge the funds and other money and securities purported to be pledged by the Indenture in the manner and to the extent provided in the Indenture.

SECTION XVII: LEGAL MATTERS

All legal matters incident to the authorization, issuance and delivery of the Series 2022 Bonds are subject to the approval of Nixon Peabody LLP, New York, New York, and Bryant Rabbino LLP, New York, New York, Co-Bond Counsel to the Corporation. The form of the opinions of Co-Bond Counsel is attached hereto as Appendix G. Certain legal matters are subject to the approval of the New York City Corporation Counsel, counsel to the Corporation and the City; Orrick Herrington & Sutcliffe LLP, New York, New York, Special Disclosure Counsel to the City and the Corporation; and Norton Rose Fulbright US LLP, New York, New York, and D. Seaton and Associates, P.A., P.C., New York, New York, co-counsel to the Underwriters.

SECTION XVIII: CONTINUING DISCLOSURE

To the extent that (i) Rule 15c2-12 (the “Rule”) of the Securities and Exchange Commission (“SEC”) promulgated under the Securities Exchange Act of 1934, as amended (the “1934 Act”), requires the Underwriters to determine, as a condition to purchasing the Series 2022 Bonds, that the parties to the hereinafter defined Continuing Disclosure Agreements will covenant to the effect of the provisions hereinafter summarized, and (ii) the Rule as so applied is authorized by a Federal law that as so construed is within the powers of Congress, the Corporation, the City and the Trustee will enter into a written agreement to provide continuing disclosure (the “City Continuing Disclosure Agreement”), and the Corporation and the Trustee will enter into a written agreement to provide continuing disclosure (the “HYIC Continuing Disclosure Agreement” referred to herein, collectively, as the “Continuing Disclosure Agreements” and, individually, as a “Continuing Disclosure Agreement”), each for the benefit of the holders of the Series 2022 Bonds.

Under the City Continuing Disclosure Agreement, the City will undertake for the benefit of the holders of the Series 2022 Bonds to provide within 185 days after the end of each Fiscal Year, to the Electronic Municipal Market Access system (“EMMA”) (www.emma.msrb.org) established by the Municipal Securities Rulemaking Board (the “MSRB”), core financial information and operating data for the prior Fiscal Year, including (i) the City’s audited general purpose financial statements, prepared in accordance with generally accepted accounting principles in effect from time to time and (ii) material historical quantitative data on the City’s revenues, expenditures, financial operations and indebtedness generally of the type found in Sections IV, V and VIII and under the captions “2016-2020 Summary of Operations” in Section VI and “Pension Systems” in Section IX of Appendix D to this Official Statement. The City may use the City’s Official Statement relating to its General Obligation bonds when available to satisfy this requirement.

Under the HYIC Continuing Disclosure Agreement, the Corporation has undertaken for the benefit of the holders of the Series 2022 Bonds to provide:

(a) by November 30, 2021 and by November 30 of each subsequent Fiscal Year, to EMMA, core financial information for the prior Fiscal Year including (i) its audited financial statements prepared in accordance with generally accepted accounting principles stating the amount of each type of Revenue (e.g., Interest Support Payments, Tax Equivalency Payments, PILOT Payments, PILOMRT Payments, and DIB Payments), received by the Corporation for such year, and (ii) information as to each PILOT Agreement assigned to the Corporation during such year, including identification of the property covered and a schedule or description of amounts payable during the term of such agreement; and

(b) in a timely manner not in excess of 10 Business Days after its occurrence, to EMMA, notice of any of the following events with respect to the Series 2022 Bonds:

(1) principal and interest payment delinquencies;

(2) non-payment related defaults, if material;

(3) unscheduled draws on debt service reserves reflecting financial difficulties;

(4) unscheduled draws on credit enhancements reflecting financial difficulties;

(5) substitution of credit or liquidity providers, or their failure to perform;

(6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Series 2022 Bonds, or other material events affecting the tax status of the Series 2022 Bonds;

(7) modifications to rights of the holders of the Series 2022 Bonds, if material;

(8) bond calls, if material, and tender offers;

(9) defeasances;

(10) release, substitution, or sale of property securing repayment of the Series 2022 Bonds, if material;

(11) rating changes;

(12) bankruptcy, insolvency, receivership or similar event of the Corporation or the City (such event being considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the Corporation or the City in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Corporation or the City, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Corporation or the City);

(13) the consummation of a merger, consolidation, or acquisition involving the Corporation or the City or the sale of all or substantially all of the assets of the Corporation or the City, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;

(14) appointment of a successor or additional trustee or the change of name of a trustee, if material;

(15) incurrence of a Financial Obligation (as defined below) of the Corporation, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the Corporation, any of which affect security holders, if material; and

(16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the Corporation, any of which reflect financial difficulties; and

(17) failure of the Corporation to comply with clause (a) above.

"Financial Obligation" means a (i) debt obligation; (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (iii) guarantee of (i) or (ii); provided that "financial obligation" shall not include municipal securities (as defined in the Securities Exchange Act of 1934, as amended) as to which a final official statement (as defined in the Rule) has been provided to the MSRB consistent with the Rule.

The Corporation will not undertake to provide any notice with respect to credit enhancement if the credit enhancement is added after the primary offering of the Series 2022 Bonds, the Corporation does not apply for or participate in obtaining the enhancement and the enhancement is not described in this Official Statement.

No Bondholder may institute any suit, action or proceeding at law or in equity ("Proceeding") for the enforcement of either Continuing Disclosure Agreement or for any remedy for breach thereof, unless such Bondholder shall have filed with the City or the Corporation, as the case may be, evidence of ownership and a written notice of and request to cure such breach, and the City or the Corporation, as the case may be, shall have refused to comply within a reasonable time. All Proceedings shall be instituted only as specified herein, in the Federal or State courts located in the Borough of Manhattan, State and City of New York, and for the equal benefit of all holders of the outstanding bonds benefited by the same or a substantially similar covenant, and no remedy shall be sought or granted other than specific performance of the covenant at issue.

An amendment to the City Continuing Disclosure Agreement may only take effect if:

(a) the amendment is made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature, or status of the City, or type of business conducted; the City Continuing Disclosure Agreement, as amended, would have complied with the requirements of the Rule at the time of award of the Series 2022 Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and the amendment does not materially impair the interests of Bondholders, as determined by parties unaffiliated with the City (such as, but without limitation, the City's financial advisor or bond counsel) and the annual financial information containing (if applicable) the amended operating data or financial information will explain, in narrative form, the reasons for the amendment and the "impact" (as that word is used in the letter from the SEC staff to the National Association of Bond Lawyers dated June 23, 1995) of the change in the type of operating data or financial information being provided; or

(b) all or any part of the Rule, as interpreted by the staff of the SEC at the date of issuance of the Series 2022 Bonds, ceases to be in effect for any reason, and the City elects that the City Continuing Disclosure Agreement shall be deemed terminated or amended (as the case may be) accordingly.

An amendment to the HYIC Continuing Disclosure Agreement may only take effect if:

(a) the amendment is made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature, or status of HYIC, or type of business conducted; the HYIC Continuing Disclosure Agreement, as amended, would have complied with the requirements of the Rule at the time of award of the Series 2022 Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and the amendment does not materially impair the interests of Bondholders, as determined by parties unaffiliated with the Corporation (such as, but without limitation, the Corporation's financial advisor or bond counsel) and the annual financial information containing (if applicable) the amended operating data or financial information will explain, in narrative form, the reasons for the amendment and the "impact" (as that word is used in the letter from the SEC staff to the National Association of Bond Lawyers dated June 23, 1995) of the change in the type of operating data or financial information being provided; or

(b) all or any part of the Rule, as interpreted by the staff of the SEC at the date of issuance of the Series 2022 Bonds, ceases to be in effect for any reason, and the Corporation elects that the HYIC Continuing Disclosure Agreement shall be deemed terminated or amended (as the case may be) accordingly.

For purposes of the City Continuing Disclosure Agreement or the HYIC Continuing Disclosure Agreement, a beneficial owner of a security includes any person who, directly or indirectly, through any contract, arrangement, understanding, relationship, or otherwise has or shares investment power which includes the power to dispose, or to direct the disposition of, such security, subject to certain exceptions as set forth in the City Continuing Disclosure Agreement or the HYIC Continuing Disclosure Agreement, as applicable. Any assertion of beneficial ownership must be filed, with full documentary support, as part of the written request described above.

Failure of any party to perform its obligations under the City Continuing Disclosure Agreement or the HYIC Continuing Disclosure Agreement shall not constitute an "event of default" under the Indenture or any other agreement executed and delivered in connection with the issuance of the Series 2022 Bonds. In addition, if all or a portion of the Rule ceases to be in effect for any reason, then the information required to be provided under the City Continuing Disclosure Agreement or the HYIC Continuing Disclosure Agreement, insofar as the provision of the Rule no longer in effect required the provision of such information, will no longer be required to be provided.

Compliance with Prior Continuing Disclosure Undertakings

The Corporation's annual core financial information filing for Fiscal Year 2016 was timely filed, but lacked a required update to the section titled "Summary of Historical Cash Flows." This update was subsequently filed 8 business days late on December 12, 2016. The Corporation has undertaken policies and procedures to ensure such failures do not occur in the future.

SECTION XIX: FINANCIAL ADVISOR

The Corporation has retained Public Resources Advisory Group and Sycamore Advisors, LLC, to act as co-financial advisor with respect to the issuance of the Series 2022 Bonds.

SECTION XX: FINANCIAL STATEMENTS

The audited financial statements for the Fiscal Years of the Corporation ended June 30, 2021 and 2020, are attached hereto as Appendix F. Marks Paneth LLP, the Corporation's independent auditor, has not reviewed, commented on or approved, and is not associated with, this Official Statement. The report of Marks Paneth LLP relating to the Corporation's financial statements for the Fiscal Years ended June 30, 2021 and 2020, which is a matter of public record, is included in this Official Statement. However, Marks Paneth LLP has not performed any procedures on any financial statements or other financial information of the Corporation, including without limitation any of the information contained in this Official Statement, since the date of such report and has not been asked to consent to the inclusion of its report in this Official Statement.

SECTION XXI: MISCELLANEOUS

The references herein to the Indenture, the Support and Development Agreement, the Continuing Disclosure Agreements, the IDA Assignment Agreement, the DIB Assignment Agreement, and the City-MTA Railyards Agreement (collectively, the "Project Documents") are summaries of certain provisions thereof. Such summaries do not purport to be complete and reference is made to the Project Documents for full and complete statements of such provisions. Copies of the Project Documents are available at the offices of the Trustee.

Neither this Official Statement nor any statement which may have been made orally or in writing shall be construed as a contract or as a part of a contract with the original purchasers or any holders of the Series 2022 Bonds.

The delivery of this Official Statement has been duly authorized by the Corporation.

HUDSON YARDS INFRASTRUCTURE CORPORATION

APPENDIX A

CERTAIN DEFINITIONS AND SUMMARY OF CERTAIN PROVISIONS OF THE INDENTURE

Definitions of Certain Terms

"**Accreted Value**" means with respect to any Capital Appreciation Bond (i) as of any Valuation Date, the amount set forth for such date in the Supplemental Indenture authorizing such Capital Appreciation Bond and (ii) as of any date other than a Valuation Date, the sum of (a) the Accreted Value on the immediately preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date, calculated based on the assumption that Accreted Value accrues during any semiannual period in equal daily amounts on the basis of a year of twelve (12) thirty-day months, and (2) the difference between the Accreted Values for such Valuation Dates.

"**Agreement**" means each of and singularly the IDA Assignment Agreement, the DIB Assignment Agreement, each PILOT Agreement, each PILOT Mortgage, the Support Agreement and the MTA Agreement.

"**Appreciated Value**" means with respect to any Deferred Income Bond (i) as of any Valuation Date, the amount set forth for such date in the Supplemental Indenture authorizing such Deferred Income Bond and (ii) as of any date other than a Valuation Date, the sum of (a) the Appreciated Value on the immediately preceding Valuation Date and (b) the product of (1) a fraction, the numerator of which is the number of days having elapsed from the preceding Valuation Date and the denominator of which is the number of days from such preceding Valuation Date to the next succeeding Valuation Date, calculated based on the assumption that Appreciated Value accrues during any semiannual period in equal daily amounts on the basis of a year of twelve (12) thirty-day months, and (2) the difference between the Appreciated Values for such Valuation Dates, and (iii) as of any date of calculation on and after the Interest Commencement Date, the Appreciated Value on the Interest Commencement Date.

"**Authorized Officer**" (i) in the case of the Corporation, the Chairman, the President, a Vice–President, the Treasurer, an Assistant Treasurer, the Comptroller, a Deputy Comptroller, the Secretary, and an Assistant Secretary, and when used with reference to any act or document also means any other person authorized by a resolution or the by–laws of the Corporation to perform such act or execute such document; (ii) in the case of the City, when used with reference to any act or document, means the person identified in the Indenture or in the Agreement as authorized to perform such act or execute such document, and in all other cases means the Mayor of the City, the Director of Management and Budget or an officer or employee of the City authorized in a written instrument signed by the Mayor or the Director of Management and Budget or by the Charter of the City or its Administrative Code to act on behalf of the Mayor or the Director of Management and Budget; and (iii) in the case of the Trustee, a Vice President, an Assistant Vice President, an Assistant Secretary, an Assistant Treasurer or any other corporate trust officer of the Trustee, and when used with reference to any act or document also means any other person authorized to perform any act or sign any document by or pursuant to a resolution of the Board of Directors of the Trustee or the by–laws of the Trustee.

"**Bond**" means any bond of the Corporation authorized and issued pursuant to the Indenture and to a Supplemental Indenture, and, except as expressly limited by the Indenture or otherwise expressly provided in the Indenture, any Hedge Agreement Payments and Parity Reimbursement Obligations of the Corporation; ***provided, however,*** that Hedge Agreement Payment or a Parity Reimbursement Obligation shall not be considered a Bond for purposes of Article II ("Authorization and Issuance of the Bonds"), Article III ("General Terms and Provisions of Bonds"), Article IV ("Redemption of Bonds"), Article IX ("Supplemental Indentures"), Article X ("Amendments of Indenture"), Article XI ("Defaults and Remedies") and Article XII ("Defeasance") of the Indenture or for purposes of the right to receive Interest Support Payments.

"**Bond Counsel**" means Nixon Peabody LLP and Bryant Rabbino LLP, or an attorney or another law firm appointed by the Corporation having a national reputation in the law of public finance and whose opinions are generally accepted by purchasers of municipal bonds.

“**Bondholder**,” “**Holder of Bonds**” **or** “**Holder**” or any similar term, when used with reference to a Bond or Bonds, means the registered owner of any Bond.

“**Book Entry Bond**” means a Bond authorized to be issued to, and issued to and registered in the name of, a Depository for the participants in such Depository.

“**Business Day**” means any day which is not a Saturday, Sunday, a day on which the Trustee or banking institutions chartered by the State or the United States of America are legally authorized to close in the City, or a day that is a legal holiday for the City; ***provided, however,*** that, with respect to Option Bonds or Variable Interest Rate Bonds of a Series, such term means any day which is not a Saturday, Sunday, a day on which the Trustee, the New York Stock Exchange, banking institutions chartered by the State or the United States of America or the issuer of a Credit Facility or Liquidity Facility for such Bonds are legally authorized to close in the City, or a day that is a legal holiday for the City.

“**Capital Appreciation Bond**” means any Bond as to which interest is compounded on each Valuation Date therefor and is payable only at the maturity or prior redemption thereof.

“**Capitalized Interest Account**” means the account within the Construction Fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading “Establishment of Funds and Accounts”.

“**City**” means The City of New York, a municipal corporation of the State, constituting a political subdivision thereof.

“**Code**” means the Internal Revenue Code of 1986, as amended, and the applicable regulations thereunder.

“**Completion Bonds**” means Bonds in a principal amount not to exceed $150,000,000 in the aggregate issued in one or more Series for the purpose of paying unfunded Project Costs for completion of the Subway Extension (exclusive of the costs associated with construction of an intermediate station at West 41st Street and Tenth Avenue) and the first phase of the Public Amenities.

“**Construction Fund**” means the fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading “Establishment of Funds and Accounts”.

“**Corporation**” means Hudson Yards Infrastructure Corporation, a local development corporation organized and existing under the Not-For-Profit Corporation Law of the State of New York, and its successors and assigns.

“**Corporation Expense Fund**” means the fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading “Establishment of Funds and Accounts”.

“**Corporation Expenses**” means for any Fiscal Year the amount set forth in a certificate of the Corporation prepared for such Fiscal Year in accordance with the provisions of the Indenture described below under the heading “Certificate of the Corporation as to Expenses” for all other costs, fees and expenses of the Corporation of any kind arising out of or incurred in connection with maintaining its corporate existence and in furtherance of its corporate purposes, powers or duties, including, without limitation:

(i) salaries;

(ii) insurance premiums, including but not limited to insurance premiums on financial guaranty insurance policies issued in connection with Bonds that are due during such Fiscal Year and that were due, but not paid, during a prior Fiscal Year, and interest, if any, payable on any unpaid premiums;

(iii) fees, charges expenses, regularly scheduled payments, indemnities and other similar charges payable to or for (a) Providers, (b) auditing, legal, financial and investment advisory and other professional and consulting services, (c) fiduciaries, paying agents, transfer agents and other agents, and (d) printing, advertisements and publication or other distribution of notices;

(iv) any and all other fees, charges and expenses required or permitted to be incurred by the Corporation or required to be paid by the Corporation;

(v) Tax Obligations; and

(vi) expenses of HYDC that are comparable to the foregoing, but only to the extent not paid or payable from any other source;

provided, however, that Corporation Expenses do not include the principal of or interest on any indebtedness of the Corporation or any Termination Payments.

"**Costs of Issuance**" means the items of expense incurred in connection with the authorization, sale and issuance of the Bonds, which items of expense shall include, but not be limited to, document printing and reproduction costs, filing and recording fees, costs of credit ratings, initial fees and charges of the Trustee or a Depository, legal fees and charges, professional consultants' fees, fees and charges for execution, transportation and safekeeping of Bonds, premiums, fees and charges for insurance on Bonds, commitment fees or similar charges of a Remarketing Agent or relating to a Credit Facility, a Liquidity Facility or a Hedge Agreement, and other costs, charges and fees in connection with the foregoing.

"**Costs of Issuance Account**" means the account within the Construction Fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading "Establishment of Funds and Accounts".

"**Counterparty**" means any person with which the Corporation has entered into a Hedge Agreement, and such person's successors and assigns.

"**Credit Facility**" means an irrevocable letter of credit, surety bond, loan agreement, Standby Purchase Agreement or other agreement, facility or insurance or guaranty arrangement pursuant to which the Corporation or the Trustee is entitled to obtain money to pay the principal, purchase price or Redemption Price of Bonds due in accordance with their terms or tendered for purchase or redemption, plus accrued interest thereon to the date of payment, purchase or redemption thereof whether or not the Corporation is in default under the Indenture, which is issued or extended by:

(i) a bank, a trust company, a national banking association, an organization subject to registration with the Board of Governors of the Federal Reserve System under the Bank Holding Company Act of 1956 or any successor provisions of law;

(ii) a federal branch pursuant to the International Banking Act of 1978 or any successor provisions of law;

(iii) a domestic branch or agency of a foreign bank which branch or agency is duly licensed or authorized to do business under the laws of any state or territory of the United States of America;

(iv) a savings bank;

(v) a saving and loan association;

(vi) an insurance company or association chartered or organized under the laws of any state of the United States of America;

(vii) the Government National Mortgage Association or any successor thereto or the Federal National Mortgage Association or any successor thereto;

(viii) an entity affiliated with or which is a subsidiary of any entity described above or affiliated with or a subsidiary of any registered securities dealer; or

(ix) any other entity approved by the Corporation.

"**Debt Service**" means, when used in connection with any particular Outstanding Bonds, and for any period, the principal and Sinking Fund Installments of and interest on such Bonds payable during such period, including interest payable on Deferred Income Bonds from and after their respective Interest Commencement Dates exclusive of the principal and Sinking Fund Installments of or interest on Funded Bonds; ***provided, however,*** that if the interest at which a Variable Interest Rate Bond will bear interest at any time during such period is not known, the Trustee shall calculate such interest based upon a rate per annum certified to it by the Corporation as the rate the Corporation has assumed such Variable Interest Rate Bond will bear.

"**Debt Service Account**" means the account within the Debt Service Fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading "Establishment of Funds and Accounts".

"**Debt Service Deficiency**" means, as of any particular date of calculation, the amount by which the money in the Debt Service Account available for the payment of Debt Service on Outstanding Bonds (exclusive of Funded Bonds) is less than the Debt Service payable on such Bonds on the next succeeding Interest Payment Date.

"**Debt Service Fund**" means the fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading "Establishment of Funds and Accounts".

"**Defeasance Security**" means:

(i) a Government Obligation, including the interest component of REFCORP bonds for which the separation of principal and interest is made by request of the Federal Reserve Bank of New York in book-entry form, that is not subject to redemption prior to maturity other than at the option of the holder thereof or that has been irrevocably called for redemption on a stated future date; or

(ii) a Municipal Obligation (a) that is not subject to redemption prior to maturity other than at the option of the holder thereof or as to which irrevocable instructions have been given to the trustee of such Municipal Obligation by the obligor thereof to give due notice of redemption and to call such Municipal Obligation for redemption on the date or dates specified in such instructions and such Municipal Obligation is not otherwise subject to redemption prior to such specified date other than at the option of the holder thereof, (b) the timely payment of the principal or redemption price thereof and interest thereon is fully secured by a fund consisting only of cash or obligations described in clause (i) above, which fund may be applied only to the payment of such principal of and interest and redemption premium, if any, on such Municipal Obligation on the maturity date thereof or the redemption date specified in the irrevocable instructions referred to in clause (a) above, and (c) that at the time an investment therein is made is rated in the highest rating category by at least two Rating Services;

provided, however, that such term shall not mean any interest in a unit investment trust or mutual fund or in "CATS," "TIGRS" or "TRS".

"**Deferred Income Bond**" means any Bond as to which interest accruing thereon prior to the Interest Commencement Date therefor is compounded on each Valuation Date for such Deferred Income Bond, payable at maturity or earlier redemption, and interest accruing from and after the Interest Commencement Date is payable on the Interest Payment Dates therefor.

"**Depository**" means The Depository Trust Company, New York, New York, a limited purpose trust company organized under the laws of the State, or its nominee, or any other person, firm, association or corporation designated in the Supplemental Indenture authorizing a Series of Bonds to serve as securities depository for Bonds of such Series.

"**Determination of Taxability**" means, when used with respect to a Tax Exempt Bond, a final determination by any court of competent jurisdiction or a final determination by the Internal Revenue Service to which the Corporation shall consent or from which no timely appeal shall have been taken, in each case to the effect that interest on such Bond is includable in the gross income of the Holder thereof for purposes of federal income taxation.

"**DIB Assignment Agreement**" means the Amended and Restated DIB Assignment and Agreement, dated as of December 1, 2006, as amended and restated as of May 1, 2017, by and between the City and the Corporation, as from time to time amended or supplemented in accordance therewith and with the Indenture.

"**DIB Payments**" means payments of contributions to the Hudson Yards District Improvement Fund established pursuant to Section 93-31 of the City's zoning resolution, pursuant to which the Chairperson of the City Planning Commission has been authorized to make certain benefits available to the developers of certain buildings and improvements within the District, as a bonus.

"**Eligible Investments**" means:

(i) Defeasance Securities;

(ii) Government Obligations;

(iii) demand and time deposits in or certificates of deposit of, or bankers' acceptances issued by, any bank or trust company, savings and loan association or savings bank, payable on demand or on a specified date no more than three months after the date acquired as an investment under the Indenture, if such deposits or instruments are at the time an investment therein is made rated by at least two Rating Services "A–1+" if by S&P, "P–1" if by Moody's and "F1" if by Fitch;

(iv) Municipal Obligations that at the time an investment therein is made are rated at least in one of the two highest long term rating categories by at least two Rating Services, without regard to qualification of such rating by symbols such as "+" or "-" and numerical notation;

(v) commercial or finance company paper (including both non–interest bearing discount obligations and interest bearing obligations) payable on demand or on a specified date not more than two hundred seventy (270) days after the date acquired as an investment under the Indenture that is at the time an investment therein is made rated in the highest rating category by at least two Rating Services;

(vi) repurchase obligations with respect to any security described in clause (i) or (ii) above entered into with (a) a primary dealer, depository institution or trust company (acting as principal) that at the time an investment therein is made is rated by at least two Rating Services "A–1" if by S&P, "P–1" if by Moody's and "F1" if by Fitch (if payable on demand or on a specified date no more than three months after the date acquired as an investment under the Indenture) or in one of the two highest long term rating categories by at least two Rating Services, or (b) any financial institution or corporation, any insurance company, a registered broker/dealer or domestic commercial bank, in each case whose long term debt obligations are rated "investment grade" by at least two Rating Services; provided, however, that (1) a specific written agreement governs the transactions, (2) the securities that are the subject of the repurchase agreement are held free and clear of any lien, by the Trustee or an independent third party acting solely as the agent of the Trustee that is (A) a Federal Reserve Bank or (B) a member of the Federal Deposit Insurance Corporation that has combined surplus and undivided profits of not less than twenty–five million dollars ($25,000,000), and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee, and (3) the agreement provides that the securities that are the subject of the repurchase agreement are required to be repurchased either on demand or within one year after their date of purchase;

(vii) securities bearing interest or sold at a discount (in each case payable on demand or on a specified date no more than ninety (90) days after the date acquired as an investment hereunder) that are issued by any corporation incorporated under the laws of the United States of America or any state thereof and are rated by at least two Rating Services, "P–1" if by Moody's, "A–1+" if by S&P and "F1" if by Fitch, at the time of such investment or contractual commitment providing for such investment; provided, however, that securities issued by any such corporation will not be Eligible Investment to the extent that investment therein would cause the then outstanding principal amount of securities issued by such corporation and held as investments under the Indenture to exceed twenty percent (20%) of the aggregate principal amount of all Eligible Investments then held under the Indenture;

(viii) units of taxable money market funds which are regulated investment companies and seek to maintain a constant net asset value per share and which at the time an investment therein is made are rated by at least two Rating Services, at least "Aa-mf" if by Moody's, "AAm" if by S&P and "AAmmf" if by Fitch, including if so rated any such fund which the Trustee or an affiliate of the Trustee serves as an investment advisor, administrator, shareholder, servicing agent and/or custodian or sub–custodian, notwithstanding that (a) the Trustee or an affiliate of the Trustee charges and collects fees and expenses (not exceeding current income) from such funds for services rendered, (b) the Trustee charges and collects fees and expenses for services rendered pursuant to the Indenture and (c) services performed for such funds and pursuant to this Indenture may converge at any time (the Corporation specifically authorizes the Trustee or an affiliate of the Trustee to charge and collect all fees and expenses from such funds for services rendered to such funds, in addition to any fees and expenses the Trustee may charge and collect for services rendered pursuant to the Indenture);

(ix) investment agreements or guaranteed investment contracts with any financial institution or corporation, any insurance company, a registered broker/dealer or a domestic commercial bank whose senior long term debt obligations are rated, or guaranteed by a financial institution, whose senior long term debt obligations are rated, at the time such agreement or contract is entered into, in one of the two highest long term rating categories by at least two Rating Services, without regard to qualification of such rating by symbols such as "+" or "-" and numerical notation; provided, however, that in the event that such rating is suspended, withdrawn or reduced below the rating assigned to Outstanding Bonds without regard to any Credit Facility either (a) the Corporation has an option to terminate such agreement or contract or (b) such agreement or contract is required to be collateralized by securities described in clause (i) or (ii) above or by obligations of the Government National Mortgage Association or any successor thereto; provided, further, that (1) a specific written agreement governs the transactions, (2) the collateral securities, if any, are held free and clear of any lien, by the Trustee or by a trustee of an independent third party acting solely as the agent of the Trustee that is (A) a Federal Reserve Bank or (B) a member of the Federal Deposit Insurance Corporation that has combined surplus and undivided profits of not less than twenty-five million dollars ($25,000,000), and the Trustee shall have received written confirmation from such third party that it holds such securities, free and clear of any lien, as agent for the Trustee, (3) the agreement has a term of thirty days or less, or either the Trustee, if the Trustee holds the collateral, or a custodian of the collateral or a valuation agent selected by the Corporation, will value the collateral securities no less frequently than monthly, and will liquidate the collateral securities if any deficiency in the required collateral percentage is not restored within five Business Days of such valuation, and (4) the fair market value of the collateral securities in relation to the amount of the obligation, including principal and interest, is equal to at least one hundred two percent (102%); and

(x) other obligations or securities that either (i) under the applicable standards and guidelines of each Rating Service are investments in which money in a particular fund or account under the Indenture may be invested by the Corporation, or (ii) as to the investment therein for any fund or account the Corporation has received Rating Confirmation.

"**Fiscal Year**" means a period of twelve (12) consecutive months beginning July 1st of a calendar year and ending on June 30th of the next succeeding calendar year or any other twelve month period as the Corporation may select as its fiscal year.

"**Fitch**" means Fitch, Inc. and its successors and assigns; ***provided, however,*** that references in the Indenture to Fitch shall be effective so long as Fitch is a Rating Service.

"**Funded Bond**" means as of any particular date of determination a Bond for which provision for payment has not been made in accordance with the Indenture and remains Outstanding, but for which:

(i) the Trustee or another banking institution then holds, in trust, either money in an amount which shall be sufficient, or Eligible Investments the principal of and interest on which when due will provide money which, together with the money, if any, so held, shall be sufficient in the judgment of a firm of certified public accountants to pay when due the principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, of and interest due and to become due on said Bond on or prior to the redemption date or maturity date thereof, as the case may be; and

(ii) in case all or any portion of said Bond is to be redeemed on any date prior to its maturity, the Corporation shall have given the Trustee, in form satisfactory to it, irrevocable instructions to give as provided in the Indenture notice of redemption on said date of such Bond or portion thereof;

provided, **however**, that such Bond shall no longer be a Funded Bond if at any time the money and Eligible Investments are no longer sufficient to meet the aforesaid requirements.

"**Future Year Debt Service Requirement**" means the amount projected by the Corporation and certified to the Trustee pursuant to the Indenture described below under the heading "Future Year Debt Service Requirement" as the amount to be retained in the Debt Service Account during the next succeeding Fiscal Year for the payment of Debt Service on Outstanding Bonds (other than Funded Bonds) payable in the second succeeding Fiscal Year and determined as follows: (a) projected Debt Service on such Bonds in the second succeeding Fiscal Year, less (b) the amount projected to be available in the Debt Service Account as of July 1 of the second succeeding Fiscal Year, less (c) Recurring Revenues projected to be received by the Corporation during the second succeeding Fiscal Year available for Debt Service on such Bonds; taking into account in each case, the projected receipt dates for the revenues and payment dates for the obligations.

"**Government Obligation**" means:

(i) a direct obligation of, or an obligation the timely payment of the principal of and interest on which is guaranteed by, the United States of America, the Federal Housing Administration, the Federal Home Loan Mortgage Corporation, the Federal National Mortgage Association, the Federal Farm Credit System or a Federal Home Loan Bank; and

(ii) an obligation of the United States of America which has been stripped by the United States Department of the Treasury itself or by any Federal Reserve Bank (not including "CATS," "TIGRS" and "TRS" unless the Corporation obtains Rating Confirmation with respect thereto).

"**Hedge Agreement**" means any financial arrangement entered into by the Corporation with another person that (i) is executed in connection with Bonds and is an Interest Rate Exchange Agreement, an interest rate cap or collar or other exchange or rate protection transaction, or (ii) is an agreement for the forward purchase of securities for the investment of money of the Corporation in any fund or account established by the Indenture.

"**Hedge Agreement Payment**" means any periodic or regularly scheduled payment required to be made by the Corporation pursuant to a Hedge Agreement, but does not include a Termination Payment.

"**HYDC**" means Hudson Yards Development Corporation, a local development corporation created and existing pursuant to the Not-For-Profit Corporation Law of the State of New York, and its successors and assigns.

"**HYDC Expense Account**" means the account within the Construction Fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading "Establishment of Funds and Accounts".

"**IDA Assignment Agreement**" means the Amended and Restated PILOT Assignment and Agreement, dated as of December 1, 2006, as amended and restated as of May 1, 2017, by and among the City, NYC IDA and the Corporation, as from time to time amended or supplemented in accordance therewith and with the Indenture.

"**Indenture**" means the Second Trust Indenture dated as of May 1, 2017, by and between the Corporation and the Trustee, as from time to time further amended or supplemented by Supplemental Indentures in accordance with the terms and provisions of the Indenture.

"**Interest Commencement Date**" means, with respect to any particular Deferred Income Bond, the date prior to the maturity date thereof after which interest accruing thereon shall be payable on each Interest Payment Date succeeding such Interest Commencement Date.

"**Interest Deficiency Notice**" shall have the meaning given to such term in the Support Agreement.

"**Interest Payment Date**" means, when used in connection with any particular Bond, such date on which interest thereon is payable in accordance with the terms thereof.

"**Interest Payment Date**" means, when used in connection with any particular Bond, each date on which interest thereon is payable in accordance with the terms thereof.

"**Interest Rate Exchange Agreement**" means an agreement entered into by the Corporation in connection with the issuance of or which relates to any Bonds which provides that during the term of such agreement the Corporation is to pay to the Counterparty an amount based on the interest accruing at a fixed or variable rate per annum on a notional amount equal to the principal amount of such Bonds and that the Counterparty is to pay to the Corporation an amount based on the interest accruing on such notional amount at a fixed or variable rate, in each case computed according to a formula set forth in such agreement, or that one shall pay to the other any net amount due under such agreement.

"**Interest Support Payments**" means the payments required to be made by the City pursuant to Section 4.02(a)(ii) of the Support Agreement.

"**Liquidity Facility**" means a letter of credit, surety bond, loan agreement, Standby Purchase Agreement, line of credit or other agreement or arrangement pursuant to which money may be obtained upon the terms and conditions contained therein for the purchase or redemption of Option Bonds tendered for purchase or redemption in accordance with the terms of the Indenture and of the Supplemental Indenture authorizing such Bonds, which is issued or provided by:

(i) a bank, a trust company, a national banking association, an organization subject to registration with the Board of Governors of the Federal Reserve System under the Bank Holding Company Act of 1956 or any successor provisions of law;

(ii) a federal branch pursuant to the International Banking Act of 1978 or any successor provisions of law;

(iii) a domestic branch or agency of a foreign bank which branch or agency is duly licensed or authorized to do business under the laws of any state or territory of the United States of America;

(iv) a savings bank;

(v) a saving and loan association;

(vi) an insurance company or association chartered or organized under the laws of any state of the United States of America,

(vii) the Government National Mortgage Association or any successor thereto or the Federal National Mortgage Association or any successor thereto;

(viii) an entity affiliated with or which is a subsidiary of any entity described above or affiliated with or a subsidiary of any registered securities dealer; or

(ix) any other entity approved by the Corporation.

"**Maximum Annual Debt Service**" means, as of any particular date of calculation and with respect to any Outstanding Bonds, an amount equal to the greatest amount required in the then current or any future Fiscal Year to pay the Debt Service on such Bonds during such Fiscal Year; ***provided, however,*** that for purposes of this definition:

(i) the Accreted Value of a Capital Appreciation Bond and the Appreciated Value of a Deferred Income Bond becoming due at maturity or through a mandatory Sinking Fund Installment shall be included in the calculations of interest and principal payable during the Fiscal Year in which such Capital Appreciation Bond or Deferred Income Bond matures or in which such Sinking Fund Installment is due;

(ii) the principal of an Option Bond Outstanding during any Fiscal Year shall be included only in the years and in the respective principal amounts due on the dates on which Sinking Fund Installments are due and on the stated maturity date thereof;

(iii) it shall be assumed that a Variable Interest Rate Bond, prior to its conversion to bear interest at a fixed rate to its maturity, bears interest during any Fiscal Year at the lesser of:

(1) a fixed rate of interest determined in the sole judgment of an Authorized Officer of the Corporation, on a Business Day not more than five (5) days prior to the date of calculation as the fixed rate at which such Variable Interest Rate Bond would have had to bear to be marketed at par on such date as a fixed rate obligation; and

(2) if the Corporation has in connection with such Variable Interest Rate Bond entered into (A) an Interest Rate Exchange Agreement which provides that the Corporation is to pay to another person an amount determined based upon a fixed rate of interest on the Outstanding principal amount of the Variable Interest Rate Bonds to which such agreement relates and the Counterparty pays with respect to a like principal amount a variable rate expected to be reasonably equivalent to the variable rate of interest on such Bonds, or (B) a Hedge Agreement in the nature of an interest rate cap or collar, then either the interest fixed rate set forth in or determined in accordance with such Interest Rate Exchange Agreement or the maximum rate set forth in such Hedge Agreement, as applicable; and

(iv) the principal and Sinking Fund Installments of and interest on Funded Bonds shall be excluded from such calculation.

"**Maximum Interest Rate**" means, with respect to any particular Variable Interest Rate Bond, the numerical rate of interest, if any, established as the maximum rate at which such Variable Interest Rate Bond may bear interest at any time.

"**Minimum Interest Rate**" means, with respect to any particular Variable Interest Rate Bond, a numerical rate of interest, if any, established as the minimum rate at which such Variable Interest Rate Bond may bear interest at any time.

"**Moody's**" means Moody's Investors Service and its successors and assigns; ***provided, however,*** that references in the Indenture to Moody's shall be effective so long as Moody's is a Rating Service.

"**MTA**" means any of the Metropolitan Transportation Authority, the Triborough Bridge and Tunnel Authority and The Long Island Rail Road Company, and any of their successors or assigns.

"**MTA Agreement**" means the Rail Yards Agreement, dated as of September 28, 2006, among Metropolitan Transportation Authority, Triborough Bridge and Tunnel Authority, The Long Island Rail Road Company and the City.

"**Municipal Obligation**" means an obligation of any state or territory of the United States of America, any political subdivision of any state or territory of the United States of America, or any agency, authority, public benefit corporation or instrumentality of such state, territory or political subdivision.

"**Net Recurring Revenues**" means, as of any particular date of calculation and when used in connection with any Fiscal Year, the amount of PILOT Payments and Tax Equivalency Payments received by the Corporation during such Fiscal Year, ***less*** the Corporation Expenses for such Fiscal Year.

"**New Development**" means the construction of a building or other improvement within the Project Area for residential, commercial or other use or uses, or the "Substantial Rehabilitation," as such term is defined in the Support Agreement, of an existing building or improvement within the Project Area, in each case evidenced by the issuance of a temporary or permanent certificate of occupancy on or after January 19, 2005.

"**NYC IDA**" means New York City Industrial Development Agency, a corporate governmental agency constituting a body corporate and politic and a public benefit corporation of the State of New York, and its successors and assigns.

"**Opinion of Bond Counsel**" means, when used in reference to any act, an opinion to the effect that such act is authorized or permitted by the Indenture and will not adversely affect the exclusion of interest on any Tax Exempt Bond from the gross income of the Holder thereof for purposes of federal income taxation.

"**Option Bond**" means any Bond which by its terms may be tendered by and at the option of the owner thereof for purchase or redemption by the Corporation prior to the stated maturity thereof, or the maturity of which may be extended by and at the option of the owner thereof.

"**Outstanding**" means, as of any particular date of calculation, when used in reference to any Bonds, all Bonds authenticated and delivered under the Indenture and under any applicable Supplemental Indenture and all Parity Reimbursement Obligations except:

(i) any Bond cancelled by the Trustee at or before such date;

(ii) any Bond deemed to have been paid in accordance with the provisions of the Indenture described below under the heading "Defeasance";

(iii) any Bond paid pursuant to the Indenture or any Bond in lieu of or in substitution for which another Bond shall have been authenticated and delivered pursuant to the Indenture;

(iv) Option Bonds tendered or deemed tendered in accordance with the provisions of the Supplemental Indenture authorizing such Bonds on the applicable adjustment or conversion date, if interest thereon shall have been paid through such applicable date and the purchase price thereof shall have been paid or amounts are available for such payment as provided in the Indenture and in the Supplemental Indenture authorizing such Bonds;

(v) Parity Reimbursement Obligations arising out of a Credit Facility or Liquidity Facility if and to the extent that such Parity Reimbursement Obligations are evidenced by Bonds to which the Credit Facility or Liquidity Facility relates and such Bonds are registered in the name of the Provider thereof or its nominee; and

(vi) Funded Bonds, but only for such purposes as the provisions of the Indenture expressly provide that Funded Bonds shall not be considered to be Outstanding Bonds or that Funded Bonds are to be excluded from the calculation of Outstanding Bonds.

“**Parity Reimbursement Obligation**” means an obligation of the Corporation to pay or reimburse the Provider of a Credit Facility or Liquidity Facility for money advanced thereunder for the payment of the principal, Redemption Price or purchase price of Bonds, including interest on the money so advanced, whether or not such obligation is evidenced by a note, bond or other evidence of indebtedness, but which is secured by a security interest in, pledge of and lien on the Trust Estate on a parity with the lien created by the Indenture for the payment of the Bonds to which such Credit Facility or Liquidity Facility relates.

“**Payment Default**” means an event of default described in clause (a) of the heading below entitled “Events of Default”.

“**PILOMRT Payments**” means payments in lieu of any mortgage recording taxes (i) made pursuant to a PILOT Agreement, (ii) made to the Corporation pursuant to the MTA Agreement or (iii) made to the Corporation in connection with certain New Developments in the Project Area, in each case evidenced by the issuance of a temporary or permanent certificate of occupancy on or after January 19, 2005, by any of (A) the New York State Urban Development Corporation doing business as the Empire State Development Corporation, or any of its subsidiaries, and (B) The Port Authority of New York and New Jersey.

“**PILOT Agreement**” means, each and singularly, an agreement entered into on or after January 1, 2006 (i) by and between the NYC IDA and another party pursuant to Section 858(15) of the General Municipal Law, pursuant to which, *inter alia,* such person agrees to make payments to the NYC IDA in lieu of the payment of *ad valorem* real property taxes to the City in connection with property located in the Project Area, (ii) by and between the MTA and another person pursuant to which, *inter alia,* such person agrees to make payments in lieu of the payment of *ad valorem* real property taxes to the MTA or the City in connection with property located in the Project Area, which payments are payable to the Corporation pursuant to the MTA Agreement, and (iii) by and between New York State Urban Development Corporation, doing business as the Empire State Development Corporation, The Port Authority of the States of New York and New Jersey or any other governmental entity, or any of their subsidiaries, and another person pursuant to which, *inter alia,* such person agrees to make payments in lieu of the payment of *ad valorem* real property taxes to the governmental party thereto or the City in connection with property located in the Project Area, which payments are payable to the Corporation.

“**PILOT Payments**” means payments in lieu of *ad valorem* real property taxes made pursuant to a PILOT Agreement.

“**PILOT Mortgage**” means any mortgage given by a party to a PILOT Agreement to secure its obligations thereunder to make PILOT Payments.

“**Pledged Funds**” means the Revenue Fund, the Construction Fund, and the Debt Service Fund, each and every account and subaccount in any such fund, and any fund or account established pursuant to a Supplemental Indenture therein designated as a Pledged Fund.

“**Project**” means, individually, the Subway Extension, Public Amenities and any future improvements thereto, and the purchase of the TDRs, each as more particularly described in Exhibit B annexed to the Indenture.

“**Project Account**” means the account within the Construction Fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading “Establishment of Funds and Accounts”.

“**Project Area**” means the geographic area within the City in the Borough of Manhattan referred to as the “Hudson Yards Financing District” in Resolution Number 547 of 2006 of the City’s City Council.

“**Project Cost Requisition**” means a requisition signed by an Authorized Officer of the Corporation and an appropriate officer of HYDC, substantially in the form annexed to the Indenture as Exhibit A, stating with respect to each payment to be made to any person, (i) the names of the payees, (ii) the purpose for which payment is to be made in terms sufficient for identification, (iii) the respective amount of each such payment and (iv) that such purpose constitutes a proper purpose for which money in the Construction Fund may be applied and has not been the basis of any previous withdrawal from the Construction Fund.

"**Project Costs**" means costs and expenses or the refinancing of costs and expenses incurred in connection with the Project, including, but not limited to, (i) costs and expenses of the acquisition of the title to or other interest in real property, including easements, rights–of–way and licenses, (ii) costs and expenses incurred for labor and materials and payments to contractors, builders and material men, for the acquisition, construction, reconstruction, rehabilitation, repair and improvement of the Project, (iii) the cost of surety bonds and insurance of all kinds, including premiums and other charges in connection with obtaining title insurance, that may be required or necessary prior to completion of the Project, which is not paid by a contractor or otherwise provided for, (iv) the costs and expenses for design, test borings, surveys, estimates, plans and specifications and preliminary investigations therefor, and for supervising the Project, (v) costs and expenses required for the acquisition and installation of equipment or machinery, (vi) all other costs which the City, HYDC or the Corporation shall be required to pay or cause to be paid for the acquisition, construction, reconstruction, rehabilitation, repair, improvement and equipping of the Project, (vii) any sums required to reimburse any person for advances made by them for any of the above items or for other costs incurred and for work done by them in connection with the Project, (viii) costs and expenses of HYDC, including but not limited to, in connection with the performance of its duties under the Support Agreement and its activities to facilitate other development of the Project Area, (xi) interest on Outstanding Bonds, and (xii) fees, expenses and liabilities of the Corporation incurred in connection with the Project, including but not limited to litigation expenses, judgments, settlements and compromises, and in connection with any other agreement of the City, HYDC or the Corporation ancillary to the Project.

"**Provider**" means the provider or issuer of a Credit Facility or a Liquidity Facility, and its successors and assigns.

"**Provider Payments**" means the amount, certified by a Provider to the Trustee, as payable to such Provider on account of amounts advanced by it under a Credit Facility or a Liquidity Facility, including interest on amounts advanced and fees and charges with respect thereto.

"**Public Amenities**" means the work or improvement so designated and more particularly defined in Exhibit B annexed to the Indenture.

"**Rating Confirmation**" means the written confirmation of each Rating Service to the effect that the rating assigned, without regard to any Credit Facility, to each of the Bonds rated by such Rating Service will remain unchanged and will not be withdrawn, suspended or reduced as a consequence of some act or occurrence.

"**Rating Service**" means as of any particular date of determination each of Fitch, Moody's and S&P, or their respective successors, which then has a rating on Outstanding Bonds assigned at the request of the Corporation.

"**Record Date**" means, when used in relation to the Bonds of a Series, the date specified as the record date for such Bonds in the Supplemental Indenture authorizing such Bonds.

"**Recurring Revenues**" means, as of any particular date of calculation and when used in connection with any Fiscal Year, the amount of PILOT Payments and Tax Equivalency Payments received by the Corporation during the Fiscal Year.

"**Redemption Account**" means the account within the Debt Service Fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading "Establishment of Funds and Accounts".

"**Redemption Price**" when used with respect to a Bond means the principal amount of such Bond plus the applicable premium, if any, payable upon redemption prior to maturity thereof pursuant to the Indenture or to the applicable Supplemental Indenture.

"**Refunding Bond**" means any Bond issued pursuant to the Indenture to pay or provide for the payment of Bonds.

"**Remarketing Agent**" means the person appointed by or pursuant to a Supplemental Indenture authorizing the issuance of Option Bonds to remarket such Option Bonds tendered or deemed to have been tendered for purchase in accordance with such Supplemental Indenture.

"**Remarketing Agreement**" means, with respect to Option Bonds of a Series, an agreement between the Corporation and the Remarketing Agent relating to the remarketing of such Bonds.

"**Reserved Rights**" means, when used with respect to any Agreement to which the Corporation is a party or that has been assigned to it that is a part of the Trust Estate, any right or privilege thereunder to give notices, consents or approvals, to agree to amendments, modifications or supplements thereto, to enforce the obligations of any other party thereto, and any agreement by another party thereto to indemnify the Corporation or to hold it harmless, but in all such cases subject to the limitations or conditions expressly imposed thereon by the Indenture.

"**Revenue Fund**" means the fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading "Establishment of Funds and Accounts".

"**Revenues**" means, when used in connection with any Fiscal Year, all amounts received by the Corporation during such Fiscal Year from (i) PILOT Payments, (ii) PILOMRT Payments, (iii) Tax Equivalency Payments, (iv) DIB Payments, (v) Interest Support Payments, (vi) the sale or other transfer of the TDRs or the air rights or development rights appurtenant to other real property located within the Project Area, in each case after deduction therefrom of the costs incurred in connection with such sale or transfer and any amounts required to be applied as a consequence of such sale or transfer to the purchase, redemption or defeasance of Bonds in order to maintain the tax–exempt status of interest on any Tax Exempt Bonds, (vii) rentals, if any, paid to the Corporation, (viii) Hedge Agreement Payments and Termination Payments received by the Corporation, and (ix) proceeds of (A) any foreclosure sale, (B) exercise of an owners right of redemption or (C) any other sale or disposition by the Corporation, in each case, of property subject to a PILOT Mortgage or that has been acquired by the Corporation upon or in lieu of the foreclosure of such PILOT Mortgage.

"**S&P**" means S&P Global Ratings and its successors and assigns; ***provided, however,*** that references in the Indenture to S&P shall be effective so long as S&P is a Rating Service.

"**Series**" means all of the Bonds authenticated and delivered on original issuance and pursuant to the Indenture and to the Supplemental Indenture authorizing such Bonds as a separate Series of Bonds, and any Bonds thereafter authenticated and delivered in lieu of or in substitution for such Bonds pursuant to the Indenture, regardless of variations in maturity, interest rate, Sinking Fund Installments or other provisions.

"**Sinking Fund Installment**" means, when used in connection with any Bond means, as of any date of calculation, the amount of money required to be paid on a future date for the retirement of a Term Bond that matures after said future date, but does not include any amount payable by the Corporation by reason only of the maturity of such Term Bond.

"**Standby Purchase Agreement**" means an agreement by and between the Corporation and another person, pursuant to which such person is obligated to purchase an Option Bond tendered for purchase and not remarketed to another purchaser.

"**Substantial Completion**" means, (i) when used in connection with the Subway Extension or the Public Amenities, that HYDC has certified to the Corporation and the City that all of the following shall have occurred:

(a) copies of all temporary or permanent certificates of occupancy required in connection therewith, if any, have been delivered to HYDC;

(b) all work required by the plans and specifications and construction documents, including but not limited to required commissioning, has been completed, except for minor or insubstantial details or construction, decoration, mechanical adjustment (including without limitation testing or mechanical systems and associated commissioning work) or installation; ***provided, however,*** that, with respect to mechanical systems, an item is minor or insubstantial if it does not interfere with the ability of such system to meet the performance criteria set forth in the construction documents; and

(c) any work remaining to be done is of a nature as will not interfere with the normal use and occupancy for its intended purpose; and

(ii) when used in connection with the TDRs, that the Corporation has fully paid for the purchase price therefor as certified to the Trustee by the Corporation.

"**Subway Extension**" means the work or improvements so designated and more particularly described in Exhibit B annexed to the Indenture.

"**Supplemental Indenture**" means any Indenture of the Corporation amending or supplementing the Indenture or any prior Supplemental Indenture executed and becoming effective in accordance with the terms and provisions of the Indenture.

"**Support Agreement**" means the Amended and Restated Hudson Yards Support and Development Agreement, dated as of December 1, 2006, as amended and restated as of May 1, 2017, by and among the City, HYDC and the Corporation, as from time to time amended and supplemented in accordance therewith and with the Indenture.

"**Supported Bond**" means any Outstanding Bond, other than a Funded Bond, that, pursuant to the Support Agreement, the City is obligated to make Interest Support Payments in connection therewith.

"**Surplus Fund**" means the fund so designated, created and established pursuant to the provisions of the Indenture described below under the heading "Establishment of Funds and Accounts".

"**Tax Equivalency Payments**" means the payments required to be made by the City pursuant to Section 4.01 of the Support Agreement.

"**Tax Exempt Bond**" means any Bond as to which Bond Counsel has rendered an opinion to the effect that interest on it is excluded from gross income for purposes of federal income taxation.

"**Tax Obligations**" means for any Fiscal Year the amount required by the Code to be paid by the Corporation during such Fiscal Year to the United States of America as rebate payments, yield reduction payments, penalties and interest.

"**Term Bond**" means a Bond so designated and payable from Sinking Fund Installments.

"**Termination Payment**" means any payment required to be made upon and solely as a consequence of the termination of a Hedge Agreement.

"**TDRs**" means the transferable development rights appurtenant to the property within the Project Area designated as the "Eastern Rail Yards," as defined in the MTA Agreement, in which the Corporation is to purchase an interest pursuant to the MTA Agreement.

"**Trustee**" means U.S. Bank National Association appointed as Trustee for the Bonds pursuant to the Indenture and having the duties, responsibilities and rights provided for in the Indenture, and its successor or successors and any other bank or trust company which may at any time be substituted in its place pursuant to the Indenture.

"**Trust Estate**" has the meaning given to such term in the granting clause of the Indenture.

"**UTEP-Hudson Yards**" has the meaning given to such term in the IDA Assignment Agreement.

"**Valuation Date**" means (i) with respect to any Capital Appreciation Bond, the date or dates set forth in the Supplemental Indenture authorizing such Bond on which specific Accreted Values are assigned to such Capital Appreciation Bond, and (ii) with respect to any Deferred Income Bond, the date or dates prior to the Interest Commencement Date set forth in the Supplemental Indenture authorizing such Bond on which specific Appreciated Values are assigned to such Deferred Income Bond.

"**Variable Interest Rate**" means the rate or rates of interest to be borne by a Bond which is or may be varied from time to time in accordance with the method of determining such interest rate or rates established for such Bond; ***provided, however,*** that such variable interest rate may be subject to a Maximum Interest Rate and a Minimum Interest Rate and that there may be an initial rate specified, in each case as provided in such Supplemental Indenture.

"**Variable Interest Rate Bond**" means any Bond that bears a Variable Interest Rate; ***provided, however,*** that from and after the date on which the interest rate on such Bond shall have been fixed for the remainder of the term thereof, such Bond shall no longer be a Variable Interest Rate Bond.

(Indenture Section 1.01)

Summary of Certain Provisions of the Indenture

The following is a summary of certain provisions of the Indenture. Such summary does not purport to be complete and reference is made to the Indenture for full and complete statements of such and all provisions.

Granting Clause

In order to secure the payment of the principal and Redemption Price of and interest on the Bonds and the performance and observance of all of the covenants and conditions contained in the Indenture or in the Bonds, the Corporation has executed and delivered the Indenture and has conveyed, granted, assigned, transferred, pledged, set over and confirmed and granted a security interest in, to the Trustee, its successor or successors and its or their assigns forever, with power of sale, all and singular, the following real and personal property (such property sometimes referred to as the "Trust Estate"):

(i) All right, title and interest of the Corporation in, to and under the IDA Assignment Agreement, the DIB Assignment Agreement, the PILOT Agreements now existing and hereafter entered into, the PILOT Mortgages now existing and hereafter entered into, the MTA Agreement and the Support Agreement, including, without limitation, the present and continuing right to make claim for, collect and receive the payments thereunder and the right to bring actions and proceedings for the enforcement thereof;

(ii) All right, title and interest of the Corporation in, to and under the Revenues, including, without limitation, the present and continuing right to make claim for, collect and receive the Revenues, and the right to bring actions and proceedings for the enforcement thereof;

(iii) Except as otherwise expressly provided in the Indenture, all of the Corporation's right, title and interest in money and securities on deposit with the Trustee in the Pledged Funds; provided, however, that the priority in which such money and securities are applied to the repayment of the Bonds shall be as expressly specified in the Indenture;

(iv) Any and all other property of every kind and nature from time to time hereafter, by delivery or by writing of any kind, conveyed, pledged, assigned or transferred to the Trustee as and for additional security under the Indenture by the Corporation or by any person on behalf of the Corporation, including without limitation the money and securities of the Corporation held by the Trustee as security for the Bonds; and

(v) All proceeds of any of the foregoing;

(A) to have and to hold, all and singular, the properties and the rights and privileges hereby conveyed, assigned and pledged by the Corporation or intended so to be, unto the Trustee and its successors and assigns forever, in trust, nevertheless, with power of sale and for the benefit and security of each and every owner of the Bonds issued and to be issued under the Indenture, without preference, priority or distinction as to participation in the lien, benefit and protection of one Bond over or from the other Bonds, by reason of date or order of issuance or negotiation or maturity thereof, or for any other reason whatsoever, except as in the Indenture otherwise expressly provided, so that each of such Bonds shall have the same right, lien and privilege under the Indenture and shall be equally secured by the Indenture with the same effect as if the same shall have been made, issued and negotiated simultaneously with the delivery hereof and were expressed to mature on one and the same date;

(B) subject and subordinate to, so long as no Payment Default shall have occurred and be continuing under the Indenture, the Reserved Rights of the Corporation.

If the Corporation or its successors or assigns shall well and truly pay or cause to be paid the principal of such Bonds with interest, according to the provisions set forth in the Bonds and each of them or shall provide for the payment of such Bonds by depositing or causing to be deposited with the Trustee the entire amount of funds or securities requisite for payment thereof, when and as authorized by the provisions of Indenture described below under the heading "Defeasance", and shall also pay or cause to be paid all other sums payable under the Indenture by the Corporation, then the presents and the estate and rights granted by the Indenture shall cease, determine and become void, and thereupon the Trustee, on payment of its lawful charges and disbursements then unpaid, on demand of the Corporation and upon the payment of the cost and expenses thereof, shall duly execute, acknowledge and deliver to the Corporation such instruments of satisfaction or release as may be specified by the Corporation as necessary or proper to discharge the Indenture, including, if appropriate, any required discharge of record, and if necessary shall grant, reassign and deliver to the Corporation, its successors or assigns, all and singular the property, rights, privileges and interest by it granted, conveyed and assigned, and all substitutes therefor, or any part thereof, not previously disposed of or released as under the Indenture provided; otherwise the Indenture shall be and remain in full force.

Authorization of Bonds

Bonds of the Corporation to be designated as "Hudson Yards Revenue Bonds" are authorized to be issued pursuant to the Indenture and the Indenture creates a continuing pledge and lien to secure the payment of the principal and Redemption Price of and interest on all Outstanding Bonds. The Bonds will be special obligations of the Corporation payable solely from the Trust Estate in the manner more particularly described in the Indenture. The aggregate principal amount of Bonds which may be executed, authenticated and delivered is not limited except as provided by the Indenture.

(Indenture Section 2.01)

Issuance of Bonds and Additional Bonds

The issuance of Bonds shall be authorized by a Supplemental Indenture. The Bonds will be executed by the Corporation and delivered to the Trustee. The Corporation shall, in addition to other requirements of the Indenture, deliver to the Trustee:

(a) a copy of the Indenture, including the Supplemental Indenture authorizing such Bonds, certified by an Authorized Officer of the Corporation;

(b) a copy of each of the IDA Assignment Agreement, the DIB Assignment Agreement, each PILOT Agreement and PILOT Mortgage theretofore assigned to the Corporation, the Support Agreement and the MTA Agreement, in each case certified by an Authorized Officer of the Corporation;

(c) if a Credit Facility or Liquidity Facility is to be provided in connection with the issuance of the Bonds of such Series, such Credit Facility or Liquidity Facility;

(d) if such Bonds are Supported Bonds, a certificate of an Authorized Officer of the Corporation to the effect that the issuance thereof complies with the provisions of the Indenture regarding limitations on Supported Bonds;

(e) except in the case of the Completion Bonds and Refunding Bonds, a certificate of an Authorized Officer of the Corporation (i) setting forth (A) the Net Recurring Revenues for the immediately preceding Fiscal Year for which audited financial statements of the Corporation are available, and (B) the Maximum Annual Debt Service (for Fiscal Years during which Bonds Outstanding before the date of issue are scheduled to remain Outstanding) calculated only with respect to Bonds Outstanding after giving effect to the issuance of the Bonds then to be issued, in each case excluding Funded Bonds, and (ii) a statement to the effect that the amount set forth in (A) is at least equal to one hundred twenty–five percent (125%) of the amount set forth in (B);

(f) a written order as to the delivery of the Bonds, signed by an Authorized Officer of the Corporation, describing the Bonds to be delivered, designating the purchaser or purchasers to whom such Bonds are to be delivered and stating the consideration for such Bonds;

(g) a certificate of an Authorized Officer of the Corporation to the effect that no default under any Agreement to which it is a party will exist after issuance of the Bonds then to be issued;

(h) a certificate of an Authorized Officer of the City to the effect that it is not in default under any Agreement to which it is a party;

(i) a certificate of an officer of the NYC IDA to the effect that it is not in default under the IDA Assignment Agreement; and

(j) an opinion of Bond Counsel to the effect that, in the opinion of Bond Counsel, the Indenture and the applicable Supplemental Indenture authorizing the Series of Bonds have been duly and lawfully authorized, executed and delivered by the Corporation; that the Indenture and the applicable Supplemental Indenture are in full force and effect and are valid and binding upon the Corporation and enforceable in accordance with their terms; that the Indenture creates the valid pledge and the valid lien upon the Revenues which it purports to create, subject only to the provisions of the Indenture permitting the withdrawal, payment, setting apart or appropriation thereof for the purposes and on the terms and conditions set forth in the Indenture and each applicable Supplemental Indenture; and that the Corporation is duly authorized and entitled to issue such Series of Bonds and, upon the execution and delivery thereof and upon authentication by the Trustee, such Series of Bonds will be duly and validly issued and will constitute valid and binding special obligations of the Corporation entitled to the benefits of the Indenture; ***provided however***, that such opinion may be qualified to the extent that enforceability of rights and remedies may be limited by bankruptcy, insolvency, reorganization, moratorium or other laws affecting creditors' rights generally or as to the availability of any particular remedy.

(Indenture Section 2.02)

Refunding Bonds

A Series of Refunding Bonds may be authenticated and delivered pursuant to the Indenture only upon receipt by the Trustee of the documents required above under "Issuance of Bonds and Additional Bonds" and of:

(a) irrevocable instructions to the Trustee, satisfactory to it, to give due notice of redemption of all Bonds to be refunded that are to be redeemed prior to their respective maturity dates on the redemption date specified in such instructions;

(b) either (i) money in an amount sufficient to effect payment of the principal or Redemption Price of the Bonds to be refunded, together with accrued interest on such Bonds to their respective maturity or redemption dates, which money shall be held by the Trustee, in a separate account irrevocably in trust for and assigned to the respective Holders of the Bonds to be refunded, or (ii) Defeasance Securities in such principal amounts, of such maturities, bearing such interest and otherwise having such terms and qualifications as shall be necessary to comply with the defeasance provisions of the Indenture, and money required pursuant to said defeasance provisions, which Defeasance Securities and money shall be held in trust and used only as provided in the defeasance provisions of the Indenture; and

(c) a certificate of an Authorized Officer of the Corporation, together with supporting schedules, to the effect that the Maximum Annual Debt Service (for Fiscal Years during which Bonds Outstanding before the date of issue are scheduled to remain Outstanding) on all Bonds Outstanding (exclusive of Funded Bonds) after giving effect to the issuance of the Refunding Bonds is not greater than the Maximum Annual Debt Service on all Bonds (exclusive of Funded Bonds) immediately preceding issuance of the Refunding Bonds.

(Indenture Section 2.03)

Parity Reimbursement Obligations and Hedge Agreement Payments

In connection with a Series of Bonds, the Corporation may obtain or cause to be obtained one or more Credit Facilities, Liquidity Facilities or Hedge Agreements. In connection therewith the Corporation may enter into such agreements with the Provider of such Credit Facility or Liquidity Facility or the Counterparty to a Hedge Agreement providing for, *inter alia*: (i) the payment of fees and expenses to such Provider or Counterparty; (ii) the terms and conditions of such Credit Facility, Liquidity Facility or Hedge Agreement; (iii) the Series of Bonds to which it relates; and (iv) the security, if any, for the Corporation's obligations thereunder.

The Corporation may in an agreement with the Provider of such Credit Facility or Liquidity Facility or the Counterparty to a Hedge Agreement agree to directly reimburse the Provider for amounts paid by it pursuant to the Credit Facility or Liquidity Facility, together with interest thereon, or to make Hedge Agreement Payments to the Counterparty (collectively, the **"Reimbursement Obligation"**); ***provided, however***, that no Reimbursement Obligation under a Credit Facility or Liquidity Facility shall be created, for purposes of the Indenture, until amounts are paid under the Credit Facility or Liquidity Facility. Any obligation to reimburse the provider of a Credit Facility or Liquidity Facility or to make Hedge Agreement Payments may be a Parity Reimbursement Obligation secured by a pledge of and a lien on the Trust Estate on a parity with the lien created under the Indenture for the Bonds to which they relate, ***except*** that, in the case of a Hedge Agreement, only the obligation to make Hedge Agreement Payments, but not Termination Payments, may be secured by a lien on the Trust Estate that is on a parity with the lien created by the Indenture. A Parity Reimbursement Obligation shall be deemed to be a part of the Series of Bonds to which the Credit Facility, Liquidity Facility or Hedge Agreement which gave rise to such Parity Reimbursement Obligation relates.

(Indenture Section 2.05)

Additional Obligations

The Corporation reserves the right to issue bonds, notes or any other obligations or otherwise incur indebtedness pursuant to other and separate indentures or agreements of the Corporation, so long as the same is not, except as provided in the Indenture, entitled to a charge, lien or right prior or equal to the charge or lien in the Trust Estate created by the Indenture.

(Indenture Section 2.06)

Authorization of Redemption

Bonds subject to redemption prior to maturity pursuant to the Indenture or to a Supplemental Indenture shall be redeemable, in accordance with the Indenture, at such times, at such Redemption Prices and upon such terms as may otherwise be specified in the Indenture or in the Supplemental Indenture authorizing such Series.

(Indenture Section 4.01)

Redemption at the Election of the Corporation

In the case of any redemption of Bonds other than mandatorily as provided in the provisions of the Indenture described below under the heading "Redemption Other than at Corporation's Election" or as provided following a Payment Default as described below under the heading "Redemption Account", the Corporation shall give written notice to the Trustee of its election to redeem, of the Series and of the principal amounts of the Bonds of each maturity of such Series to be redeemed. Such notice shall be given not less than forty-five (45) days prior to the redemption date or such lesser number of days as the Trustee may approve. The Series, maturities and principal amounts thereof to be so redeemed shall be determined by the Corporation in its sole discretion, subject to any limitations with respect thereto contained in the Indenture or in the Supplemental Indenture authorizing such Series. The Corporation shall pay to the Trustee on or prior to the redemption date an amount which, in addition to other amounts available therefor held by the Trustee, is sufficient to redeem on the redemption date at the Redemption Price thereof, together with interest accrued and unpaid thereon to the redemption date, all of the Bonds to be so redeemed.

(Indenture Section 4.02)

Redemption Other Than at Corporation's Election

Whenever by the terms of the Bonds are required to be redeemed pursuant to the provisions of the Indenture described below under the heading "Redemption Account" or through the application of mandatory Sinking Fund Installments or otherwise as provided in the Supplemental Indenture authorizing such Bonds, the Trustee shall select the particular Bonds of the Series and maturities to be redeemed in the manner described below under the heading "Selection of Bonds to be Redeemed", give the notice of redemption and pay out of money available therefor the Redemption Price thereof in accordance with the terms of the Indenture.

(Indenture Section 4.03)

Selection of Bonds to be Redeemed

Unless otherwise provided in the Supplemental Indenture authorizing the issuance of Bonds of a Series, in the event of redemption of less than all of the Outstanding Bonds of like Series, maturity and tenor, the Trustee shall assign to each Outstanding Bond of the Series, maturity and tenor (exclusive of Funded Bonds) to be redeemed a distinctive number for each unit of the principal amount of such Bond equal to the lowest denomination in which the Bonds of such Series are authorized to be issued and shall select by lot, using such method of selection as it shall deem proper in its discretion, from the numbers assigned to such Bonds as many numbers as, at such unit amount equal to the lowest denomination in which the Bonds of such Series are authorized to be issued for each number, shall equal the principal amount of such Bonds to be redeemed. In making such selections the Trustee may draw the

Bonds by lot (i) individually or (ii) by one or more groups, the grouping for the purpose of such drawing to be by serial numbers (or, in the case of Bonds of a denomination of more than the lowest denomination in which the Bonds of such Series are authorized to be issued, by the numbers assigned thereto as provided in this heading) which end in the same digit or in the same two digits. In case, upon any drawing by groups, the total principal amount of Bonds drawn shall exceed the amount to be redeemed, the excess may be deducted from any group or groups so drawn in such manner as the Trustee may determine. The Trustee may in its discretion assign numbers to aliquot portions of Bonds and select part of any Bond for redemption. The Bonds to be redeemed shall be the Bonds to which were assigned numbers so selected; ***provided, however,*** that only so much of the principal amount of each such Bond of a denomination of more than the lowest denomination in which the Bonds of such Series are authorized to be issued shall be redeemed as shall equal the lowest denomination in which the Bonds of such Series are authorized to be issued for each number assigned to it and so selected.

For purposes of this heading, the lowest denomination in which a Capital Appreciation Bond is authorized to be issued shall be the lowest Accreted Value authorized to be due at maturity on such Bonds, and the lowest denomination in which a Deferred Income Bond is authorized to be issued shall be the lowest Appreciated Value on the Interest Commencement Date authorized for such Bonds.

(Indenture Section 4.04)

Notice of Redemption

Whenever Bonds are to be redeemed, the Trustee shall give notice of the redemption of the Bonds in the name of the Corporation which notice shall specify: (i) the Bonds to be redeemed which shall be identified by the designation of the Bonds given in accordance with the provisions of the Indenture described above under the heading “Authorization of Bonds”, the maturity dates and interest rates of the Bonds to be redeemed and the date such Bonds were issued; (ii) the numbers and other distinguishing marks of the Bonds to be redeemed, including CUSIP numbers; (iii) the redemption date; (iv) the Redemption Price; (v) with respect to each such Bond, the principal amount thereof to be redeemed; (vi) that, except in the case of Book Entry Bonds, such Bonds will be redeemed at the principal corporate trust office of the Trustee giving the address thereof and the telephone number of the Trustee to which inquiries may be directed; (vii) that no representation is made as to the correctness of the CUSIP number either as printed on the Bonds or as contained in such notice and that an error in a CUSIP number as printed on a Bond or as contained in such notice shall not affect the validity of the proceedings for redemption; and (viii) if the Corporation’s obligation to redeem the Bonds is subject to conditions, a statement to that effect and of the conditions to such redemption. Such notice shall further state that, if on such date all conditions to redemption have been satisfied, there shall become due and payable on such date upon each Bond to be redeemed the Redemption Price thereof, together with interest accrued and unpaid thereon to the redemption date, and that, from and after such date, payment having been made or provided for, interest thereon shall cease to accrue. Such notice shall be given by mailing a copy of such notice not less than thirty (30) days nor more than sixty (60) days prior to the redemption date or, in the case of Variable Interest Rate Bonds or Option Bonds, such shorter period as shall be established by the Supplemental Indenture authorizing such Bonds. Such notice shall be sent by first class mail, postage prepaid, to the registered owners of the Bonds which are to be redeemed, at their last known addresses, if any, appearing on the registration books not more than ten (10) Business Days prior to the date such notice is given. Upon giving such notice, the Trustee shall promptly certify to the Corporation that it has mailed or caused to be mailed such notice to the Holders of the Bonds to be redeemed in the manner provided in the Indenture. Such certificate shall be conclusive evidence that such notice was given in the manner required by the Indenture. The failure of any Holder of a Bond to be redeemed to receive such notice shall not affect the validity of the proceedings for the redemption of the Bonds.

(Indenture Section 4.05)

Payment of Redeemed Bonds

Notice having been given by mail in the manner provided in the Indenture, the Bonds or portions thereof so called for redemption shall become due and payable on the redemption date so designated at the Redemption Price, plus interest accrued and unpaid to the redemption date, except in the case of book-entry Bonds, upon presentation and surrender of such Bonds, at the office or offices specified in such notice, and, in the case of Bonds presented by other than the registered owner, together with a written instrument of transfer duly executed by the registered owner or his duly authorized attorney, such Bonds, or portions thereof, shall be paid at the Redemption Price plus interest accrued and unpaid to the redemption date. If, on the redemption date, money for the redemption of all Bonds or portions thereof of any like Series, maturity and tenor to be redeemed, together with interest accrued and unpaid thereon to the redemption date, shall be held by the Trustee so as to be available therefor on such date and if notice of redemption shall have been mailed as aforesaid, then, from and after the redemption date, interest on the Bonds or portions thereof so called for redemption shall cease to accrue and such Bonds shall no longer be considered to be Outstanding under the Indenture. If such money shall not be so available on the redemption date, such Bonds or portions thereof shall continue to bear interest until paid at the same rate as they would have borne had they not been called for redemption.

(Indenture Section 4.06)

Pledge of Trust Estate

The Corporation, to secure the payment of the principal and Redemption Price of and interest on the Bonds and performance and observance of all of the covenants and conditions contained in the Indenture or in the Bonds, has by the Granting Clause of the Indenture conveyed, granted, assigned, transferred, pledged, set over and confirmed and granted a security interest in and does convey, grant, assign, transfer, pledge, set over and confirm and grant a security interest in, unto the Trustee, its successor or successors and its or their assigns forever, with power of sale, the Trust Estate. The Bonds shall be special obligations of the Corporation payable solely from and secured by a pledge of, lien on, security interest in, and trust imposed upon the Trust Estate as provided in the Indenture.

(Indenture Section 5.01)

Establishment of Funds and Accounts

The following funds and separate accounts within funds are established by the Indenture and shall be held and maintained by the Trustee:

- Revenue Fund;

- Construction Fund, consisting of:

  Project Account;
  Costs of Issuance Account;
  Capitalized Interest Account; and
  HYDC Expense Account;

- Debt Service Fund, consisting of:

  Debt Service Account;
  Supported Bond Interest Subaccount;
  Redemption Account;

- Corporation Expense Fund; and

- Surplus Fund.

All money at any time deposited in any fund, account or subaccount created and pledged by the Indenture or by any Supplemental Indenture or required thereby to be created shall be held in trust for the benefit of the Holders of Bonds, but shall nevertheless be disbursed, allocated and applied solely for the uses and purposes provided in the Indenture; ***provided, however,*** that the money derived from the remarketing of Option Bonds tendered or deemed to have been tendered for purchase or redemption in accordance with the Supplemental

Indenture authorizing the issuance of such Bonds or derived from a Liquidity Facility or a Credit Facility relating to such Bonds, and any fund or account established by or pursuant to such Supplemental Indenture for the payment of the purchase price or Redemption Price of Option Bonds so tendered or deemed to have been tendered, shall not be held in trust for the benefit of the Holders of Bonds other than the Holders of such Option Bonds, and such money and each such fund and account are pledged by the Indenture for the payment of the purchase price or Redemption Price of such Option Bonds.

(Indenture Section 5.02)

Application of Bond Proceeds

Upon the receipt of proceeds from the sale of a Series of Bonds, the Corporation shall apply such proceeds as specified in the Indenture and in the Supplemental Indenture authorizing such Series.

Unless otherwise specified in the Supplemental Indenture authorizing the issuance of a Series of Bonds, the accrued interest, if any, received upon the delivery of such Series shall be deposited in the Debt Service Account of the Debt Service Fund.

(Indenture Section 5.03)

Construction Fund

(a) The Construction Fund may contain one or more other accounts and subaccounts as the Corporation may deem proper. There shall be established a separate account within the Capitalized Interest Account for each Series of Bonds for which proceeds are to be set aside for payment of Capitalized Interest thereon. As soon as practicable after the delivery of each Series of Bonds, there shall be deposited into each account and subaccount within the Construction Fund the amount required to be deposited therein pursuant to the Supplemental Indenture authorizing such Series, except that Project Costs consisting of the purchase price for the TDRs payable pursuant to the MTA Agreement shall be paid in accordance with the direction of the Corporation directly to the person entitled thereto.

(b) Except as provided in paragraph (d) of this heading, payments from the Project Account or the Costs of Issuance Account shall be made by the Trustee in accordance with a Project Cost Requisition. Money in a subaccount within the Capitalized Interest Account shall, on the fourth Business Day next preceding an Interest Payment Date for the Bonds for which such subaccount has been established, be transferred by the Trustee to the Debt Service Account of the Debt Service Fund, in such amounts as may be required to pay when due the interest on such Bonds payable on such Interest Payment Date. Money in the HYDC Expense Account shall be paid by the Trustee to HYDC in accordance with the direction of the Corporation given or confirmed in writing.

(c) The income or interest earned on investments of money in the Construction Fund shall be held in the Construction Fund and applied in accordance with the provisions of the Indenture as described in this section.

(d) Money, if any, remaining (i) in the Costs of Issuance Account after all Costs of Issuance have been paid or provision has been made for their payment in accordance with the written direction of an Authorized Officer of the Corporation or (ii) in the Project Account, after Substantial Completion of a Project for which such subaccount has been established and provision in accordance with the direction of an Authorized Officer of the Corporation for the payment of any Project Costs then unpaid and for the payment of claims and the discharge of or security for liens arising out of construction of such Project, at the written direction of an Authorized Officer of the Corporation, may be applied:

Unless a Payment Default has occurred:

(i) to the Project Costs of any other project;

(ii) to the purchase or redemption of Outstanding Bonds;

(iii) to make provision for payment of Outstanding Bonds in accordance with the provisions of the Indenture described below under the heading "Defeasance"; or

(iv) as otherwise be set forth in such direction provided that prior to such application the Corporation shall have caused an Opinion of Bond Counsel to be delivered to the Trustee.

Notwithstanding any other provision of this heading, if a Payment Default has occurred, the money in each account and subaccount of the Construction Fund shall be transferred to the Redemption Account for application in accordance with the provisions of the Indenture described below under the heading "Redemption Account".

(Indenture Section 5.04)

Application of Revenues

All Revenues (other than Interest Support Payments made in connection with Outstanding Bonds, which shall be deposited as hereinafter provided in this Section) upon receipt shall be deposited in the Revenue Fund and immediately thereafter applied as provided in the Indenture:

Application Prior to a Payment Default. All Revenues (other than Interest Support Payments that are to be deposited as described below under "Application of Interest Support Payments") received during a Fiscal Year shall, if no Payment Default has occurred, be applied by the Trustee in the following order of priority:

First: To the Corporation Expense Fund, the amount required to make the amount deposited therein during such Fiscal Year equal to the amount of Corporation Expenses certified by the Corporation for such Fiscal Year;

Second: To the Debt Service Account of the Debt Service Fund, the amount required (i) to pay the Debt Service remaining to be paid during the then current Fiscal Year on Outstanding Bonds, (ii) to pay Hedge Agreement Payments and principal of and interest on any Parity Reimbursement Obligations as the same is due and payable during such Fiscal Year, and (iii) to maintain in the Debt Service Account the Future Year Debt Service Requirement; and

Third: To the Surplus Fund, the balance of such Revenues.

Application of Interest Support Payments. Interest Support Payments, up to the lesser of the interest payable on Outstanding Supported Bonds (other than Funded Bonds) on the next succeeding Interest Payment Date and the Debt Service Deficiency on the day of such deposit, shall be deposited in the Supported Bond Interest Subaccount of the Debt Service Account. The balance of such Interest Support Payments, if any, shall be deposited directly in the Debt Service Account up to the amount sufficient, together with the other money then therein, to pay the Debt Service payable on Outstanding Bonds (other than Funded Bonds) on the next succeeding Interest Payment Date.

On and After a Payment Default. The Revenues received on and after a Payment Default shall be applied by the Trustee in the following order of priority:

First: Interest Support Payments received by the Trustee shall, up to the amount of interest coming due during the then current Fiscal Year on Outstanding Bonds that are Supported Bonds, be deposited in the Supported Bond Interest Subaccount;

Second: To the Corporation Expense Fund, the amount required to make the amount deposited therein during such Fiscal Year equal to the Corporation Expenses for such Fiscal Year; and

Third: To the Redemption Account, the balance of such Revenues.

(Indenture Section 5.05)

Debt Service Fund

(a) The Trustee shall make the payments from each account of the Debt Service Fund as set forth below.

(i) **Debt Service Account.** Except as otherwise provided under the heading "Redemption Account" described below, the Trustee shall pay from the Debt Service Account the following amounts and in the following order of priority:

First, the principal and Sinking Fund Installments of all Outstanding Bonds (other than Funded Bonds) and the principal or any Parity Reimbursement Obligations related to Bonds, in each case as the same is due and payable;

Second, the interest on Outstanding Supported Bonds (exclusive of Funded Bonds), including from money on deposit in the Supported Bond Interest Subaccount; and

Third, the interest on Outstanding Bonds (other than Supported Bonds and Funded Bonds), the interest on Parity Reimbursement Obligations and Hedge Agreement Payments, *pro rata,* as the same become due and payable.

For purposes of subparagraph (i) above a Funded Bond shall not be considered to be an Outstanding Bond so long as it remains a Funded Bond.

(ii) Money in the Debt Service Account, other than in the Supported Bond Interest Subaccount, shall, upon a Payment Default, be transferred to the Redemption Account and applied in accordance with the provisions of the Indenture described below under the heading "Redemption Account".

(b) If at any time the amount on deposit in the Debt Service Account exceeds the sum of the Debt Service, Hedge Agreement Payments and interest on Parity Reimbursement Obligations remaining to be paid therefrom during the then current Fiscal Year plus the Future Year Debt Service Requirement payable in the next succeeding Fiscal Year, such excess may, at the direction of the Corporation, be withdrawn therefrom and deposited to the Surplus Fund.

(c) Notwithstanding the provisions of this Section, the Corporation may, at any time subsequent to the first day of any Fiscal Year, but in no event less than forty–five (45) days prior to the succeeding date on which a Sinking Fund Installment is scheduled to be due on Outstanding Bonds, direct the Trustee to purchase, with money on deposit in the Debt Service Account, as applicable, at a price not in excess of par plus interest accrued and unpaid to the date of such purchase, Bonds to be redeemed from such Sinking Fund Installment payable from such account; provided, however, that no money in the Debt Service Account shall be so applied unless after such purchase the amount in such account is at least equal to the principal and Sinking Fund Installments of and interest due and to become due on Outstanding Bonds payable from such account during the then current Fiscal Year. Any Bond so purchased or otherwise purchased and delivered to the Trustee shall be cancelled upon receipt thereof by the Trustee and evidence of such cancellation shall be given to the Corporation. The principal amount of each Bond so cancelled shall be credited against the applicable Sinking Fund Installment due on such date.

(d) Redemption Account. The Trustee shall pay from the Redemption Account the Redemption Price of all Outstanding Bonds (other than Funded Bonds) redeemed pursuant to the provisions of the Indenture described below under the heading "Redemption Account".

(Indenture Section 5.06)

Redemption Account

Subsequent to the occurrence of a Payment Default, money in each fund, account or subaccount established pursuant to the Indenture, other than the Supported Bond Interest Subaccount, shall be transferred to the Redemption Account and the money in the Redemption Account shall be applied in the following order of priority:

(i) First, to the payment to the registered owners of the Outstanding Bonds, interest on all arrears in payment of the principal of or interest on Outstanding Bonds at the respective rates of interest specified in such Bond, *pro rata* based upon the amount of principal and interest payable to each such registered owner;

(ii) Second, on each Interest Payment Date, to the interest due and past due on such Interest Payment Date on all Outstanding Bonds (including interest on Supported Bonds not paid from money in the Supported Bond Interest Subaccount), *pro rata* based upon the amount of interest payable to each person entitled thereto; and

(iii) Third, to redeem Outstanding Bonds on February 15th of each Fiscal Year, at a Redemption Price equal to one hundred percent (100%) of the principal amount of the Bonds to be redeemed, *pro rata* based upon the principal amount of each Outstanding Bonds.

Unless otherwise provided in the Supplemental Indenture authorizing the issuance of Bonds of a Series, the particular Bonds of each Series and maturity to be so redeemed pursuant to this heading shall be selected, by lot, in accordance with the provisions of the Indenture described above under the heading "Selection of Bonds to be Redeemed".

For purposes of this section, a Funded Bond shall not be considered to be an Outstanding Bond so long as it remains a Funded Bond.

(Indenture Section 5.07)

Corporation Expense Fund

Money in the Corporation Expense Fund shall be used only for the payment of Corporation Expenses and shall be withdrawn by the Corporation at such times and in such amounts as the Corporation considers necessary to make such payments, including withdrawals of amounts for deposit to one or more accounts of the Corporation established for the convenience of the Corporation in effecting payment of Corporation Expenses.

Money in the Corporation Expense Fund on June 30th of a Fiscal Year shall, after provision for payment of any Corporation Expenses for such Fiscal Year due but then unpaid, may be withdrawn by the Trustee at the written direction of the Corporation and deposited to any one or more of the funds or accounts under the Indenture in the respective amounts set forth in such direction.

(Indenture Section 5.08)

Surplus Fund

Money in the Surplus Fund may be applied, free and clear of any lien or trust thereon, for any corporate purpose of the Corporation, including, but not limited to, payments to the City; ***provided, however,*** that prior to any such application the money in the Surplus Fund shall be applied to the payment of any Termination Payments then payable. Such payment shall be made by the Trustee at the times and in the amounts set forth in the written direction of the Corporation.

Notwithstanding the foregoing, subsequent to the occurrence of a Payment Default, money in the Surplus Fund shall be transferred to the Redemption Account and applied in accordance with the provisions of the Indenture described above under the heading "Redemption Account".

(Indenture Section 5.09)

Application of Money in Certain Funds for Retirement of Bonds

Notwithstanding any other provisions of the Indenture, if at any time the amounts held in the Debt Service Account of the Debt Service Fund are sufficient to pay the principal or Redemption Price of all Outstanding Bonds and the interest accrued and unpaid and to accrue on such Bonds (other than Funded Bonds) to the next date of redemption when all such Bonds are redeemable, or to make provision pursuant to the provisions of the Indenture described below under subparagraph (b) of the heading "Defeasance" for the payment of such Bonds at the maturity or redemption dates thereof, then, in each such case the Corporation may

(i) direct the Trustee to redeem such Bonds, whereupon the Trustee shall proceed to redeem or provide for the redemption of such Outstanding Bonds in the manner provided for redemption of such Bonds by the Indenture and by each Supplemental Indenture as provided in Article IV of the Indenture, or

(ii) give the Trustee irrevocable instructions in accordance with the provisions of the Indenture described below under subparagraph (b) of the heading "Defeasance" and make provision for the payment of such Bonds at the maturity or redemption dates thereof in accordance therewith.

(Indenture Section 5.10)

Transfer of Investments

Whenever money in any fund or account established under the Indenture is to be paid in accordance with the Indenture to another such fund or account, such payment may be made, in whole or in part, by transferring to such other fund or account investments held as part of the fund or account from which such payment is to be made, whose value, together with the money, if any, to be transferred, is at least equal to the amount of the payment then to be made; ***provided, however,*** that no such transfer of investments would result in a violation of any investment standard or guideline applicable to such fund.

(Indenture Section 5.11)

Investment of Funds and Accounts Held by the Trustee

Money held under the Indenture, if permitted by law, shall, as nearly as may be practicable, be invested by the Trustee in any Eligible Investments in accordance with the direction of an Authorized Officer of the Corporation given in writing, which direction shall specify the particular investment to be made. Each investment shall permit the money so deposited or invested to be available for use at the times at, and in the amounts in, which the Corporation reasonably believes such money will be required for the purposes of the Indenture. In computing the amount in any fund or account held by the Trustee under the Indenture, obligations purchased as an investment of money therein or held therein shall be valued at the market value thereof, plus accrued interest to the date of valuation.

(Indenture Section 6.01)

Payment of Principal and Interest

The Corporation shall pay or cause to be paid every Bond, including interest thereon, on the dates and at the places and in the manner provided in the Bonds according to the true intent and meaning thereof.

(Indenture Section 7.01)

Corporate Existence

The Corporation shall maintain its existence as a local development corporation under the New York Not-for-Profit Corporation Law and shall not amend its certificate of incorporation in any manner that would have the effect of expanding its corporate purposes or restricting the corporate action for which the affirmative vote of an independent director is required. The Corporation may amend its certificate of incorporation to expand its corporate purposes to act in the public interest through the financing of, and other assistance relating to, development and redevelopment activities outside of the Project Area, but within the geographic boundaries of the City, through the issuance of its bonds, notes, debentures or other evidences of indebtedness, provided that the bonds, notes, debentures or other evidences of indebtedness issued for any such capital improvements are not payable from or secured by the Revenues, Pledged Funds or any other assets of the Corporation constituting any part of the Trust Estate and that the holders of such bonds, notes, debentures or other evidences of indebtedness have no right or interest in or to the Revenues, Pledged Funds or other assets constituting a part of the Trust Estate.

(Indenture Section 7.05)

Accounts and Audits

The Corporation shall keep proper books of records and accounts (separate from all other records and accounts), which may be kept on behalf of the Corporation by the Trustee, in which complete and correct entries shall be made of its transactions relating to each Series of Bonds, which books and accounts, at reasonable hours and subject to the reasonable rules and regulations of the Corporation, shall be subject to the inspection of the Trustee, each Provider or of any Holder of a Bond or a representative of any of the foregoing duly authorized in writing. The Corporation shall cause such books and accounts to be audited annually after the end of its fiscal year by an independent certified public accounting firm selected by the Corporation. Annually within thirty (30) days after receipt by the Corporation of the report of such audit, a signed copy of such report shall be furnished to the Trustee, to each Provider and to the City. A copy of the most recently audited financial statements of the Corporation, together with a copy of the accountant's report thereon, shall, upon receipt of a written request therefor, and payment of any reasonable fee or charge made in connection therewith, be furnished to the registered owner of a Bond or any beneficial owner of a Book Entry Bond requesting the same.

(Indenture Section 7.06)

Creation of Liens

Except as permitted by the Indenture, the Corporation shall not create or cause to be created any lien or charge prior or equal to that of the Bonds on the Trust Estate; ***provided, however,*** that nothing contained in the Indenture shall prevent the Corporation from issuing bonds, notes or other obligations or otherwise incurring indebtedness so long as the charge or lien on the Trust Estate created to secure the same is not prior or equal to the charge or lien on the Trust Estate created by the Indenture.

(Indenture Section 7.07)

Notice of Default; Enforcement of Agreements

The Corporation as soon as practicable shall give written notice to the Trustee and to each Provider of the occurrence of a default under any of the Agreements. The Corporation, prior to the occurrence of a Payment Default, may and, at the direction of the Holders of a majority in principal amount of the Outstanding Bonds, shall take all legally available action to cause each party to an Agreement to perform fully its obligation thereunder in the manner and at the times provided in such Agreement.

(Indenture Section 7.08)

Offices for Payment and Registration of Bonds

The Corporation shall at all times maintain an office or agency in the State where Bonds may be presented for payment, which office or agency may be at or through the principal corporate trust office of the Trustee. The Corporation shall at all times maintain an office or agency in the State where Bonds may be presented for registration, transfer or exchange and the Trustee is appointed as its agent to maintain such office or agency for the registration, transfer or exchange of Bonds. The provisions of this heading shall be subject to the provisions of the Indenture.

(Indenture Section 7.10)

Amendment of Agreements

(a) Except as otherwise provided in the Indenture, an Agreement may not be amended, changed, modified or terminated, nor shall the Corporation consent or acquiesce in any amendment, change, modification or termination of an Agreement, nor may any provision thereof be waived by the Corporation, without the consent of the Holders of Outstanding Bonds as provided in the Indenture, if such amendment, change, modification, termination or waiver (i) reduces the amount payable on any date or delays the date on which such payment is to be made, (ii) waives or surrenders any right of the Corporation or its assignor, (iii) modifies the events which constitute events of default under such Agreement or diminishes, limits or conditions the rights of the Corporation or its assignor under, or remedies which upon the occurrence of a default may be exercised by, the Corporation or its assignor under such Agreement, or (iv) adversely affects the Holders of Outstanding Bonds in any material respect.

No such amendment, change, modification, termination or waiver shall take effect unless consented to in writing by (a) the Holders of at least a majority in principal amount of the Bonds then Outstanding, or (b) in case less than all of the several Series of Bonds then Outstanding are affected by the amendment, change, modification, termination or waiver, the Holders of not less than a majority in principal amount of the Bonds of the Series so affected and then Outstanding; ***provided, however,*** (i) Funded Bonds shall not be deemed to be Outstanding for purposes of any calculation of Outstanding Bonds under this heading and (ii) if such amendment, change, modification, termination or waiver will, by its terms, not take effect so long as any Bonds of any specified Series and maturity remain Outstanding, the consent of the Holders of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds under this heading.

(b) An Agreement may be amended, changed or modified or any provision thereof waived in any other respect without the consent of the Holders of Outstanding Bonds if such amendment, change or modification is in accordance with such Agreement or the same does not adversely affect the Holders of such Bonds in any material respect, except that no amendment, change, modification or alteration of an Agreement to cure any ambiguity or defect or inconsistent provision therein or to insert such provisions clarifying matters or questions arising thereunder as are necessary or shall be made unless such amendment, change, modification or waiver is not contrary to or inconsistent with the Agreement as theretofore in effect and unless consented to by the Trustee.

(c) No amendment, change, modification or termination of an Agreement or waiver of a provision thereof shall be made other than pursuant to a written instrument signed by the parties thereto. No such amendment, change, modification or waiver shall become effective unless there has been delivered to the Trustee an opinion of Bond Counsel to the effect that the same will not adversely affect the exclusion of interest on any Tax Exempt Bond from gross income for purposes of federal income taxation. A copy of each such amendment, change, modification, termination or waiver shall be filed with the Trustee.

(d) For the purposes of this heading, the purchasers of the Bonds of a Series, whether purchasing as underwriters upon their initial issuance, for resale upon a remarketing or reoffering of such Bonds, or otherwise, upon such purchase may consent to an amendment, change, modification, termination or waiver permitted by this heading with the same effect as a consent given by the Holder of such Bonds.

For the purposes of this heading, a Series shall be deemed to be adversely affected by an amendment, change, modification, alteration or waiver of any provision of an Agreement if the same adversely affects or diminishes the rights of the Holders of the Bonds of such Series in any material respect. The Trustee may in its discretion determine whether or not, in accordance with the foregoing provisions, Bonds of any particular Series would be adversely affected in any material respect by any amendment, change, modification, alteration or waiver, and any such determination shall be binding and conclusive on the Corporation and all Holders of Bonds.

For the purposes of this heading, the Trustee shall be entitled conclusively to rely upon an opinion of counsel, which counsel shall be satisfactory to the Trustee, with respect to whether any amendment, change, modification, alteration or waiver adversely affects the interests of any Holders of Bonds then Outstanding in any material respect.

(Indenture Section 7.11)

Amendment of UTEP

(a) Except as otherwise provided in the Indenture, the Corporation shall not consent to or acquiesce in any amendment to the UTEP–Hudson Yards or deviation therefrom pursuant to the IDA Assignment Agreement unless either (1) the Corporation delivers to the Trustee its written certification to the effect that in the reasonable judgment of the Corporation such amendment will facilitate the further commercial development of the Project Area or (2) such amendment is consented to in writing by (A) the Holders of at least a majority in principal amount of the Bonds then Outstanding, or (B) in case less than all of the several Series of Bonds then Outstanding are adversely affected by the amendment, change, modification, termination or waiver, the Holders of not less than a majority in principal amount of the Bonds of the Series so affected and then Outstanding; ***provided, however,*** that (i) Funded Bonds shall not be deemed to be Outstanding for purposes of any calculation of Outstanding Bonds under this heading and (ii) if such amendment, change, modification, termination or waiver will, by its terms, not take effect so long as any Bonds of any specified Series and maturity remain Outstanding, the consent of the Holders of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds under this heading.

(b) For the purposes of this heading, the purchasers of the Bonds of a Series, whether purchasing as underwriters upon their initial issuance, for resale upon a remarketing or reoffering of such Bonds, or otherwise, upon such purchase may consent to an amendment, change, modification, termination or waiver permitted by this heading with the same effect as a consent given by the Holder of such Bonds.

For the purposes of this heading, a Series shall be deemed to be adversely affected by an amendment of the UTEP–Hudson Yards or a deviation therefrom, if the same adversely affects or diminishes the rights of the Holders of the Bonds of such Series in any material respect. The Trustee may in its discretion determine whether or not, in accordance with the foregoing provisions, Bonds of any particular Series would be adversely affected in any material respect by any amendment or deviation and any such determination shall be binding and conclusive on the Corporation and all Holders of Bond.

For the purposes of this heading, the Trustee shall be entitled conclusively to rely upon an opinion of counsel, which counsel shall be satisfactory to the Trustee, with respect to whether any amendment, change, modification, alteration or waiver adversely affects the interests of any Holders of Bonds then Outstanding in any material respect.

(Indenture Section 7.12)

Certificate of the Corporation as to Expenses

At least sixty (60) days prior to the beginning of each Fiscal Year, the Corporation shall prepare a certificate stating the expected Corporation Expenses for such Fiscal Year. Such certificate shall set forth the Corporation Expenses projected to be payable during such Fiscal Year and during each month thereof. The certificate may be amended by the Corporation from time to time during the Fiscal Year. A copy of such certificate and any amendment thereto shall be promptly filed with the Trustee.

(Indenture Section 7.13)

Notice Regarding Interest Support Payments

The Corporation shall give each Fiscal Year, in accordance with Section 4.02 of the Support Agreement, not later than at the times specified in the Support Agreement (i) a Net Interest Obligation Notice, as such term is defined in the Support Agreement, and (ii) an Interest Deficiency Notice, each of which may be amended or modified as permitted by the Support Agreement.

(Indenture Section 7.14)

Payment of Lawful Charges

The Corporation shall pay or take all legally available action to cause the City to pay all taxes and assessments or other municipal or governmental charges, if any, lawfully levied or assessed upon the Trust Estate, when the same shall become due.

(Indenture Section 7.16)

Assignment of PILOT Agreements and PILOT Mortgages

The Corporation has collaterally assigned or caused to be so assigned to the Trustee each of the PILOT Agreements and related PILOT Mortgages existing on the date of issuance of the latest series of Bonds issued under the Indenture, as more particularly identified in ***Schedule I*** to the Indenture, and recorded each such assignment or caused the same to be recorded in the land records of New York County, New York. Further, as soon as practicable after a PILOT Agreement and related PILOT Mortgage is entered into and assigned to the Corporation after the date of the Indenture, the Corporation shall, either by a separate instrument or a joint instrument of assignment, collaterally assign or cause to be so assigned to the Trustee each such PILOT Agreement and related PILOT Mortgage, and cause the same to be recorded in the land records of New York County, New York.

(Indenture Section 7.17)

Limitations on Supported Bonds

The Corporation shall not issue any Bond that is a Supported Bond in excess of the amount then authorized by appropriate resolution of the City Council, other than any Refunding Bond issued to pay or provide for the payment of Supported Bonds, and unless the Support Agreement then obligates the City to make Interest Support Payments with respect to the principal amount of all Supported Bonds that will be Outstanding after giving effect to the issuance of such Supported Bond.

(Indenture Section 7.18)

Extension of PILOT Agreements

The Corporation shall, so long as Bonds remain Outstanding, request the NYC IDA to exercise any right to extend the term of each PILOT Agreement the NYC IDA may have under one or more PILOT Agreements between it and another party.

(Indenture Section 7.19)

MTA PILOT Payments

The Corporation shall not, so long as Bonds are Outstanding, consent to the payment of any PILOT Payments under the MTA Agreement to any person other than the Corporation.

(Indenture Section 7.20)

City's Failure to Appropriate

The Corporation shall give notice to the Trustee of a failure (i) by the Mayor to include in the expense budget submitted by the Mayor to the City Council in each fiscal year, the amount required by Section 4.06 of the Support Agreement to be included therein for the payment of Tax Equivalency Payments and Interest Support Payments to be made by the City during the City's next ensuing fiscal year, (ii) by the City duly to appropriate in its budget for a fiscal year upon its initial adoption an amount sufficient to pay the amount set forth by the Corporation in its "Net Interest Obligation Notice," as such term is defined in the Support Agreement, or duly to enact an increase in the appropriation in such budget within sixty (60) days after the Corporation submits an amendment to said Net Interest Obligation Notice increasing the amount set forth therein or (iii) by the City duly to appropriate in its budget for a fiscal year the amount the Mayor is required by Section 4.06 of the Support Agreement to include therein for payment of Tax Equivalency Payments to be made during such Fiscal Year. Such notice shall be given to the Trustee as soon as practicable after the Corporation obtains knowledge of any such failure.

(Indenture Section 7.21)

Future Year Debt Service Requirement

Not more than 30 days prior to the end, but not later than June 30th, of each Fiscal Year, the Corporation shall determine the Future Year Debt Service Requirement, and certify the same to the Trustee, which certification shall set forth the calculations on which such determination was made. The Corporation at any time and from time to time during the Fiscal Year next succeeding such certification shall amend such determination and recertify to the Trustee the Future Year Debt Service Requirement.

(Indenture Section 7.22)

Modification and Amendment of the Indenture without Consent

The Corporation may execute and deliver at any time or from time to time Supplemental Indentures for any one or more of the following purposes, and any such Supplemental Indenture shall become effective in accordance with its terms:

(a) to provide for the issuance of a Series of Bonds pursuant to the provisions of the Indenture and to prescribe the terms and conditions pursuant to which such Bonds may be issued, paid or redeemed;

(b) to add additional covenants and agreements of the Corporation for the purpose of further securing the payment of the Bonds, provided such additional covenants and agreements are not contrary to or inconsistent with the covenants and agreements of the Corporation contained in the Indenture;

(c) to prescribe further limitations and restrictions upon the issuance of Bonds and the incurring of indebtedness by the Corporation which are not contrary to or inconsistent with the limitations and restrictions thereon theretofore in effect;

(d) to surrender any right, power or privilege reserved to or conferred upon the Corporation by the terms of the Indenture, provided that the surrender of such right, power or privilege is not contrary to or inconsistent with the covenants and agreements of the Corporation contained in the Indenture;

(e) to confirm, as further assurance, any pledge under the Indenture, and the subjection to any lien, claim or pledge created or to be created by the provisions of the Indenture, of the Revenues, or any pledge of any other money, investments thereof or funds;

(f) to modify any of the provisions of the Indenture or of any previously adopted Supplemental Indenture in any other respects, provided that such modifications shall not be effective until after all Bonds of any Series of Bonds Outstanding as of the effective date of such Supplemental Indenture shall cease to be Outstanding, and all Bonds issued under such Indenture shall contain a specific reference to the modifications contained in such subsequent Supplemental Indenture; or

(g) with the consent of the Trustee, to cure any ambiguity or defect or inconsistent provision in the Indenture or to insert such provisions, clarifying matters or questions arising under the Indenture as are necessary or desirable, ***provided*** that any such modifications are not contrary to or inconsistent with the Indenture as theretofore in effect, or to modify any of the provisions of the Indenture or of any previous Supplemental Indenture in any other respect, provided that such modification shall not adversely affect the interests of the Bondholders in any material respect.

(Indenture Section 9.01)

Supplemental Indentures Effective with Consent of Bondholders

The provisions of the Indenture may also be modified or amended at any time or from time to time by a Supplemental Indenture, subject to the consent of the Bondholders in accordance with the provisions of the Indenture, such Supplemental Indenture to become effective upon the filing with the Trustee of a copy thereof certified by an Authorized Officer of the Corporation.

(Indenture Section 9.02)

General Provisions Relating to Supplemental Indentures

The Indenture shall not be modified or amended in any respect except in accordance with and subject to the provisions of the Indenture. Nothing contained in the Indenture shall affect or limit the rights or obligations of the Corporation to make, do, execute or deliver any Supplemental Indenture, act or other instrument pursuant to the provisions of the Indenture or the right or obligation of the Corporation to execute and deliver to the Trustee any instrument provided or permitted in the Indenture to be delivered to the Trustee.

A copy of every Supplemental Indenture, when filed with the Trustee, shall be accompanied by an opinion of Bond Counsel stating that such Supplemental Indenture has been duly and lawfully adopted in accordance with the provisions of the Indenture, is authorized or permitted by the Indenture and is valid and binding upon the Corporation and enforceable in accordance with its terms.

The Trustee is authorized to accept delivery of a certified copy of any Supplemental Indenture permitted or authorized pursuant to the provisions of the Indenture and to make all further agreements and stipulations which may be contained therein, and, in taking such action, the Trustee shall be fully protected in relying on the opinion of Bond Counsel that such Supplemental Indenture is authorized or permitted by the provisions of the Indenture.

No Supplemental Indenture changing, amending or modifying any of the rights or obligations of the Trustee shall become effective without the written consent of the Trustee.

The Corporation, as soon as practicable after a Supplemental Indenture changing, amending or modifying any provisions of the Indenture has become effective, shall give written notice thereof to each Rating Service.

(Indenture Section 9.03)

Powers of Amendment of the Indenture

Any modification or amendment of the Indenture and of the rights and obligations of the Corporation and of the Holders of the Bonds under the Indenture, in any particular, may be made by a Supplemental Indenture, with the written consent given as provided in the provisions of the Indenture described below under the heading

"Consent of Bondholders", (i) of the Holders of at least a majority in principal amount of the Bonds Outstanding at the time such consent is given, or (ii) in case less than all of the several Series of Bonds then Outstanding are affected by the modification or amendment, of the Holders of at least a majority in principal amount of the Bonds of each Series so affected and Outstanding at the time such consent is given, exclusive of Funded Bonds; ***provided, however,*** that if such modification or amendment will, by its terms, not take effect so long as any Bonds of any specified like Series, maturity and tenor remain Outstanding, the consent of the Holders of such Bonds shall not be required and such Bonds shall not be deemed to be Outstanding for the purpose of any calculation of Outstanding Bonds under this heading. No such modification or amendment shall permit a change in the amount or date of any Sinking Fund Installment, the terms of redemption or maturity of the principal of any Outstanding Bond or of any installment of interest thereon or a reduction in the principal amount or the Redemption Price thereof or in the rate of interest thereon without the consent of the Holder of such Bond, or shall reduce the percentages or otherwise affect the classes of Bonds the consent of the Holders of which is required to effect any such modification or amendment. For the purposes of this heading, a Series of Bonds shall be deemed to be affected by a modification or amendment of the Indenture if the same adversely affects or diminishes the rights of the Holders of the Bonds of such Series in any material respect. The Trustee may in its discretion determine whether or not, in accordance with the foregoing provisions, the Bonds of any particular Series or maturity would be affected by any modification or amendment of the Indenture and any such determination shall be binding and conclusive on the Corporation and all Holders of Bonds.

(Indenture Section 10.01)

Consent of Bondholders

The Corporation may at any time execute and deliver a Supplemental Indenture making a modification or amendment permitted by the provisions of the Indenture described above under the heading "Powers of Amendment of the Indenture" to take effect when and as provided in this heading. A copy of such Supplemental Indenture (or brief summary thereof or reference thereto in form approved by the Trustee) together with a request to the Bondholders for their consent thereto in form satisfactory to the Trustee, shall promptly after execution and delivery thereof be mailed by the Corporation to the Bondholders (but failure to mail such copy and request to any particular Bondholder shall not affect the validity of the Supplemental Indenture when consented to as provided in this heading). Such Supplemental Indenture shall not be effective unless and until (i) there shall have been filed with the Trustee (a) the written consent of the Holders of the percentages of Outstanding Bonds specified in the provisions of the Indenture described above under the heading "Powers of Amendment of the Indenture" and (b) an opinion of Bond Counsel stating that such Supplemental Indenture has been duly and lawfully executed, delivered and filed by the Corporation in accordance with the provisions of the Indenture, is authorized or permitted by the Indenture, and is valid and binding upon the Corporation and enforceable in accordance with its terms, and (ii) a notice shall have been mailed as described in this heading. Each such consent shall be effective only if accompanied by proof of the holding or owning at the date of such consent, of the Bonds with respect to which such consent is given, which proof shall be such as is permitted by the Indenture. A certificate or certificates by the Trustee filed with the Trustee that it has examined such proof and that such proof is sufficient in accordance with the Indenture shall be conclusive proof that the consents have been given by the Holders of the Bonds described in the certificate or certificates of the Trustee. Any consent given by a Bondholder shall be binding upon the Bondholder giving such consent and, anything in the Indenture to the contrary notwithstanding, upon any subsequent Holder of such Bond and of any Bonds issued in exchange therefor (whether or not such subsequent Holder thereof has notice thereof), unless such consent is revoked in writing by the Bondholder giving such consent or a subsequent Holder thereof by filing such revocation with the Trustee, prior to the time when the written statement of the Trustee as described in this heading is filed. The fact that a consent has not been revoked may likewise be proved by a certificate of the Trustee filed with the Trustee to the effect that no revocation thereof is on file with the Trustee. At any time after the Holders of the required percentages of Bonds shall have filed their consents to the Supplemental Indenture, the Trustee shall make and file with the Corporation and the Trustee a written statement that such Holders of such required percentages of Bonds have filed such consents. Such written statement shall be conclusive that such consents have been so filed. At any time thereafter notice, stating in substance that the Supplemental Indenture (which may be referred to as a Supplemental Indenture adopted by the Corporation on a stated date, a copy of which is on file with the Trustee) has been consented to by the Holders of the required percentages of Bonds and will be effective as provided in this heading, shall be given to the Bondholders by the Corporation by mailing such notice to the Bondholders. The Corporation shall file with the

Trustee proof of the mailing of such notice. A transcript, consisting of the papers required or permitted by this heading to be filed with the Trustee, shall be proof of the matters therein stated. Such Supplemental Indenture making such amendment or modification shall be deemed conclusively binding upon the Corporation, the Trustee, and the Holders of all Bonds upon the filing with the Trustee of proof of the mailing of such notice.

For the purposes of the Indenture, the purchasers of the Bonds of a Series, whether purchasing as underwriters, for resale or otherwise, upon such purchase from the Corporation, may consent to a modification or amendment permitted by the provisions of the Indenture described under the headings "Powers of Amendment of the Indenture" and "Modifications of the Indenture by Unanimous Consent" in the manner described in the Indenture, except that no proof of ownership shall be required, and with the same effect as a consent given by the Holder of such Bonds; ***provided, however,*** that, if such consent is given by a purchaser who is purchasing as an underwriter or for resale, the nature of the modification or amendment and the provisions for the purchaser consenting thereto shall be described in the official statement,

prospectus, offering memorandum or other offering document prepared in connection with the primary offering of the Bonds of such Series by the Corporation.

(Indenture Section 10.02)

Modifications of the Indenture by Unanimous Consent

The terms and provisions of the Indenture and the rights and obligations of the Corporation and of the Holders of the Bonds may be modified or amended in any respect upon the execution, delivery and filing with the Trustee by the Corporation of a copy of a Supplemental Indenture certified by an Authorized Officer of the Corporation and the consent of the Holders of all of the Bonds then Outstanding, such consent to be given as provided in the provisions of the Indenture described under the heading "Consent of Bondholders".

(Indenture Section 10.03)

Events of Default

An event of default under the Indenture and under each Supplemental Indenture (herein called "event of default") shall exist if:

(a) payment of the principal or Sinking Fund Installment of or interest on any Bond shall not be made by the Corporation when the same shall become due and payable; or

(b) with respect to a Tax Exempt Bond, there has been a Determination of Taxability; or

(c) the Corporation shall default in the due and punctual performance of any other of the covenants, conditions, agreements and provisions contained in the Indenture or in the Bonds or in any Supplemental Indenture on the part of the Corporation to be performed and such default shall continue for thirty (30) days after written notice specifying such default and requiring same to be remedied shall have been given to the Corporation by the Trustee, which may give such notice in its discretion and shall give such notice at the written request of the Holders of not less than twenty-five per centum (25%) in principal amount of the Outstanding Bonds, unless, if such default is not capable of being cured within thirty (30) days, the Corporation has commenced to cure such default within said thirty (30) days and diligently prosecutes the cure thereof; or

(d) the Corporation shall (1) be generally not paying its debts as they become due, (2) commence a voluntary case or other proceeding seeking liquidation, reorganization, dissolution, rehabilitation or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of it or any substantial part of its property, or consent to any such relief or to the appointment of or taking possession by any such official in an involuntary case or other proceeding commenced against it, (3) make a general assignment for the benefit of its creditors, (4) declare a moratorium or (5) take any corporate action to authorize any of the foregoing; or

(e) a trustee in bankruptcy, custodian or receiver for the Corporation or any substantial part of its property shall have been appointed and the same has not been discharged within sixty (60) days after such appointment.

(Indenture Section 11.01)

Mandatory Redemptions upon Payment Default

Upon the happening of a Payment Default the Outstanding Bonds (other than Funded Bonds) shall be subject to mandatory redemption in accordance with the provisions of the Indenture described under the heading "Redemption Account".

(Indenture Section 11.02)

Enforcement of Remedies; Limitations

Upon the happening and continuance of any event of default specified in the provisions of the Indenture described above under the heading "Events of Default", other than a Payment Default, then and in every such case, the Trustee may proceed, and upon the written request of the Holders of not less than a majority in principal amount of the Outstanding Bonds or, in the case of a happening and continuance of an event of default specified in the provisions of the Indenture described above in subparagraph (b) under the heading "Events of Default", upon the written request of the Holders of not less than a majority in principal amount of the Outstanding Bonds of the Series affected thereby, shall proceed (subject to the provisions of the Indenture), to protect and enforce its rights and the rights of the Bondholders under the Indenture or under any Supplemental Indenture or under the laws of the State by such suits, actions or special proceedings in equity or at law, either for the specific performance of any covenant contained under the Indenture or under any Supplemental Indenture or in aid or execution of any power granted in the Indenture or the Supplemental Indenture, or for an accounting against the Corporation as if the Corporation were the trustee of an express trust, or for the enforcement of any proper legal or equitable remedy as the Trustee shall deem most effectual to protect and enforce such rights, including the enforcement of its rights and remedies, as assignee, under any Agreement assigned to it.

In the enforcement of any remedy under the Indenture and under each Supplemental Indenture the Trustee shall be entitled to sue for, enforce payment of, and receive any and all amounts then, or during any default becoming, and at any time remaining, due from the Corporation for principal or interest or otherwise under any of the provisions of the Indenture or of any Supplemental Indenture or of the Bonds, with interest on overdue payments of the principal of or interest on the Bonds at the rate or rates of interest specified in such Bonds, together with any and all costs and expenses of collection and of all proceedings under the Indenture and under any Supplemental Indenture and under such Bonds, without prejudice to any other right or remedy of the Trustee or of the Holders of such Bonds, and to recover and enforce judgment or decree against the Corporation but solely as provided in the Indenture, in any Supplemental Indenture and in such Bonds, for any portion of such amounts remaining unpaid, with interest, costs and expenses, and to collect in any manner provided by law, the money adjudged or decreed to be payable.

In no event, however, may the Trustee or any Bondholder declare the principal of any Bond or the interest thereon immediately due and payable other than in accordance with its terms.

(Indenture Section 11.03)

Bondholders' Direction of Proceedings

Anything in the Indenture to the contrary notwithstanding, the Holders of a majority in principal amount of the Outstanding Bonds or, in the case of an event of default specified in the provisions of the Indenture described above in subparagraph (b) under the heading "Events of Default", the Holders of a majority in principal amount of the Outstanding Bonds of the Series affected thereby shall have the right by an instrument in writing executed and delivered to the Trustee, to direct the method and place of conducting all remedial proceedings to be taken by the Trustee under the Indenture and under each Supplemental Indenture, provided, such direction shall not be otherwise than in accordance with law and the provisions of the Indenture and of each Supplemental Indenture, and that the Trustee shall have the right to decline to follow any such direction which in the opinion of the Trustee would be unjustly prejudicial to Bondholders not parties to such direction.

(Indenture Section 11.05)

Limitation of Rights of Individual Bondholders

No Holder of any of the Bonds shall have any right to institute any suit, action or proceeding in equity or at law for the execution of any trust under the Indenture, or for any other remedy under the Indenture unless such Holder previously shall have given to the Trustee written notice of the event of default on account of which such suit, action or proceeding is to be instituted, and unless also the Holders of not less than a majority in principal amount of the Outstanding Bonds or, in the case of an event of default specified in the provisions of the Indenture described above in subparagraph (b) under the heading "Events of Default", the Holders of not less than a majority in principal amount of the Outstanding Bonds of the Series affected thereby, shall have made written request to the Trustee after the right to exercise such powers or right of action, as the case may be, shall have accrued, and shall have afforded the Trustee a reasonable opportunity either to proceed to exercise the powers granted by the Indenture or to institute such action, suit or proceeding in its or their name, and unless, also, there shall have been offered to the Trustee reasonable security and indemnity against the costs, expenses, and liabilities to be incurred therein or thereby, and the Trustee shall have refused or neglected to comply with such request within a reasonable time.

(Indenture Section 11.06)

Remedies Not Exclusive

No remedy conferred in the Indenture upon or reserved to the Trustee or to the Bondholders is intended to be exclusive of any other remedy or remedies, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Indenture or now or hereafter existing at law or in equity or by statute; ***provided, however,*** that neither the Trustee nor any Bondholder may declare the principal of any Bond or the interest thereon immediately due and payable.

(Indenture Section 11.08)

Waiver and Non-Waiver of Default

No delay or omission of the Trustee or any Bondholder to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver of any such default or acquiescence therein. Every power and remedy given by the Indenture to the Trustee and the Bondholders, respectively, may be exercised from time to time and as often as may be deemed expedient.

The Trustee may, and upon written request of the Holders of not less than a majority in principal amount of the Outstanding Bonds or, in the case of an event of default specified in the provisions of the Indenture described above in subparagraph (b) under the heading "Events of Default", the Holders of not less than a majority in principal amount of the Outstanding Bonds of the Series affected thereby, shall waive any default which in its opinion shall have been remedied before the entry of final judgment or decree in any suit, action or proceeding instituted by it under the provisions of the Indenture or before the completion of the enforcement of any other remedy under the Indenture; ***provided, however,*** that no such waiver shall extend to or affect any other existing or any subsequent default or defaults or impair any rights or remedies consequent thereon.

(Indenture Section 11.09)

Funded Bonds Excluded from Calculations

In any calculation of the principal amount of Outstanding Bonds for any purpose required or permitted by the provisions of the Indenture relating to Events of Default and remedies relating thereto, no Funded Bond shall be considered to be Outstanding and no Holder of a Funded Bond may exercise any right to give any consent or direction required or permitted by the provisions of the Indenture relating to Events of Default and remedies relating thereto.

Defeasance

If the Corporation shall pay or cause to be paid to the Holders of Bonds of a Series the principal or Redemption Price of and interest thereon, at the times and in the manner stipulated in the Bonds, in the Indenture, and in the applicable Supplemental Indenture, then the pledge of the Trust Estate and all other rights granted by the Indenture to such Bonds shall be discharged and satisfied.

Bonds for the payment or redemption of which money shall have been set aside and shall be held in trust by the Trustee (through deposit of money for such payment or redemption or otherwise at the maturity or redemption date thereof) shall be deemed to have been paid within the meaning and with the effect expressed in the above paragraph. All Outstanding Bonds of any Series or any maturity within a Series or a portion of a maturity within a Series shall prior to the maturity or redemption date thereof be deemed to have been paid within the meaning and with the effect expressed in the above paragraph if (i) in case any of said Bonds are to be redeemed on any date prior to their maturity, the Corporation shall have given to the Trustee, in form satisfactory to it, irrevocable instructions to give as provided in the Indenture notice of redemption on said date of such Bonds, (ii) there shall have been deposited with the Trustee either money in an amount which shall be sufficient, or Defeasance Securities the principal of and interest on which when due will provide money which, together with the money, if any, deposited with the Trustee at the same time, shall be sufficient in the judgment of a firm of independent certified public accountants or, in the case of the Series 2022 Bonds and Bonds issued thereafter, a firm of nationally recognized verification agents, to pay when due the principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, and interest due and to become due on said Bonds on and prior to the redemption date or maturity date thereof, as the case may be, (iii) in the event said Bonds are not to be redeemed within the next succeeding sixty (60) days, the Corporation shall have given the Trustee, in form satisfactory to it, irrevocable instructions to give, as soon as practicable, by first class mail, postage prepaid, to the Holders of said Bonds at their last known addresses appearing on the registration books, a notice to the Holders of such Bonds that the deposit required by (ii) above has been made with the Trustee and that said Bonds are deemed to have been paid in accordance with this heading, and stating such maturity or redemption date upon which money is to be available for the payment of the principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, of and interest on said Bonds, (iv) in the event said Bonds do not then bear interest at a stated rate per annum to their respective maturity dates or are subject to mandatory or optional tender, the Corporation shall have delivered Rating Confirmations to the Trustee, and (v) the Corporation shall have delivered to the Trustee an opinion of Bond Counsel to the effect that said Bonds having been deemed to have been paid as provided in this heading would not (A) cause said Bonds to be considered to have been "reissued" for purposes of Section 1001 of the Code and (B) adversely affect the exclusion of interest any Tax Exempt Bond from gross income for purposes of federal income taxation.

The Corporation shall give written notice to the Trustee of its selection of the Series and maturity payment of which shall be made in accordance with this heading. The Trustee shall select the Bonds of like Series and maturity payment of which shall be made in accordance with this heading in the manner provided in the provisions of the Indenture described above under the heading "Selection of Bonds to be Redeemed". Neither the Defeasance Securities nor money deposited with the Trustee pursuant to this heading nor principal or interest payments on any such Defeasance Securities shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, of and interest on said Bonds; ***provided, however,*** that any money received from such principal or interest payments on such Defeasance Securities deposited with the Trustee, if not then needed for such purpose, shall, to the extent practicable, be reinvested in Defeasance Securities maturing at times and in amounts sufficient to pay when due the principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, of and interest to become due on said Bonds on and prior to such redemption date or maturity date thereof, as the case may be. Any income or interest earned by, or increment to, the investment of any such money so deposited, shall, to the extent certified by the Trustee to be in excess of the amounts required as described above to pay the principal, Sinking Fund Installments, if any, or Redemption Price, if applicable, of and interest on such Bonds, as realized, be paid by the Trustee as follows: First, to each Provider the Provider Payments which have not been repaid, *pro rata,* based upon the respective Provider Payments then unpaid to each Provider; and, then, the balance thereof to the Corporation. The money so paid by the Trustee shall be released of any trust, pledge, lien, encumbrance or security interest created by the Indenture.

(Indenture Section 12.01)

No Recourse under Indenture or on the Bonds

All covenants, stipulations, promises, agreements and obligations of the Corporation contained in the Indenture shall be deemed to be the covenants, stipulations, promises, agreements and obligations of the Corporation and not of any member, officer or employee of the Corporation, and no recourse shall be had for the payment of the principal or Redemption Price of or interest on the Bonds or for any claims based thereon, on the Indenture or on the Supplemental Indenture against any member, officer or employee of the Corporation or any person executing the Bonds, all such liability, if any, being expressly waived and released by every Holder of Bonds by the acceptance of the Bonds.

(Indenture Section 14.04)

Certain Provisions Relating to Capital Appreciation Bonds and Deferred Income Bonds

For the purposes of (i) receiving payment of the Redemption Price if a Capital Appreciation Bond is redeemed prior to maturity or (ii) receiving payment of a Capital Appreciation Bond if the principal of all Bonds is declared immediately due and payable following an "event of default", as provided in the provisions of the Indenture described above under the heading "Mandatory Redemptions upon Payment Default", the then current Accreted Value of such Bond shall be deemed to be its principal amount. In computing the principal amount of Bonds held by the registered owner of a Capital Appreciation Bond in giving to the Corporation, the City or the Trustee any notice, consent, request, or demand pursuant to the Indenture for any purpose whatsoever, the Accreted Value of such Bond as at the immediately preceding Valuation Date shall be deemed to be its principal amount. Notwithstanding any other provision of the Indenture, the amount payable at any time with respect to the principal of and interest on any Capital Appreciation Bond shall not exceed the Accreted Value thereof at such time. For purposes of receiving payment of the Redemption Price or principal of a Capital Appreciation Bond called for redemption prior to maturity, the difference between the Accreted Value of such Bond when the Redemption Price or principal thereof is due upon such redemption or declaration and the principal of such Bond on the date the Bonds of the Series of which it is a part were first issued shall be deemed not to be accrued and unpaid interest thereon.

For the purposes of (i) receiving payment of the Redemption Price if a Deferred Income Bond is redeemed, or (ii) receiving payment of a Deferred Income Bond if the principal of all Bonds is declared immediately due and payable following an "event of default," as provided in the provisions of the Indenture described above under the heading "Mandatory Redemptions upon Payment Default", the then current Appreciated Value of such Bond shall be deemed to be its principal amount. In computing the principal amount of Bonds held by the registered owner of a Deferred Income Bond in giving to the Corporation or the Trustee any notice, consent, request, or demand pursuant to the Indenture for any purpose whatsoever, the Appreciated Value of such Bond as at the immediately preceding Valuation Date shall be deemed to be its principal amount. Notwithstanding any other provision of the Indenture, the amount payable at any time prior to the Interest Commencement Date with respect to the principal of and interest on any Deferred Income Bond shall not exceed the Appreciated Value thereof at such time. For purposes of receiving payment prior to the Interest Commencement Date of the Redemption Price or principal of a Deferred Income Bond called for redemption prior to maturity, the difference between the Appreciated Value of such Bond when the Redemption Price or principal thereof is due upon such redemption or declaration and the principal of such Bond on the date the Bonds were first issued shall be deemed not to be accrued and unpaid interest thereon.

(Indenture Section 14.07)

APPENDIX B

CERTAIN DEFINITIONS AND SUMMARY OF CERTAIN PROVISIONS OF THE SUPPORT AND DEVELOPMENT AGREEMENT

Definitions of Certain Terms

"2006 Indenture" means the Trust Indenture, dated as of December 1, 2006, as amended by a Second Supplemental Trust Indenture, dated as of February 1, 2008, and further amended and restated as of October 1, 2011, by and between the Corporation and U.S. Bank National Association, in its capacity as trustee thereunder. For purposes of clarification, (i) the 2006 Indenture has been terminated and there are no obligations outstanding thereunder, nor may any obligations hereafter be issued thereunder, and (ii) all bonds issued under the 2006 Indenture, which have been refunded and are no longer outstanding, were Supported Bonds and, consequently, under the terms of the Agreement, all Bonds hereafter issued that refund Supported Bonds, including all bonds issued under the 2006 Indenture, may be issued as Supported Bonds.

"Agreement" means the Amended and Restated Hudson Yards Support and Development Agreement, dated as of December 1, 2006 and amended and restated as of May 1, 2017, by and among the Corporation, HYDC and the City, as from time to time further amended or supplemented in accordance with the terms and provisions of the Agreement and of the Indenture.

"Bonds" means bonds, notes and other evidences of indebtedness issued by the Corporation, the proceeds of which are applied to the payment of Project Costs, that are secured by substantially the same revenues as the Bonds, including the Series 2022 Bonds.

"Capitalized Interest" means interest for the payment of which money derived from the proceeds of Bonds issued for the payment of such interest, and any interest earnings on such money, is available.

"City" means The City of New York, a municipal corporation of the State of New York, constituting a political subdivision thereof.

"Corporation" means Hudson Yards Infrastructure Corporation, a local development corporation formed under the Not-for-Profit Corporation Law of the State of New York.

"Deficiency Notice Date" has the meaning set forth under the heading "Interest Support Payments".

"Designee" means an officer or employee of the City authorized in a written instrument signed by the Director to act on behalf of the Director under the Agreement.

"Director" means the Director of Management and Budget of the City or the Director's Designee.

"Draw Schedule" means the schedule certified to the Corporation by HYDC and approved by the Corporation, as annexed to the Agreement as Exhibit B, setting forth the anticipated dates on which the Corporation is reasonably expected to be required to advance money for payments of the Project Costs and the amounts projected to be paid on each such date, as such schedule may from time to time be revised or modified by HYDC and recertified and resubmitted to and approved by the Corporation.

"Event of Default" has the meaning given to such term in the provisions of the Agreement described herein under the heading "Events of Default".

"Fiscal Year" means a period of twelve (12) consecutive months beginning July 1st in any calendar year and ending on June 30th of the succeeding calendar year.

"HYDC Budget" means the budget of HYDC Expenses for a Fiscal Year prepared by HYDC pursuant to the provisions of the Agreement described herein under the heading "HYDC Expenses and Budget", as from time to time amended in accordance with the Agreement and as approved by the Corporation.

"HYDC Expenses" means all costs, fees and expenses of HYDC of any kind arising out of or incurred in connection with the performance of its duties and obligations under the Agreement, services performed to facilitate the development of the Project Area and maintaining its corporate existence, and for its administrative and overhead expenses, including without limitation:

(i) salaries;

(ii) insurance premiums;

(iii) fees and expenses of architects, engineers, attorneys and other consultants retained by HYDC;

(iv) fees, charges, expenses, payments, indemnities and other similar charges payable to or for (a) auditing, legal, financial and investment advisory and other professional and consulting services, and (b) printing, advertisements and publication or other distribution of notices; and

(v) any and all other fees, charges and expenses required or permitted to be incurred by HYDC or required to be paid by HYDC.

"Indenture" means the Second Trust Indenture, dated as of May 1, 2017, by and between the Corporation and the Trustee, as from time to time amended and supplemented.

"Indenture Requirements" means, as of any particular date of calculation, (i) when used in connection with a Net Interest Obligation Notice for a Fiscal Year, the Corporation Expenses for such Fiscal Year, plus the Debt Service to be paid during such Fiscal Year on outstanding Bonds issued under the Indenture, and, (ii) when used in connection with any particular Interest Deficiency Notice, the then unfunded Corporation Expenses for the then current Fiscal Year, plus the Debt Service payable on such Interest Payment Date on outstanding Bonds issued under the Indenture.

"Interest Deficiency Notice" means, with respect to an Interest Payment Date, a written notice setting forth the amounts by which the interest on Supported Bonds outstanding under the Indenture payable on such Interest Payment Date exceed the money available for the payment thereof, which amounts shall be determined as described herein under the heading "Interest Support Payments", as such notice may be from time to time amended.

"Interest Payment Date" means each date on which interest on Supported Bonds is payable in accordance with their terms.

"Interest Support Payments" means the payments required to be made by the City pursuant to the provisions of the Agreement described herein under the heading "Interest Support Payments" in connection with interest on the Corporation's Supported Bonds.

"MTA Agreement" means the Rail Yards Agreement, dated as of September 28, 2006, among Metropolitan Transportation Authority, Triborough Bridge and Tunnel Authority, The Long Island Rail Road Company and the City.

"Net Interest Obligation" means for any Fiscal Year the amounts, separately stated, by which the interest the Corporation projects to be payable during such Fiscal Year (i) on Supported Bonds outstanding under the 2006 Indenture, and (ii) on Supported Bonds outstanding under the Indenture, in each case including Supported Bonds the Corporation anticipates to issue that will be outstanding during such Fiscal Year and the Corporation's estimate of interest payable on Supported Bonds that bear interest at variable interest rates, exceed the Capitalized Interest and other money the Corporation reasonably expects to be available for payment thereof, which such amounts shall be determined as described herein under the heading "Interest Support Payments".

"Net Interest Obligation Notice" means a written notice setting forth the Net Interest Obligation for a Fiscal Year, as from time to time amended.

"New Development" means the construction of a building or other improvement within the Project Area for residential, commercial or other use or uses, or the Substantial Rehabilitation of an existing building or improvement within the Project Area, in each case evidenced by the issuance of a temporary or permanent certificate of occupancy on or after January 19, 2005.

"PILOT Agreement" has the meaning given to such term in the Indenture.

"PILOT Payment" means a payment made pursuant to a PILOT Agreement between a governmental body, including any public benefit corporation or other instrumentality of a governmental body, in lieu of *ad valorem* real property tax on a New Development that is paid directly or indirectly to the City.

"Plans and Specifications" means the completed final schematic plans, design development drawings, and all other design documents for each separate component of the Project, which shall conform to the schematic drawings approved by the City, as such Plans and Specifications may be modified from time to time in accordance with the provisions of the Agreement described herein under the heading "Approval Process".

"Project" has the meaning given to such term in the Indenture.

"Project Area" means the geographic area within the City in the Borough of Manhattan referred to as the "Hudson Yards Finance District," as more particularly described in Resolution 547 of 2006 of the City's City Council.

"Project Cost Requisition" means a requisition signed by the Corporation and delivered to the Trustee in accordance with the Indenture.

"Project Costs" has the meaning given to such term in the Indenture.

"Substantial Rehabilitation" means any one or a combination of (i) work necessary to bring a building into compliance with all applicable laws and regulations, including but not limited to the installation, replacement or repair of heating, plumbing, electrical and related systems and the elimination of hazardous violations in the building in accordance with state and local laws and regulations, (ii) reconstruction or work to improve the habitability or prolong the useful life of a structure, or (iii) an addition to an existing building that substantially increases the square footage or floor area thereof, which, in each case, increases the assessed value of such building or structure by twenty percent (20%) or more over the prior year's assessed value.

"Supported Bonds" means Bonds that are secured by the City's obligation to make Interest Support Payments as provided in the Agreement.

"Tax Equivalency Payment" means each payment required to be made by the City pursuant to the provisions of the Agreement described herein under the heading "Tax Equivalency Payments".

"Tax Receipts" means all *ad valorem* real property taxes and PILOT Payments collected by the City from owners of New Developments, including any amounts collected (i) as a consequence or result of enforcement proceedings, (ii) as interest or penalties for the failure of any such owner to make timely payment of the *ad valorem* real property taxes levied against such New Development, (iii) as the proceeds of any sale of tax liens related to a New Development and (iv) as a consequence or result of the enforcement of a PILOT Agreement, including the foreclosure of any mortgage securing the same.

"Trustee" means U.S. Bank National Association, in its capacity as trustee under the Indenture, or any successor trustee under the Indenture.

(Section 1.01)

General Administration of the Project

(a) HYDC shall serve as the Corporation's development consultant and representative in connection with the planning, design and construction of the Project, and shall use its best efforts to assist governmental or quasi-governmental entities or private developers in completing the Project. HYDC shall accomplish this goal through creative use of the City's land and building resources, public infrastructure investment and available federal, State, City and other financial assistance programs, and by making requisitions from the Corporation for the purpose of receiving payments and/or reimbursements for the foregoing. HYDC shall provide such services as shall be necessary and convenient for the administration, oversight and review of any such planning, design and implementation services undertaken for the Project or any New Development.

(b) HYDC shall (i) continue to cause the planning, design and construction of the Project, (ii) diligently work to prosecute such construction, and (iii) use commercially reasonable efforts to cause the Project to be completed as expeditiously as may be practicable.

(c) HYDC shall perform its work so as to minimize conflicts and inefficiencies of any kind with any and all governmental or quasi-governmental agencies, consultants, contractors, or other parties engaged in the development, construction and improvement of the Project.

(d) Nothing in the Agreement shall prevent the City from using its own employees or retaining any other firm or person in any capacity in connection with the Project.

(Section 2.01)

Land Acquisition and Disposition

HYDC shall promote the development of the Hudson Yards Financing District and the Project by causing the acquisition of properties necessary for the Project, through the negotiation of leases for, or causing the condemnation if necessary, through the appropriate condemning authority, including the City and MTA, and by facilitating such acquisitions, leases and condemnations. To the extent certain City-owned property is surplus to the needs of the Project, HYDC shall promote the development of the Hudson Yards Financing District by causing the disposition of such property.

(Section 2.02)

Approval Process

Except as otherwise determined by the parties to the Agreement:

(a) Prior to devoting substantial staff time to or otherwise undertaking any portion of the Project, any proposed addition to the Project (an "Additional Project Element"), or any New Development (which for purposes of this heading shall include conducting a study) (all "Additional Work"), HYDC shall submit a description of the proposed Additional Work, including estimates of a budget, the governmental or quasi-governmental agencies, developers and contractors to be involved in the Additional Project Element, if any, a performance schedule, an estimate of staff time to be spent on the Additional Work, and, where appropriate, square footage, uses and site location of the New Development, to an Authorized Officer of the Corporation.

(b) The Corporation shall approve, disapprove or modify HYDC's request to perform Additional Work promptly after receipt of said description. HYDC shall not authorize or expend any its funds for Additional Work prior to approval of the proposed Additional Work (including the budget and performance schedule therefor and for the Additional Project Element) by the Corporation and authorization under HYDC's applicable corporate procedures. Changes within approved Additional Work budgets in excess of a 15% change in any line, and any other material change in the schedule or Plans and Specifications of an

Additional Project (including the addition of a new line in the approved budget), must be furnished to and approved by the Corporation.

(c) HYDC shall not, without the prior written consent of the Corporation, enter into any contract or other binding commitment that requires or provides for the expenditure of proceeds of the Bonds.

(Section 2.03)

Project Planning and Other Services

(a) In connection with the Project and any other Additional Project Element administered by HYDC, subject to the approvals set forth in the provisions of the Agreement described herein under the heading "Approval Process" and consistent with applicable laws, rules and regulations relating to the source of funds, HYDC may undertake, and incur Project Costs for or incur costs to be reimbursed by the Corporation or the City, activities including, without limitation:

(i) working with appropriate governmental and quasi–governmental agencies to obtain and implement financial assistance from federal, State, City and other sources for the development and improvement of the Project Area;

(ii) facilitating the processing of sales, leases, permits and contracts through the City's approval processes;

(iii) assisting in the processing of condemnations, zoning changes, street closings and other land use actions; and

(iv) reviewing feasibility, market and impact studies, surveys, maps, borings, site analyses, plans, specifications, contract documents, appraisals and title searches.

(b) HYDC may review, for conformance with the Project, the Plans and Specifications prepared for any Additional Project Element, including (i) analysis and evaluation of the design of the improvement, plans and specifications, and materials and equipment to be used for the improvement, (ii) review of the design and resolution of any design changes as may arise, (iii) management of fee expenditures in relation to budgets, (iv) management of design to meet Project objectives, and (v) review and comment on design documents during production.

(c) HYDC shall be responsible for assisting each governmental or quasi-governmental agency or developer in those instances where HYDC deems it appropriate in securing and/or making arrangements for procurement of all governmental authorizations, permits and licenses, zoning consents, approvals and variances as may be required for a New Development. However, responsibility for securing such governmental authorizations, permits and licenses, zoning consents, approvals and variances rests with the governmental or quasi-governmental agencies and developers.

(Section 2.03)

Project Implementation

(a) In connection with the Project and any Additional Project Element, subject to the approvals set forth in the provisions of the Agreement described herein under the heading "Approval Process" and consistent with applicable laws, rules and regulations relating to the source of funds, HYDC may facilitate and oversee, and incur Project Costs or incur costs to be reimbursed by the Corporation or the City for, activities including, without limitation:

(i) demolishing or sealing-up vacant buildings;

(ii) preparing City-owned sites for construction, reconstruction or disposition (including, without limitation, grading, foundation improvements and work to alleviate subsurface faults);

(iii) constructing improvements to real property;

(iv) renovating and rehabilitating City-owned buildings or other buildings;

(v) acquiring and managing property;

(vi) constructing drainage, road, utility, parking, security and circulation improvements and facilities on property owned by, or under the control of, the City;

(vii) establishing energy conservation and improvements;

(viii) providing relocation assistance;

(ix) providing construction management or co-ordination;

(x) developing and redeveloping markets, marginal streets, and water front property;

(xi) serving as an agent of the City for the negotiation and processing of the PILOT Agreements with regard to the Project Area;

(xii) providing information regarding the availability of financial assistance for applicants in the City from both public and private sources, in the form of loans, grants, tax incentives or any additional form available;

(xiii) maintaining and updating a ledger setting forth the total amount disbursed with respect to any Project or any Additional Project Element; and

(xiv) reviewing and approving requisitions for payment and the supporting payment breakdown.

(b) HYDC shall not be responsible for construction means, methods, techniques, sequences and procedures employed by contractors in the construction or improvement of the Project Area, but will be responsible to report on these to the Corporation. HYDC shall attend meetings and presentations as necessary and shall provide relevant information for these meetings and prepare meeting minutes.

(c) HYDC shall be the liaison with the governmental and quasi-governmental agencies, and to the extent HYDC deems it necessary, the developers of the Project, any Additional Project Element, or any New Development. In the course of such representation, HYDC may

(i) attend meetings;

(ii) receive and review reports;

(iii) review and discuss elements of the Project or any Additional Project Element, including implementation strategies and progress, value engineering, disputes, design issues, other topics relating to the design and construction of the Project, and any and all relevant reports related thereto generated by parties involved in the Project, and receive briefings on and discuss any aspect of interest related to the Project before any final actions related to such topics are taken or authorized to be taken;

(iv) vote, with the prior approval of the Corporation, on decisions related to the Project and any Additional Project Element;

(v) inspect materials related to the Project and any Additional Project Element, including invoices, materials associated with disputes with contractors and consultants, and materials associated with change orders, and conduct field inspections of the Project and the Additional Project Elements to assess the progress of the Project and the Additional Project Elements; and

(vi) in connection with the extension of the No. 7 line of the subway (the "Subway Extension"), officers of HYDC shall serve on a project committee to oversee the construction of the Subway Extension, in accordance with the No. 7 Extension Memorandum of Understanding among Metropolitan Transportation Authority, on behalf of itself and New York City Transit Authority and MTA Capital Construction, the City, HYDC and the Corporation, as the same may be amended from time to time.

(d) HYDC shall be responsible for all matters pertaining to (i) monitoring compliance with the schedule and budget for the Project; and (ii) close-out of the Project, including, but not limited to, obtaining all necessary guarantees, as-built drawings, certificates of compliance with the Plans and Specifications, certificates of occupancy and other necessary governmental approvals required for occupancy; and certification that the costs of the Project have been paid in full to date, and that all remaining Project Costs will be paid in full with the proceeds of the final disbursement.

(e) Any guaranties and warranties relating to the construction of the Project or any Additional Project Element or materials utilized in connection therewith shall be made for the benefit of HYDC and the Corporation, and, to the extent that the Corporation is not expressly named in any such warranty or guaranty, HYDC shall assign its rights and interest therein to the Corporation, pursuant to an assignment reasonably satisfactory to the Corporation in form and substance. HYDC shall cooperate with the Corporation in the prosecution of any claims against any entity issuing a guaranty and/or warranty for the benefit of the Corporation under the Agreement.

(f) Approval by the Corporation of any construction change orders shall be made in accordance with the provisions of the Agreement described herein under the heading "Approval Process", or as otherwise agreed by HYDC and the Corporation. For purposes of the Agreement, any construction change order which will result in a material modification of the Plans or Specifications shall be approved in writing by the Corporation.

(g) HYDC agrees that it will use its best efforts to cause such construction, reconstruction, rehabilitation and improvement to be completed in accordance with the Plans and Specifications; but if for any reason such construction, reconstruction, rehabilitation and improvement is delayed there shall be no resulting liability on the part of HYDC to the Corporation and no diminution in or postponement of the reimbursement of Project Costs.

(Section 2.04)

Fees

All fees, if any, charged by HYDC shall be approved by the Corporation prior to HYDC's entering into any fee arrangement, except as otherwise provided in the Agreement.

(Section 2.05)

Adequacy, Sufficiency or Suitability

HYDC makes no warranties or representations and accepts no liabilities or responsibilities with respect to or for the adequacy, sufficiency or suitability of or defects in the Plans and Specifications or any contracts or agreements with respect to the construction, reconstruction, rehabilitation or improvement of the Project or any New Development.

(Section 2.08)

HYDC Expenses and Budget

HYDC shall, not later than sixty (60) days after the date of execution of the Agreement, prepare a budget for the then current Fiscal Year of the HYDC Expenses for the balance of such Fiscal Year. At least sixty (60) days prior to the beginning of each Fiscal Year thereafter, HYDC shall prepare a budget of the HYDC Expenses for such Fiscal Year. Each such budget shall set forth by reasonably descriptive category, both in the aggregate and monthly, the HYDC Expenses projected to be payable during such Fiscal Year and during each month of such Fiscal Year. A budget may be amended by HYDC from time to time during the Fiscal Year. A certified copy of each such budget or amendments thereto shall be promptly filed with the Corporation for the Corporation's approval, which approval will not be unreasonably withheld or delayed.

(Section 2.13)

Issuance of Bonds

In order to provide money for Project Costs, the Corporation will use all reasonable efforts to issue, sell and deliver Bonds at such times and in such amounts as in its discretion it determines is necessary to pay Project Cost Requisitions anticipated in accordance with the then most recent Project Draw Schedule or to refund prior Bonds.

(Section 3.01)

Payment of Project Costs

The Corporation agrees to pay, but solely from the proceeds of its Bonds available therefor, all Project Costs identified in properly prepared and executed Project Cost Requisitions.

(Section 3.02)

Advances by the City or HYDC

The Corporation shall reimburse the City and HYDC, but solely from the proceeds of its Bonds available therefor, for amounts advanced or expenses that constitute Project Costs incurred by either of them, provided that reimbursement thereof will not adversely affect the exclusion of interest on any Bonds from gross income for purposes of federal income taxation. The City and HYDC each agree to submit to the Corporation such documents as may be reasonably required by the Corporation to establish the amount and purposes of such advances or expenses and to enable the Corporation and HYDC to execute Project Cost Requisitions for payment thereof in accordance with the Indenture.

(Section 3.03)

HYDC Expenses

The Corporation, not later than the first day of each calendar quarter of a Fiscal Year, shall pay to HYDC the amount set forth in the HYDC Budget for such Fiscal Year as payable during such calendar quarter for HYDC Expenses. All money paid to HYDC pursuant to this heading shall be held by HYDC separate and apart from all other money. Upon the expiration of the Agreement, HYDC shall remit to the Corporation any excess amounts not required for the operations of HYDC during the then current Fiscal Year, as reflected in the HYDC Budget for such Fiscal Year. HYDC shall maintain and provide to the Corporation the records relating to the investment of and income or interest earned on all money advanced to HYDC by the Corporation pursuant to this heading.

(Section 3.04)

Conditions of Bond Closings

Prior to or concurrently with the issuance and delivery of Bonds to the underwriters or purchasers thereof (the "Closing"), the following documents shall be delivered to the Corporation, in each case satisfactory in form and substance to the Corporation and its counsel:

(a) A certificate, dated the date of Closing, of the Director to the effect that: (i) the representations and warranties of the City contained in the Agreement are true and correct in all material respects on and as of the date of Closing as if such representations and warranties had been made on and as of such date; (ii) no "event of default" on behalf of the City under the Agreement has occurred and is continuing, and no event has occurred and is continuing that with the passage of time or the giving of notice, or both, would constitute an "event of default" on behalf of the City under the Agreement; (iii) appropriations have been duly made by the City for the payment of Tax Equivalency Payments and Interest Support Payments to be made during the then current Fiscal Year in an amount at least equal to the amount required by the provisions of the Agreement described below under the heading "Mayoral Budget" to have been included in the expense budget for such Fiscal Year submitted by the Mayor to the City Council; (iv) if any such appropriation is included in a unit of appropriation out of which payments other than Tax Equivalency Payments or Interest Support Payments, as the case may be, may be made, the amount appropriated in such unit of appropriation is at least equal to all payments, including the Tax Equivalency Payments or Interest Support Payments, as applicable, payable, and reasonably expected to be paid, from such unit of appropriation; and (v) as of the date of Closing, the information relating to the City and the Project obtained from the City and contained in the Official Statement does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading;

(b) A certificate, dated the date of Closing, of the appropriate officer of HYDC to the effect that: (i) the representations and warranties of HYDC contained in the Agreement are true and correct in all material respects on and as of the date of Closing as if such representations and warranties had been made on and as of such date; and (ii) no "event of default" on behalf of HYDC under the Agreement has occurred and is continuing; and

(c) Such additional legal opinions, certificates, instruments and other documents as the Corporation or its counsel reasonably may request, satisfactory in the reasonable judgment of the Corporation and its counsel, as the case may be, including, but not limited to, such opinions, certificates and other documents to evidence (i) compliance by the City and HYDC with legal requirements reasonably relating to the transactions contemplated by the Agreement, and (ii) the truth and completeness, as of the date of Closing, of the representations and warranties of the City and HYDC contained in the Agreement and the certificates or other documents referred to therein and of the statements and information contained in the Official Statement with respect to the City, HYDC and the Project.

(Section 3.05)

Tax Equivalency Payments

Subject to adjustment as provided in this heading and to the provisions of the Agreement described herein under the heading "Assignment of Payments by Corporation", not later than the l" day of August and February of each Fiscal Year, commencing on or after July 1, 2007, the City shall pay to or upon the order of the Corporation fifty percent (50%) of (i) the *ad valorem* real property taxes levied by the City on New Developments that are payable during such Fiscal Year and (ii) the PILOT Payments projected by the City to be received during such Fiscal Year. The amount payable by the City on each such date shall be adjusted to reflect the amount, if any, by which the Tax Receipts collected during the six-month period that commenced on the nearer of the January I" or July I" immediately preceding such payment date either exceeded or was less than the amount payable on such payment date. The City shall retain in its possession for a reasonable period of years records of all Tax Receipts collected during a Fiscal Year sufficient to identify each New Development, the *ad valorem* real property taxes levied against each New Development during such Fiscal Year and the Tax Receipts collected during such Fiscal

Year in connection with each such New Development, which records shall be subject at all reasonable times during normal business hours to the inspection of the Corporation, the Trustee and their respective agents and representatives. At the written request of the City or the Trustee, copies of such records shall be delivered to the City and the Trustee.

(Section 4.01)

Interest Support Payments

Not later than April 1st of each year, the Corporation shall give a Net Interest Obligation Notice to the City setting forth the Net Interest Obligation for the ensuing Fiscal Year. Such Net Interest Obligation Notice shall detail the Net Interest Obligation with respect to Supported Bonds issued under the Indenture. The Corporation from time to time thereafter may amend or modify such notice. The Corporation shall, not later than fifteen days prior to each Interest Payment Date (the "Deficiency Notice Date"), give an Interest Deficiency Notice to the City setting forth the amount by which the interest payable by the Corporation on such Interest Payment Date exceeds the amount available for the payment thereof, including from Capitalized Interest, which notice may from time to time be amended by the Corporation and which such notice shall detail the interest deficiency with respect to Supported Bonds issued under the Indenture. The City shall, not later than the four Business Days immediately preceding an Interest Payment Date, pay to or upon the order of the Corporation the amount set forth in the Interest Deficiency Notice relating to such Interest Payment Date.

For the purpose of calculating the Net Interest Obligation, if any, for a Fiscal Year, such amounts shall be determined by calculating the amount by which the Indenture Requirements payable during such Fiscal Year exceed the money projected to be available during such Fiscal Year for the payment thereof, but in no event shall the aggregate Net Interest Obligation in any Fiscal Year exceed the total of the interest on the Supported Bonds outstanding under the Indenture payable during such Fiscal Year, in each case not including Funded Bonds under either the Indenture.

The Corporation covenants that it will not issue Supported Bonds, other than Supported Bonds issued to pay or provide for the payment of outstanding Supported Bonds, unless the City has been authorized by appropriate action of the City Council to make Interest Support Payments in connection with such Supported Bonds.

(Section 4.02)

Nature of Obligations of the City

Except as hereinafter provided in this heading, the obligation of the City to pay the Tax Equivalency Payments and Interest Support Payments shall be absolute and unconditional, and such payments shall be payable without any rights of setoff, recoupment or counterclaim it might have against the Corporation, HYDC, the Trustee or any other person, or any damage to or destruction to the Project, or the taking by eminent domain of title to or the right of use of all or any part of the Project. If the City shall have paid all Tax Equivalency Payments and Interest Support Payments required by the Agreement and continues to pay the same when due, the City shall not be precluded from bringing any action it may otherwise have against the Corporation or HYDC arising out of the failure of either of them to perform and observe any agreement or covenant, whether expressed or implied, or any duty, liability or obligation of either of them arising out of or in connection with the Agreement.

The City will not terminate the Agreement or be excused from performing its obligations under the Agreement for any cause including, without limiting the generality of the foregoing, any acts or circumstances that may constitute a failure of consideration or frustration of purpose, without regard to any default by the Corporation or HYDC, or the failure of the Corporation or HYDC to perform and observe any agreement or covenant, whether expressed or implied, or any duty, liability or obligation of either of them arising out of or in connection with the Agreement.

Notwithstanding anything in the Agreement to the contrary, payment of the Tax Equivalency Payments and the Interest Support Payments and all other obligations of the City under the Agreement shall be subject to and dependent upon appropriations being made from time to time by the City for such purpose.

(Section 4.03)

Assignment of Payments by Corporation

It is understood that all Tax Equivalency Payments made by the City to the Corporation under the Agreement are to be pledged and assigned by the Corporation to the payment of outstanding Bonds issued pursuant to the Indenture, and that Interest Support Payments made in connection with Supported Bonds issued pursuant to the Indenture are to be pledged and assigned by the Corporation to the payment of outstanding Bonds issued pursuant to the Indenture. The City consents to such assignments. Except as provided in this heading or in each of the Indenture, the Corporation shall not assign the Agreement or any payments thereunder without the prior written consent of the City.

(Section 4.04)

Direction as to Payment

(a) Tax Equivalency Payments shall, for so long as Second Resolution Bonds are outstanding under the Indenture, be paid by the City, when due, to the Trustee for deposit in accordance with the Indenture.

(b) Interest Support Payments with respect to Supported Bonds issued under the Indenture shall be paid by the City, when due, to the Trustee for deposit in accordance with the Indenture.

(Section 4.05)

Mayoral Budget

The expense budget submitted by the Mayor to the City Council in each Fiscal Year for the succeeding Fiscal Year shall include appropriations for payments to or upon the order of the Corporation of (i) an amount equal to *the ad valorem* real property tax levy made by the City for such Fiscal Year against all New Developments, (ii) PILOT Payments payable to the City during such Fiscal Year and (iii) an amount equal to the Net Interest Obligation set forth in the Net Interest Obligation Notice for such Fiscal Year, which appropriations shall be separate and apart from each other, but either appropriation may be included in a unit of appropriation out of which payments other than the Tax Equivalency Payments or Interest Support Payments may be paid; **provided, however**, that, if included within a unit of appropriation out of which payments other than the Tax Equivalency Payments and Interest Support Payments may be paid, the amount set forth in said expense budget for such unit of appropriation shall not be less than the amount of all payments, including the Tax Equivalency Payments or Interest Support Payments, payable from such unit of appropriation. If at any time during a Fiscal Year the appropriation enacted for such Fiscal Year is no longer sufficient in amount to pay the Tax Equivalency Payments and Interest Support Payments payable during the balance of such Fiscal Year, the Mayor shall take all action required to seek an increase in the appropriation from which the Tax Equivalency Payments or Interest Support Payments are to be paid so that it shall be sufficient to pay the same for the balance of such Fiscal Year.

To assist the Mayor in the preparation of the expense budget to be submitted to the City Council, the Corporation agrees to give the City a Net Interest Obligation Notice not later than by April 1st of each year.

(Section 4.06)

Indemnification and Limitation on Liability

(a) The City, to the extent permitted by law, (i) releases the Corporation and HYDC and each member, officer and employee of the Corporation or HYDC from claims for damages or liability arising from or out of the design, acquisition, construction, reconstruction, rehabilitation, improvement or use of the Project, and (ii) shall indemnify and hold the Corporation and HYDC and each member, director, officer and employee of the Corporation harmless against any and all liability, loss, cost, damage or claim, and shall pay any and all judgment or expense, of any and all kinds or nature and however arising, imposed by law, including interest thereon, which it or any of them may sustain, be subject to or be caused to incur by reason of any claim, action or proceeding whatsoever, including without limitation, any claim, action or proceeding arising from or out of the design, acquisition, construction, reconstruction, rehabilitation, improvement or use of the Project, or upon or arising out of an allegation that an official statement, prospectus, placement memorandum, offering circular or other offering document prepared in connection with the sale and issuance of Bonds contained an untrue or misleading statement of a material fact or omitted to state a material fact necessary in order to make the statements made therein in light of the circumstances under which they were made not misleading. Notwithstanding the foregoing provisions of this paragraph, neither the Corporation nor HYDC shall be indemnified or held harmless by the City for any Project Costs related to the Subway Extension in excess of $2,100,000,000, exclusive of the costs of acquiring real property or interests therein in connection with the Subway Extension, unless such additional costs were approved in writing by the City prior to being incurred.

(b) The Corporation and HYDC each agree to give the City prompt notice in writing of the assertion of any claim or the institution of each such suit, action or proceeding and to cooperate with the City in the investigation of such claim and the defense, adjustment, settlement or compromise of any such action or proceeding. Neither the Corporation nor HYDC shall settle any such suit, action or proceeding without the prior written consent of the Corporation Counsel of the City.

(c) Except as provided in paragraph (d) of this heading, the City, at its own cost and expense, shall defend any and all suits, actions or proceedings which may be brought or asserted against the Corporation, HYDC or their respective members, directors, officers or employees for which the City may be required to indemnify the Corporation or HYDC or hold the Corporation or HYDC harmless pursuant to paragraph (a) of this heading, but this provision shall not be deemed to relieve any insurance company which has issued a policy of insurance from its obligation to defend the City, the Corporation, HYDC and any other insured named in such policy of insurance in connection with claims, suits or actions covered by such policy.

(d) The Corporation, HYDC and each member, director, officer or employee of the Corporation or HYDC shall, at the cost and expense of the City, be entitled to employ separate counsel in any action or proceeding arising out of any alleged act or omission which occurred or is alleged to have occurred while the member, director, officer or employee was acting within the scope of his or her employment or duties, and to conduct the defense thereof, in which (i) the Corporation Counsel of the City determines, based on his or her investigation and review of the facts and circumstances of the case, that the interests of such person and the interests of the City are in conflict, or in the event the Corporation Counsel determines that no conflict exists, a court of competent jurisdiction subsequently determines that such person is entitled to retain separate counsel, or (ii) such person may have an available defense which cannot as a matter of law be asserted on behalf of such person by the City or by counsel employed by it or (iii) such person may be subject to criminal liability, penalty or forfeiture or (iv) the City has consented to the employment of separate counsel.

(Section 4.07)

Amendment of MTA Agreement

The City shall not, without the prior written consent of the Corporation, amend, change, modify or terminate the MTA Agreement, or waive any provision thereof, if such amendment, change, modification, termination or waiver reduces the amount or delays the date of payment of any amount payable to the Corporation pursuant to Section 2 or 3 of the MTA Agreement. The City acknowledges that the provisions of Sections 2 and 3 of the MTA Agreement are intended to be for the benefit of the Corporation.

(Section 4.08)

City Representations and Warranties

The City represents and warrants as follows:

(a) Legal Entity. The City is a municipal corporation of the State of New York, constituting a political subdivision thereof, duly created and validly existing under the Constitution and laws of the State of New York.

(b) Legal Authority. The City has the good right and lawful authority and power to execute and deliver the Agreement, to perform the obligations and covenants contained in the Agreement and to consummate the transactions contemplated by the Agreement.

(c) Due Authorization. The City has duly authorized by all necessary actions the execution and delivery of the Agreement, the performance of its obligations and covenants under the Agreement, and the consummation of the transactions contemplated by the Agreement.

(d) Validity and Enforceability. The Agreement constitutes a legal, valid and binding obligation of the City, enforceable against the City in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency, reorganization or other laws relating to the enforcement of creditors' rights generally or the availability of any particular remedy.

(e) No Conflict. The Agreement, the execution and delivery of the Agreement and the performance of the City's obligations under the Agreement (i) do not and will not in any material respect conflict with, or constitute on the part of the City a breach of or default under (a) any existing law, administrative regulation, judgment, order, decree or ruling by or to which it or its revenues, properties or operations are bound or subject or (b) any agreement or other instrument to which the City is a party or by which it or any of its revenues, properties or operations are bound or subject and (ii) will not result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the City's revenues, properties or operations.

> (1) Consents and Approvals. All consents, approvals, authorizations or orders of, or filings, registrations or declarations with any court, governmental authority, legislative body, board, agency or commission which are required for the due authorization of, which would constitute a condition precedent to or the absence of which would materially adversely affect the due performance by the City of its obligations under the Agreement or the consummation of the transactions contemplated by the Agreement have been duly obtained and are in full force and effect.

(f) No Defaults. The City is not in breach of or default under any agreement or other instrument to which the City is a party or by or to which it or its revenues, properties or operations are bound or subject, or any existing administrative regulation, judgment, order, decree, ruling or other law by or to which it or its revenues, properties or operations are bound or subject, which breach or default is material to the City's ability to perform its obligations under the Agreement; and no event has occurred and is continuing that with the passage of time or the giving of notice, or both, would constitute, under any such agreement or instrument, such a breach or default material to such transactions.

(g) No Litigation. Except as set forth in an official statement, prospectus, placement memorandum or other similar offering document prepared in connection with the issuance and sale of Bonds, no action, suit, proceeding or investigation, in equity or at law, before or by any court or governmental agency or body, is pending or, to the best knowledge of the City, threatened wherein an adverse decision, ruling or finding might impair in any material respect the City's ability to perform its obligations under the Agreement or the validity or enforceability of the Agreement.

(h) Essentiality of the Project. The Project is essential to the proper implementation of the future development and redevelopment of the Project Area.

(i) Not Indebtedness of the City. The Agreement and the obligations of the City under the Agreement do not and will not constitute indebtedness of the City under Article VIII of the Constitution of the State.

(Section 5.01)

HYDC Representations and Warranties

HYDC represents and warrants as follows:

(a) Legal Entity. HYDC is a local development corporation duly created and validly existing under the Not-For-Profit Corporation Law of the State of New York.

(b) Legal Authority. HYDC has the good right and lawful authority and power to execute and deliver the Agreement, to perform the obligations and covenants contained in the Agreement and to consummate the transactions contemplated by the Agreement.

(c) Due Authorization. HYDC has duly authorized by all necessary actions the execution and delivery of the Agreement, the performance of its obligations and covenants under the Agreement, and the consummation of the transactions contemplated by the Agreement.

(d) Validity and Enforceability. The Agreement constitutes a legal, valid and binding obligation of HYDC, enforceable against it in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency, reorganization or other laws relating to the enforcement of creditors' rights generally or the availability of any particular remedy.

(e) No Conflict. The Agreement, the execution and delivery of the Agreement and the performance of HYDC's obligations under the Agreement (i) do not and will not in any material respect conflict with, or constitute on the part of HYDC a breach of or default under (a) any existing law, administrative regulation, judgment, order, decree or ruling by or to which it or its revenues, properties or operations are bound or subject or (b) any agreement or other instrument to which HYDC is a party or by which it or any of its revenues, properties or operations are bound or subject and (ii) will not result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of HYDC's revenues, properties or operations.

(f) Consents and Approvals. All consents, approvals, authorizations or orders of, or filings, registrations or declarations with any court, governmental authority, legislative body, board, agency or commission which are required for the due authorization of, which would constitute a condition precedent to or the absence of which would materially adversely affect the due performance by HYDC of its obligations under the Agreement or the consummation of the transactions contemplated by the Agreement have been duly obtained and are in full force and effect.

(g) No Defaults. HYDC is not in breach of or default under any agreement or other instrument to which it is a party or by or to which it or its revenues, properties or operations are bound or subject, or any existing administrative regulation, judgment, order, decree, ruling or other law by or to which it or its revenues, properties or operations arc bound or subject, which breach or default is material to HYDC's ability to perform its obligations under the Agreement; and no event has occurred and is continuing that with the passage of time or the giving of notice, or both, would constitute, under any such agreement or instrument, such a breach or default material to such transactions.

(h) No Litigation. Except as set forth in an official statement, prospectus, placement memorandum or other similar offering document prepared in connection with the issuance and sale of Bonds, no action, suit, proceeding or investigation, in equity or at law, before or by any court or governmental agency or body, is pending or, to the best knowledge of HYDC, threatened wherein an adverse decision, ruling or finding might impair in any material respect HYDC's ability to perform its obligations under the Agreement or the validity or enforceability of the Agreement.

(Section 5.02)

Corporation Representations and Warranties

The Corporation represents and warrants as follows:

(a) Legal Entity. The Corporation is a local development corporation duly created and validly existing under the Not-For-Profit Corporation Law of the State of New York.

(b) Legal Authority. The Corporation has the good right and lawful authority and power to execute and deliver the Agreement, to perform the obligations and covenants contained in the Agreement and to consummate the transactions contemplated by the Agreement.

(c) Due Authorization. The Corporation has duly authorized by all necessary actions the execution and delivery of the Agreement, the performance of its obligations and covenants under the Agreement, and the consummation of the transactions contemplated by the Agreement.

(d) Validity and Enforceability. The Agreement constitutes a legal, valid and binding obligation of the Corporation, enforceable against it in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency, reorganization or other laws relating to the enforcement of creditors' rights generally or the availability of any particular remedy.

(e) No Conflict. The Agreement, the execution and delivery of the Agreement and the performance of the Corporation's obligations under the Agreement (i) do not and will not in any material respect conflict with, or constitute on the part of the Corporation a breach of or default under (a) any existing law, administrative regulation, judgment, order, decree or ruling by or to which it or its revenues, properties or operations are bound or subject or (b) any agreement or other instrument to which the Corporation is a party or by which it or any of its revenues, properties or operations are bound or subject and (ii) will not result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the Corporation's revenues, properties or operations.

(f) Consents and Approvals. All consents, approvals, authorizations or orders of, or filings, registrations or declarations with any court, governmental authority, legislative body, board, agency or commission which are required for the due authorization of, which would constitute a condition precedent to or the absence of which would materially adversely affect the due performance by the Corporation of its obligations under the Agreement or the consummation of the transactions contemplated by the Agreement have been duly obtained and are in full force and effect.

(g) No Defaults. The Corporation is not in breach of or default under any agreement or other instrument to which it is a party or by or to which it or its revenues, properties or operations are bound or subject, or any existing administrative regulation, judgment, order, decree, ruling or other law by or to which it or its revenues, properties or operations are bound or subject, which breach or default is material to the Corporation's ability to perform its obligations under the Agreement; and no event has occurred and is continuing that with the passage of time or the giving of notice, or both, would constitute, under any such agreement or instrument, such a breach or default material to such transactions.

(h) No Litigation. Except as set forth in an official statement, prospectus, placement memorandum or other similar offering document prepared in connection with the issuance and sale of Bonds, no action, suit, proceeding or investigation, in equity or at law, before or by any court or governmental agency or body, is pending or, to the best knowledge of the Corporation, threatened wherein an adverse decision, ruling or finding might impair in any material respect the Corporation's ability to perform its obligations under the Agreement or the validity or enforceability of the Agreement.

(Section 5.03)

Events of Default

An "Event of Default" or a "Default" shall mean, whenever they are used in the Agreement, any one or more of the following events:

(a) Failure by the City to pay or cause to be paid, when due, the Tax Equivalency Payments and Interest Support Payments; or

(b) Failure by any party to the Agreement to observe and perform any covenant, condition or agreement on its part to be observed or performed, which failure shall continue for a period of thirty (30) days after written notice, specifying such failure and requesting that it be remedied, is given to such party by either of the other parties to the Agreement, unless by reason of the nature of such failure the same cannot be remedied within such thirty (30) day period and within such period commenced to take appropriate actions to remedy such failure and such action is being diligently pursued; or

(c) Any representation or warranty (i) of the City or HYDC contained in the Agreement shall at any time be untrue in any material respect or (ii) of the Corporation contained in the Agreement shall have been at the time it was made untrue in any material respect; or

(d) A party to the Agreement shall generally not pay its debts as such debts become due, or shall admit in writing its inability to pay its debts generally, or shall make a general assignment for the benefit of creditors; or any proceeding shall be instituted by or against such party seeking to adjudicate it a bankrupt or insolvent, or seeking liquidation, winding up, reorganization, arrangement, adjustment, protection, relief, or composition of it or its debts under any law relating to bankruptcy, insolvency or reorganization or relief of debtors, or seeking the entry of an order for relief or the appointment of a receiver, trustee, or other similar official for it for any substantial part of its property; or such party shall authorize any of the actions set forth above in this subparagraph.

Notwithstanding anything contained in this heading to the contrary, a failure by the City to pay when due any payment required to be made under the Agreement or a failure by the City to observe and perform any covenant, condition or agreement on its part to be observed or performed under the Agreement, resulting from a failure by the City to appropriate money for such purposes, shall not constitute an Event of Default under the Agreement.

(Section 6.01)

Remedies

Whenever any event of default referred to in the provisions of the Agreement described above under the heading "Events of Default" shall have happened and be continuing, each party to the Agreement may take whatever action at law or in equity may appear necessary or desirable to collect the payments then due and thereafter to become due, or to enforce performance and observance of any obligation, agreement or covenant under the Agreement of any other party to the Agreement; **provided, however**, that (i) the Agreement may not be terminated as a consequence of such event of default and (ii) performance by a non-defaulting party shall not be excused as a consequence of such event of default.

(Section 6.02)

No Remedy Exclusive

No remedy in the Agreement conferred upon or reserved to any party to the Agreement is intended to be exclusive of any other available remedy or remedies, but each and every such remedy shall be cumulative and shall be in addition to every other remedy given under the Agreement or now or hereafter existing at law or in equity or by statute. No delay or omission to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver thereof, but any such right and power may be exercised from time to time and as often as may be deemed expedient. In order for any party to the Agreement to exercise any remedy reserved to it in the Agreement, it shall not be necessary to give any notice, other than such notice as may be expressly required in the Agreement.

(Section 6.03)

Termination of Agreement

The Agreement shall terminate on the later of August 31, 2036 or the last day of the calendar month thereafter during which no Bonds are outstanding, ***except*** that the City's obligations under the provisions of the Agreement described above under the heading "Indemnification and Limitation on Liability" shall survive termination of the Agreement.

(Section 7.01)

Environmental Quality Review and Historic Preservation

The City, HYDC and the Corporation each covenant that they shall comply with the provisions of Article 8 of the Environmental Conservation Law and any rules and regulations promulgated pursuant thereto and of the provisions of the Historic Preservation Act of 1980 of the State of New York applicable to the Project or additions thereto. As among the City, HYDC and the Corporation, the City shall assume primary responsibility or lead agency status under such laws and shall take such actions as may be required to be taken by the lead agency or agency with primary responsibility thereunder. The Corporation and HYDC will cooperate with and provide assistance to the City in the performance of its duties as lead agency, including the preparation and provision of such documents as may be reasonably requested of the Corporation or HYDC as are necessary to enable the City to comply with such laws.

(Section 7.02)

Cooperation by the City

HYDC shall prepare and submit to the Corporation, and periodically revise as necessary to reflect any changes in the times and amounts of anticipated needs for money to pay the Project Costs, a Draw Schedule. The City and HYDC shall keep the Corporation informed, by notice in writing signed by the Director and an appropriate officer of HYDC, of any unanticipated needs for money to pay the Project Costs. The City and HYDC shall give the Corporation their full cooperation and assistance in all matters relating to financing of the Project.

The City and HYDC, whenever requested by the Corporation, shall provide and certify, or cause to be provided and certified, in form satisfactory to the Corporation, such information concerning either of them, the Project, and such other matters that the Corporation reasonably considers necessary to enable it to complete and publish an official statement, prospectus, placement memorandum, offering circular or other similar document in connection with the sale of Bonds, or to enable the Corporation to make any reports that, in the opinion of counsel to the Corporation, is required by law or regulations of any governmental authority or by contract.

(Section 7.03)

Consent to Sale of Bonds

The Corporation will consult with the Director on the terms and timing of proposed sales of Bonds and the contents of all amendments or supplements to the Indenture, certificates, applications, contracts, official statements, prospectuses, placement memoranda or other similar document relating to the sale of Bonds, notices of sale, advertisements, and other documents relating to financing of the Project. The Corporation shall not enter into any contract for the sale of Bonds, either through negotiated sale or competitive bid, unless the terms and conditions of such sale have been approved by the Director.

(Section 7.04)

Amendments, Changes and Modifications

The Agreement may be amended, changed or modified in any respect provided that each amendment, change or modification is in writing signed by an Authorized Officer of the Corporation and of the City; **provided, however**, that no amendment, change or modification shall take effect unless and until (i) if the consent of Holders of Outstanding Bonds is required by the Indenture, there shall have been filed with the Trustee the written consents of the Holders of the percentages of Outstanding Bonds specified in the Indenture, (ii) if the consent of the Trustee is required by the Indenture, the Trustee shall have consented thereto and (iii) an executed copy of such amendment, change or modification, certified by an Authorized Officer of the Corporation, shall have been filed with the Trustee.

(Section 7.07)

APPENDIX C

PROJECT AREA DESCRIPTION

The description of the Project Area is as follows:

The Project Area, is defined as that area in the borough of Manhattan beginning at the intersection of 43rd Street and 8th Avenue, continuing southerly along Eighth Avenue to the intersection of 39th Street and 8th Avenue, continuing westerly along 39th Street to a point 150 feet westerly of the intersection of 39th Street and 8th Avenue, continuing from that point southerly along that line to the intersection of that line and 35th Street, continuing easterly from along 35th Street to the intersection of 8th Avenue and 35th Street, continuing southerly along 8th Avenue to the intersection of 33rd Street and 8th Avenue, continuing easterly along 33rd Street to the intersection of 7th Avenue and 33rd Street, continuing southerly along 7th Avenue to the intersection of 31st Street and 7th Avenue, continuing westerly along 31st Street to the intersection of 9th Avenue and 31st Street, continuing southerly along 9th Avenue to the intersection of 30th Street and 9th Avenue, continuing westerly along 30th Street to intersection of 11th Avenue and 30th Street, continuing southerly along 11th Avenue to the intersection of 29th Street and 11th Avenue, continuing westerly along 29th Street to the intersection 12th Avenue and 29th Street, then continuing northerly along 12th Avenue to the intersection of 34th Street and 12th Avenue, continuing easterly along 34th Street to the intersection of 11th Avenue and 34th Street, continuing northerly along 11th Avenue to the intersection of 41st Street and 11th Avenue, continuing westerly along 41st Street to the intersection of 12th Avenue and 41st Street, continuing Northerly along 12th Avenue to the intersection of 43rd Street and 12th Avenue, continuing easterly along 43rd Street to the intersection of 43rd Street and 10th Avenue, continuing southerly along 10th Avenue to the intersection of 10th Avenue and 42nd Street, continuing easterly along 42nd Street to a point 250 feet westerly from the intersection of 42nd Street and 8th Avenue, continuing northerly from that point 100 feet, then continuing westerly 50 feet, then continuing northerly from that point to the intersection of 43rd Street, continuing easterly along 43rd Street to the point of beginning.

A map showing the Project Area is shown at the front of this Official Statement just prior to the Summary Statement.

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APPENDIX D

THE CITY OF NEW YORK

This Appendix D provides certain information concerning The City of New York (the "City") in connection with the sale of the Series 2022 Bonds by the Hudson Yards Infrastructure Corporation.

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THE CITY OF NEW YORK

This Appendix consists of information which was furnished to the Corporation by The City of New York (the "City"). Although the Corporation considers the sources to be reliable, the Corporation has made no independent verification of the information presented herein and does not warrant its accuracy. The City will not be liable on the Series 2022 Bonds and the Series 2022 Bonds will not be a debt of the City. The obligation of the City to pay the amounts due under the Support and Development Agreement is subject to, and dependent upon, the making of annual appropriations by the City and the availability of moneys to fund such payments.

The factors affecting the City's financial condition described throughout this Appendix are complex and are not intended to be summarized under "SECTION I: INTRODUCTORY STATEMENT" below. The economic and financial condition of the City may be affected by various changes in laws, including tax law, financial, social, economic, political, geo-political and environmental factors, cybersecurity threats, terrorist events, hostilities or war, outbreak of infectious diseases, and other factors which could have a material effect on the City's economic and financial condition. For a discussion of additional factors affecting the City's financial condition, see below under "SECTION I: INTRODUCTORY STATEMENT," "SECTION II: RECENT FINANCIAL DEVELOPMENTS—COVID-19" and "SECTION VII: FINANCIAL PLAN—Assumptions." This Appendix should be read in its entirety.

Because the City is a large and complex entity, information about it changes on an ongoing basis. This Appendix has been updated to include certain information reflecting changes since the date of the Preliminary Official Statement. "SECTION II: RECENT FINANCIAL DEVELOPMENTS" has been updated to reflect a recent development in the proceedings related to the Public Advocate's Article 78 petition. "SECTION X: OTHER INFORMATION—Litigation" has been updated to describe recent litigation developments.

SECTION I: INTRODUCTORY STATEMENT

The purpose of this Appendix is to provide information on certain factors affecting the City and its general economic background to those considering purchasing the Series 2022 Bonds.

This Appendix contains forecasts, projections and estimates that are based on expectations and assumptions which existed at the time such forecasts, projections and estimates were prepared. In light of the important factors that may materially affect economic conditions in the City, the inclusion in this Appendix of such forecasts, projections and estimates should not be regarded as a representation by the City or its independent auditors that such forecasts, projections and estimates will occur. Such forecasts, projections and estimates are not intended as representations of fact or guarantees of results. If and when included in this Appendix, the words "expects," "forecasts," "projects," "intends," "anticipates," "estimates" and analogous expressions are intended to identify forward-looking statements and any such statements inherently are subject to a variety of risks and uncertainties that could cause actual results to differ materially from those projected. Such risks and uncertainties include, among others, general economic and business conditions, changes in political, social and economic conditions, regulatory initiatives and compliance with governmental regulations, litigation and various other events, conditions and circumstances, many of which are beyond the control of the City. These forward-looking statements speak only as of the date they were prepared. The City disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained herein to reflect any change in the City's expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based between modifications to the City's financial plan required by law.

References to website addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader's convenience. Unless specified otherwise, such websites and the information or links contained therein are not incorporated into, and are not part of, this Appendix for purposes of Rule 15c2-12 adopted by the United States Securities and Exchange Commission (the "SEC") under the Securities Exchange Act of 1934.

The City, with a population of approximately 8.8 million, is an international center of business and culture. Its non-manufacturing economy is broadly based, with the banking, securities, insurance, technology, information, publishing, fashion, design, retailing, education and health care industries accounting for a significant portion of the City's total employment earnings. Additionally, the City is a leading tourist destination. Manufacturing activity in the City is conducted primarily in apparel and printing.

For each of the 1981 through 2020 fiscal years, the City's General Fund had an operating surplus, before discretionary and other transfers, and achieved balanced operating results as reported in accordance with generally accepted accounting principles ("GAAP"), after discretionary and other transfers and except for the application of Governmental Accounting Standards Board ("GASB") Statement No. 49 ("GASB 49") and without regard to changes in certain fund balances described in GML Section 25 (as defined below), as described below. City fiscal years end on June 30 and are referred to by the calendar year in which they end. The City has been required to close substantial gaps between forecast revenues and forecast expenditures in order to maintain balanced operating results. There can be no assurance that the City will continue to maintain balanced operating results as required by New York State (the "State") law without proposed tax or other revenue increases or reductions in City services or entitlement programs, which could adversely affect the City's economic base.

As required by the New York State Financial Emergency Act For The City of New York (the "Financial Emergency Act" or the "Act") and the New York City Charter (the "City Charter"), the City prepares a four-year annual financial plan, which is reviewed and revised on a quarterly basis and which includes the City's capital, revenue and expense projections and outlines proposed gap-closing programs for years with projected budget gaps. The City's current financial plan projects budget balance in the 2021 and 2022 fiscal years in accordance with GAAP except for the application of GASB 49 and without regard to changes in certain fund balances pursuant to GML Section 25 (as defined below). In 2010, the Financial Emergency Act was amended to waive the budgetary impact of GASB 49 by enabling the City to continue to finance with bond proceeds certain pollution remediation costs. In 2019, Section 25 of the State General Municipal Law ("GML Section 25") was amended to address the application to the City of GASB Statement No. 84, which contained updated requirements for fiduciary funds of state and local governments. Pursuant to GML Section 25, the City may, without violating Expense Budget (as defined below) balance requirements, carry forward to a subsequent fiscal year unspent fund balances that are restricted as to their use by requirements of State or federal law or regulation or by requirements of private or other governmental parties. The City may also continue to carry forward unspent balances held in its Health Stabilization Fund, School Crossing Guards Health Insurance Fund and Management Benefits Fund. The City's current financial plan projects budget gaps for the 2023 through 2025 fiscal years. A pattern of current year balance and projected future year budget gaps has been consistent through the entire period since 1982, during which the City has achieved an excess of revenues over expenditures, before discretionary transfers, for each fiscal year. For information regarding the current financial plan, see "SECTION II: RECENT FINANCIAL DEVELOPMENTS" and "SECTION VII: FINANCIAL PLAN." For information regarding the June 2010 amendment of the Financial Emergency Act with respect to the application of GASB 49 to the City budget, see "SECTION III: GOVERNMENT AND FINANCIAL CONTROLS." The City is required to submit its financial plans to the New York State Financial Control Board (the "Control Board"). For further information regarding the Control Board, see "SECTION III: GOVERNMENT AND FINANCIAL CONTROLS—City Financial Management, Budgeting and Controls—*Financial Review and Oversight*."

For its normal operations, the City depends on aid from the State both to enable the City to balance its budget and to meet its cash requirements. There can be no assurance that there will not be delays or reductions in State aid to the City from amounts currently projected; that State budgets for future State fiscal years will be adopted by the April 1 statutory deadline, or interim appropriations will be enacted; or that any such reductions or delays will not have adverse effects on the City's cash flow or expenditures. In addition, the City and the State have made various assumptions with respect to federal aid. Future federal actions or inactions could have adverse effects on the City, both directly and indirectly through State aid to localities reductions that will need to be taken in the absence of additional federal aid to the State. See "SECTION II: RECENT FINANCIAL DEVELOPMENTS—2021-2025 Financial Plan."

The Mayor is responsible for preparing the City's financial plan which relates to the City and certain entities that receive funds from the City. The financial plan is modified quarterly. The City's projections set forth in the financial plan are based on various assumptions and contingencies which are uncertain and which may not materialize. Such assumptions and contingencies include the condition of the international, national, regional and local economies, the provision of State and federal aid, the impact on City revenues and expenditures of any future federal or State legislation and policies affecting the City and the cost of pension structures and healthcare. See "SECTION II: RECENT FINANCIAL DEVELOPMENTS."

Implementation of the financial plan is dependent on the City's ability to market successfully its bonds and notes. Implementation of the financial plan is also dependent upon the ability to market the securities of other financing entities including the New York City Municipal Water Finance Authority (the "Water Authority") and the New York City Transitional Finance Authority ("TFA"). See "SECTION VII: FINANCIAL PLAN—Financing Program." The success of projected public sales of City, Water Authority, TFA and other bonds and notes will be subject to prevailing market conditions. Future developments in the financial markets generally, as well as future developments concerning the City, and public discussion of such developments, may affect the market for outstanding City general obligation bonds and notes.

The City Comptroller and other agencies and public officials, from time to time, issue reports and make public statements which, among other things, state that projected revenues and expenditures may be different from those forecast in the City's financial plans. See "SECTION VII: FINANCIAL PLAN—Certain Reports."

SECTION II: RECENT FINANCIAL DEVELOPMENTS

For the 2020 fiscal year, the City's General Fund had a total surplus of $3.8 billion, before discretionary and other transfers, and achieved balanced operating results in accordance with GAAP, except for the application of GASB 49 and without regard to changes in certain fund balances pursuant to GML Section 25 as described above, after discretionary and other transfers. The 2020 fiscal year was the fortieth consecutive year that the City achieved balanced operating results when reported in accordance with GAAP, except for the application of GASB 49 and without regard to changes in certain fund balances pursuant to GML Section 25 as described above.

COVID-19

The City has been severely affected by the coronavirus disease, referred to herein as "COVID-19." While the Governor ended the state of emergency in the State on June 24, 2021, the state of emergency in the City remains in effect. The City experienced a surge in cases and deaths during the spring of 2020. Although cases and deaths declined during the late spring and summer of 2020, they increased again in the fall and winter of 2020-2021. Cases and deaths in the City declined significantly during the spring of 2021, as vaccinations became widely available. Commencing at the end of June 2021, cases in the City increased, coinciding with the spread of a more infectious virus variant.

The sudden reduction in business activity, travel and tourism resulting from the pandemic, and the government's response to it, had a devastating impact on the retail, cultural, hospitality and the entertainment sectors. As a result of the COVID-19 pandemic, unemployment rates throughout the City increased substantially.

As of September 26, 2021, the City reported a cumulative total of 1,078,148 COVID-19 cases and 34,186 deaths, including those that were confirmed and those that were probably related to COVID-19, representing approximately 2.5% of COVID-19 cases in the U.S., 5.0% of deaths in the U.S., and 0.7% of deaths globally, with communities of color suffering disproportionately. COVID-19 cases, hospitalizations and death rates may fluctuate in the future. There can be no assurance that COVID-19 cases, hospitalizations and deaths in the City will not increase above current levels or that business closures and other restrictions will not be re-imposed in the future.

Certain real estate sectors have sustained losses as a result of the business distress caused by COVID-19. Higher unemployment and increased numbers of employees working from home due to the pandemic have stressed the City's office market. The pandemic has also reduced income for retail stores and hotels. Residential rent delinquencies significantly higher than average have been reported. Property tax revenues are projected to decline in fiscal year 2022, before resuming modest growth. The longer-term impact on commercial real estate will depend on decisions of major office tenants regarding density, remote work and relocation of operations out of the City.

Projected property tax revenues declined from $30.95 billion in fiscal year 2021 to $29.28 billion in fiscal year 2022. The decline in fiscal year 2022 was the result in part of a decrease in commercial property (tax class four) market values, which dropped by approximately 17 percent in the fiscal year 2022 property tax roll. This decrease was the result of significant declines in market valuations for office, hotel, and retail properties. The market valuation for fiscal year 2023 has not yet been determined by the City Department of Finance, but there remains risk that values will remain under stress due to the continued impact of the COVID-19 pandemic. Specific risks remain in the office and hotel sectors.

In May 2021, the Governor, along with the governors of New Jersey and Connecticut eased COVID-19 pandemic restrictions on each state's businesses, venues and gatherings, replacing them with limitations only by space available to maintain the required six feet of social distancing. Additionally, in May 2021, the City subway system returned to 24-hour service.

In June 2021, the Governor announced a further relaxation of COVID-19 limits, lifting restrictions on social distancing, cleaning and health screening for many businesses, including retail, food services, offices, gyms, amusement and family entertainment establishments, hair salons, barber shops, and personal care services. The State's health guidelines remain in effect for large indoor events, pre-K to grade 12 schools, public transit, health care settings and congregate facilities.

In response to rising cases of COVID-19 in the City, the Mayor announced a requirement that, as of September 13, 2021, all City employees submit proof of vaccination or complete weekly testing. Additionally, the Mayor announced a requirement that, effective August 16, 2021, all patrons of indoor dining establishments, gyms, and indoor entertainment venues show proof of vaccination to gain entry. Numerous other government entities and private companies have also announced vaccination and testing requirements in response to the increase in COVID-19 infections.

On September 13, 2021, public schools began their 2021-2022 school year, with in person teaching. Simultaneously, the Mayor required that all Mayoral agency employees return to work in person on a full-time basis.

The City continues to experience significant challenges due to the COVID-19 pandemic. The ultimate impact of the COVID-19 pandemic on the City's economy and the amount and timing of collections of City revenues cannot be determined at this time. Additional changes in employment and earnings subject to personal income tax, as well as reductions in economic activity subject to the sales tax, may occur, including, but not limited to, reductions in personal income tax revenues due to changes in residency status resulting from remote work outside the City and other employment-related changes. No assurance can be provided that the COVID-19 pandemic and resulting economic disruption will not result in revenues to the City that are lower than projected herein.

2021-2025 Financial Plan

On June 30, 2020, the City submitted to the Control Board the financial plan for the 2021 through 2024 fiscal years (the "June 2020 Financial Plan"), which was consistent with the City's capital and expense budgets as adopted for the 2020 fiscal year. Subsequently, the June 2020 Financial Plan was modified during the 2021 fiscal year. On June 30, 2021, the City submitted to the Control Board the financial plan for the 2022 through 2025 fiscal years, which was consistent with the City's capital and expense budgets as adopted for the 2022 fiscal year, and a further modification to the June 2020 Financial Plan with respect to the 2021 fiscal year (together, the "Financial Plan").

The Financial Plan projects revenues and expenses for the 2021 and 2022 fiscal years balanced in accordance with GAAP, except for the application of GASB 49 and without regard to changes in certain fund balances pursuant to GML Section 25, and projects gaps of approximately \$4.05 billion, \$3.84 billion and \$4.07 billion in fiscal years 2023 through 2025, respectively. The June 2020 Financial Plan had projected revenues and expenses for the 2021 fiscal year balanced in accordance with GAAP, except for the application of GASB 49 and without regard to changes in certain fund balances pursuant to GML Section 25, and had projected gaps of approximately \$4.18 billion, \$3.04 billion and \$3.18 billion in fiscal years 2022 through 2024, respectively.

The Financial Plan reflects, since the June 2020 Financial Plan, an increase in projected net revenues of \$5.89 billion in fiscal year 2021 and decreases in projected net revenues of \$1.42 billion, \$1.19 billion and \$351 million in fiscal years 2022 through 2024, respectively. Changes in projected revenues include: (i) an increase in real property tax revenues of \$263 million in fiscal year 2021 and decreases in real property tax revenues of \$2.60 billion, \$2.71 billion and \$2.65 billion in fiscal years 2022 through 2024, respectively; (ii) increases in personal income tax revenues of \$3.31 billion, \$852 million, \$999 million and \$1.01 billion in fiscal years 2021 through 2024, respectively; (iii) increases in business tax revenues of \$1.97 billion, \$780 million, \$755 million and \$942 million in fiscal years 2021 through 2024, respectively; (iv) decreases in sales tax revenues of \$280 million, \$666 million and \$328 million in fiscal years 2021 through 2023, respectively, and an increase in sales tax revenues of \$76 million in fiscal year 2024; (v) increases in real estate transaction tax revenues of \$450 million, \$359 million, \$313 million and \$352 million in fiscal years 2021 through 2024, respectively; (vi) decreases in hotel tax revenues of \$193 million, \$345 million, \$297 million and \$139 million in fiscal years 2021 through 2024, respectively; (vii) decreases in State School Tax Relief Program (the "STAR Program") revenues of \$8 million in fiscal year 2021 and \$7 million in each of fiscal years 2022 through 2024; and (viii) increases in other tax revenues of \$109 million and \$3 million in fiscal years 2021 and 2023, respectively, and decreases in other tax revenues of \$7 million and \$12 million in fiscal years 2022 and 2024, respectively. Changes in projected revenues also include (i) increases in tax audit revenues of \$250 million and \$200 million in fiscal years 2021 and 2022, respectively; (ii) an increase of \$212 million representing a debt service reimbursement payment from New York City Health and Hospitals ("NYCHH") in fiscal year 2021; (iii) increases in revenues included in the Citywide Savings Program (described below) of \$20 million, \$45 million, \$60 million and \$60 million in fiscal years 2021 through 2024, respectively; and (iv) net decreases in non-tax revenues of \$207 million and $32 million in fiscal years 2021 and 2022, respectively, and net increases in non-tax revenues of $30 million and $20 million in fiscal years 2023 and 2024, respectively.

The Financial Plan also reflects, since the June 2020 Financial Plan, decreases in projected net expenditures of $219 million and $181 million in fiscal years 2021 and 2023, respectively, and increases in projected net expenditures of $510 million and $304 million in fiscal years 2022 and 2024, respectively. Changes in projected expenditures include: (i) increases in agency expenses of $929 million, $2.42 billion, $671 million and $723 million in fiscal years 2021 through 2024, respectively; (ii) decreases in expenses included in the Citywide Savings Program of $623 million, $1.08 billion, $657 million and $680 million in fiscal years 2021 through 2024, respectively; (iii) decreases in debt service of $1.01 billion, $950 million, $294 million and $329 million in fiscal years 2021 through 2024, respectively, primarily as a result of lower interest rates and debt refinancing; (iv) a net increase of $165 million in fiscal year 2021 and a decrease of $210 million in fiscal year 2022 in reimbursement of Medicaid expenses; (v) an increase in expenses associated with City Council initiatives of $516 million in fiscal year 2022; (vi) decreases in pension contributions of $467 million and $446 million in fiscal years 2021 and 2022, respectively, and increases in pension contributions of $95 million and $590 million in fiscal years 2023 and 2024, respectively, primarily as a result of the net impact of changes in assumptions and methods proposed by the City Actuary, whereby gains from investments (fiscal year 2019 and prior) are recognized immediately instead of over a six year period; (vii) decreases in the general reserve of $80 million and $700 million in fiscal years 2021 and 2022, respectively; (viii) a decrease in the capital stabilization reserve of $250 million in fiscal year 2022; (ix) the rescindment of the previously planned drawdown of $1.6 billion from the Retiree Health Benefits Trust in fiscal year 2021; (x) a decrease of $255 million in fiscal year 2021 reflecting reimbursement of expenditures with federal aid; (xi) a decrease in the reserve for collective bargaining of $60 million in fiscal year 2021 and increases in the reserve for collective bargaining of $706 million and $4 million in fiscal years 2022 and 2023, respectively; and (xii) a decrease of $421 million in fiscal year 2021 reflecting a re-estimate of prior years' expenses and receivables. For more information of changes to pension assumptions, see "SECTION IX: PENSION SYSTEMS AND OPEB."

In addition, the Financial Plan reflects an increase in expenditures of $500 million in fiscal year 2022 reflecting a deposit to the Revenue Stabilization Fund. The Revenue Stabilization Fund was established in fiscal year 2021 with the deposit of prior year surpluses of $493 million. The Revenue Stabilization Fund acts as an expense reserve funded with prior year surpluses and acts as a rainy day fund. No more than fifty percent of the total amount of such fund may be withdrawn in any fiscal year unless the Mayor has certified that there is a compelling fiscal need.

The Financial Plan reflects, since the June 2020 Financial Plan, provision for $6.11 billion for the prepayment in fiscal year 2021 of fiscal year 2022 expenses and an expenditure reduction of $6.11 billion in fiscal year 2022.

The Financial Plan reflects total federal aid of $16.66 billion, $13.70 billion, $9.24 billion, $8.60 billion, and $7.91 billion in fiscal years 2021 through 2025, respectively, including $8.25 billion of federal aid in fiscal year 2021 relating to the outbreak of COVID-19, all of which has been authorized.

The Financial Plan reflects $41 million in fiscal year 2021 and $53 million in fiscal year 2022 for the cost of the Fair Fares Program, which provides reduced fares to low income subway and bus riders, but does not reflect funding beyond fiscal year 2022. It is expected that funding sources for the continuation of the program will be identified in coordination with the City Council.

The Financial Plan reflects the intercept by the State of $250 million and $150 million in sales taxes in fiscal years 2021 and 2022, respectively, otherwise payable to the City, to provide assistance to distressed hospitals and nursing homes.

The Financial Plan assumes the continued sale of real property tax liens through the lien sale program in each fiscal year, with the exception of fiscal year 2021, during which no lien sale occurred. The Financial Plan reflects revenues in fiscal year 2021 from the lien sale program of $16 million from trusts established in connection with prior lien sales, along with a deferral of $96 million in lien sale revenue until fiscal year 2022. The Financial Plan further assumes that, due to COVID-19, real property tax delinquencies as a percentage of property tax levy will change from 1.8% in fiscal year 2020 to 2.6%, 2.5%, 1.6%, 1.5 % and 1.4% in fiscal years 2021 through 2025, respectively. The authorization to sell real property tax liens expires on March 1, 2022. In the event that the program is not re-authorized beyond such date, real property tax delinquencies could increase beyond the rates assumed in the Financial Plan. Each

1% increase in delinquencies would reduce property tax revenues by $318 million in fiscal year 2022, $323 million in fiscal year 2023, $328 million in fiscal year 2024 and $332 million in fiscal year 2025. For further information, see "SECTION IV: SOURCES OF CITY REVENUES—Collection of the Real Estate Tax."

The Financial Plan assumes $1 billion of recurring labor savings in each fiscal year. In fiscal year 2021, a portion of such savings was funded with federal aid and the remainder was deferred to fiscal year 2022. The Financial Plan reflects funding in fiscal year 2022 for the deferred amount and reflects the application of federal aid to labor savings in fiscal year 2022. Labor savings in fiscal years 2023 and thereafter have yet to be identified. The Financial Plan reflects no wage increases for two years following the expiration of the current labor contracts covering the 2017-2021 round of collective bargaining, followed by annual 1% wage increases. Each annual 1% wage increase will cost approximately $460 million per fiscal year. For further information, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—1. PERSONAL SERVICE COSTS."

The Financial Plan does not reflect the potential impact on the City of a State initiative to redesign its Medicaid program to achieve $2.5 billion in savings Statewide, the cost of which is unknown at this time.

The Financial Plan does not include funding to cover a reduction of approximately $40 million in State aid for transportation over fiscal years 2021 and 2022. The Financial Plan also does not reflect the impact, in of a State requirement that the City increase its share of funding of the MTA's net paratransit operating deficit from 33% to 50%. The Financial Plan reflects $175 million in each of fiscal years 2022 through 2025 to cover the City's contributions for paratransit services compared to MTA's estimates of such costs of $239 million, $278 million, $295 million and $315 million in such fiscal years. The Financial Plan further does not reflect funding to cover projected increases in the annual operating deficit of the MTA Bus Company, which the City is obligated to fund. The Financial Plan reflects $484 million in fiscal year 2022 and $442 million in each of fiscal years 2023 through 2025, compared to MTA's estimate of such costs of $715 million, $676 million, $675 million and $690 million in fiscal years 2022 through 2025, respectively. For further information on New York City Transit, see "SECTION VII: FINANCIAL PLAN—Assumptions—*New York City Transit*."

The Financial Plan does not reflect future increases in the charter school per-pupil tuition rate, which, if not offset by changes to State education aid to the City that occur each year during the State budget process, are preliminarily estimated to cost the City $282 million in fiscal year 2023, $433 million in fiscal year 2024 and $625 million in fiscal year 2025. These figures are based on preliminary data. Final figures that would determine the actual costs to the City will not be finalized until the time of the State budget process for the applicable year.

State legislation provides for congestion tolling for vehicles entering a designated congestion zone in Manhattan below 60th Street, the revenues from which will be directed to the MTA for transit improvements. Details of the plan, including pricing and the start date, have yet to be determined. The start date could be delayed until 2023.

The Financial Plan assumes that the City's direct costs (including costs of NYCHH and NYCHA) as a result of Superstorm Sandy ("Sandy") will largely be paid from non-City sources, primarily the federal government. In addition to such direct costs, the City is delivering Sandy-related disaster recovery assistance services, benefiting impacted communities, businesses, homeowners and renters ("Community Costs"). The City anticipates that funding for Community Costs will be primarily reimbursed with federal funds. However, the City is responsible for $134 million of such Community Costs, which are reflected the Financial Plan. The City may also be responsible for up to approximately $150 million of additional Community Costs, which are not currently reflected in the Financial Plan. For further information, see "SECTION X: OTHER INFORMATION—Environmental Matters."

On September 1, 2021, Hurricane Ida hit the Mid-Atlantic East Coast as a post-tropical storm ("Ida"), and caused severe flooding in parts of the City, including inland areas. In response, on September 3, 2021, the Mayor created the Extreme Weather Response Taskforce to draft a report containing recommendations to better address future extreme weather events in the City. The taskforce released its report on September 27, 2021. For further information on Ida, the taskforce and its report, see "SECTION X: OTHER INFORMATION—Environmental Matters."

On January 31, 2019, New York City Housing Authority ("NYCHA"), the City and the U.S. Department of Housing and Urban Development ("HUD") entered into an agreement relating to lead-based paint and other health and safety concerns in NYCHA's properties. Pursuant to this agreement, a federal monitor has been appointed to oversee NYCHA's compliance with the terms of the agreement and federal regulations, and the City has committed $1.2 billion in additional capital funds in the 2021-2024 Capital Commitment Plan (defined herein), with an additional $1 billion in City capital funds reflected in the remaining years of the Ten-Year Capital Strategy for fiscal years 2020 through 2029. NYCHA has announced that it may be out of compliance with federal requirements beyond the regulations concerning lead-based paint and other health and safety concerns that were the subject of such agreement. NYCHA's 2017 Physical Needs Assessment estimated its projected capital costs at approximately $32 billion over the next five years. In January 2020, NYCHA's Chairman and Chief Executive Officer stated that such costs were $40 billion. In July 2020, NYCHA announced a plan to carry out capital improvements to approximately 110,000 public housing units through a federal disposition process that would utilize a newly created public entity. The plan seeks to generate funds by borrowing against pooled federal Tenant Protection Vouchers, which are federal rental vouchers with a higher value than the Section 9 operating subsidy that NYCHA currently receives. The plan does not explicitly require City investment or directly impact the Financial Plan. Legislation necessary to implement the plan was not enacted. However, NYCHA continues to pursue such legislation with respect to improvements to 25,000 public housing units.

On May 31, 2018, the Mayor and the Speaker of the City Council established the New York City Advisory Commission on Property Tax Reform (the "Commission") to consider changes to the City's property taxation system, without reducing property tax revenues to the City. On January 31, 2020, the Commission released its preliminary report and recommendations which, among other things, would align the taxable value of certain properties more closely with market value. In June 2021, the Commission held its first public hearings to solicit public input on its preliminary report. The implementation of a new property tax system would require State legislation.

Section 1518 of the City Charter provides that tax warrants authorizing the imposition of property taxes by the City are to be signed by the Public Advocate and counter-signed by the City Clerk. On July 1, 2020, Public Advocate Jumaane Williams announced he would not sign tax warrants for City property taxes for fiscal year 2021 for policy reasons related to the City budget but unrelated to the imposition of property taxes and, to date, has not signed the tax warrants. The City issued bills and collected payments for property taxes due in fiscal year 2021. On March 8, 2021, the Public Advocate filed an Article 78 petition in New York State Supreme Court in New York County asking the Court to issue an order prohibiting the City from filing borough property tax assessment rolls and warrants or issuing adjusted property tax bills and quarterly statements unless the related tax warrants have been signed by the Public Advocate and countersigned by the City Clerk. The City maintains that the City Charter requirement that the Public Advocate sign the tax warrants is ministerial in nature and that the Public Advocate does not have the power to delay, hinder, or prevent the City's duly authorized and required collection of property taxes. The City has cross-moved to dismiss the Public Advocate's petition and oral argument was held on that petition on October 13, 2021 and the judge reserved decision. On July 21, 2021, the Public Advocate announced that he has not decided whether he will sign tax warrants for the collection of property taxes for fiscal year 2022. The City has issued, and will continue to issue, property tax bills as regularly scheduled and intends to collect all payments for property taxes due in fiscal year 2022.

The City's Ten-Year Capital Strategy (as defined below) reflects approximately $1.6 billion for reconstruction work on the Brooklyn Queens Expressway between Sands Street and Atlantic Avenue, including the Triple Cantilever. On August 4, 2021, the Mayor announced a plan for a series of improvements to the Triple Cantilever structure, along with certain changes in use, which would replace the larger reconstruction project and are intended to extend the useful life of the existing asset by approximately twenty years. The cost and scope of such improvements are uncertain at this time, but are estimated to be between $500 million and $750 million. The City will continue to study what improvements will be required to implemented beyond such twenty year period.

From time to time, the City Comptroller, the Control Board staff, the Office of the State Deputy Comptroller for the City of New York ("OSDC"), the Independent Budget Office ("IBO") and others issue reports and make public statements regarding the City's financial condition, commenting on, among other matters, the City's financial plans, projected revenues and expenditures and actions by the City to eliminate projected operating deficits. It is reasonable to expect that reports and statements will continue to be issued and may contain different perspectives on the City's budget and economy and may engender public comment. For information on reports issued on the Financial Plan by the City Comptroller and others reviewing, commenting on and identifying various risks therein, see "SECTION VII: FINANCIAL PLAN—Certain Reports."

The State

The State ended its 2021 fiscal year with a balance of $9.2 billion in its general fund (the "General Fund"), an increase of $217 million from fiscal year 2020. The State Legislature completed action on the $112.2 billion State 2022 Budget for its 2022 fiscal year on April 6, 2021 (the "State 2022 Budget"). The State 2022 Budget provided for balanced operations on a cash basis in the General Fund, as required by law. The State Annual Information Statement, dated June 8, 2021 (the "Annual Information Statement"), reflects the State 2022 Budget and the State's Financial Plan for fiscal years 2022-2025 (the "State Financial Plan"). In September 2021, the State released the first Quarterly Update to the State Financial Plan (the "First Quarterly Update") and expects to release an update to the Annual Information Statement reflecting the First Quarterly Update in October 2021. In the First Quarterly Update, the State projects a balanced budget, on a cash basis, in fiscal years 2022 and 2023 and budget gaps of $247 million and $1.2 billion in fiscal years 2024 and 2025, respectively. The State Financial Plan had projected a balanced budget, on a cash basis, in fiscal years 2022 and 2023 and budget gaps of $1.4 billion and $2.0 billion in fiscal years 2024 and 2025, respectively. The State's projections for fiscal year 2023 and thereafter reflect an assumption that the Governor will continue to propose, and the State Legislature will continue to enact, balanced budgets in future years that limit annual growth in State operating funds to no greater than 2%.

The State Financial Plan noted that the State's gap-closing plan included in the State's Financial Plan for fiscal years 2021-2024, as updated throughout the State 2021 fiscal year (the "State 2021 Financial Plan"), included $8.2 billion in local aid reductions that were to be executed during State fiscal year 2021. Federal actions that reduced Medicaid costs and established a fund to assist states and local governments in funding COVID-19 expenses and improved tax receipt collections alleviated the need for most of the local aid reductions that were expected to be executed. The First Quarterly Update notes that with certain exceptions, these withheld amounts were released for payment in March 2021.

The Annual Information Statement and the First Quarterly Update reflect assumptions at the respective times of publication concerning the financial impact of the COVID-19 pandemic. The First Quarterly Update states that State revenue sources, including personal income, consumption, and business tax collections, may be adversely affected by the long-term impact of COVID-19 on a range of activities and behaviors, including commuting patterns, remote working and education, business activity, social gatherings, tourism, public transportation and aviation, and it is not possible to assess or forecast the effects of such changes, if any, at the respective times of publication.

The Annual Information Statement and the First Quarterly Update identify a number of additional risks inherent in the implementation of the State 2022 Budget and the State Financial Plan. Such risks include, but are not limited to, the performance of the national and State economies, and the collection of economically sensitive tax receipts in the amounts projected; national and international events; ongoing financial risks in the Euro-zone; changes in consumer confidence, oil supplies and oil prices; cybersecurity threats; major terrorist events, hostilities or war; climate change and extreme weather events; federal statutory and regulatory changes concerning financial sector activities; changes to federal programs; changes concerning financial sector bonus payouts and any future legislation governing the structure of compensation; shifts in monetary policy affecting interest rates and the financial markets; credit rating agency actions; the impact of financial and real estate market developments on bonus income and capital gains realizations; tech industry developments and employment; the effect of household debt on consumer spending and State tax collections; the outcome of litigation and other claims affecting the State; wage and benefit increases for State employees that exceed projected annual costs; changes in the size of the State's workforce; the realization of the projected rate of return for pension fund assets and current assumptions with respect to wages for State employees affecting the State's required pension fund contributions; the willingness and ability of the federal government to provide the aid expected in the State Financial Plan; the ability of the State to implement cost reduction initiatives and the success with which the State controls expenditures; and the ability of the State and public authorities to issue securities successfully in the public credit markets.

SECTION III: GOVERNMENT AND FINANCIAL CONTROLS

Structure of City Government

The City of New York is divided into five counties, which correspond to its five boroughs. The City, however, is the only unit of local government within its territorial jurisdiction with authority to levy and collect taxes, and is the unit of local government primarily responsible for service delivery. Responsibility for governing the City is currently vested by the City Charter in the Mayor, the City Comptroller, the City Council, the Public Advocate and the Borough Presidents.

— *The Mayor*. Bill de Blasio, the Mayor of the City, took office on January 1, 2014 and was elected to a second term commencing on January 1, 2018. The Mayor is elected in a general election for a four-year term and is the chief executive officer of the City. The Mayor has the power to appoint the commissioners of the City's various departments. The Mayor is responsible for preparing and administering the City's annual Expense and Capital Budgets (as defined below) and financial plan. The Mayor has the power to veto local laws enacted by the City Council, but such a veto may be overridden by a two-thirds vote of the City Council. The Mayor has powers and responsibilities relating to land use and City contracts and all residual powers of the City government not otherwise delegated by law to some other public official or body. The Mayor is also a member of the Control Board.

— *The City Comptroller*. Scott M. Stringer, the Comptroller of the City, took office on January 1, 2014 and was elected to a second term commencing on January 1, 2018. The City Comptroller is elected in a general election for a four-year term and is the chief fiscal officer of the City. The City Comptroller has extensive investigative and audit powers and responsibilities which include keeping the financial books and records of the City. The City Comptroller's audit responsibilities include a program of performance audits of City agencies in connection with the City's management, planning and control of operations. In addition, the City Comptroller is required to evaluate the Mayor's budget, including the assumptions and methodology used in the budget. The Office of the City Comptroller is responsible under the City Charter and pursuant to State law and City investment guidelines for managing and investing City funds for operating and capital purposes. The City Comptroller is also a member of the Control Board and is a trustee, the custodian and the delegated investment advisor of the City's five pension systems.

— *The City Council*. The City Council is the legislative body of the City and consists of the Public Advocate and 51 members elected for four-year terms who represent various geographic districts of the City. Under the City Charter, the City Council must annually adopt a resolution fixing the amount of the real estate tax and adopt the City's annual Expense Budget and Capital Budget. The City Council does not, however, have the power to enact local laws imposing other taxes, unless such taxes have been authorized by State legislation. The City Council has powers and responsibilities relating to franchises and land use and as provided by State law.

— *The Public Advocate*. Jumaane Williams was elected as Public Advocate in a special election and took office in March 2019 to hold office until December 31, 2019. Through a second special election held in November 2019, Mr. Williams was elected to complete the remainder of a four year term which began on January 1, 2018. The Public Advocate is elected in a general election for a four-year term. The Public Advocate is first in the line of succession to the Mayor in the event of the disability of the Mayor or a vacancy in the office, pending an election to fill the vacancy. The Public Advocate appoints a member of the City Planning Commission and has various responsibilities relating to, among other things, monitoring the activities of City agencies, the investigation and resolution of certain complaints made by members of the public concerning City agencies and ensuring appropriate public access to government information and meetings.

— *The Borough Presidents*. Each of the City's five boroughs elects a Borough President who serves for a four-year term concurrent with other City elected officials. The Borough Presidents consult with the Mayor in the preparation of the City's annual Expense Budget and Capital Budget. Five percent of discretionary increases proposed by the Mayor in the Expense Budget and, with certain exceptions, five percent of the appropriations supported by funds over which the City has substantial discretion proposed by the Mayor in the Capital

Budget, must be based on appropriations proposed by the Borough Presidents. Each Borough President also appoints one member to the Panel for Educational Policy (as described below) and has various responsibilities relating to, among other things, reviewing and making recommendations regarding applications for the use, development or improvement of land located within the borough, monitoring and making recommendations regarding the performance of contracts providing for the delivery of services in the borough and overseeing the coordination of a borough-wide public service complaint program.

On November 2, 2010, the City Charter was amended to provide that no person shall be eligible to be elected to or serve in the office of Mayor, Public Advocate, City Comptroller, Borough President or Council member if that person has previously held such office for two or more consecutive full terms, unless one full term or more has elapsed since that person last held such office. Such term limit applies only to officials first elected to office on or after November 2, 2010.

City Financial Management, Budgeting and Controls

The Mayor is responsible under the City Charter for preparing the City's annual expense and capital budgets (as adopted, the "Expense Budget" and the "Capital Budget," respectively, and collectively, the "Budgets") and for submitting the Budgets to the City Council for its review and adoption. The Expense Budget covers the City's annual operating expenditures for municipal services, while the Capital Budget covers expenditures for capital projects, as defined in the City Charter. Operations under the Expense Budget must reflect the aggregate expenditure limitations contained in financial plans.

The City Council is responsible for adopting the Expense Budget and the Capital Budget. Pursuant to the City Charter, the City Council may increase, decrease, add or omit specific units of appropriation in the Budgets submitted by the Mayor and add, omit or change any terms or conditions related to such appropriations. The City Council is also responsible, pursuant to the City Charter, for approving modifications to the Expense Budget and adopting amendments to the Capital Budget beyond certain latitudes allowed to the Mayor under the City Charter. However, the Mayor has the power to veto any increase or addition to the Budgets or any change in any term or condition of the Budgets approved by the City Council, which veto is subject to an override by a two-thirds vote of the City Council, and the Mayor has the power to implement expenditure reductions subsequent to adoption of the Expense Budget in order to maintain a balanced budget. In addition, the Mayor has the power to determine the non-property tax revenue forecast on which the City Council must rely in setting the property tax rates for adopting a balanced City budget.

Office of Management and Budget

The City's Office of Management and Budget ("OMB"), with a staff of approximately 400, is the Mayor's primary advisory group on fiscal issues and is also responsible for the preparation, monitoring and control of the City's Budgets and four-year financial plans which encompass the City's revenue, expenditure, cash flow and capital projections. In addition, OMB is responsible for the preparation of a Ten-Year Capital Strategy.

State law and the City Charter require the City to maintain its Expense Budget balanced when reported in accordance with GAAP with the exception of GASB 49 and without regard to changes in certain fund balances pursuant to GML Section 25. All Covered Organizations (as defined below) are also required to maintain budgets that are balanced when reported in accordance with GAAP. From time to time certain Covered Organizations have had budgets providing for operations on a cash basis but not balanced under GAAP.

To assist in achieving the goals of the financial plan and budget, the City reviews its financial plan periodically and, if necessary, prepares modifications to incorporate actual results and revisions to projections and assumptions to reflect current information. The City's revenue projections are continually reviewed and periodically updated with the benefit of discussions with a panel of private economists analyzing the effects of changes in economic indicators on City revenues and information from various economic forecasting services.

Office of the Comptroller

The City Comptroller is the City's chief fiscal officer and is responsible under the City Charter for reviewing and commenting on the City's Budgets and financial plans, including the assumptions and methodologies used in their preparation. The City Comptroller, as an independently elected public official, is required to report annually to the City Council on the state of the City's economy and finances and periodically to the Mayor and the City Council on the financial condition of the City and to make recommendations, comments and criticisms on the operations, fiscal policies and financial transactions of the City. Such reports, among other things, have differed with certain of the economic, revenue and expenditure assumptions and projections in the City's financial plans and Budgets. See "SECTION VII: FINANCIAL PLAN—Certain Reports."

The Office of the City Comptroller establishes the City's accounting and financial reporting practices and internal control procedures. The City Comptroller is also responsible for the preparation of the City's annual financial statements, which, since 1978, have been required to be reported in accordance with GAAP.

The Comprehensive Annual Financial Report of the Comptroller (the "Annual Report") for the 2020 fiscal year, which includes, among other things, the City's financial statements for the 2020 and 2019 fiscal years, was issued on October 30, 2020. The Annual Report for the 2020 fiscal year received the Government Finance Officers Association award of the Certificate of Achievement for Excellence in Financial Reporting, the forty-first consecutive year the Annual Report has won such award.

All contracts for goods and services requiring the expenditure of City monies must be registered with the City Comptroller. No contract can be registered unless funds for its payment have been appropriated by the City Council or otherwise authorized. The City Comptroller also prepares vouchers for payments for such goods and services and cannot prepare a voucher unless funds are available in the Budgets for its payment.

The City Comptroller is also required by the City Charter to audit all City agencies and has the power to audit all City contracts. The Office of the Comptroller conducts both financial and management audits and has the power to investigate corruption in connection with City contracts or contractors.

The Mayor and City Comptroller are responsible for the issuance of City indebtedness. The City Comptroller oversees the payment of such indebtedness and is responsible for the custody of certain sinking funds.

Financial Reporting and Control Systems

Since 1978, the City's financial statements have been required to be audited by independent certified public accountants and to be presented in accordance with GAAP. The City has completed forty consecutive fiscal years with a General Fund surplus when reported in accordance with then applicable GAAP, except with regard to the application of GASB 49 and without regard to changes in certain fund balances pursuant to GML Section 25 as described herein.

Both OMB and the Office of the Comptroller utilize a financial management system which provides comprehensive current and historical information regarding the City's financial condition. This information, which is independently evaluated by each office, provides a basis for City action required to maintain a balanced budget and continued financial stability.

The City's operating results and forecasts are analyzed, reviewed and reported on by each of OMB and the Office of the Comptroller as part of the City's overall system of internal control. Internal control systems are reviewed regularly, and the City Comptroller requires an annual report on internal control and accountability from each agency. Comprehensive service level and productivity targets are formulated and monitored for each agency by the Mayor's Office of Operations and reported publicly in a semiannual management report.

The City has developed and utilizes a cash forecasting system which forecasts its daily cash balances. This enables the City to predict its short-term borrowing needs and maximize its return on the investment of available cash balances. Monthly statements of operating revenues and expenditures, capital revenues and expenditures and cash flow are reported after each month's end, and major variances from the financial plan are identified and explained.

City funds held for operating and capital purposes are managed by the Office of the City Comptroller, with specific guidelines as to investment vehicles. The City invests primarily in obligations of the United States Government, its agencies and instrumentalities, high grade commercial paper and repurchase agreements with primary dealers. The repurchase agreements are collateralized by United States Government treasuries, agencies and instrumentalities, held by the City's custodian bank and marked to market daily.

More than 97% of the aggregate assets of the City's five defined benefit pension systems are managed by outside managers, supervised by the Office of the City Comptroller, and the remainder is held in cash or managed by the City Comptroller. Allocations of investment assets are determined by each fund's board of trustees. As of July 31, 2021, aggregate pension assets were allocated approximately as follows: 30% U.S. equity; 27% fixed income; 19% international equity; 8% alternative credit; 7% private equity; 5% private real estate; 1% hedge funds; 1% infrastructure investments; and 1% cash (percentages may not add to 100% due to rounding).

Financial Emergency Act and City Charter

The Financial Emergency Act requires that the City submit to the Control Board, at least 50 days prior to the beginning of each fiscal year (or on such other date as the Control Board may approve), a financial plan for the City and certain State governmental agencies, public authorities or public benefit corporations which receive or may receive monies from the City directly, indirectly or contingently (the "Covered Organizations") covering the four-year period beginning with such fiscal year. The New York City Transit Authority and the Manhattan and Bronx Surface Transit Operating Authority (collectively, "New York City Transit" or "NYCT" or "Transit Authority"), NYCHH and NYCHA are examples of Covered Organizations. The Act requires that the City's four-year financial plans conform to a number of standards. Subject to certain conditions, the Financial Emergency Act and the City Charter require the City to prepare and balance its budget covering all expenditures other than capital items so that the results of such budget will not show a deficit when reported in accordance with GAAP. Provision must be made, among other things, for the payment in full of the debt service on all City securities. The budget and operations of the City and the Covered Organizations must be in conformance with the financial plan then in effect.

From 1975 to June 30, 1986, the City was subject to a Control Period, as defined in the Act, which was terminated upon the satisfaction of the statutory conditions for termination, including the termination of all federal guarantees of obligations of the City, a determination by the Control Board that the City had maintained a balanced budget in accordance with GAAP for each of the three immediately preceding fiscal years and a certification by the State and City Comptrollers that sales of securities by or for the benefit of the City satisfied its capital and seasonal financing requirements in the public credit markets and were expected to satisfy such requirements in the 1987 fiscal year. With the termination of the Control Period, certain Control Board powers were suspended including, among others, its power to approve or disapprove certain contracts (including collective bargaining agreements), long-term and short-term borrowings, and the four-year financial plan and modifications thereto of the City and the Covered Organizations. Pursuant to the Act and the City Charter, the City is required to develop a four-year financial plan each year and to modify the plan as changing circumstances require. Under current law, prior to July 1, 2008, the Control Board was required to reimpose a Control Period upon the occurrence or substantial likelihood and imminence of the occurrence of any one of certain events specified in the Act. These events were (i) failure by the City to pay principal of or interest on any of its notes or bonds when due or payable, (ii) the existence of a City operating deficit of more than $100 million, (iii) issuance by the City of notes in violation of certain restrictions on short-term borrowing imposed by the Act, (iv) any violation by the City of any provision of the Act which substantially impaired the ability of the City to pay principal of or interest on its bonds or notes when due and payable or its ability to adopt or adhere to an operating budget balanced in accordance with the Act, or (v) joint certification by the State and City Comptrollers that they could not at that time make a joint certification that sales of securities in the public credit market by or for the benefit of the City during the immediately preceding fiscal year and the current fiscal year satisfied its capital and seasonal financing requirements during such period and that there was a substantial likelihood that such securities could be sold in the general public market from the date of the joint certification through the end of the next succeeding fiscal year in amounts that would satisfy substantially all of the capital and seasonal financing requirements of the City during such period in accordance with the financial plan then in effect.

In 2003, the State Legislature amended the Act to change its termination date from the *earlier* of July 1, 2008 or the date on which certain bonds are discharged to the *later* of July 1, 2008 or the date on which such bonds are discharged. The bonds referred to in the amended section of the Act are all bonds containing the State pledge and agreement authorized under section 5415 of the Act (the "State Covenant").

The State Covenant is authorized to be included in bonds of the City. Since the 2003 enactment of this amendment to the Act, the City has not issued bonds containing the State Covenant. However, many City bonds issued prior to the amendment do contain the State Covenant. Because the City has issued such bonds with maturities as long as 30 years, the effect of the amendment was to postpone termination of the Act from July 1, 2008 to 2033 (or earlier if all City bonds containing the State Covenant are discharged). The State Legislature could, without violation of the State Covenant contained in the City's outstanding bonds, enact legislation that would terminate the Control Board and the Act because, at the time of issuance of those bonds, the latest termination date of the Act was July 1, 2008.

While the State Legislature amended the Act to extend the termination date of the Control Board, the power to impose or continue a Control Period terminated July 1, 2008. The power to impose or continue a Control Period is covered by a section of the Act that provides that no Control Period shall continue beyond July 1, 2008. The State Legislature did not amend this provision. Therefore, under current law, although the Act continues in effect, no Control Period may be imposed.

Financial Review and Oversight

The Control Board, with the OSDC, reviews and monitors revenues and expenditures of the City and the Covered Organizations. In addition, the IBO has been established pursuant to the City Charter to provide analysis to elected officials and the public on relevant fiscal and budgetary issues affecting the City.

The Control Board is required to: (i) review the four-year financial plan of the City and of the Covered Organizations and modifications thereto; (ii) review the operations of the City and the Covered Organizations, including their compliance with the financial plan; and (iii) review certain contracts, including collective bargaining agreements, of the City and the Covered Organizations. The requirement to submit four-year financial plans and budgets for review was in response to the severe financial difficulties and loss of access to the credit markets encountered by the City in 1975. The Control Board must reexamine the financial plan on at least a quarterly basis to determine its conformance to statutory standards.

The *ex officio* members of the Control Board are the Governor of the State of New York (Chairman); the Comptroller of the State of New York; the Mayor of The City of New York; and the Comptroller of The City of New York. In addition, there are three private members appointed by the Governor. The Executive Director of the Control Board is appointed jointly by the Governor and the Mayor. The Control Board is assisted in the exercise of its responsibilities and powers under the Financial Emergency Act by the State Deputy Comptroller for The City of New York.

SECTION IV: SOURCES OF CITY REVENUES

The City derives its revenues from a variety of local taxes, user charges and miscellaneous revenues, as well as from federal and State unrestricted and categorical grants. State aid as a percentage of the City's revenues has remained relatively constant over the period from 1980 to 2020, while federal aid has been sharply reduced. The City projects that local revenues will provide approximately 69.2% of total revenues in the 2021 fiscal year, while federal aid, including categorical grants, will provide 16.2%, and State aid, including unrestricted aid and categorical grants, will provide 14.6%. Adjusting the data for comparability, local revenues provided approximately 60% of total revenues in 1980, while federal and State aid each provided approximately 20%. A discussion of the City's principal revenue sources follows. For additional information regarding assumptions on which the City's revenue projections are based, see "SECTION VII: FINANCIAL PLAN—Assumptions." For information regarding the City's tax base, see "EXHIBIT A—ECONOMIC AND DEMOGRAPHIC INFORMATION."

Real Estate Tax

The real estate tax, the single largest source of the City's revenues, is the primary source of funds for the City's General Debt Service Fund. The City expects to derive approximately 48.0% of its total tax revenues and 30.0% of its total revenues for the 2021 fiscal year from the real estate tax. For information concerning tax revenues and total revenues of the City for prior fiscal years, see "SECTION VI: FINANCIAL OPERATIONS—2016-2020 Summary of Operations."

The State Constitution authorizes the City to levy a real estate tax without limit as to rate or amount (the "debt service levy") to cover scheduled payments of the principal of and interest on indebtedness of the City. However, the State Constitution limits the amount of revenue which the City can raise from the real estate tax for operating purposes (the "operating limit") to 2.5% of the average full value of taxable real estate in the City for the current and the last four fiscal years, which amount may be further limited by the State Constitution or laws. On June 24, 2011 the Governor signed into law the State's tax levy limitation law which restricts, among other things, the amount of real property taxes that may be levied by or on behalf of a municipality in a particular year. Such law does not apply to the City. Since the enactment of the tax levy limitation law, legislation applying such law to the City has been proposed from time to time but has never passed. Were it to be enacted into law, it would have a material adverse impact on projected City revenues. The table below sets forth the percentage the debt service levy represents of the total levy. The City Council has adopted a distinct tax rate for each of the four categories of real property established by State legislation.

On April 24, 2017, a lawsuit was filed challenging the City's real property tax system and valuation methodology. See "SECTION X: OTHER INFORMATION—Litigation—*Taxes*."

On May 31, 2018, the Mayor and the Speaker of the City Council established the Commission to consider changes to the City's property taxation system, without reducing property tax revenues to the City. See "SECTION II: RECENT FINANCIAL DEVELOPMENTS."

COMPARISON OF REAL ESTATE TAX LEVIES, TAX LIMITS AND TAX RATES

Fiscal Year	Total Levy[(1)]	Levy Within Operating Limit	Debt Service Levy[(2)]	Debt Service Levy as a Percentage of Total Levy	Operating Limit	Levy Within Operating Limit as a Percentage of Operating Limit	Rate Per $100 of Full Valuation[(3)]	Average Tax Rate Per $100 of Assessed Valuation
			(Dollars in Millions, except for Tax Rates)					
2017	$ 25,794.1	$ 22,303.5	$ 2,353.6	9.1%	$ 22,377.8	99.7%	$ 2.45	$ 12.28
2018	27,726.2	24,005.2	2,599.9	9.4	24,448.7	98.2	2.38	12.28
2019	29,574.7	26,274.6	2,095.6	7.1	26,437.7	99.4	2.36	12.28
2020	31,629.8	27,803.8	2,448.5	7.7	28,936.2	96.1	2.30	12.28
2021	33,371.4	28,960.9	2,872.0	8.6	30,614.3	94.6	2.34	12.28
2022	31,636.0	29,341.6	852.1	2.7	31,695.2	92.6	2.36	12.28

(1) As approved by the City Council.
(2) The debt service levy includes a portion of the total reserve for uncollected real estate taxes.
(3) Full valuation is based on the special equalization ratios (discussed below) and the billable assessed valuation. Special equalization ratios and full valuations are revised periodically as a result of surveys by the State Office of Real Property Tax Services.

Assessment

The City has traditionally assessed real property at less than market value. The State Office of Real Property Tax Services (the "State Office") is required by law to determine annually the relationship between taxable assessed value and market value which is expressed as the "special equalization ratio." The special equalization ratio is used to compute full value for the purpose of measuring the City's compliance with the operating limit and general debt limit. For a discussion of the City's debt limit, see "SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities—*Limitations on the City's Authority to Contract Indebtedness*." The ratios are calculated by using the most recent market value surveys available and a projection of market value based on recent survey trends, in accordance with methodologies established by the State Office from time to time. Ratios, and therefore full values, may be revised when new surveys are completed. The ratios and full values shown in the table below, which were used to compute the 2022 fiscal year operating limit and general debt limit, have been established by the State Office and include the results of the fiscal year 2020 market value survey.

BILLABLE ASSESSED AND FULL VALUE OF TAXABLE REAL ESTATE[(1)]

Fiscal Year	Billable Assessed Valuation of Taxable Real Estate[(2)]	÷	Special Equalization Ratio	=	Full Valuation[(2)]
2018................	$ 225,863,036,909		0.1937		$ 1,166,045,621,626
2019................	240,777,862,121		0.1956		1,230,970,665,240
2020................	257,509,634,870		0.2003		1,285,619,744,733
2021................	271,688,749,747		0.2017		1,346,994,297,209
2022................	257,560,316,555		0.1925		1,337,975,670,416
				Average:	$ 1,273,521,199,845

(1) Also assessed by the City, but excluded from the computation of taxable real estate, are various categories of property exempt from taxation under State law. For the 2021 fiscal year, the billable assessed value of all real estate (taxable and exempt) was $449 billion, comprised of $151.8 billion of fully exempt real estate, $78.9 billion of partially taxable real estate (including both taxable and exempt real estate) and $218.3 billion of fully taxable real estate.
(2) Figures are based on estimates of the special equalization ratio which are revised annually. These figures are derived from official City Council Tax Resolutions adopted with respect to the 2022 fiscal year. These figures differ from the assessed and full valuation of taxable real estate reported in the Annual Report, which excludes veterans' property subject to tax for school purposes and is based on estimates of the special equalization ratio which are not revised annually.

State law provides for the classification of all real property in the City into one of four statutory classes. Class one primarily includes one-, two- and three-family homes; class two includes certain other residential property not included in class one; class three includes most utility real property; and class four includes all other real property. The total tax levy consists of four tax levies, one for each class. Once the tax levy is set for each class, the tax rate for each class is then fixed annually by the City Council by dividing the levy for such class by the billable assessed value for such class.

Assessment procedures differ for each class of property. For fiscal year 2022, class one was assessed at approximately 6% of market value and classes two, three and four were each assessed at 45% of market value. In addition, individual assessments on class one parcels cannot increase by more than 6% per year or 20% over a five-year period. Market value increases and decreases for most of class two and all of class four are phased in over a period of five years. Increases in class one market value in excess of applicable limitations are not phased in over subsequent years. There is also no phase in for class three property.

Class two and class four real property have three assessed values: actual, transitional and billable. Actual assessed value is established for all tax classes without regard to the five-year phase-in requirement applicable to most class two and all class four properties. The transitional assessed value reflects this phase-in. Billable assessed value is the basis for tax liability and is the lower of the actual or transitional assessment.

The share of the total levy that can be borne by each class is regulated by the provisions of the State Real Property Tax Law. Each class share of the total tax levy is updated annually to reflect new construction, demolition, alterations or changes in taxable status and is subject to limited adjustment to reflect market value changes among the four classes. Class share adjustments are limited to a 5% maximum increase per year. Maximum class increases below 5% must be, and typically are, approved by the State Legislature. For fiscal year 2022, tax rates were set on June 30, 2021 and reflect a 5% limitation on class share adjustment. The average tax rate for fiscal year 2022 was maintained at $12.28 per $100 of assessed value. Property tax bills were sent out during the second week of June 2021 with fiscal year 2021 tax rates, which will be revised with the new tax rates for fiscal year 2022 and will be sent out to taxpayers in November 2021.

City real estate tax revenues may be reduced in future fiscal years as a result of tax refund claims asserting overvaluation, inequality of assessment and illegality. The State Office annually certifies various class ratios and class equalization rates relating to the four classes of real property in the City. "Class ratios" are determined for each class by the State Office by calculating the ratio of assessed value to market value. Various proceedings challenging assessments of real property for real estate tax purposes, and one action challenging the constitutionality of the real property tax system, are pending. For further information regarding the City's potential exposure in certain of these proceedings, see "SECTION X: OTHER INFORMATION—Litigation—*Taxes*" and "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note D.5."

Trend in Taxable Assessed Value

State law provides for increases in assessed values of most properties to be phased into property tax bills over five-year periods. The billable assessed valuation, as determined by the City Department of Finance, rose to $224.5 billion, $239.7 billion, $256.6 billion and $270.8 billion for fiscal years 2018 through 2021, respectively, and declined to $256.7 billion for fiscal year 2022. With a weaker outlook in the class two and class four market values combined with a deflated level of existing pipeline of deferred assessment increases yet to be phased in, the billable assessed valuations are forecast to grow by 1.6%, 1.4% and 1.4% in fiscal years 2023 through 2025, respectively.

Collection of the Real Estate Tax

Real estate tax payments are due each July 1 and January 1. Owners of all properties assessed at $250,000 or less are eligible to make tax payments in quarterly installments on July 1, October 1, January 1 and April 1. An annual interest rate as approved by the City Council is imposed upon late payments on properties with an assessed value of $250,000 or less and between $250,000 to $450,000 except in the case of (i) any parcel with respect to which the real estate taxes are held in escrow and paid by a mortgage escrow agent and (ii) parcels consisting of vacant or unimproved land. In addition, a separate annual interest rate as approved by the City Council is imposed upon late payments on all other properties.

In fiscal year 2020, the annual interest rates on late payments were 7% on properties with an assessed value of $250,000 or less, except in the cases set forth in clauses (i) and (ii) of the preceding paragraph, and 18% on all other properties. For the first quarter of 2021, in order to provide relief to property owners due to the impact of COVID-19, the City lowered the above-referenced late payment rates for certain eligible property owners to rates between 0% and 7.5%, in each case depending on the assessed value of the property and whether a COVID-19 related payment deferral was requested by the owner and granted by the City. For the second through fourth quarters of fiscal year 2021, such late payment rates were 5% on properties with an assessed value of $250,000 or less, and 18% on all other properties. In June 2021, the City released the following rates for fiscal year 2022: (i) for owners of property with an assessed value of less than $250,000, the late payment interest rate has been decreased from 5% to 3%; (ii) for owners of property with an assessed value between $250,000 to $450,000, the late payment interest rate has been decreased from 18% to 6%; and (iii) for all other owners, the late payment interest rate has been decreased from 18% to 13%.

The City primarily uses two methods to enforce the collection of real estate taxes. The City has been authorized to sell real estate tax liens on class one properties which are delinquent for at least three years and class two, three and four properties which are delinquent for at least one year. In addition, the City is entitled to foreclose delinquent tax liens by in rem proceedings after one year of delinquency with respect to properties other than one- and two-family dwellings and condominium apartments for which the annual tax bills do not exceed $2,750, as to which a three- year delinquency rule is in effect. The City's authority to sell tax liens expired on December 31, 2020, and has been reauthorized with a new expiration date of March 1, 2022. The renewed authorization includes changes to the eligibility of certain accounts subject to lien sale, including an exemption from any tax lien sale held in calendar year 2021 for an owner of 10 or fewer residential units, where one of such units is owner-occupied and the remaining units are occupied by a tenant or are available for rent, and where the owner certifies, in writing, that they are experiencing a COVID-19-related financial hardship. It is assumed that this exemption is a deferral, and that such properties would become eligible for a lien sale in the following year if the accounts remained delinquent and if the authority to sell tax liens is re-authorized by March 1, 2022. The Department of Finance has issued 90-day notice letters for the tax lien sale scheduled to be held in December 2021.

The real estate tax is accounted for on a modified accrual basis in the General Fund. Revenue accrued is limited to prior year payments received, offset by refunds made, within the first two months of the following fiscal year. In deriving the real estate tax revenue forecast, a reserve is provided for cancellations or abatements of taxes and for nonpayment of current year taxes owed and outstanding as of the end of the fiscal year.

The following table sets forth the amount of delinquent real estate taxes (owed and outstanding as of the end of the fiscal year of levy) for each of the fiscal years indicated. Delinquent real estate taxes do not include real estate taxes subject to cancellation or abatement under various exemption or abatement programs. Delinquent real estate taxes generally increase during a recession and when the real estate market deteriorates. Delinquent real estate taxes generally decrease as the City's economy and real estate market recover. For additional information on real property tax delinquencies, see "SECTION II: RECENT FINANCIAL DEVELOPMENTS."

From time to time, the City sells tax liens to separate statutory trusts. In fiscal years 2016 through 2020, the City's tax lien program resulted in net proceeds of approximately $80 million, $95.5 million, $101.1 million, $60.8 million and $96.7 million, respectively. Fiscal year 2020 includes the sale proceeds of the fiscal year 2019 tax lien sale, which closed in fiscal year 2020, and the receipt of approximately $50 million from trusts established in connection with prior lien sales. Due to the outbreak of COVID-19, the tax lien sale for fiscal year 2020 did not occur. The Financial Plan, which includes the impacts of the delay of the fiscal year 2020 and fiscal year 2021 tax lien sales to fiscal year 2022, reflects receipt of $16.0 million in fiscal year 2021 from trusts established in connection with prior lien sales. See "SECTION II: RECENT FINANCIAL DEVELOPMENTS."

REAL ESTATE TAX COLLECTIONS AND DELINQUENCIES

Fiscal Year	Tax Levy[1]	Tax Collections on Current Year Levy	Tax Collections as Percentage of Tax Levy	Prior Year (Delinquent Tax) Collections	Refunds	Cancellations, Net Credits, Abatements, Exempt Property Restored and Shelter Rent	Delinquent as of End of Fiscal Year	Delinquency as a Percentage of Tax Levy	Lien Sale Program
				(Dollars In Millions)					
2017	$ 25,794.1	$ 24,283.6	94.1%	$ 317.1	$ (220.7)	$ (1,185.9)	$ (324.6)	1.26%	$ 95.5
2018	27,726.2	26,166.0	94.4	324.0	(372.2)	(1,219.2)	(341.0)	1.23	101.1
2019	29,574.7	27,681.2	93.6	338.8	(377.4)	(1,529.1)	(364.4)	1.24	60.8
2020	31,629.8	29,532.2	93.4	370.7	(349.1)	(1,513.7)	(583.9)	1.84	96.7
2021[2]	33,371.4	30,990.0	92.9	348.0	(400.0)	(1,605.4)	(776.0)	2.33	16.0
2022[2]	31,636.0	29,235.9	92.4	320.0	(400.0)	(1,590.1)	(810.0)	2.56	128.0

(1) As approved by the City Council.
(2) Forecast.

Other Taxes

The City expects to derive 52.0% of its total tax revenues for the 2021 fiscal year from a variety of taxes other than the real estate tax, such as: (i) the 4.5% sales and compensating use tax, which commenced August 1, 2009, in addition to the 4% sales and use tax imposed by the State upon receipts from retail sales of tangible personal property and certain services in the City; (ii) the personal income tax on City residents; (iii) a general corporation tax levied on the income of corporations doing business in the City; and (iv) a banking corporation tax imposed on the income of banking corporations doing business in the City.

For local taxes other than the real estate tax, the City may adopt and amend local laws for the levy of local taxes to the extent authorized by the State. This authority can be withdrawn, amended or expanded by State legislation.

Revenues from taxes other than the real estate tax in the 2020 fiscal year decreased by $335 million from the 2019 fiscal year. The following table sets forth, by category, revenues from taxes, other than the real estate tax, for each of the City's 2016 through 2020 fiscal years.

	2016	2017	2018	2019	2020
			(In Millions)		
Personal Income[1]	$ 11,340	$ 11,230	$ 13,372	$ 13,344	$ 13,551
General Corporation	3,354	3,527	3,454	4,269	4,547
Banking Corporation[2]	268	(82)	(17)	(70)	(38)
Unincorporated Business Income	2,040	2,005	2,182	2,029	1,939
Sales[3]	6,911	7,017	7,443	7,810	7,372
Commercial Rent..................................	779	816	853	907	864
Real Property Transfer	1,775	1,415	1,388	1,547	1,135
Mortgage Recording..............................	1,234	1,118	1,050	1,097	975
Utility	354	371	371	369	356
Cigarette	45	37	36	30	25
Hotel	565	579	597	625	468
All Other[4]	614	654	630	833	1,054
Audits	1,161	1,296	1,337	818	1,026
Total..	$ 30,440	$ 29,983	$ 32,696	$ 33,609	$ 33,274

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Note: Totals may not add due to rounding.

(1) Personal Income includes the personal income tax revenues of $180 million, $297 million, $181 million, $444 million and $512 million in fiscal years 2016 through 2020, respectively, retained by the TFA for funding requirements associated with TFA Future Tax Secured Bonds. Personal income taxes flow directly from the State to the TFA, and from the TFA to the City only to the extent not required by the TFA for debt service, operating expenses and contractual and other obligations incurred pursuant to the TFA indenture. In fiscal years 2016 through 2017, Personal Income includes $607 million and $166 million, respectively, which was provided to the City by the State as a reimbursement for the reduced personal income tax revenues resulting from the STAR Program.

(2) With the enactment of corporate tax reform that merged the general corporation tax with the banking corporation tax in 2015, most banking corporation tax payments are now being reported as business corporation taxes. However, refunds arising from prior year returns filed as banking corporation taxes are still paid out as refunds under the banking corporation tax. In fiscal years 2017, 2018, 2019 and 2020, the amount refunded exceeded the gross receipts resulting in net negative revenues for such fiscal years.

(3) A portion of sales tax revenues payable to the City would be paid to the TFA if personal income tax revenues did not satisfy specified debt service ratios.

(4) All Other includes, among others, beer and liquor taxes and the automobile use tax, but excludes the STAR Program aid of $814 million, $370 million, $189 million, $181 million and $165 million in fiscal years 2016 through 2020, respectively.

Miscellaneous Revenues

Miscellaneous revenues include revenue sources such as charges collected by the City for the issuance of licenses, permits and franchises, interest earned by the City on the investment of City cash balances, tuition and fees at the Community Colleges, reimbursement to the City from the proceeds of water and sewer rates charged by the New York City Water Board (the “Water Board”) for costs of delivery of water and sewer services and paid to the City by the Water Board for its lease interest in the water and sewer system, rents collected from tenants in City-owned property and from The Port Authority of New York and New Jersey (the “Port Authority”) with respect to airports and the collection of fines. The following table sets forth amounts of miscellaneous revenues for each of the City’s 2016 through 2020 fiscal years.

	2016	2017	2018	2019	2020
			(In Millions)		
Licenses, Permits and Franchises	$ 728	$ 770	$ 776	$ 802	$ 699
Interest	79	73	125	226	137
Charges for Services	1,001	1,033	1,027	1,030	951
Water and Sewer	1,297	1,385	1,390	1,470	1,615
Rental	279	253	261	273	258
Fines and Forfeitures	995	985	1,027	1,109	1,079
Other	725	565	413	1,087	530
Total	$ 5,104	$ 5,064	$ 5,019	$ 5,997	$ 5,269

Note: Totals may not add due to rounding.

Rental income in fiscal years 2016 through 2020 includes approximately $128.5 million, $144.5 million, $153.6 million, $153.6 million and $153.6 million, respectively, in Port Authority lease payments for the City airports.

Fees and charges collected from the users of the water and sewer system of the City are revenues of the Water Board, a body corporate and politic, constituting a public benefit corporation, all of the members of which are appointed by the Mayor. The Water Board currently holds a long-term leasehold interest in the water and sewer system pursuant to a lease between the Water Board and the City.

Other miscellaneous revenues for fiscal years 2016 through 2020 include $229 million, $100.3 million, $108.7 million, $103 million and $118 million, respectively, of tobacco settlement revenues (“TSRs”) from the settlement of litigation with certain cigarette manufacturers that were not retained by TSASC. Other miscellaneous revenues for fiscal years 2016 through 2020 do not include TSRs retained by TSASC for debt service and operating expenses totaling $137 million, $60 million, $65 million, $61 million and $70 million, respectively. Pursuant to the TSASC indenture, less than 40% of the TSRs are pledged to the TSASC bondholders and the remainder flow to the City. For further information see “SECTION VII: FINANCIAL PLAN—Assumptions—*Revenue Assumptions*—4. MISCELLANEOUS REVENUES” and “SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities.”

Other miscellaneous revenues for fiscal year 2016 include $74 million from a deferred prosecution agreement under the Manhattan District Attorney's Office and the US Department of Justice related to sanctions violations against Credit Agricole and Investment Bank. Other miscellaneous revenues for fiscal year 2017 include $78 million from the Department of Education and $30 million from the sale of the Brooklyn Heights library development rights. Other miscellaneous revenues for fiscal year 2018 include $39 million from affordable housing development fees.

Other miscellaneous revenues for fiscal year 2019 include $78 million and $142 million from a deferred prosecution agreement under the Manhattan District Attorney's office and the US Department of Justice related to sanctions violations by Societe Generale and Standard Chartered Bank, and the sale of a building located at 101 Barclay Street for $117 million.

Other miscellaneous revenues for fiscal year 2020 include $45 million from the refund from a collateral reserve relating to an insurance policy issued by Chubb Insurance and $10.8 million from a rental payment from the United Nation Development Corporation.

Unrestricted Intergovernmental Aid

Unrestricted federal and State aid are not subject to any substantial restriction as to their use and are used by the City as general support for its Expense Budget. For a further discussion of federal and State aid, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Revenue Assumptions*—5. FEDERAL AND STATE CATEGORICAL GRANTS."

The following table sets forth amounts of unrestricted federal and State aid received by the City in each of its 2016 through 2020 fiscal years.

	2016	**2017**	**2018**	**2019**	**2020**
			(In Millions)		
Unrestricted Intergovernmental Aid	$6	$59	—	$151	$11

Federal and State Categorical Grants

The City makes certain expenditures for services required by federal and State mandates which are then wholly or partially reimbursed through federal and State categorical grants. State categorical grants are received by the City primarily in connection with City welfare, education, higher education, health and mental health expenditures. The City also receives substantial federal categorical grants in connection with the federal Community Development Block Grant Program ("Community Development"). The federal government also provides the City with substantial public assistance, social service and education grants as well as reimbursement for all or a portion of certain costs incurred by the City in maintaining programs in a number of areas, including housing, criminal justice and health. All City claims for federal and State grants are subject to subsequent audit by federal and State authorities. Certain claims submitted to the State Medicaid program by the City are the subject of investigation by the Office of the Inspector General of the United States Department of Health and Human Services ("OIG"). For a discussion of claims for which a final audit report has been issued by OIG, see "SECTION X: OTHER INFORMATION—Litigation—*Miscellaneous*." The City provides a reserve for disallowances resulting from these audits which could be asserted in subsequent years. Federal grants are also subject to audit under the Single Audit Act Amendments of 1996. For a further discussion of federal and State categorical grants, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Revenue Assumptions*—5. FEDERAL AND STATE CATEGORICAL GRANTS." For information regarding certain recent developments relating to federal aid, see "SECTION II: RECENT FINANCIAL DEVELOPMENTS."

The following table sets forth amounts of federal and State categorical grants received by the City for each of the City's 2016 through 2020 fiscal years.

	2016	2017	2018	2019	2020
			(In Millions)		
Federal[1]					
Community Development[2]	$ 780	$ 1,108	$ 1,081	$ 506	$ 558
Social Services	3,225	3,454	3,362	3,553	2,918
Education	1,698	1,709	1,786	1,876	1,672
Other[3]	1,691	1,656	1,737	1,784	4,433
Total	$ 7,394	$ 7,927	$ 7,966	$ 7,719	$ 9,581
State					
Social Services	$ 1,490	$ 1,709	$ 1,611	$ 1,698	$ 1,750
Education	9,612	10,250	10,710	11,185	11,493
Higher Education	239	248	255	263	246
Health and Mental Health	535	573	535	523	428
Other	1,126	1,210	1,342	1,301	1,417
Total	$ 13,002	$ 13,990	$ 14,453	$ 14,970	$ 15,334

(1) Federal funding includes amounts received under the American Recovery and Reinvestment Act of $203 million, $199.8 million, $198 million, $197 million and $186 million in fiscal years 2016 through 2020, respectively.

(2) Amounts represent actual funds received and may be lower or higher than the appropriation of funds actually provided by the federal government for the particular fiscal year due either to underspending or the spending of funds carried forward from prior fiscal years. Community Development includes $669.4 million, $874.8 million, $884.4 million, $432.6 million and $215.2 million in fiscal years 2016 through 2020, respectively, in disaster recovery funding for storm damage remediation as a result of Superstorm Sandy.

(3) Other includes $74.5 million, $51.7 million, $20.1 million, $70.9 million and $61.0 million in fiscal years 2016 through 2020, respectively, of FEMA funding for expenditures for storm damage remediation as a result of Superstorm Sandy.

SECTION V: CITY SERVICES AND EXPENDITURES

Expenditures for City Services

Three types of governmental agencies provide public services within the City's borders and receive financial support from the City. One category is the mayoral agencies established by the City Charter which include, among others, the Police, Fire and Sanitation Departments. Another is the independent agencies which are funded in whole or in part through the City Budget by the City but which have greater independence in the use of appropriated funds than the mayoral agencies. Included in this category are certain Covered Organizations such as NYCHH and the Transit Authority. A third category consists of certain public benefit corporations ("PBCs") which were created to finance the construction of housing, hospitals, dormitories and other facilities and to provide other governmental services in the City. The legislation establishing this type of agency contemplates that annual payments from the City, appropriated through its Expense Budget, may or will constitute a substantial part of the revenues of the agency. Included in this category is, among others, the City University Construction Fund ("CUCF"). For information regarding expenditures for City services, see "SECTION VI: FINANCIAL OPERATIONS—2016-2020 Summary of Operations."

Federal and State laws require the City to provide certain social services for needy individuals and families who qualify for such assistance. The City receives federal Temporary Assistance for Needy Families ("TANF") block grant funds through the State for the Family Assistance Program. The Family Assistance Program provides benefits for households with minor children subject, in most cases, to a five-year time limit. The Safety Net Assistance Program provides benefits for adults without minor children, families who have reached the Family Assistance Program time limit, and others, including certain immigrants, who are ineligible for the Family Assistance Program but are eligible for public assistance. Historically, the cost of the Safety Net Assistance Program was borne equally by the City and the State. In the 2011-2012 State Budget the State implemented new funding formulas, increasing the City share of the Safety Net Assistance Program to 71% and eliminating the City Share of 25% for the Family Assistance Program by fully funding it with TANF block grant funds.

The City also provides funding for many other social services, such as day care, foster care, family planning, services for the elderly and special employment services for welfare recipients, some of which are mandated, and may be wholly or partially subsidized, by either the federal or State government. See "SECTION VII: FINANCIAL PLAN—Assumptions—*Revenue Assumptions*—5. FEDERAL AND STATE CATEGORICAL GRANTS."

In July 2002, the Board of Education was replaced by the City's Department of Education (the "DOE") which is overseen by a Chancellor, appointed by the Mayor, and the 13-member Panel for Educational Policy where the Mayor appoints eight members including the Chancellor, and the Borough Presidents each appoint one member. The number of pupils in the school system is estimated to be approximately 1.1 million in each of the 2021 through 2025 fiscal years, which is subject to change due to the potential impacts of COVID-19. Actual enrollment in fiscal years 2016 through 2020 has been 1,081,324, 1,086,672, 1,082,555, 1,074,318 and 1,071,337, respectively. See "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—2. OTHER THAN PERSONAL SERVICES COSTS—*Department of Education*." The City's system of higher education, consisting of its Senior Colleges and Community Colleges, is operated under the supervision of the City University of New York ("CUNY"). The City is projected to provide approximately 46.4% of the costs of the Community Colleges in the 2021 fiscal year. The State has full responsibility for the costs of operating the Senior Colleges, although the City is required initially to fund these costs which are then reimbursed by the State.

The City administers health services programs for the care of the physically and mentally ill and the aged. NYCHH maintains and operates the City's 11 municipal acute care hospitals, five long-term care facilities, six free standing diagnostic and treatment centers, a certified home health-care program, many hospital-based and neighborhood clinics and a health maintenance organization. NYCHH is funded primarily by third party reimbursement collections from Medicare and Medicaid and by payments from bad debt/charity care pools, with significant contributions from the City. See "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—2. OTHER THAN PERSONAL SERVICES COSTS—*New York City Health and Hospitals*."

Medicaid provides basic medical assistance to needy persons. The City is required by State law to furnish medical assistance through Medicaid to all City residents meeting eligibility requirements established by the State. Prior to

State legislation in fiscal year 2006 capping City Medicaid payments, the State had assumed 81.2% of the non-federal share of long-term care costs, all of the costs of providing medical assistance to the mentally disabled, and 50% of the non-federal share of Medicaid costs for all other clients. As a result of State legislation in fiscal years 2006 and 2012 capping City Medicaid payments, the State percentage of the non-federal share may vary. The federal government pays 50% of Medicaid costs for federally eligible recipients and a higher share for federally eligible childless adults.

The City's Expense Budget increased during the five-year period ended June 30, 2020, due to, among other factors, the increasing costs of pensions and Medicaid, the costs of labor settlements and the impact of inflation on various other than personal services costs.

Employees and Labor Relations

Employees

The following table presents the number of full-time and full-time equivalent employees of the City, including the mayoral agencies, the DOE and CUNY, at the end of each of the City's 2016 through 2020 fiscal years.

	2016	**2017**	**2018**	**2019**	**2020**
Education	141,311	144,740	146,134	146,776	147,792
Police	51,929	52,976	53,755	53,486	53,416
Social Services, Homeless and Children's Services	21,805	22,047	22,003	22,145	21,698
City University Community Colleges and Hunter Campus Schools	8,979	9,184	9,414	9,385	8,314
Environmental Protection and Sanitation	15,710	16,000	16,152	16,545	16,031
Fire	16,845	17,463	17,228	17,405	17,480
All Other	56,513	59,997	60,983	60,997	59,305
Total	313,092	322,407	325,669	326,739	324,036

The following table presents the number of full-time employees of certain Covered Organizations, as reported by such Organizations, at the end of each of the City's 2016 through 2020 fiscal years.

	2016	**2017**	**2018**	**2019**	**2020**
Transit Authority	47,354	48,495	49,415	49,283	47,056
Housing Authority	10,796	10,737	10,491	10,597	11,024
NYCHH	37,650	36,213	35,484	36,735	38,918
Total(1)	95,800	95,445	95,390	96,615	96,998

(1) The definition of "full-time employees" varies among the Covered Organizations and the City.

The foregoing tables include persons whose salaries or wages are paid by certain public employment programs, including programs funded under the Workforce Investment Act, which support employees in non-profit and State agencies as well as in the mayoral agencies and the Covered Organizations.

Labor Relations

Substantially all of the City's employees are members of labor unions. For those employees, wages, hours or working conditions may be changed only as provided for under collective bargaining agreements. Although State law prohibits strikes by municipal employees, strikes and work stoppages by employees of the City and the Covered Organizations have occurred.

Collective bargaining for City employees is under the jurisdiction of either the New York City Office of Collective Bargaining, which was created under the New York City Collective Bargaining Law, or the New York State Public Employment Relations Board ("PERB"), which was created under the State Employees Fair Employment Act. Collective bargaining matters relating to police, firefighters and pedagogical employees are under the jurisdiction of

PERB. Under applicable law, the terms of future wage settlements could be determined through an impasse procedure which, except in the case of pedagogical employees, can result in the imposition of a binding decision. Pedagogical employees do not have access to binding arbitration but are covered by a fact- finding impasse procedure under which a binding decision may not be imposed. Although the impasse procedure may not impose a binding settlement, it may influence ongoing collective bargaining.

For information regarding the City's assumptions with respect to the current status of the City's agreements with its labor unions, the cost of future labor settlements and related effects on the Financial Plan, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—1. PERSONAL SERVICES COSTS."

Pensions

The City maintains a number of pension systems providing benefits for its employees and employees of various independent agencies (including certain Covered Organizations). For further information regarding the City's pension systems and the City's obligations thereto, see "SECTION IX: PENSION SYSTEMS AND OPEB."

Capital Expenditures

The City makes substantial capital expenditures to reconstruct, rehabilitate and expand the City's infrastructure and physical assets, including City mass transit facilities, water and sewer facilities, streets, bridges and tunnels, and to make capital investments that will improve productivity in City operations. For additional information regarding the City's infrastructure, physical assets and capital program, see "SECTION VII: FINANCIAL PLAN—Long-Term Capital Program" and "—Financing Program."

The City utilizes a three-tiered capital planning process consisting of the Ten-Year Capital Strategy (previously, the Ten-Year Capital Plan), the four-year capital plan and the current-year Capital Budget. The Ten-Year Capital Strategy, which is published once every two years in conjunction with the Executive Budget as required by the City Charter, is a long-term planning tool designed to reflect fundamental allocation choices and basic policy objectives. The four-year capital plan, which is updated three times a year, as required by the City Charter, translates mid-range policy goals into specific projects. The Capital Budget defines for each fiscal year specific projects and the timing of their initiation, design, construction and completion.

On April 26, 2021, the City published the Ten-Year Capital Strategy for fiscal years 2022 through 2031. The Ten-Year Capital Strategy totals $133.7 billion, of which approximately 97% would be financed with City funds.

The Ten-Year Capital Strategy includes, among other items: (i) $23.0 billion to construct new schools and improve existing educational facilities, including CUNY; (ii) $22.7 billion for improvements to the water and sewer system; (iii) $15.1 billion for expanding and upgrading the City's housing stock; (iv) $10.2 billion for reconstruction or resurfacing of City streets; (v) $1.7 billion for continued City-funded investment in mass transit; (vi) $11.1 billion for the continued reconstruction and rehabilitation of all four East River bridges and 108 other bridge structures; (vii) $10.0 billion to design and construct new jail facilities as well as to upgrade equipment, vehicles, and necessary systems; and (viii) $2.5 billion for construction and improvement of court facilities.

For a discussion of the City's debt limit, see "SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities—*Limitations on the City's Authority to Contract Indebtedness*."

Those programs in the Ten-Year Capital Strategy financed with City funds are currently expected to be funded primarily from the issuance of bonds by the City, the Water Authority and the TFA. From time to time, during recessionary periods when operating revenues have come under increasing pressure, capital funding levels have been reduced from those previously contemplated in order to reduce debt service costs. For information concerning the City's long-term financing program for capital expenditures, see "SECTION VII: FINANCIAL PLAN—Financing Program."

The City's capital expenditures, including expenditures funded by State and federal grants, totaled $47.2 billion during the 2016 through 2020 fiscal years. City-funded expenditures, which totaled $41.6 billion during the 2016 through 2020 fiscal years, have been financed through the issuance of bonds by the City, the TFA and the Water Authority. The following table summarizes the major categories of capital expenditures in the City's 2016 through 2020 fiscal years.

	2016	**2017**	**2018**	**2019**	**2020**	**Total**
			(In Millions)			
Education	$ 2,475	$ 2,706	$ 2,353	$ 2,830	$ 2,853	$ 13,217
Environmental Protection	1,378	1,454	1,688	1,992	1,846	8,358
Transportation	1,032	1,139	1,461	1,301	1,341	6,274
Transit Authority(1)	231	91	55	311	95	783
Housing	753	950	1,412	1,681	904	5,700
Hospitals	104	130	217	306	363	1,120
Sanitation	324	324	290	243	202	1,383
All Other(2)	1,784	2,032	2,164	2,185	2,169	10,332
Total Expenditures(3)	$ 8,080	$ 8,826	$ 9,640	$ 10,848	$ 9,774	$ 47,168
City-funded Expenditures(4)	$ 6,676	$ 7,444	$ 8,887	$ 9,278	$ 9,331	$ 41,616

(1) Excludes the Transit Authority's non-City portion of the MTA capital program.
(2) All Other includes, among other things, parks, correction facilities, public structures and equipment.
(3) Total Expenditures for the 2016 through 2020 fiscal years include City, State and federal funding and represent amounts which include an accrual for work-in-progress. These figures are derived from the Annual Report.
(4) City-funded Expenditures do not include accruals, but represent actual cash disbursements occurring during the fiscal year.

The City annually issues a condition assessment and a proposed maintenance schedule for the major portion of its assets and asset systems which have a replacement cost of $10 million or more and a useful life of at least ten years, as required by the City Charter. For information concerning a report which sets forth the recommended capital investment to bring certain identified assets of the City to a state of good repair, see "SECTION VII: FINANCIAL PLAN—Long-Term Capital Program."

SECTION VI: FINANCIAL OPERATIONS

The City's Annual Report for the fiscal year ended June 30, 2020 is included by specific reference in this Appendix as "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT." The Annual Report for the fiscal year ended June 30, 2020 is available for inspection at the Office of the City Comptroller and at https://comptroller.nyc.gov/reports/comprehensive-annual-financial-reports/ and is available on EMMA (as defined herein) (https://emma.msrb.org). For a summary of the City's significant accounting policies, see "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note A." For a summary of the City's operating results for the previous five fiscal years, see "2016-2020 Summary of Operations" below.

Except as otherwise indicated, all of the financial data relating to the City's operations contained herein, although derived from the City's books and records, are unaudited. In addition, neither the City's independent auditors, nor any other independent accountants, have compiled, examined or performed any procedures with respect to the Financial Plan or other estimates or projections contained elsewhere herein, nor have they expressed any opinion or any other form of assurance on such prospective financial information or its achievability, and assume no responsibility for, and disclaim any association with, all such prospective financial information.

The Financial Plan is prepared in accordance with standards set forth in the Financial Emergency Act and the City Charter. The Financial Plan contains projections and estimates that are based on expectations and assumptions which existed at the time such projections and estimates were prepared. The estimates and projections contained in this Section and elsewhere herein are based on, among other factors, evaluations of historical revenue and expenditure data, analyses of economic trends and current and anticipated federal and State legislation affecting the City's finances. The City's financial projections are based upon numerous assumptions and are subject to certain contingencies and periodic revisions which may involve substantial change. This prospective information is not fact and should not be relied upon as being necessarily indicative of future results. The City makes no representation or warranty that these estimates and projections will be realized. The estimates and projections contained in this Section and elsewhere herein were not prepared with a view towards compliance with the guidelines established by the American Institute of Certified Public Accountants with respect to prospective financial information.

2016-2020 Summary of Operations

The following table sets forth the City's results of operations for its 2016 through 2020 fiscal years in accordance with GAAP.

The information regarding the 2016 through 2020 fiscal years has been derived from the City's audited financial statements and should be read in conjunction with the notes accompanying this table and the City's 2019 and 2020 financial statements included in "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT." The 2016 through 2018 financial statements are not separately presented herein. For further information regarding the City's revenues and expenditures, see "SECTION IV: SOURCES OF CITY REVENUES" and "SECTION V: CITY SERVICES AND EXPENDITURES."

	Fiscal Year(1)				
	Actual				
	2016	2017	2018	2019	2020
	(In Millions)				
Revenues and Transfers					
Real Estate Tax(2)	$ 23,181	$ 24,679	$ 26,408	$ 27,885	$ 29,816
Other Taxes(3)(4)	30,440	29,983	32,696	33,609	33,274
Miscellaneous Revenues(3)	5,104	5,064	5,019	5,997	5,269
Other Categorical Grants	861	1,208	1,255	1,340	1,105
Unrestricted Federal and State Aid	6	59	—	151	5
Federal Categorical Grants	7,394	7,927	7,966	7,719	9,561
State Categorical Grants	13,002	13,990	14,453	14,970	15,334
Disallowances Against Categorical Grants	(1)	558	139	113	299
Total Revenues and Transfers(5)	$ 79,987	$ 83,468	$ 87,936	$ 91,784	$ 94,385
Expenditures and Transfers					
Social Services	$ 13,801	$ 14,485	$ 15,208	$ 15,833	$ 15,631
Board of Education	21,974	23,318	25,026	26,905	27,903
City University	956	1,067	1,087	1,114	1,117
Public Safety and Judicial	9,326	9,694	10,024	10,358	10,791
Health Services	2,667	2,233	2,401	2,656	2,520
Pensions(6)	9,171	9,281	9,513	9,829	9,672
Debt Service(3)(7)	5,874	5,890	6,673	6,373	6,554
All Other(8)	16,213	17,495	17,999	18,711	20,192
Total Expenditures and Transfers(5)	$ 79,982	$ 83,463	$ 87,931	$ 91,779	$ 94,380
Surplus(9)	$ 5	$ 5	$ 5	$ 5	$ 5

(1) The City's results of operations refer to the City's General Fund revenues and transfers reduced by expenditures and transfers. The revenues and assets of PBCs included in the City's audited financial statements do not constitute revenues and assets of the City's General Fund, and, accordingly, the revenues of such PBCs are not included in the City's results of operations. Expenditures required to be made and revenues earned by the City with respect to such PBCs are included in the City's results of operations. For further information regarding the particular PBCs included in the City's financial statements, see "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note A."

(2) In fiscal years 2016 through 2020, Real Estate Tax includes $207 million, $204 million, $188.7 million, $181.3 million and $165.5 million, respectively, which was provided to the City by the State as a reimbursement for the reduced property tax revenues resulting from the State's STAR Program.

(3) Other Taxes includes as revenues to the City the personal income tax revenues retained by the TFA of $180 million, $297 million, $181 million, $444 million and $512 million in fiscal years 2016 through 2020, respectively. Debt Service includes as a debt service expense the funding requirements associated with TFA Future Tax Secured Bonds of $180 million, $297 million, $181 million, $444 million and $512 million in fiscal years 2016 through 2020, respectively. Debt Service does not include debt service on TSASC bonds. Miscellaneous Revenues includes TSRs that are not retained by TSASC for debt service and operating expenses.

(4) Other Taxes includes tax audit revenues. For further information regarding the City's revenues from Other Taxes, see "SECTION IV: SOURCES OF CITY REVENUES—Other Taxes."

(5) Total Revenues and Transfers and Total Expenditures and Transfers exclude Inter-Fund Revenues.

(6) For information regarding pension expenditures, see "SECTION X: OTHER INFORMATION."

(7) Debt Service includes discretionary transfers of $1.760 billion, $1.560 billion, $1.902 billion, $1.702 billion and $1.269 billion into the General Debt Service Fund in fiscal years 2016 through 2020, respectively, and grants from the City to the TFA of $1.734 billion, $1.909 billion, $2.174 billion, $2.319 billion and $2.550 billion in fiscal years 2016 through 2020, respectively, which were used by the TFA to pay debt service in the following fiscal year thereby decreasing the TFA funding requirements.

(8) All Other includes payments into the Retiree Health Benefits Trust Fund of $500 million, $100 million, $100 million and $100 million in fiscal years 2016, 2017, 2018 and 2019, respectively, a payment from the Retiree Health Benefits Trust of approximately $1 billion in the Retiree Health Benefits Trust to pay for OPEB costs in fiscal year 2020, and payment of $200 million of subsidies to NYCHH in fiscal year 2019 otherwise due in fiscal year 2020.

(9) Surplus is the surplus after discretionary and other transfers and expenditures. The City had general fund operating revenues exceeding expenditures of $4.043 billion, $4.185 billion, $4.581 billion, $4.226 billion and $3.824 billion before discretionary and other transfers and expenditures for the 2016 through 2020 fiscal years, respectively. Discretionary and other transfers are included in Debt Service and All Other.

Forecast of 2021 Results

The following table compares the forecast for the 2021 fiscal year contained in the financial plan, submitted to the Control Board in June 2020 (the "June 2020 Forecast"), with the forecast contained in the Financial Plan, which was submitted to the Control Board on June 30, 2021 (the "June 2021 Forecast"). Each forecast was prepared on a basis consistent with GAAP except for the application of GASB 49 and without regard to changes in certain fund balances described in GML Section 25. For information regarding recent developments, see "SECTION II: RECENT FINANCIAL DEVELOPMENTS."

	June 2020 Forecast	June 2021 Forecast	Increase/(Decrease) from June 2020 Forecast
	(In Millions)		
REVENUES			
Taxes			
General Property Tax	$ 30,691	$ 30,954	$ 263[1]
Other Taxes	27,030	32,380	5,350[2]
Tax Audit Revenues	921	1,171	250[3]
Subtotal – Taxes	$ 58,642	$ 64,505	$ 5,863
Miscellaneous Revenues	6,960	7,265	305[4]
Unrestricted Intergovernmental Aid	—	1	1
Less: Intra-City Revenue	(1,842)	(2,123)	(281)
Disallowances Against Categorical Grants	(15)	(15)	—
Subtotal – City Funds	$ 63,745	$ 69,633	$ 5,888
Other Categorical Grants	975	1,146	171[5]
Inter-Fund Revenues	677	633	(44)
Federal Categorical Grants	7,370	16,658	9,288[6]
State Categorical Grants	15,425	15,029	(396)[7]
Total Revenues	$ 88,192	$103,099	$ 14,907
EXPENDITURES			
Personal Services			
Salaries and Wages	$ 29,749	$ 29,601	$ (148)[8]
Pensions	9,932	9,465	(467)[9]
Fringe Benefits	10,565	11,256	691[10]
Retiree Health Benefits Trust	(1,600)	—	1,600[11]
Subtotal – Personal Services	$ 48,646	$ 50,322	$ 1,676
Other Than Personal Services			
Medical Assistance	5,238	5,665	427[12]
Public Assistance	1,628	1,604	(24)
All Other	30,871	38,991	8,120[13]
Subtotal – Other Than Personal Services	$ 37,737	$ 46,260	$ 8,523
Debt Service	7,370	6,332	(1,038)[14]
FY 2020 Budget Stabilization	(3,819)	(3,819)	—[15]
FY 2021 Budget Stabilization	—	6,107	6,107[16]
Capital Stabilization Reserve	—	—	—
General Reserve	100	20	(80)
Less: Intra-City Revenue	(1,842)	(2,123)	(281)
Net Total Expenditures	$ 88,192	$103,099	$ 14,907

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(1) The increase in General Property Tax is from lower reserve for collectibles of $210 million and higher collections from prior year delinquencies of $53 million.

(2) The increase in Other Taxes is due to increases of $3.307 billion in personal income tax, $1.66 billion in general corporation tax, $305 million in unincorporated business tax, $252 million in mortgage recording tax, $198 million in real property transfer tax, $73 million in commercial rent tax and $48 million in other taxes, offset by decreases of $280 million in sales tax, $193 million in hotel tax, $8 million in STAR Program aid, $6 million in utility tax and $6 million in cigarette tax.

(3) The increase in Tax Audit Revenues is due to increase in audits from business taxes of $200 million, commercial rent tax of $20 million, hotel tax of $15 million and sales tax of $17 million, offset by a reduction in audits from cigarette tax of $2 million.

(4) The increase in Miscellaneous Revenues is due to increases of $281 million in intra-city revenues, $266 million in miscellaneous and other revenues, $14 million in rental income, and $2 million in interest income, offset by decreases of $117 million in charges for services, $43 million in permit revenues, $43 million in franchises, $42 million in fines and forfeitures, $12 million in water and sewer charges and $1 million in license revenues.

(5) The increase in Other Categorical Grants is due to increases of $46 million in education funding, $20 million in police funding, $19 million in board of elections funding, $16 million in health and mental hygiene funding, $15 million in technology and telecommunications funding, $14 million in parks funding, $12 million in miscellaneous agency funding and $47 million in other agencies funding, offset by a decrease of $18 million in debt service funding.

(6) The increase in Federal Categorical Grants is due to increases of $5.813 billion in funding relating to the outbreak of COVID-19, $1.172 billion in health and mental hygiene funding, $860 million in education funding, $473 million in community development funding, primarily disaster recovery funding, $231 million in social services funding, $165 million in children services funding, $134 million in police funding, $97 million in housing preservation and development funding, $86 million in CUNY funding, $72 million in fire department funding, $47 million in youth and community development funding, $34 million in emergency management funding, $23 million in homeless services funding, $23 million in department for the aging funding, $21 million in transportation department funding, $20 million in small business services funding and $31 million in other agencies funding, offset by a decrease of $14 million in debt service funding.

(7) The decrease in State Categorical Grants is due to increases of $51 million in children services funding, $45 million in social services funding, $37 million in miscellaneous agency funding $27 million in police funding, $16 million in district attorney funding, $10 million in transportation department funding and $19 million in other agencies funding, offset by a decrease of $601 million in education funding.

(8) The decrease in Salaries and Wages is primarily due to negotiated wage deferrals from fiscal year 2021 to fiscal year 2022.

(9) The decrease in Pensions is primarily due to the net savings arising from proposed changes by the City Actuary in assumptions and methods and a phased in reduction over a four year period of the actuarial interest rate assumption from 7% to 6.8%.

(10) The increase in Fringe Benefits is primarily due to a re-allocation of labor savings originally allocated to Fringe Benefits, but now expected to be achieved in Salaries and Wages.

(11) The increase in Retiree Health Benefits Trust is due to the rescindment of the previously planned drawdown of $1.6 billion from the trust in fiscal year 2021.

(12) The increase in Medical Assistance is primarily to an increase in supplemental Medicaid payments.

(13) The increase in Other Than Personal Services—All Other is due to expense increases to be funded in part by $7.512 billion of Federal Categorical Grants, $179 million of State Categorical Grants, $414 million of other funds and $15 million of City Funds.

(14) The decrease in General Obligation, Lease and TFA Debt Service is primarily due to savings from refinancing transactions executed in fiscal year 2021 and lower actual interest rates on floating rate obligations.

(15) FY 2020 Budget Stabilization reflects the discretionary transfer of $1.27 billion into the General Debt Service Fund and a grant of $2.55 billion to the TFA in fiscal year 2020 for debt service due in fiscal year 2021.

(16) FY 2021 Budget Stabilization reflects, in fiscal year 2021, the discretionary transfer of $3.0 billion into the General Debt Service Fund and a grant of $2.68 billion to the TFA, each for debt service due in fiscal year 2022, and the discretionary transfer of $425 million into the Retiree Health Benefits Trust.

SECTION VII: FINANCIAL PLAN

The following table sets forth the City's projected operations on a basis consistent with GAAP, except for the application of GASB 49 and without regard to changes in certain fund balances described in GML Section 25, for the 2021 through 2025 fiscal years as contained in the Financial Plan. This table should be read in conjunction with the accompanying notes, "Actions to Close the Remaining Gaps" and "Assumptions" below. For information regarding recent developments, see "SECTION II: RECENT FINANCIAL DEVELOPMENTS."

	Fiscal Years[1][2]				
	2021	2022	2023	2024	2025
			(In Millions)		
REVENUES					
Taxes					
General Property Tax[3]	$ 30,954	$ 29,284	$ 30,042	$ 30,471	$ 30,881
Other Taxes[4]	32,380	32,151	34,674	36,372	37,833
Tax Audit Revenue	1,171	921	721	721	721
Subtotal – Taxes	$ 64,505	$ 62,356	$ 65,437	$ 67,564	$ 69,435
Miscellaneous Revenues[5]	7,265	6,873	6,472	6,461	6,474
Unrestricted Intergovernmental Aid	1	-	-	-	-
Less: Intra-City Revenue	(2,123)	(1,891)	(1,440)	(1,439)	(1,434)
Disallowances Against Categorical Grants	(15)	(15)	(15)	(15)	(15)
Subtotal – City Funds	$ 69,633	$ 67,323	$ 70,454	$ 72,571	$ 74,460
Other Categorical Grants	1,146	1,025	993	991	990
Inter-Fund Revenues[6]	633	725	725	725	725
Federal Categorical Grants	16,658	13,697	9,244	8,603	7,908
State Categorical Grants	15,029	15,953	16,308	16,626	16,877
Total Revenues	$103,099	$ 98,723	$ 97,724	$ 99,516	$100,960
EXPENDITURES					
Personal Service					
Salaries and Wages	$ 29,601	$ 31,423	$ 30,811	$ 30,946	$ 31,228
Pensions	9,465	10,037	10,469	10,660	10,597
Fringe Benefits	11,256	12,377	11,839	12,933	13,890
Retiree Health Benefits Trust		—	—	—	—
Subtotal – Personal Service	$ 50,322	$ 53,837	$ 53,119	$ 54,539	$ 55,715
Other Than Personal Service					
Medical Assistance	5,665	6,546	6,494	6,494	6,494
Public Assistance	1,604	1,651	1,650	1,650	1,650
All Other[7]	38,991	36,858	32,311	32,070	32,001
Subtotal – Other Than Personal Service	$ 46,260	$ 45,055	$ 40,455	$ 40,214	$ 40,145
Debt Service[8]	6,332	7,029	8,391	8,789	9,353
FY 2020 Budget Stabilization & Discretionary Transfers[9]	(3,819)	-	-	-	-
FY 2021 Budget Stabilization[10]	6,107	(6,107)	-	-	-
Capital Stabilization Reserve[11]	-	-	250	250	250
General Reserve	20	300	1,000	1,000	1,000
Deposit to the Revenue Stabilization Fund[12]	-	500	-	-	-
Less: Intra-City Expenses	(2,123)	(1,891)	(1,440)	(1,439)	(1,434)
Total Expenditures	$103,099	$ 98,723	$101,775	$103,353	$105,029
Gap to be Closed	$ —	$ —	$ (4,051)	$ (3,837)	$ (4,069)

(1) The four year financial plan for the 2021 through 2024 fiscal years, as submitted to the Control Board on June 30, 2020, contained the following projections for the 2021-2024 fiscal years: (i) for 2021, total revenues of $88.192 billion and total expenditures of $88.192 billion; (ii) for 2022, total revenues of $93.654 billion and total expenditures of $97.834 billion, with a gap to be closed of $4.180 billion; (iii) for 2023, total revenues of $96.967 billion and total expenditures of $100.010 billion, with a gap to be closed of $3.043 billion; and (iv) for 2024, total revenues of $98.288 billion and total expenditures of $101.470 billion, with a gap to be closed of $3.182 billion.

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Footnotes continued from previous page

The four year financial plan for the 2020 through 2023 fiscal years, as submitted to the Control Board on June 19, 2019, contained the following projections for the 2020-2023 fiscal years: (i) for 2020, total revenues of $92.772 billion and total expenditures of $92.772 billion; (ii) for 2021, total revenues of $94.421 billion and total expenditures of $97.942 billion, with a gap to be closed of $3.521 billion; (iii) for 2022, total revenues of $96.992 billion and total expenditures of $99.871 billion, with a gap to be closed of $2.879 billion; and (iv) for 2023, total revenues of $99.352 billion and total expenditures of $102.493 billion, with a gap to be closed of $3.141 billion.

The four year financial plan for the 2019 through 2022 fiscal years, as submitted to the Control Board on June 14, 2018, contained the following projections for the 2019-2022 fiscal years: (i) for 2019, total revenues of $89.158 billion and total expenditures of $89.158 billion; (ii) for 2020, total revenues of $91.238 billion and total expenditures of $94.498 billion, with a gap to be closed of $3.260 billion; (iii) for 2021, total revenues of $94.048 billion and total expenditures of $96.973 billion, with a gap to be closed of $2.925 billion; and (iv) for 2022, total revenues of $96.257 billion and total expenditures of $98.542 billion, with a gap to be closed of $2.285 billion.

(2) The Financial Plan combines the operating revenues and expenditures of the City, the DOE and CUNY. The Financial Plan does not include the total operations of NYCHH, but does include the City's subsidy to NYCHH and the City's share of NYCHH revenues and expenditures related to NYCHH's role as a Medicaid provider. Certain Covered Organizations and PBCs which provide governmental services to the City, such as the Transit Authority, are separately constituted and their revenues, are not included in the Financial Plan; however, City subsidies and certain other payments to these organizations are included. Revenues and expenditures are presented net of intra-City items, which are revenues and expenditures arising from transactions between City agencies.

(3) For a description of the STAR Program, and other real estate tax assumptions, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Revenue Assumptions*—2. REAL ESTATE TAX."

(4) Personal income taxes flow directly from the State to the TFA, and from the TFA to the City only to the extent not required by the TFA for debt service, reserves, operating expenses and contractual and other obligations incurred pursuant to the TFA indenture. Sales taxes will flow directly from the State to the TFA to the extent necessary to provide statutory coverage. Other Taxes includes amounts that are expected to be retained by the TFA for its funding requirements associated with TFA Future Tax Secured Bonds.

(5) Miscellaneous Revenues reflects the receipt by the City of TSRs not used by TSASC for debt service and other expenses. For information on TSASC, see "SECTION IV: SOURCES OF CITY REVENUES—Miscellaneous Revenues."

(6) Inter-Fund Revenues represents General Fund expenditures, properly includable in the Capital Budget, made on behalf of the Capital Projects Fund pursuant to inter-fund agreements.

(7) For a discussion of the categories of expenditures in Other Than Personal Services—All Other, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—2. OTHER THAN PERSONAL SERVICES COSTS."

(8) For a discussion of the debt service in General Obligation, Lease and TFA Debt Service, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—3. GENERAL OBLIGATION, LEASE AND TFA DEBT SERVICE."

(9) FY 2020 Budget Stabilization reflects the discretionary transfer of $1.27 billion into the General Debt Service Fund and a grant of $2.55 billion to the TFA in fiscal year 2020 for debt service due in fiscal year 2021.

(10) FY 2021 Budget Stabilization reflects, in fiscal year 2021, the discretionary transfer of $3.0 billion into the General Debt Service Fund and a grant of $2.68 billion to the TFA, each for debt service due in fiscal year 2022, and the discretionary transfer of $425 million into the Retiree Health Benefits Trust.

(11) The Capital Stabilization Reserve reflects a capital reserve which will be available to make capital projects more efficient or for debt retirement in an economic downturn.

(12) The Revenue Stabilization Fund reflects an expense reserve funded with prior year surpluses. No more than fifty percent of the total amount of such fund may be withdrawn in any fiscal year unless the Mayor has certified that there is a compelling fiscal need.

Implementation of various measures in the Financial Plan may be uncertain. If these measures cannot be implemented, the City will be required to take actions to decrease expenditures or increase revenues to maintain a balanced financial plan. See "Assumptions" and "Certain Reports" below.

Actions to Close the Remaining Gaps

Although the City has maintained balanced budgets in each of its last 40 fiscal years, except for the application of GASB 49 with respect to fiscal years 2010 through 2020, and without regard to changes in certain fund balances described in GML Section 25 in fiscal year 2020, and is projected to achieve balanced operating results for the 2021 and 2022 fiscal years, except for the application of GASB 49 and without regard to changes in certain fund balances described in GML Section 25, there can be no assurance that the Financial Plan or future actions to close projected outyear gaps can be successfully implemented or that the City will maintain a balanced budget in future years without additional federal or State aid, revenue increases or expenditure reductions. Additional tax increases and reductions in essential City services could adversely affect the City's economic base.

Assumptions

The Financial Plan is based on numerous assumptions, including the condition of the City's and the region's economies and the concomitant receipt of economically sensitive tax revenues in the amounts projected. The Financial Plan is subject to various other uncertainties and contingencies relating to, among other factors, the extent, if any, to which wage increases for City employees exceed the annual wage costs assumed; realization of projected earnings for pension fund assets and current assumptions with respect to wages for City employees affecting the City's required pension fund contributions; the willingness and ability of the State to provide the aid contemplated by the Financial Plan and to take various other actions to assist the City; the ability of NYCHH and other such entities to maintain balanced budgets; the willingness of the federal government to provide the amount of federal aid contemplated in the Financial Plan; the impact on City revenues and expenditures of federal and State legislation affecting Medicare or other entitlement programs; adoption of the City's budgets by the City Council in substantially the forms submitted by the Mayor; the ability of the City to implement cost reduction initiatives, and the success with which the City controls expenditures; the impact of conditions in the real estate market on real estate tax revenues; the ability of the City and other financing entities to market their securities successfully in the public credit markets; the impact of the outbreak of COVID-19; and the extension of the authorization to sell real property tax liens. See "SECTION II: RECENT FINANCIAL DEVELOPMENTS." Certain of these assumptions are reviewed in reports issued by the City Comptroller and other public officials. See "SECTION VII: FINANCIAL PLAN—Certain Reports."

The projections and assumptions contained in the Financial Plan are subject to revision, which may be substantial. No assurance can be given that these estimates and projections, which include actions the City expects will be taken but are not within the City's control, will be realized. For information regarding certain recent developments, see "SECTION II: RECENT FINANCIAL DEVELOPMENTS."

Revenue Assumptions

1. GENERAL ECONOMIC CONDITIONS

The Financial Plan assumes an increase in economic activity in calendar year 2021 compared to calendar year 2020. The following table presents a forecast of the key economic indicators for the calendar years 2020 through 2025. This forecast is based upon information available in March 2021.

FORECAST OF KEY ECONOMIC INDICATORS

	Calendar Years					
	2020	**2021**	**2022**	**2023**	**2024**	**2025**
U.S. ECONOMY						
Real GDP (billions of 2012 dollars):	18,423	19,465	20,270	20,767	21,284	21,787
Percent Change	-3.5	5.7	4.1	2.5	2.5	2.4
Non-Agricultural Employment (millions)	142.3	145.6	150.6	153.3	155.1	156.2
Percent Change	-5.7	2.4	3.4	1.8	1.1	0.7
CPI-All Urban (1982-84=100)	259	265	269	274	280	287
Percent Change	1.2	2.2	1.5	2.0	2.3	2.4
Wage Rate ($ per year)	65,601	68,015	69,293	71,512	74,336	77,554
Percent Change	6.3	3.7	1.9	3.2	3.9	4.3
Personal Income ($ billions)	19,692	20,683	20,761	21,690	22,805	23,985
Percent Change	6.1	5.0	0.4	4.5	5.1	5.2
Pre-Tax Corp Profits ($ billions)	2,101	2,392	2,466	2,611	2,768	2,938
Percent Change	-6.1	13.8	3.1	5.9	6.0	6.1
Unemployment Rate (Percent)	8.1	5.5	4.1	3.6	3.4	3.5
10-year Treasury Bond Rate	0.9	1.8	2.3	2.4	2.6	2.9
Federal Funds Rate	0.4	0.1	0.1	0.1	0.3	0.5

	Calendar Years					
	2020	**2021**	**2022**	**2023**	**2024**	**2025**
NYC ECONOMY						
Real Gross City Product (billions of 2012 dollars):	834	871	935	964	977	993
Percent Change	-6.9	4.4	7.4	3.1	1.4	1.6
Non-Agricultural Employment (thousands)	4,132	4,285	4,578	4,725	4,789	4,861
Percent Change	-11.2	3.7	6.8	3.2	1.4	1.5
CPI- All Urban NY-NJ Area (1982-84=100)	283	289	294	300	307	314
Percent Change	1.7	2.0	1.7	2.1	2.3	2.4
Wage Rate ($ per year)	102,737	104,682	107,260	110,577	113,622	116,585
Percent Change	7.4	1.9	2.5	3.1	2.8	2.6
Personal Income	694	728	740	775	810	845
Percent Change	3.7	4.9	1.7	4.7	4.5	4.2
NYC REAL ESTATE MARKET						
Manhattan Primary Office Market						
Asking Rental Rate ($ per square feet)	80.20	69.25	69.73	72.38	74.42	76.16
Percent Change	0.5	-13.6	0.7	3.8	2.8	2.3
Vacancy Rate – Percent	14.9	16.7	17.5	16.8	16.5	16.3

Source: OMB

2. REAL ESTATE TAX

Projections of real estate tax revenues are based on a number of assumptions, including, among others, assumptions relating to the tax rate, the assessed valuation of the City's taxable real estate, the delinquency rate, debt service needs, a reserve for uncollectible taxes, the operating limit and the impact of the outbreak of COVID-19. See "SECTION IV: SOURCES OF CITY REVENUES—Real Estate Tax."

Projections of real estate tax revenues include net revenues from the sale of real property tax liens of $16 million in fiscal year 2021, $128 million in fiscal year 2022 and $80 million in each of fiscal years 2023 through 2025. Projections of real estate tax revenues include the effects of the STAR Program which will reduce the real estate tax revenues by an estimated $154 million in fiscal year 2021 and $149 million, $150 million, $148 million and $146 million in fiscal years 2022 through 2025, respectively. Projections of real estate tax revenues reflect the estimated cost of extending the current tax reduction for owners of cooperative and condominium apartments amounting to $657 million, $614 million, $624 million, $632 million and $639 million in fiscal years 2021 through 2025, respectively.

The delinquency rate was 1.4% in fiscal year 2016, 1.3% in fiscal year 2017, 1.2% in fiscal year 2018, 1.2% in fiscal year 2019 and 1.8% in fiscal year 2020. The Financial Plan projects delinquency rates of 2.3% in fiscal year 2021, 2.6% in fiscal year 2022, 1.7% in fiscal year 2023, 1.4% in fiscal year 2024 and 1.4% in fiscal year 2025. For information concerning the delinquency rates for prior years, see "SECTION IV: SOURCES OF CITY REVENUES—Real Estate Tax—*Collection of the Real Estate Tax*." For a description of proceedings seeking real estate tax refunds from the City, see "SECTION X: OTHER INFORMATION—Litigation—*Taxes*." For information on the potential impact of the lapse of lien sale authorization on real property tax delinquencies, see "SECTION II: RECENT FINANCIAL DEVELOPMENTS."

On April 24, 2017, a lawsuit was filed challenging the City's real property tax system and valuation methodology. See "SECTION X: OTHER INFORMATION—Litigation—*Taxes*."

3. OTHER TAXES

The following table sets forth amounts of revenues (net of refunds) from taxes other than the real estate tax projected to be received by the City in the Financial Plan. The amounts set forth below exclude the Criminal Justice Fund and audit revenues.

	2021	2022	2023	2024	2025
			(In Millions)		
Personal Income[(1)]	$14,978	$13,827	$14,728	$15,280	$15,849
General Corporation	4,821	4,378	4,608	4,681	4,719
Banking Corporation	—	—	—	—	—
Unincorporated Business Income	1,962	2,005	2,105	2,201	2,277
Sales[(2)]	6,484	7,423	8,339	8,992	9,501
Commercial Rent	841	880	913	937	959
Real Property Transfer	992	1,155	1,335	1,409	1,484
Mortgage Recording	816	894	919	971	1,024
Utility	357	374	376	383	395
Cigarette	20	19	18	17	16
Hotel Tax[(3)]	75	215	350	520	630
All Other[(4)]	1,034	981	983	981	979
Total	$32,380	$31,151	$34,674	$36,372	$37,833

Note: Totals may not add due to rounding.

(1) Personal Income includes $276 million, $347 million, $3.806 billion, $3.929 billion and $4.264 billion of personal income tax revenues projected to be retained by the TFA for debt service and other expenses in fiscal years 2021 through 2025, respectively.

(2) Sales Tax reflects the imposition of sales tax on certain additional internet sales and providing that sales tax revenues in the amount of $170 million in State fiscal year 2021 and thereafter increasing by one percent per year, will be directed to the MTA for transit improvements. Revenues from such additional sales tax are currently estimated to be approximately $170 million per year and are in addition to existing sales taxes attributable to certain other internet transactions. In addition, fiscal years 2021 and 2022 reflect State intercept of $250 million and $150 million, respectively, to fund the "Distressed Provider Assistance Account" to provide assistance to hospitals and nursing homes.

(3) Hotel Tax includes the impact of an additional temporary hotel occupancy tax of 0.875 percent resulting in additional revenues of $11 million, $34 million, $52 million, $77 million and $93 million in fiscal years 2021 through 2025, respectively.

(4) All Other includes, among others, beer and liquor taxes and the automobile use tax. All Other also includes $153 million, $149 million, $150 million, $148 million and $146 million in fiscal years 2021 through 2025, respectively, to be provided to the City by the State as reimbursement for the reduced property tax resulting from the STAR Program.

The Financial Plan reflects the following assumptions regarding projected baseline revenues from Other Taxes: (i) with respect to the personal income tax, a 10.5 percent surge in fiscal year 2021 revenue reflecting the impact of federal stimulus programs as well as strong equities markets, a 7.7 percent decrease in fiscal year 2022 revenues reflecting the market's return to more normal levels and the end of government programs, and continued moderate to strong growth on average in fiscal years 2023 through 2025; (ii) with respect to the business corporation tax, a sharp increase in fiscal year 2021 reflecting near record Wall Street profits, a drop in revenue in fiscal year 2022 following the abnormally strong year before it, and moderate changes in fiscal years 2023 through 2025; (iii) with respect to the unincorporated business income tax, slight growth for fiscal year 2021 following the prior year's decline, reflecting a drop in tax payments due to the impact of COVID-19 on many industry sectors such as hospitality, entertainment, food and beverage and general retail, a return to more average growth in fiscal year 2022 reflecting an improved economic situation in the City, and a return to moderate to strong growth in fiscal years 2023 through 2025 reflecting the control of the pandemic and consequently, economic growth; (iv) with respect to the sales tax, a decline in growth in fiscal year 2021 following the prior year's decline, reflecting that consumer spending due to the pandemic was constrained through most of fiscal year 2021 as economic uncertainty and job loss influenced individuals to save and spend mainly on essentials, with tourism, hospitality and entertainment spending remaining severely hampered due to COVID-19, a rebound in growth in fiscal years 2022 and 2023 from increased consumer spending due to pent-up demand and the recovery of the tourism, hospitality and entertainment industries as COVID-19 is controlled, and moderate growth in fiscal years 2024 and 2025 reflecting economic growth; (v) with respect to the real property transfer tax, a steep decline in fiscal year 2021 reflecting a drop in the number of transactions due to the impact of COVID-19 as well as weakness in high end residential transactions that existed before the COVID-19 shut-down, a strong rebound in fiscal years 2022 and 2023 as the City's economy rebounds and moderate growth in fiscal years 2024 and 2025 reflecting steady economic growth; (vi) with respect to the mortgage recording tax, a decline in fiscal year 2021 mirroring weakness in transaction activity, a strong rebound in fiscal year 2022 before returning to the long-term trend growth rate in fiscal years 2023 through 2025 reflecting steady economic growth; and (vii) with respect to the commercial rent tax, a decline in fiscal year 2021 reflecting the COVID-19 impact with growth returning in fiscal years 2022 through 2025, as the local office market improves with employment gains.

4. MISCELLANEOUS REVENUES

The following table sets forth amounts of miscellaneous revenues projected to be received by the City in the Financial Plan.

	2021	2022	2023	2024	2025
			(In Millions)		
Licenses, Permits and Franchises	$ 607	$ 658	$ 686	$ 688	$ 686
Interest Income	14	9	10	13	36
Charges for Services	896	1,020	1,037	1,041	1,041
Water and Sewer Payments(1)	1,714	1,637	1,616	1,598	1,596
Rental Income	259	248	248	248	248
Fines and Forfeitures	986	1,067	1,093	1,093	1,093
Other	666	343	342	341	340
Intra-City Revenues	2,123	1,891	1,440	1,439	1,434
	$ 7,265	$ 6,873	$ 6,472	$ 6,461	$ 6,474

(1) Received from the Water Board. The Financial Plan reflects a request by the City for rental payments from the Water Board of $137 million in fiscal year 2021, with no additional rental payment requests for fiscal years 2022 through 2025. For further information regarding the Water Board, see "SECTION VII: FINANCIAL PLAN—Financing Program."

Rental Income reflects approximately $163.6 million in fiscal year 2021 and $158.6 million in each of fiscal years 2022 through 2025 for lease payments for the City's airports.

Other reflects $127.8 million, $119.6 million, $118.6 million, $117.8 million and $117.2 million of projected resources in fiscal years 2021 through 2025, respectively, from the receipt by the City of TSRs. For more information, see "SECTION IV: SOURCES OF CITY REVENUES—Miscellaneous Revenues." Economic and legal uncertainties relating to the tobacco industry and the settlement may significantly affect the receipt of TSRs by TSASC and the City.

5. FEDERAL AND STATE CATEGORICAL GRANTS

The following table sets forth amounts of federal and State categorical grants projected to be received by the City in the Financial Plan.

	2021	2022	2023	2024	2025
			(In Millions)		
Federal					
Community Development	$ 884	$ 339	$ 261	$ 261	$ 260
Social Services	3,840	3,329	3,453	3,454	3,454
Education	2,985	5,077	3,734	3,346	2,492
Other	8,949	4,952	1,796	1,542	1,702
Total	$ 16,658	$ 13,697	$ 9,244	$ 8,603	$ 7,908
State					
Social Services	$ 1,907	$ 1,837	$ 1,837	$ 1,837	$ 1,837
Education	10,847	11,961	12,250	12,520	12,712
Higher Education	283	278	277	277	277
Health and Mental Hygiene	504	516	548	548	548
Other	1,488	1,361	1,396	1,444	1,503
Total	$ 15,029	$ 15,953	$ 16,308	$ 16,626	$ 16,877

The Financial Plan assumes that all existing federal and State categorical grant programs will continue, unless specific legislation provides for their termination or adjustment, and assumes increases in aid where increased costs are projected for existing grant programs. For information concerning federal and State aid and the possible impacts on the Financial Plan, see "SECTION I: INTRODUCTORY STATEMENT" and "SECTION II: RECENT FINANCIAL DEVELOPMENTS."

As of May 31, 2021, approximately 16.3% of the City's full-time and full-time equivalent employees (consisting of employees of the mayoral agencies and the DOE) were paid by Community Development funds, water and sewer funds and from other sources not funded by unrestricted revenues of the City.

A major component of federal categorical aid to the City is the Community Development program. Pursuant to federal legislation, Community Development grants are provided to cities primarily to aid low and moderate income persons by improving housing facilities, parks and other improvements, by providing certain social programs and by promoting economic development. These grants are based on a formula that takes into consideration such factors as population, age of housing and poverty.

The City's receipt of categorical aid is contingent upon the satisfaction of certain statutory conditions and is subject to subsequent audits, possible disallowances and possible prior claims by the State or federal governments. The general practice of the State and federal governments has been to deduct the amount of any disallowances against the current year's payment, although in some cases the City remits payment for disallowed amounts to the grantor. Substantial disallowances of aid claims may be asserted during the course of the Financial Plan. The City estimates probable amounts of disallowances of recognized grant revenues and makes the appropriate adjustments to recognized grant revenue for each fiscal year. The amounts of such downward adjustments to revenue for disallowances attributable to prior years increased from $124 million in the 1977 fiscal year to $542 million in the 2006 fiscal year. The amounts of such disallowances were $103 million and $114 million in fiscal years 2007 and 2008, respectively. There were no adjustments for estimated disallowances in fiscal years 2009 and 2010. In fiscal year 2011 the downward adjustment for disallowances was $113 million and in fiscal year 2012 an upward adjustment of $166 million was made, reflecting a reduced estimate of disallowances attributable to prior years as of June 30, 2012. In fiscal years 2013, 2014, 2015, 2016, 2018 and 2020, downward adjustments of $59 million, $19 million, $110 million, $1 million, $558 million $139 million and $5 million, respectively, were made. In fiscal years 2017 and 2019, upward adjustments of $558 million and $113 million, respectively, were made. As of June 30, 2020, the City had an accumulated reserve of $299 million for all disallowances of categorical aid.

Expenditure Assumptions

1. PERSONAL SERVICES COSTS

The following table sets forth projected expenditures for personal services costs contained in the Financial Plan.

	2021	2022	2023	2024	2025
			(In Millions)		
Wages and Salaries	$ 28,857	$ 30,141	$ 29,886	$ 29,835	$ 29,740
Pensions	9,465	10,037	10,469	10,660	10,597
Other Fringe Benefits	11,256	12,377	11,839	12,933	13,890
Reserve for Collective Bargaining	744	1,282	925	1,111	1,488
Total	$ 50,322	$ 53,837	$ 53,119	$ 54,539	$ 55,715

The Financial Plan projects that the authorized number of City-funded full-time and full-time equivalent employees will increase from an estimated level of 271,363 as of June 30, 2021 to an estimated level of 272,304 by June 30, 2025.

Other Fringe Benefits includes $2.792 billion, $3.079 billion, $3.219 billion, $3.426 billion and $3.593 billion in fiscal years 2021 through 2025, respectively, for post-employment benefits other than pensions ("OPEB") expenditures for current retirees, which costs are currently paid by the City on a pay-as-you-go basis. For information on deposits to the Retiree Health Benefits Trust to fund a portion of the future cost of OPEB for current and future retirees, see "SECTION VI: FINANCIAL OPERATIONS—2016-2020 Summary of Operations."

The Financial Plan reflects contract settlements with nearly 85% of the City's unionized workforce for the 2017-2021 round of collective bargaining. The Financial Plan reflects funding for a cumulative 7.95% for unsettled unions based on the applicable civilian pattern as established by the DC 37 and UFT deals or the uniform pattern based on the Uniformed Officers Coalition settlement. The civilian pattern framework provides, over a 43 month period beginning on the effective date of each applicable contract, for a 2% wage increase on the first day of the contract, a 2.25% wage increase on the 13th month, a 3% wage increase on the 26th month as well as funding equivalent to 0.5% of wages to be used to fund benefit items. The uniform pattern framework provides, over a 36 month period beginning on the effective date of each applicable contract, for increases of 2.25% effective the first day, 2.5% as of the 13th month, and 3% as of the 25th month. All contract settlements also include health insurance savings as part of a 2018 Municipal Labor Committee ("MLC") agreement (the "2018 MLC Agreement"), in addition to those previously agreed upon.

Four remaining uniformed unions remain unsettled for the 2017-2021 round of collective bargaining. One of the unsettled unions, the Police Benevolent Association, has filed for arbitration over new contract terms. Arbitration proceedings are currently on hold as a result of the COVID-19 pandemic.

The amounts in the Financial Plan reflect the offsets from health insurance savings of $600 million in fiscal year 2021 and thereafter. These savings are pursuant to the 2018 MLC Agreement. The City has the right to enforce the agreement through a binding arbitration process. If total health insurance savings in fiscal year 2021 are greater than $600 million, the first $68 million of such additional savings will be used by the City to make a $100 per member per year increase to welfare funds effective July 1, 2021. If a savings amount over $600 million but less than $668 million is achieved, the $100 per member per year increase will be prorated. Any savings thereafter are to be divided equally between the City and the unions.

These savings are in addition to the $3.4 billion of health insurance savings the City achieved in fiscal years 2015 through 2018, $1.3 billion of which are recurring, which were negotiated pursuant to a previous MLC agreement.

The Financial Plan reflects no wage increases for two years following the expiration of the current labor contracts covering the 2017-2021 round of collective bargaining, followed by annual 1% wage increases. Each annual 1% wage increase will cost approximately $460 million per fiscal year.

For a discussion of the City's pension systems, see "SECTION IX: PENSION SYSTEMS AND OPEB" and "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note E.5."

2. OTHER THAN PERSONAL SERVICES COSTS

The following table sets forth projected other than personal services ("OTPS") expenditures contained in the Financial Plan.

	2021	2022	2023	2024	2025
			(In Millions)		
Administrative OTPS and Energy	$ 31,097	$ 29,527	$ 26,432	$ 26,172	$ 26,017
Public Assistance	1,604	1,651	1,650	1,650	1,650
Medical Assistance	5,665	6,546	6,494	6,494	6,494
NYCHH Support	2,678	1,107	699	708	708
Other	5,216	6,224	5,180	5,190	5,276
Total	$ 46,260	$ 45,055	$ 40,455	$ 40,214	$ 40,145

Administrative OTPS and Energy

The Financial Plan contains estimates of the City's administrative OTPS expenditures for general supplies and materials, equipment and selected contractual services, and the impact of agency gap-closing actions relating to such expenditures in the 2021 fiscal year. Thereafter, to account for inflation, administrative OTPS expenditures are projected to rise by 2.5% annually in fiscal years 2021 through 2025. Energy costs for each of the 2021 through 2025 fiscal years are assumed to vary annually, with total energy expenditures projected at $802 million in fiscal year 2021 and increasing to $981 million by fiscal year 2025.

Public Assistance

Of total cash assistance expenditures in the City, the City-funded portion is projected to be $810 million in fiscal year 2021 and $891 million in each of fiscal years 2022 through 2025.

Medical Assistance

Medical assistance payments projected in the Financial Plan consist of payments to voluntary hospitals, skilled nursing facilities, intermediate care facilities, home care providers, pharmacies, managed care organizations, physicians and other medical practitioners. The City-funded portion of medical assistance payments is estimated at $5.5 billion for the 2021 fiscal year.

The City-funded portion of medical assistance payments is expected to be $6.4 billion in each of fiscal years 2022 through 2025. Such payments include the City's capped share of local Medicaid expenditures as well as Supplemental Medicaid payments to NYCHH.

New York City Health and Hospitals

NYCHH, which provides essential services to over 1.1 million New Yorkers annually, faces near- and long-term financial challenges resulting from, among other things, changes in hospital reimbursement under the Affordable Care Act and the statewide transition to managed care. On April 26, 2016, the City released "One New York: Health Care for Our Neighborhoods," a report outlining the City's plan to address NYCHH's financial shortfall.

In May 2021, NYCHH released a cash-based financial plan, which projected City-funded expenditures of $2.5 billion in fiscal year 2021, $980 million in fiscal year 2022, $682 million in fiscal year 2023, and $690 million in each of fiscal years 2024 and 2025, in addition to the forgiveness of debt service in fiscal years 2022 through 2025 and the City's contribution to supplemental Medicaid payments which is consistent with the City's Financial Plan. NYCHH's financial plan projected total receipts of $12.0 billion, $10.5 billion, $8.9 billion, $8.5 billion and $8.4 billion, and total disbursements of $12.0 billion, $10.4 billion, $8.9 billion, $8.8 billion and $8.7 billion in fiscal years 2021 through 2025, respectively.

NYCHH relies on significant projected revenue from Medicaid, Medicare and other third-party payor programs. Future changes to such programs could have adverse impacts on NYCHH's financial condition.

Other

The projections set forth in the Financial Plan for OTPS-Other include the City's contributions to NYCT, NYCHA and CUNY and subsidies to libraries and various cultural institutions. They also include projections for the cost of future judgments and claims which are discussed below under "Judgments and Claims." In the past, the City has provided additional assistance to certain Covered Organizations which had exhausted their financial resources prior to the end of the fiscal year. No assurance can be given that similar additional assistance will not be required in the future.

New York City Transit

NYCT operates under its own section of the Financial Plan as a Covered Organization. An accrual-based financial plan for NYCT covering its 2021 through 2024 fiscal years was published in July 2021 (the "2021 NYCT Financial Plan"). The NYCT fiscal year coincides with the calendar year. The 2021 NYCT Financial Plan reflects the negative impacts of the COVID-19 outbreak on MTA costs, ridership, and farebox revenue. The 2021 NYCT Financial Plan reflects City assistance to the NYCT operating budget of $461.0 million in 2021, increasing to $546.0 million in 2025. In addition, the 2021 NYCT Financial Plan projects real estate transfer tax revenue dedicated for NYCT use of $365.0 million in 2021, increasing to $612.1 million in 2025. The 2021 NYCT Financial Plan includes decreased expected farebox revenue based on projected lower ridership. The 2021 NYCT Financial Plan reflects $7.9 billion in revenues and $14.5 billion in expenses for 2021, leaving a budget gap of $6.6 billion. After accounting for accrual adjustments and cash carried over from 2020, operating budget gaps of $2.7 billion in 2021, $4.8 billion in 2022, $6.8 billion in 2023, $9.0 billion in 2024, and $11.7 billion in 2025 are projected. These figures do not reflect the receipt of over $10.5 billion in federal aid across the American Rescue Plan Act ("ARPA") and Coronavirus Response and Relief Supplemental Appropriations Act, which is expected to offset the 2021 deficit and partially offset the outyear deficits.

In 2009, a Payroll Mobility Tax ("PMT") was enacted into State law to provide $0.34 for every $100 of payroll in the MTA's twelve-county service area. The PMT is currently expected to generate revenues for NYCT in the amount of $799 million in 2021, increasing to $898 million in 2024.

The MTA faces serious budget shortfalls from historic declines in fare, toll, and tax revenues as a result of the outbreak of COVID-19. Federal aid has allowed the MTA to close the 2021 deficit, but large out-year deficits remain. The City's payments to the MTA remain dependent on future uncertainties such as additional federal funding, ridership trends, ongoing cleaning costs, and service adjustments.

The 2015-2019 Capital Program currently includes $33.9 billion for all MTA agencies, including $16.7 billion to be invested in the NYCT core system and $1.7 billion for NYCT network expansion.

The State has agreed to contribute $9.1 billion towards the 2015-2019 Capital Program. The City has agreed to contribute $2.656 billion. Of the City's contribution, $2.056 billion has been reflected in the City's Capital Commitment Plan, including $164.0 million for the Subway Action Plan. The remaining $600.0 million will come from joint ventures, such as development deals, which will not flow through the City budget.

On September 19, 2019, the MTA released its 2020-2024 Capital Program, which took effect by default in January 2020. The program includes $54.8 billion for all MTA agencies, including $37.3 billion to be invested in subways and $3.5 billion for buses. The entire 2020-2024 Capital Program was placed on hold in 2020 but resumed upon the announcement of $6.5 billion in federal aid in the ARPA in March of 2021.

Legislation adopted in 2019 includes the enactment of congestion tolling for vehicles entering a designated congestion zone in Manhattan below 60th Street, with a start date no earlier than December 31, 2020, the revenues from which will be directed to the MTA for transit improvements. Details of the plan, including pricing and the start date, have yet to be determined. The 2021 NYCT Financial Plan anticipates that the MTA will begin receiving revenue from congestion tolling in 2023.

In addition, the State 2020 Budget included legislation authorizing the imposition of sales tax on certain additional internet sales and providing that City sales tax revenues in the amount of $127.5 million in State fiscal year 2020 (reflecting the portion of the year in which it is effective) and $170 million in State fiscal year 2021 and thereafter increasing by one percent per year, will be directed to the MTA for transit improvements. Revenues from such additional sales tax are currently estimated to be approximately $170 million per year and are in addition to existing sales taxes attributable to certain other internet transactions. Additionally, such legislation provided that State sales tax revenues in the amount of $112.5 million in State fiscal year 2020 and $150 million in State fiscal year 2021 and thereafter increasing by one percent per year, will be directed to the MTA for transit improvements. The State 2020 Budget also included legislation increasing real estate transfer taxes on properties valued at more than $2 million, which will also be directed to the MTA for transit improvements.

The State 2021 Budget requires the City to contribute $3 billion towards the 2020-2024 Capital Program concurrent with the State's $3 billion contribution. Neither the City nor the State can use operating funds dedicated to the MTA to supplant their capital commitment and must pay on a schedule determined by the State Budget Director. The City has appropriated this $3 billion and this is anticipated to be spent within the years of the Ten-Year Capital Strategy.

The State 2021 Budget included a requirement that the City increase its funding of the MTA's net paratransit operating deficit from 33% to 50%. The City's Financial Plan reflects $175 million in each of fiscal years 2022 through 2025 to cover the City's contributions for paratransit services, compared to MTA's estimates of $239 million,

$278 million, $295 million and $315 million in fiscal years 2022, 2023, 2024 and 2025, respectively. Spending on paratransit is significantly impacted by ridership levels, and it is unknown what the long-term impacts of COVID-19 will be on usage. The City will continue to monitor the anticipated paratransit costs for future years.

Department of Education

State law requires the City to provide City funds for the DOE each year in an amount not less than the amount appropriated for the preceding fiscal year, excluding amounts for debt service and pensions for the DOE. Such City funding must be maintained, unless total City funds for the fiscal year are estimated to be lower than in the preceding fiscal year, in which case the mandated City funding for the DOE may be reduced by an amount up to the percentage reduction in total City funds.

Judgments and Claims

In the fiscal year ended on June 30, 2020, the City expended $709.0 million for judgments and claims. The Financial Plan includes provisions for judgments and claims of $582.1 million, $1.34 billion, $758.2 million, $774.6 million and $791.2 million for the 2021 through 2025 fiscal years, respectively. These projections incorporate a substantial amount of claims costs attributed to NYCHH, estimated to be $140 million in each year of the Financial Plan, for which NYCHH reimburses the City unless otherwise forgiven by the City, which was the case in fiscal years 2013 and 2016. The City is a party to numerous lawsuits and is the subject of numerous claims and investigations. The City has estimated that its potential future liability on account of outstanding claims against it as of June 30, 2020 amounted to approximately $7.1 billion. This estimate was made by categorizing the various claims and applying a statistical model, based primarily on actual settlements by type of claim during the preceding ten fiscal years, and by supplementing the estimated liability with information supplied by the City's Corporation Counsel. For further information regarding certain of these claims, see "SECTION X: OTHER INFORMATION—Litigation."

In addition to the above claims, numerous real estate tax *certiorari* proceedings involving allegations of inequality of assessment, illegality and overvaluation are currently pending against the City. The City's Financial Statements for the fiscal year ended June 30, 2020 include an estimate that the City's liability in the *certiorari* proceedings, as of June 30, 2020, could amount to approximately $1.124 billion. Provision has been made in the Financial Plan for estimated refunds of $400 million in each of fiscal years 2021 through 2025. For further information concerning these claims, certain remedial legislation related thereto and the City's estimates of potential liability, see "SECTION X: OTHER INFORMATION—Litigation—Taxes" and "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note D.5."

3. GENERAL OBLIGATION, LEASE AND TFA DEBT SERVICE

Debt service estimates for fiscal years 2021 through 2025 include debt service on outstanding general obligation bonds and conduit debt, and the funding requirements associated with outstanding TFA Future Tax Secured Bonds, and estimates of debt service costs of, or funding requirements associated with, future general obligation, conduit and TFA Future Tax Secured debt issuances based on projected future market conditions. Such debt service estimates also include estimated payments pursuant to interest rate exchange agreements but do not reflect receipts pursuant to such agreements.

In July 2009, the State amended the New York City Transitional Finance Authority Act to expand the borrowing capacity of the TFA by providing that it may have outstanding $13.5 billion of Future Tax Secured Bonds (excluding Recovery Bonds) and may issue additional Future Tax Secured Bonds provided that the amount of such additional bonds, together with the amount of indebtedness contracted by the City, does not exceed the debt limit of the City. The City currently expects to continue to finance approximately half of its capital program through the TFA, exclusive of Department of Environmental Protection capital budget items financed by the Water Authority.

The Financial Plan reflects general obligation debt service of $3.41 billion, $3.88 billion, $4.44 billion, $4.74 billion and $4.97 billion in fiscal years 2021 through 2025, respectively, conduit debt service of $98 million, $124 million, $148 million, $119 million and $117 million in fiscal years 2021 through 2025, respectively, and TFA debt service of $2.83 billion, $3.03 billion, $3.81 billion, $3.93 billion and $4.26 billion in fiscal years 2021 through

2025, respectively, in each case prior to giving effect to prepayments. Such debt service requirements are projected to be below 15% of projected City tax revenues for each year of the Financial Plan.

Certain Reports

On August 3, 2021, the City Comptroller released a report entitled "Comments on New York City's Fiscal Year 2022 Adopted Budget." The report states that both the national and City economic outlooks have improved dramatically since the June 2020 Financial Plan was released. However, vaccine hesitancy and the spread of the Delta variant of the COVID-19 virus pose a near-term risk to economic recovery. The report notes that the Financial Plan closes a $4.18 billion gap projected in June of 2020 due to prepayment in fiscal year 2021 of $6.11 billion of fiscal year 2022 expenditures. The prepayment also allowed the City to support a $1.42 billion downward revision in City-funds revenues and a Rainy Day Fund deposit of $500 million. The report notes that the fiscal year 2022 budget is balanced but the Financial Plan projects budget gaps in fiscal years 2023 through 2025. Revenues are projected to grow by 2.3 percent from fiscal year 2022 through 2025, while expenditures are projected to grow by 6.4 percent. However, adjusted for prepayments in fiscal year 2021 of fiscal year 2022 expenses, expenditures before reserves are projected to remain relatively flat, which can be attributed to the assumption of unspecified labor savings annually beginning in fiscal year 2023 and the winding down of spending related to COVID-19.

In the report, the City Comptroller projects net offsets of $1.13 billion, $166 million, and $763 million in fiscal years 2022, 2024 and 2025, respectively, and net risks of $427 million in fiscal year 2023, which, when added to the results projected in the Financial Plan, would result in a surplus of $1.13 billion in fiscal year 2022, and gaps of approximately $4.48 billion, $3.67 billion, and $3.31 billion in fiscal years 2023 through 2025, respectively.

The differences from the Financial Plan projections result in part from the City Comptroller's net expenditure projections, which are higher than the Financial Plan projections by $330 million, $871 million, and $130 million in fiscal years 2022 through 2024, respectively, and lower than the Financial Plan projections by $610 million in fiscal year 2025, as a result of: (i) additional overtime expenditures of $130 million in each of fiscal years 2022 through 2025; (ii) increased expenditures to fund the Fair Fares program of $47 million in fiscal year 2022 and $100 million in each of fiscal years 2023 through 2025; (iii) increased homeless shelter operation expenditures of $147 million in each of fiscal years 2022 through 2025; (iv) increased expenditures associated with funding the Emergency Rental Assistance Program of $202 million in each of fiscal years 2023 through 2025; (v) reduction in labor savings of $1 billion in each of fiscal years 2023 through 2025; (vi) increased cost of providing MTA Paratransit Funding of $81 million, $111 million, $130 million and $150 million in fiscal years 2022 through 2025, respectively; and (vii) increased costs associated with providing prevailing wages for homeless shelter security guards of $41 million in each of fiscal years 2023 through 2025. The report also projects: (i) decreased expenditures associated with pension contributions of $760 million, $1.52 billion, and $2.28 billion in fiscal years 2023 through 2025, respectively; and (ii) anticipated debt service savings from lower interest rates on variable rate bonds of $75 million in fiscal year 2022 and $100 million in each of fiscal years 2023 through 2025.

The differences from the Financial Plan projections also result from the City Comptroller's net revenue projections, which are higher than the Financial Plan projections by $1.46 billion, $444 million, $296 million, and $153 million in fiscal years 2022 through 2025, respectively. The report projects that: (i) property tax revenues will be higher by $236 million, $242 million, $245 million, and $254 million in fiscal years 2022 through 2025, respectively; (ii) personal income tax revenues will be higher by $529 million, $94 million, and $133 million in fiscal years 2022, 2024 and 2025, respectively; (iii) business tax revenues will be higher by $157 million in fiscal year 2022; (iv) sales tax revenues will be higher by $291 million, $164 million, $142 million, and $81 million in fiscal years 2022 through 2025, respectively; (v) real-estate-related tax revenues will be higher by $162 million in fiscal year 2022; (vi) other tax revenues will be higher by $8 million in fiscal year 2022; and (vii) revenues from audit collections will be higher by $79 million in fiscal year 2022, and $279 million in each of fiscal years 2023 through 2025.

The report also identifies certain risks to projected revenues that result in the following differences from the Financial Plan: (i) personal income tax revenues will be lower by $58 million in fiscal year 2023; (ii) business tax revenues will be lower by $64 million, $176 million, and $166 million in fiscal years 2023 through 2025, respectively; (iii) real-estate-related taxes will be lower by $113 million, $281 million, and $417 million in fiscal years 2023 through 2025, respectively; and (iv) other tax revenues will be lower by $6 million, $7 million, and $11 million in fiscal years 2023 through 2025, respectively.

On August 3, 2021, the OSDC released a review of the Financial Plan. The report highlights a $2 billion increase in City-funded spending, noting the difficulties associated with balancing short-term and long-term economic needs. As it has done since the release of the April financial plan, OSDC continues to encourage (i) the use of federal relief for one-time recovery initiatives, (ii) avoiding new recurring spending without identifying commensurate resources, and (iii) leveraging positive operating results to build reserves. The report warns that the City continues to rely on one-time relief for new spending, setting aside only a small portion for reserves, which will benefit short-term economic needs at the risk of further complicating somewhat unpredictable long-term economic needs.

The report notes that agency expenditures have increased by nearly $1.5 billion, and there remains risks to City spending from unanticipated effects of the pandemic. City-funded spending continues to grow, and while the rate of growth is projected to slow in the out-years of the Financial Plan, the Financial Plan does not include out-year funding for new recovery programs that may be difficult to let expire. Additionally, budget gaps remain in the outyears, and gaps may be subject to more volatility in the years following the pandemic.

The City has benefitted from a recent increase in tourism and more than 60 percent of office workers are expected to return to workplaces by September, but new COVID-19 variants threaten further disruption and the commercial real estate market remains sluggish. Lower pension expenses and increased personal income tax revenues may offset future budget risks but are not guaranteed going forward. Reaching an agreement with organized labor will be necessary for the City to avoid significant risks to its budget, and it still has to manage education related risks and other perennial risks including overtime and funding for the MTA. To ensure long-term balance, the OSDC recommends the City renew efforts to add to reserves, identify cost efficiencies and improve revenue collections in order to help mitigate future uncertainties.

The OSDC report quantifies certain risks to the Financial Plan. The report identifies a surplus of $53 million in fiscal year 2021 and net risks of $23 million, $1.33 billion, $1.15 billion and $683 million in fiscal years 2022 through 2025, respectively. When combined with the results projected in the Financial Plan, the report estimates a surplus of $53 million in fiscal year 2021 and budget gaps of $23 million, $5.38 billion, $4.99 billion and $4.75 billion in fiscal years 2022 through 2025, respectively. The risks to the Financial Plan identified in the report include: (i) increased expenditures associated with increases in charter school tuition rates of $282 million, $433 million and $625 million in fiscal years 2023 through 2025, respectively; (ii) increased expenditures associated with providing services to students with disabilities of $220 million in each of fiscal years 2023 through 2025; (iii) increased expenditures for student transportation of $108 million in each of fiscal years 2022 through 2025; (iv) increased uniform services overtime costs of $340 million in fiscal year 2022 and $310 million in each of fiscal years 2023 through 2025; (v) increased cost of providing MTA paratransit funding of $79 million, $110 million, $129 million and $150 million in fiscal years 2022 through 2025, respectively; (vi) increased cost of providing MTA bus subsidies of $72 million, $106 million and $131 million in fiscal years 2023 through 2025, respectively; (vii) increased expenditures for homeless adult shelters of $147 million in each of fiscal years 2022 through 2025; (viii) increased expenditures to fund the emergency rental assistance program of $200 million in each of fiscal years 2023 through 2025; (ix) increased expenditures to fund the Fair Fares program of $49 million, $59 million and $66 million in fiscal years 2023 through 2025, respectively; (x) increased expenditures associated with providing prevailing wage for Department of Homeless Services security guards of $41 million in each of fiscal years 2023 through 2025; and (xi) reduction in labor savings of $1 billion in each of fiscal years 2023 through 2025.

The report also identifies (i) increased tax revenues of $53 million, $395 million, $276 million, $106 million and $107 million in fiscal years 2021 through 2025, respectively; (ii) a reduction in pension contributions of $711 million, $1.42 billion and $2.13 billion in fiscal years 2023 through 2025, respectively; (iii) additional debt service savings of $50 million and $150 million in fiscal years 2022 and 2023, respectively; (iv) additional savings as a result of the TFA Building Aid Revenue Bond refundings of $13 million in fiscal year 2022 and $74 million in each of fiscal years 2023 through 2025; and (v) a reduction in costs associated with the MTA bus subsidies of $193 million in fiscal year 2022.

On July 29, 2021, the staff of the Control Board issued a report reviewing the Financial Plan. The report states that the City is showing signs of recovery, having benefitted greatly from multi-year federal aid, strong growth in personal and business income taxes, a booming stock market and a high vaccination rate which allowed for ending most COVID-19 restrictions. This resulted in a projected $6.1 billion surplus of funds in fiscal year 2021, mostly comprised of larger-than-anticipated additional tax revenues. This surplus was used to balance the fiscal year 2022 budget and prepay expenses for fiscal year 2022. The report also notes that the momentum from job and wage gains in fiscal year 2021 could lead to additional property and non-property tax surpluses in fiscal years 2021 and 2022.

While federal aid enabled the City to directly fund education and COVID-19 response, address economic impact, restore services and support City-wide programs and initiatives, the City was not able to replace the $1 billion of Retiree Health Benefit Trust funds removed in fiscal year 2020 nor remove from the Financial Plan unspecified labor savings in fiscal years 2023 through 2025. However, the City was able to contribute $500 million to the fiscal year 2022 rainy day fund. The report notes that while the City has generated savings over the Financial Plan, it lacks a substantial commitment to find savings of recurring value, highlighting that the receipt of federal monies being relied upon will end by fiscal year 2025.

The report outlines a number of concerns and potential risks to the City's operating budget that affect the outyears of the Financial Plan. A risk analysis of the City's unspecified labor savings and higher-than-projected spending for uniformed services overtime results in estimates that the City's budget gaps could be higher by a net $1.2 billion in each of fiscal years 2023 through 2025, increasing the budget deficits in each of those years by at least $5 billion. Additionally, labor contracts have begun to expire, and the City has not yet replenished funding after having eliminated the 1% wage increases from the labor reserve for the first two years of future settlements. A potential increase in labor costs would require a greater portion of the City's operating budget, further complicating the rapidly growing debt service costs from funding the City's expansive capital plan. The report warns that these risks, among others, may result in unsustainable pressure on the City's operating budget.

The report identifies net risks to the Financial Plan of $4 million and $1.16 billion in fiscal years 2022 and 2023, respectively, and $1.15 billion in each of fiscal years 2024 and 2025, resulting in estimated gaps of $4 million, $5.23 billion, $4.99 billion and $5.22 billion in fiscal years 2022 through 2025, respectively. Such net risks and offsets result from: (i) an increase in tax revenues of $250 in fiscal year 2022; (ii) an increase in miscellaneous revenue of $50 million in fiscal year 2023, and $75 million in each of fiscal years 2024 and 2025; (iii) increased uniform services overtime expenses of $254 million and $225 million in fiscal years 2022 and 2023, respectively, and $226 million in each of fiscal years 2024 and 2025; and (iv) uncertainty with respect to the implementation of unspecified labor savings of $1 billion in each of fiscal years 2023 through 2025.

Long-Term Capital Program

The City makes substantial capital expenditures to reconstruct and rehabilitate the City's infrastructure and physical assets, including City mass transit facilities, water and sewer facilities, streets, bridges and tunnels, and to make capital investments that will improve productivity in City operations.

The City utilizes a three-tiered capital planning process consisting of the Ten-Year Capital Strategy, the four-year capital plan and the current-year Capital Budget. The Ten-Year Capital Strategy is a long-term planning tool designed to reflect fundamental allocation choices and basic policy objectives. The four-year capital plan, which is updated three times a year as required by the City Charter, translates mid-range policy goals into specific projects. The Capital Budget defines specific projects and the timing of their initiation, design, construction and completion. On April 26, 2021, the City released the five-year capital commitment plan for fiscal years 2021 through 2025 which covers the current fiscal year and the four-year capital plan for fiscal years 2022 through 2025 (the "2021-2025 Capital Commitment Plan").

City-funded commitments, which were $344 million in fiscal year 1979, are projected to reach $10.5 billion in fiscal year 2021. City-funded expenditures are forecast at $9.0 billion in fiscal year 2021; total expenditures are forecast at $10.2 billion in fiscal year 2021. For additional information concerning the City's capital expenditures and the Ten-Year Capital Strategy covering fiscal years 2022 through 2031, see "SECTION V: CITY SERVICES AND EXPENDITURES—Capital Expenditures."

See "SECTION I: INTRODUCTORY STATEMENT" and "SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities—*Limitations on the City's Authority to Contract Indebtedness*."

The following table sets forth the major areas of capital commitment projected in the 2021-2025 Capital Commitment Plan.

2021-2025 CAPITAL COMMITMENT PLAN

(In Millions)

	2021		2022		2023		2024		2025		TOTALS	
	City Funds	All Funds	City Funds	All Funds	City Funds	All Funds	City Funds	All Funds	City Funds	All Funds	City Funds	All Funds
Mass Transit[1]...............	$ 1,338	$ 1,356	$ 40	$ 40	$ 40	$ 40	$ 130	$ 130	$ 500	$ 500	$ 2,048	$ 2,066
Roadway, Bridges..........	771	902	1,763	2,128	2,025	2,206	2,163	2,263	3,154	3,203	9,876	10,701
Environmental Protection[2]....................	2,246	2,288	2,888	3,068	2,081	2,195	2,663	2,701	3,322	3,449	13,200	13,701
Education	3,012	3,214	5,566	5,566	4,546	4,546	3,772	3,772	1,206	1,206	18,102	18,304
Housing.........................	1,486	1,529	1,723	1,755	1,393	1,425	1,395	1,427	1,449	1,481	7,446	7,616
Sanitation	284	285	208	209	477	486	579	579	429	429	1,976	1,988
City Operations/Facilities......	4,963	5,799	7,094	8,075	5,329	5,820	6,291	6,700	8,473	8,552	32,149	34,947
Economic Development	778	920	946	1,101	453	456	453	463	710	737	3,340	3,677
Subtotal Commitments ..	14,877	16,293	20,226	21,943	16,345	17,176	17,445	18,033	19,244	19,557	88,137	93,002
Reserve for Unattained Commitments................	(4,421)	(4,421)	(3,195)	(3,195)	(771)	(771)	(655)	(655)	(859)	(859)	(9,901)	(9,901)
Total Commitments[3]	$10,456	$11,872	$17,031	$18,748	$15,574	$16,404	$16,790	$17,379	$18,385	$18,698	$78,236	$83,101
Total Expenditures[4]......	$ 9,025	$10,182	$10,602	$12,066	$12,262	$13,423	$12,993	$14,023	$14,197	$15,043	$59,079	$64,737

Note: Individual items may not add to totals due to rounding.

(1) Excludes NYCT's non-City portion of the MTA capital program.

(2) Includes water supply, water mains, water pollution control, sewer projects and related equipment.

(3) Commitments represent contracts registered with the City Comptroller, except for certain projects which are undertaken jointly by the City and State.

(4) Expenditures represent cash payments and appropriations planned to be expended for capital costs, excluding amounts for original issue discount.

Currently, if all City capital projects were implemented, expenditures would exceed the City's financing projections in the current fiscal year and subsequent years. The City has therefore established capital budgeting priorities to maintain capital expenditures within the available long-term financing. Due to the size and complexity of the City's capital program, it is difficult to forecast precisely the timing of capital project activity so that actual capital expenditures may vary from the planned annual amounts.

On November 15, 2017, the Mayor issued Housing New York 2.0, which updates and revises the Mayor's previously announced affordable housing initiatives. The updated plan, inclusive of prior commitments, proposes to build or preserve 300,000 affordable units by 2026, reflecting an increase of 100,000 units above what was previously announced. The expected costs associated with these revisions are reflected in the 2021-2025 Capital Commitment Plan, with additional resources as necessary to be reflected in future commitment plans.

In January 2021, the City issued an Asset Information Management System Report (the "AIMS Report"), which is its annual assessment of the asset condition and a proposed maintenance schedule for its assets and asset systems which have a replacement cost of $10 million or more and a useful life of at least ten years, as required by the City Charter. This report does not reflect any policy considerations which could affect the appropriate amount of investment, such as whether there is a continuing need for a particular facility or whether there have been changes in the use of a facility. The AIMS Report estimated that $10.4 billion in capital investment would be needed for fiscal years 2022 through 2025 to bring the assets to a state of good repair. The report also estimated that $550 million, $224 million, $293 million and $258 million should be spent on maintenance in fiscal years 2022 through 2025, respectively.

The recommended capital investment for each inventoried asset is not readily comparable to the capital spending allocated by the City in the 2021-2025 Capital Commitment Plan and the Ten-Year Capital Strategy. Only a portion of the funding set forth in the 2021-2025 Capital Commitment Plan is allocated to specifically identified assets, and funding in the subsequent years of the Ten-Year Capital Strategy is even less identifiable with individual assets. Therefore, there is a substantial difference between the amount of investment recommended in the report for all inventoried City assets and amounts allocated to the specifically identified inventoried assets in the 2021-2025 Capital Commitment Plan. The City also issues an annual report (the "Reconciliation Report") that compares the recommended capital investment with the capital spending allocated by the City in the four-year capital plan to the specifically identified inventoried assets.

The most recent Reconciliation Report, issued in October 2020, concluded that the capital investment in the five-year capital plan for fiscal years 2020 through 2024, released on April 16, 2020, for the specifically identified inventoried assets, funded 70% of the total investment recommended in the preceding AIMS Report issued in December 2019. Capital investment allocated in the Ten-Year Capital Strategy published in April 2019 funded an additional portion of the recommended investment. In the same Reconciliation Report, OMB estimated that 56% of the expense maintenance levels recommended were included in the financial plan.

Financing Program

The following table sets forth the amount of bonds issued and expected to be issued during the 2021 through 2025 fiscal years (as set forth in the Financial Plan) to implement the 2021-2025 Capital Commitment Plan. See "SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities." From time to time, the City and its related issuers also issue bonds to refinance existing debt for economic savings. Such refunding bonds are not included in the following table.

2021-2025 FINANCING PROGRAM

	2021	2022	2023	2024	2025	Total
			(In Millions)			
City General Obligation Bonds	$ 2.000	$ 4,330	$ 5,140	$ 5,440	$ 5,890	$ 22,800
TFA Future Tax Secured Bonds	3,173	5,530	5,140	5,440	5,890	25,173
Water Authority Bonds	1,316	1,474	1,610	1,769	2,062	8,230
Total	$ 6,489	$11,334	$ 11,890	$ 12,649	$ 13,842	$ 56,403

Note: Totals may not add due to rounding.

The City's financing program includes the issuance of water and sewer revenue bonds by the Water Authority which is authorized to issue bonds to finance capital investment in the City's water and sewer system. Pursuant to State law, debt service on Water Authority indebtedness is secured by water and sewer fees paid by users of the water and sewer system. Such fees are revenues of the Water Board, which holds a lease interest in the City's water and sewer system. After providing for debt service on obligations of the Water Authority and certain incidental costs, the revenues of the Water Board are paid to the City to cover the City's costs of operating the water and sewer system and as rental for the system. In fiscal years 2017, 2018 and 2019, the City did not request the rental payment due to the City from the Water Board. In fiscal year 2020, on account of the outbreak of COVID-19, the City requested a rental payment of $128 million. The Financial Plan further reflects the City requesting a rental payment of $137 million in fiscal year 2021, with no additional rental payment requests for fiscal years 2022 through 2025. The City's Ten-Year Capital Strategy applicable to the City's water and sewer system covering fiscal years 2022 through 2031, projects City-funded water and sewer investment (which is expected to be financed with proceeds of Water Authority debt) at approximately $24.3 billion. The 2021-2025 Capital Commitment Plan reflects total anticipated City-funded water and sewer commitments of $13.7 billion which are expected to be financed with the proceeds of Water Authority debt.

The TFA is authorized to have outstanding $13.5 billion of Future Tax Secured Bonds (excluding Recovery Bonds). The TFA may have outstanding Future Tax Secured Bonds in excess of $13.5 billion provided that the amount of the Future Tax Secured Bonds, together with the amount of indebtedness contracted by the City, do not exceed the debt limit of the City. Future Tax Secured Bonds are issued for general City capital purposes and are secured by the City's personal income tax revenues and, to the extent such revenues do not satisfy specified debt ratios, sales tax revenues. In addition, the TFA is authorized to have outstanding $9.4 billion of Building Aid Revenue Bonds to pay for a portion of the City's five-year educational facilities capital plan. Building Aid Revenue Bonds are secured by State building aid, which the Mayor has assigned to the TFA.

Implementation of the financing program is dependent upon the ability of the City and other financing entities to market their securities successfully in the public credit markets which will be subject to prevailing market conditions at the times of sale. No assurance can be given that the credit markets will absorb the projected amounts of public bond sales. A significant portion of bond financing is used to reimburse the City's General Fund for capital expenditures already incurred. If the City and such other entities are unable to sell such amounts of bonds, it would have an adverse effect on the City's cash position. In addition, the need of the City to fund future debt service costs from current operations may also limit the City's capital program. The Ten-Year Capital Strategy for fiscal years 2022 through 2031 totals $118.8 billion, of which approximately 95% is to be financed with funds borrowed by the City and such other entities. See "SECTION I: INTRODUCTORY STATEMENT" and "SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities—*Limitations on the City's Authority to Contract Indebtedness*." Congressional developments affecting federal taxation generally could reduce the market value of tax-favored investments and increase the debt-service costs of carrying out the major portion of the City's capital plan which is currently eligible for tax-exempt financing.

Interest Rate Exchange Agreements

In an effort to reduce its borrowing costs over the life of its bonds, the City began entering into interest rate exchange agreements commencing in fiscal year 2003. For a description of such agreements, see "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note A.12." As of June 30, 2021, the aggregate notional amount of the City's interest rate exchange agreements was $416,175,000 and the total marked-to-market value of such agreements was ($62,350,992).

In addition, in connection with its Courts Facilities Lease Revenue Bonds (The City of New York Issue) Series 2005A and B, the Dormitory Authority of the State of New York ("DASNY") entered into interest rate exchange agreements with Goldman Sachs Mitsui Marine Derivative Products, L.P. and JPMorgan Chase Bank, National Association. The City is obligated, subject to appropriation, to make lease payments to DASNY reflecting DASNY's obligations under these interest rate exchange agreements. Under such agreements, with a notional amount of $125,500,000, an effective date of June 15, 2005 and a termination date of May 15, 2039, DASNY pays a fixed rate of 3.017% and receives payments based on a LIBOR-indexed variable rate. As of June 30, 2021, the total marked-to-market value of the DASNY agreements was ($35,300,185).

Seasonal Financing Requirements

The City since 1981 has fully satisfied its seasonal financing needs, when necessary, in the public credit markets, repaying all short-term obligations within their fiscal year of issuance. The City has not issued short- term obligations to finance projected cash flow needs since fiscal year 2004. The City regularly reviews its cash position and the need for short-term borrowing. The Financial Plan does not reflect the issuance of short-term obligations.

SECTION VIII: INDEBTEDNESS

Indebtedness of the City and Certain Other Entities

Outstanding City and PBC Indebtedness

The following table sets forth outstanding City and PBC indebtedness as of June 30, 2021. "City indebtedness" refers to general obligation debt of the City, net of reserves. "PBC indebtedness" refers to obligations of the City, net of reserves, to the following PBCs: the New York City Educational Construction Fund ("ECF"), and DASNY (for health facilities, court facilities and CUCF as described below). PBC indebtedness is not debt of the City. However, the City has entered into agreements to make payments, subject to appropriation, to PBCs to be used for debt service on certain obligations constituting PBC indebtedness. Neither City indebtedness nor PBC indebtedness includes outstanding debt of the TFA, TSASC or STAR Corp., which are not obligations of, and are not paid by, the City; nor does such indebtedness include obligations of the Hudson Yards Infrastructure Corporation ("HYIC"), for which the City has agreed to pay, as needed and subject to appropriation, interest on but not principal of such obligations.

	(In Thousands)	
Gross City Long-Term Indebtedness	$ 38,574,404	
Less: Assets Held for Debt Service[(1)]	(3,000,000)	
Net City Long-Term Indebtedness		35,574,404
PBC Indebtedness		
Bonds Payable	333,689	
Capital Lease Obligations	707,245	
Gross PBC Indebtedness	1,040,934	
Less: Assets Held for Debt Service	(63,820)	
Net PBC Indebtedness		977,114
Combined Net City and PBC Indebtedness		$ 36,551,518

(1) Assets Held for Debt Service consists of General Debt Service Fund assets.

Trend in Outstanding Net City and PBC Indebtedness

The following table shows the trend in the outstanding net City and PBC indebtedness as of June 30 of each of the fiscal years 2012 through 2021.

	City Indebtedness			
	Long-Term	Short-Term	PBC Indebtedness[(1)]	Total
		(In Millions)		
2012	$ 40,913	—	$ 1,486	$ 42,399
2013	38,844	—	1,413	40,257
2014	41,033	—	1,347	42,380
2015	38,497	—	1,261	39,758
2016	36,147	—	1,236	37,383
2017	36,324	—	1,182	37,506
2018	36,725	—	1,155	37,880
2019	35,817	—	997	36,813
2020	37,515	—	935	38,450
2021	35,574	—	977	36,552

(1) Includes obligations of New York State Urban Development Corporation ("UDC") through June 30, 2016.

Rapidity of Principal Retirement

The following table details, as of June 30, 2021, the cumulative percentage of total City indebtedness that is scheduled to be retired in accordance with its terms in each prospective five-year period.

Period	**Cumulative Percentage of Debt Scheduled for Retirement**
5 years	30.86%
10 years	55.56
15 years	75.08
20 years	88.72
25 years	97.88
30 years	100.00

City and PBC Debt Service Requirements

The following table summarizes future debt service requirements, as of June 30, 2021, on City and PBC indebtedness.

	City Long-Term Debt		**PBC**		
Fiscal Years	**Principal**	**Interest**	**Indebtedness**	**Interest**	**Total**
			(In Thousands)		
2022	$ 2,173,910	$ 1,586,057	$ 62,700	$ 47,220	$ 3,869,887
2023	2,467,251	1,490,366	88,466	45,616	4,091,699
2024	2,496,371	1,385,860	65,188	41,296	3,988,714
2025 through 2152	31,436,872	11,733,949	824,580	311,279	44,306,680
Total	$38,574,404	$16,196,231	$ 1,040,934	$ 445,411	$ 56,256,980

Certain Debt Ratios

The following table sets forth the approximate ratio of City net general obligation bonded debt to assessed taxable property value as of June 30 of each of the fiscal years 2011 through 2020.

Fiscal Year	**City General Obligation Bonded Debt**[1]	**Debt Service Restricted Cash**[2]	**City General Obligation Bonded Debt Net of Debt Service Restricted Cash**	**City Net General Obligation Bonded Debt as a Percentage of Assessed Taxable Value of Property**[3]	**Per Capita**
	(in millions)	**(in millions)**	**(in millions)**		
2011	$ 41,785	$ 2,818	$ 38,967	24.40%	$ 4,710
2012	42,286	1,374	40,912	23.88	4,902
2013	41,592	2,766	38,826	21.68	4,624
2014	41,665	639	41,026	21.57	4,864
2015	40,460	1,970	38,490	18.97	4,548
2016	38,073	1,775	36,298	16.68	4,286
2017	37,891	1,583	36,308	15.48	4,303
2018	38,628	1,922	36,706	14.60	4,375
2019	37,519	1,727	35,792	13.37	4,293
2020	38,784	1,229	37,555	13.36	4,505

Source: Annual Report for the fiscal year ended June 30, 2020; New York City Comptroller's Office.

(1) General Obligation Bonded Debt is presented at par value and does not reflect GASB 44 reporting methodology netting premium and discount. See "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note D.5—*Changes in Long-term liabilities*."

(2) Primarily comprised of restricted cash and investments held in the General Debt Service Fund.

(3) Based on full valuations for each fiscal year derived from the application of the special equalization ratio reported by the State Office of Real Property Tax Services for such fiscal year.

Indebtedness of the City and Related Issuers

The following table sets forth obligations of the City and other issuers as of June 30 of each of the fiscal years 2011 through 2020. General obligation bonds are debt of the City. Although IDA Stock Exchange bonds and PBC indebtedness are not debt of the City, the City has entered into agreements to make payments, subject to appropriation, to the respective issuers to be used for debt service on the indebtedness included in the following table. ECF bonds are also not debt of the City. ECF bonds are expected to be paid from revenues of ECF, provided, however, that if such revenues are insufficient, the City has agreed to make payments, subject to appropriation, to ECF for debt service on its bonds. Indebtedness of the TFA, TSASC and STAR Corp. does not constitute debt of, and is not paid by, the City.

Fiscal Year	General Obligation Bonds	ECF	TFA	TSASC	STAR	HYIC	PBC Indebtedness and Other[(1)]	IDA Stock Exchange
				(In Millions)				
2011	$ 41,785	$ 281	$ 23,820	$ 1,260	$ 2,117	$2,000	$ 1,895	$ 98
2012	42,286	274	26,268	1,253	2,054	3,000	1,818	95
2013	41,592	268	29,202	1,245	1,985	3,000	1,739	93
2014	41,665	266	31,038	1,228	1,975	3,000	1,701	90
2015	40,460	264	33,850	1,222	2,035	3,000	1,639	87
2016	38,073	240	37,358	1,145	1,961	3,000	1,571	84
2017	37,891	236	40,696	1,089	1,884	2,751	1,549	80
2018	38,628	231	43,355	1,071	1,805	2,724	1,659	77
2019	37,519	218	46,624	1,053	1,721	2,724	1,553	62
2020	38,784	213	48,978	1,023	1,634	2,724	1,547	60

Source: Annual Report for the fiscal year ended June 30, 2020; New York City Comptroller's Office.

(1) PBC Indebtedness and Other includes capital lease obligations of the City and excludes Fiscal Year 2005 Securitization Corporation and Tax Lien Collateralized Bonds.

As of June 30, 2021, approximately $38.57 billion of City general obligation bonds were outstanding. For information regarding the City's variable rate bonds, see EXHIBIT C hereto.

Currently, HYIC has outstanding approximately $2.69 billion aggregate principal amount of bonds. In addition, HYIC has entered into a term loan facility with Bank of America, N.A. pursuant to which HYIC may draw up to an aggregate amount of $200 million, approximately $2.4 million of which has been drawn. The bonds financed the extension of the Number 7 subway line and other public improvements in the Hudson Yards area, and the term loan will be used to finance any remaining costs of completion of the original project and the expansion of the park in the Hudson Yards area. HYIC's bonds and, on a subordinate basis, draws under the term loan facility are secured by and payable from payments in lieu of taxes and other revenues generated by development in the Hudson Yards area. However, HYIC intends to extend the term loan facility prior to maturity on June 30, 2022. To the extent payments in lieu of taxes and other HYIC revenues are insufficient to pay interest on the HYIC bonds or the term loan, the City has agreed to pay the amount of any shortfall in interest, subject to appropriation. The Financial Plan does not reflect the need for such interest support payments. The City has no obligation to pay the principal of such bonds or of such term loan.

Certain Provisions for the Payment of City Indebtedness

The State Constitution requires the City to make an annual appropriation for: (i) payment of interest on all City indebtedness; (ii) redemption or amortization of bonds; and (iii) redemption of short-term indebtedness issued in anticipation of the collection of taxes or other revenues, such as tax anticipation notes ("TANs") and revenue anticipation notes ("RANs") which (with permitted renewals thereof) are not retired within five years of the date of original issue. If this appropriation is not made, a sum sufficient for such purposes must be set apart from the first revenues thereafter received by the City and must be applied for these purposes.

The City's debt service appropriation would provide for the interest on, but not the principal of, short-term indebtedness, if any. If such principal were not provided for from the anticipated sources, it would be, like debt service on City bonds, a general obligation of the City.

Pursuant to the Financial Emergency Act, a general debt service fund (the "General Debt Service Fund" or the "Fund") has been established for the purpose of paying Monthly Debt Service, as defined in the Act. In addition, as required under the Act, accounts have been established by the State Comptroller within the Fund to pay the principal of City TANs and RANs when outstanding. For the expiration date of the Financial Emergency Act, see "SECTION III: GOVERNMENT AND FINANCIAL CONTROLS—City Financial Management, Budgeting and Controls—*Financial Emergency Act and City Charter*."

Limitations on the City's Authority to Contract Indebtedness

The Financial Emergency Act imposes various limitations on the issuance of City indebtedness. No TANs may be issued by the City which would cause the principal amount of such issue of TANs to exceed 90% of the "available tax levy," as defined in the Act, with respect to such issue; TANs and renewals thereof must mature not later than the last day of the fiscal year in which they were issued. No RANs may be issued by the City which would cause the principal amount of RANs outstanding to exceed 90% of the "available revenues," as defined in the Act, for that fiscal year; RANs must mature not later than the last day of the fiscal year in which they were issued; and in no event may renewals of RANs mature later than one year subsequent to the last day of the fiscal year in which such RANs were originally issued. No bond anticipation notes ("BANs") may be issued by the City in any fiscal year which would cause the principal amount of BANs outstanding, together with interest due or to become due thereon, to exceed 50% of the principal amount of bonds issued by the City in the twelve months immediately preceding the month in which such BANs are to be issued.

The State Constitution provides that, with certain exceptions, the City may not contract indebtedness, including contracts for capital projects to be paid with the proceeds of City bonds ("contracts for capital projects"), in an amount greater than 10% of the average full value of taxable real estate in the City for the most recent five years (the "general debt limit"). See "SECTION IV: SOURCES OF CITY REVENUES—Real Estate Tax—Assessment." Certain indebtedness ("excluded debt") is excluded in ascertaining the City's authority to contract indebtedness within the constitutional limit. TANs, RANs and BANs, and long-term indebtedness issued for specified purposes are considered excluded debt. The City's authority for variable rate bonds is currently limited, with statutory exceptions, to 25% of the general debt limit. The State Constitution also provides that, subject to legislative implementation, the City may contract indebtedness for low-rent housing, nursing homes for persons of low income and urban renewal purposes in an amount not to exceed 2% of the average assessed valuation of the taxable real estate of the City for the most recent five years (the "2% debt limit"). Excluded from the 2% debt limit, after approval by the State Comptroller, is indebtedness for certain self-supporting programs aided by City guarantees or loans.

Water Authority and TSASC indebtedness and the City's commitments with other PBCs or related issuers are not chargeable against the City's constitutional debt limit. The TFA and TSASC were created to provide financing for the City's capital program. Without the TFA and TSASC, or other legislative relief, new contractual commitments for the City's general obligation financed capital program would have been virtually brought to a halt during the financial plan period beginning early in the 1998 fiscal year. As of June 30, 2021, TSASC has approximately $1.0 billion of bonds outstanding that are payable from TSRs. The TFA is permitted to have outstanding $13.5 billion of Future Tax Secured Bonds (excluding Recovery Bonds) and the TFA may have outstanding Future Tax Secured Bonds in excess of $13.5 billion, provided that the amount of such additional Future Tax Secured Bonds, together with the amount of indebtedness contracted by the City, do not exceed the debt limit of the City. Future Tax Secured Bonds are secured by the City's personal income tax revenues and sales tax revenues, if personal income tax revenues do not satisfy specified debt ratios. The TFA, as of June 30, 2021, has outstanding approximately $41.3 billion of Future Tax Secured Bonds (excluding Recovery Bonds). The TFA is authorized to have outstanding $9.4 billion of Building Aid Revenue Bonds, which are secured by State building aid and are not chargeable against the City's constitutional debt limit.

The following table sets forth the calculation of debt-incurring power as of August 31, 2021.

		As of August 31, 2021 (In Thousands)
Total City Debt-Incurring Power under General Debt Limit		$127,352,120
Gross Debt-Funded[(1)]	$38,065,940	
Less: Excluded Debt	(29,250)	
	38,036,691	
Less: Appropriations for Payment of Principal	(552,171)	
	37,484,519	
Contracts and Other Liabilities, Net of Prior Financings Thereof	16,603,277	
Less: Total City Indebtedness		(54,087,796)
Less: TFA Debt Outstanding above $13.5 billion		(27,345,290)
Debt-Incurring Power		$45,919,034

Note: Numbers may not add due to rounding.

(1) Debt issued at an original issue discount is reflected at the discounted amount rather than the par amount.

As of June 30, 2021, the combined TFA and City debt-incurring capacity for fiscal year 2025 is projected to decrease to $4.7 billion. Such projection is based on current forecasts of both real property values and City capital commitments, each of which may differ from current projections based on numerous factors. Capital commitments have historically been below projections. In addition, the City expects to reduce amounts in its Capital Commitment Plan in fall 2021. Each of these factors would create additional debt-incurring capacity relative to the projection above. See "SECTION VII: FINANCIAL PLAN—Long-Term Capital Program" and "—Financing Program."

Federal Bankruptcy Code

Under the Federal Bankruptcy Code, a petition may be filed in the federal bankruptcy court by a municipality which is insolvent or unable to meet its debts as they mature. The filing of such a petition would operate as a stay of any proceeding to enforce a claim against the City. Under such circumstances, the Federal Bankruptcy Code requires the municipality to file a plan for the adjustment of its debts, which may modify or alter the rights of creditors and may provide for the municipality to issue indebtedness, which could have priority over existing creditors and which could be secured. Any plan of adjustment confirmed by the court must be approved by the requisite majority of creditors. If confirmed by the bankruptcy court, the plan would be binding upon all creditors affected by it. Pursuant to authorization by the State, each of the City and the Control Board, acting on behalf of the City pursuant to the Financial Emergency Act, has the legal capacity to file a petition under the Federal Bankruptcy Code. For the expiration date of the Financial Emergency Act, see "SECTION III: GOVERNMENT AND FINANCIAL CONTROLS—City Financial Management, Budgeting and Controls—*Financial Emergency Act and City Charter*."

Public Benefit Corporation Indebtedness

City Financial Commitments to PBCs

PBCs are corporate governmental agencies created by or under State law to finance and operate projects of a governmental nature or to provide governmental services. Generally, PBCs issue bonds and notes to finance construction of housing, hospitals, dormitories and other facilities and receive revenues from the collection of fees, charges or rentals for the use of their facilities, including subsidies and other payments from the governmental entity whose residents have benefited from the services and facilities provided by the PBC. These bonds and notes do not constitute debt of the City.

The City has undertaken various types of financial commitments with certain PBCs which, although they do not represent City indebtedness, have a similar budgetary effect. The principal forms of the City's financial commitments with respect to PBC debt obligations are as follows:

1. *Capital Lease Obligations*—These are leases of facilities by the City or a Covered Organization, entered into with PBCs, under which the City has no liability beyond monies legally available for lease payments. State law generally provides, however, that in the event the City fails to make any required lease payment, the amount of such payment will be deducted from State aid otherwise payable to the City and will be paid to the PBC.

2. *Executed Leases*—These are leases pursuant to which the City is legally obligated to make the required rental payments.

3. *Capital Reserve Fund Arrangements*—Under these arrangements, State law requires the PBC to maintain a capital reserve fund in a specified minimum amount to be used solely for the payment of the PBC's obligations. State law further provides that in the event the capital reserve fund is depleted, State aid otherwise payable to the City may be paid to the PBC to restore such fund.

Certain PBCs are further described below.

New York City Educational Construction Fund

As of June 30, 2021, $302.0 million principal amount of ECF bonds to finance costs related to the school portions of combined occupancy structures was outstanding. Under ECF's leases with the City, debt service on the ECF bonds is payable by the City to the extent third party revenues are not sufficient to pay such debt service.

Dormitory Authority of the State of New York

As of June 30, 2021, $296.8 million principal amount and $410.4 million principal amount of DASNY bonds issued to finance the design, construction and renovation of court facilities and health facilities, respectively, in the City were outstanding. The court facilities and health facilities are leased to the City by DASNY, with lease payments made by the City in amounts sufficient to pay debt service on DASNY bonds and certain fees and expenses of DASNY.

City University Construction Fund

As of June 30, 2021, approximately $31.7 million principal amount of DASNY bonds, relating to Community College facilities, subject to capital lease arrangements was outstanding. The City and the State are each responsible for approximately one-half of the CUCF's annual rental payments to DASNY for Community College facilities which are applied to the payment of debt service on the DASNY's bonds issued to finance the leased projects plus related overhead and administrative expenses of DASNY.

For further information regarding the particular PBCs included in the City's financial statements, see "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note A."

SECTION IX: PENSION SYSTEMS AND OPEB

Pension Systems

The City maintains five actuarial pension systems, providing benefits for its employees and employees of various independent agencies (including certain Covered Organizations). Such systems consist of the New York City Employees' Retirement System ("NYCERS"), the Teachers' Retirement System of the City of New York ("TRS"), the New York City Board of Education Retirement System ("BERS"), the New York City Police Pension Fund ("PPF") and the New York City Fire Pension Fund ("FPF") (together, the New York City Retirement Systems, "NYCRS"). Members of these actuarial pension systems are categorized into tiers depending on date of membership. The systems combine features of defined benefit pension plans with those of defined contribution pension plans. Three of the five actuarial pension systems (NYCERS, TRS and BERS) are cost-sharing multiple employer systems that include public employees who are not City employees. Each public employer in these multiple employer systems has primary responsibility for funding and reporting in the employer's financial statements on its share of the systems' liabilities. Total membership in the City's five actuarial pension systems on June 30, 2019 consisted of 388,307 active employees, 369,298 retirees and beneficiaries receiving benefits and other vested members terminated but not receiving benefits, and 52,537 other inactives. Of the total membership of 810,142, City membership was 619,659. The City also contributes to three other pension systems, maintains a closed non-actuarial retirement program for certain retired individuals not covered by the five actuarial pension systems, provides other supplemental benefits to retirees and makes contributions to certain union annuity funds.

Each of the City's five actuarial pension systems is managed by a board of trustees which includes representatives of the City and the employees covered by such system. The City Comptroller is the custodian of, and has been delegated investment responsibilities for, the actuarial pension systems, subject to the policies established by the boards of trustees of the systems and State law. The City Actuary (the "Actuary"), an independent professional who is also the Chief Actuary of each of the five actuarial pension systems, determines annual employer contributions and prepares other actuarial analyses and reports that are used by the City for Financial Plan and financial reporting purposes, as further described below. The State Constitution provides that pension rights of public employees are contractual and shall not be diminished or impaired. Constitutional protection applies only to the basic pension benefits provided through each pension system's Qualified Pension Plan ("QPP") and does not extend to the Variable Supplements Funds ("VSFs") or Tax-Deferred Annuity Programs ("TDA Programs") that are also administered by some of the pension systems, as discussed below.

City Pension Contributions

The City has consistently made its full statutorily required pension contributions based on then-current actuarial valuations. For fiscal years 2019 and 2020, the City's pension contributions for the five actuarial pension systems, plus other pension expenditures, were approximately $9.9 billion and $9.8 billion, respectively, and were in addition to employee contributions. For fiscal years 2019 and 2020, 55% and 53% of the City pension contributions for such years, respectively, were attributable to the amortizations of Unfunded Accrued Liability ("UAL") described herein, see "—*Actuarial Assumptions and Methods*" below.

For the 2020 fiscal year, the City's total annual pension contribution expenditures, including pension costs not associated with the five actuarial pension systems, plus Social Security tax payments by the City for the year, were approximately 40% of total wage and salary costs. In addition, contributions are made by certain component units of the City and other government units directly to the three cost-sharing multiple employer actuarial pension systems on behalf of their participating employees and retirees.

Annual pension contributions for each system are determined by the Actuary using actuarial methods and assumptions that provide for orderly budgeting and planning, and that differ from the assumptions and methodologies used in financial reporting. The annual statutorily required pension contribution has four major cost components: (i) the service or normal cost, which is the cost of the future liability associated with pension benefits earned that year; (ii) scheduled amortization of the initial UAL established as of June 30, 2010; (iii) amortization of positive or negative adjustments to UAL from factors such as net investment returns above or below the assumed rate of return, changes in or deviations from actuarial assumptions and methods, and changes in benefits; and (iv) administrative expenses. Investment earnings reflect the impact of transfers within each pension system between the QPP and other employee benefit funds, including TDA Programs and VSFs, and within each QPP with regard to certain supplemental, voluntary member contribution accounts, as discussed below.

For further information on phasing in of changes in UAL, see "—*Actuarial Assumptions and Methods*" below. For further information on potential transfers within the pension systems, see "—*Fiduciary Fund Reporting*" below.

Each year, the Actuary provides each NYCRS with preliminary and final appropriation amounts equal to the statutorily required pension contribution for its respective QPP. For the NYCRS that are multi-employer plans, the Actuary also provides a schedule of allocations among the participating employers. Interest is charged on late payments, if any.

The New York City Off-Track Betting Corporation ("OTB") was a participating employer in NYCERS. OTB, which operated off-track betting facilities in the City, functioned under the direction of a board appointed by the Governor with input from leaders of the State Legislature at the time it ceased operations in December 2010. The pension obligations of OTB have continued to accrue since it ceased operations, and the cumulative unfunded liability as of January 1, 2019 was approximately $132 million. The City has been paying half of OTB's required contributions, which is comprised of an amortization of this unfunded liability over 15 years beginning in fiscal year 2019 and the cost for the current year. The Actuary has recently proposed that the City fund the other half of OTB's required contributions as well and has begun including this amount in the City's required contribution to NYCERS beginning in fiscal year 2021. The City will continue to seek full reimbursement from the State for any OTB contributions made by the City.

The following tables summarize the components of City pension contributions by system for fiscal years 2019, 2020 and 2021 (revised preliminary).

New York City Retirement Systems
Components of Employer Contribution—City Share
Fiscal Year 2019
($ in Millions)

	NYCERS[1]	TRS[2]	BERS[3]	POLICE	FIRE
Entry age Normal Cost	$ 853.3	$ 1,265.2	$ 133.0	$ 1,449.3	$ 577.1
Initial UAAL Contribution	$ 1,023.8	$ 1,849.7	$ 121.2	$ 1,220.8	$ 655.7
Subsequent UAAL Contribution	$ 123.7	$ 447.9	$ (2.3)	$ (133.5)	$ 165.8
Administrative Expenses	$ 35.8	$ 56.4	$ 17.7	$ 21.7	N/A
Interest on Late Employer Contributions	$ —	$ —	$ —	$ —	$ —
Total	$ 2,036.6	$ 3,619.2	$ 269.6	$ 2,558.3	$1,398.6

Fiscal Year 2020
($ in Millions)

	NYCERS[1]	TRS[2]	BERS[3]	POLICE	FIRE
Entry age Normal Cost	$ 878.5	$ 1,317.3	$ 139.0	$ 1,485.7	$ 592.0
Initial UAAL Contribution	$ 1,059.9	$ 1,905.2	$ 124.9	$ 1,257.4	$ 675.3
Subsequent UAAL Contribution	$ 112.1	$ 235.9	$ (21.6)	$ (308.4)	$ 144.6
Administrative Expenses	$ 36.0	$ 54.5	$ 15.1	$ 24.2	$ 7.3
Interest on Late Employer Contributions	$ —	$ —	$ —	$ —	$ —
Total	$ 2,086.5	$ 3,512.9	$ 257.4	$ 2,458.9	$1,419.2

Fiscal Year 2021 (Preliminary)[4]
($ in Millions)

	NYCERS[1]	TRS[2]	BERS[3]	POLICE	FIRE
Entry age Normal Cost	$ 897.3	$ 1,367.7	$ 145.5	$ 1,539.0	$ 609.1
Initial UAAL Contribution	$ 1,086.4	$ 1,956.3	$ 128.2	$1,291.1	$ 693.5
Subsequent UAAL Contribution	$ 185.7	$ (301.7)	$ (110.7)	$ (397.4)	$ 134.1
Administrative Expenses	$ 50.1	$ 55.7	$ 19.8	$ 33.2	$ 11.3
Interest on Late Employer Contributions	$ —	$ —	$ —	$ —	$ —
Total	$ 2,219.5	$ 3,078.0	$ 182.8	$ 2,465.9	$1,448.0

(1) Includes New York City School Construction Authority, Transit Police and CUNY Community Colleges.
(2) Includes CUNY Community Colleges. Does not reflect the credit for the Annuity Savings Accumulation Fund contribution paid by the DOE.
(3) Includes New York City School Construction and CUNY Community Colleges.
(4) Based on the proposed Original 2021 A&M (defined below). See below for more details.

The Financial Plan reflects projected City pension contributions of $9.465 billion, $10.037 billion, $10.469 billion, $10.660 billion and $10.597 billion for fiscal years 2021 through 2025, respectively. These projections are based on a valuation from the Actuary as of June 30, 2019 and reflect changes to funding assumptions and methods first implemented in 2019 and new proposed changes to the actuarial assumptions and methods (the "Original 2021 A&M"), proposed by the Chief Actuary as discussed below. The proposed decrease in the actuarial interest rate assumption from 7% to 6.8%, which requires State legislation, was not enacted, and therefore, revised final fiscal year 2021 pension contributions are based on a revised 2021 A&M (the "Revised 2021 A&M"). The Financial Plan also reflects costs of legislation related to COVID-19 (which established additional accidental death benefits for families of public employees who die due to the disease and contracted the disease within 45 days of reporting to work), costs associated with a proposed change to keep NYCERS, TRS and BERS in compliance with the Older Workers Benefit Protection Act (effective beginning with Fiscal Year 2022), and a change in the method for determining the Actuarial Value of Assets for TRS and BERS (effective beginning with Fiscal Year 2021). Investment earnings vary by system and are calculated differently from the investment performance reported by the City Comptroller's office, as described below.

The City Comptroller's office reports investment returns using the time-weighted calculation methodology, which facilitates measurement of relative performance across systems. Using this methodology, aggregate returns on investment assets advised by the Comptroller's office for fiscal years 2016 to 2021 were 1.46%, 12.95%, 8.67%, 7.24%, 4.44%, and 25.85%, respectively. Returns are net of all investment manager fees. These returns varied by pension system. These reported returns refer only to those investment assets of the pension systems for which the City Comptroller's office is the investment advisor. These investment assets exclude certain QPP funds advised outside the City Comptroller's office, and include pension system assets outside the QPPs. The returns do not reflect the impact of transfers within each pension system between the QPP and other employee benefit funds, such as TDAs and VSFs, or within each QPP with regard to certain supplemental, voluntary member contribution accounts. Such transfers can be material, and, as such, the earnings used by the Actuary in determining required City contributions may differ materially from the earnings implied by the investment-only rates of return above.

Actuarial Assumptions and Methods

This section describes the actuarial assumptions and methods used for determining the City's pension contributions. As mentioned previously, these actuarial assumptions and methods may differ from those used for financial reporting, or for other pension system administrative purposes.

An actuarial valuation requires an initial set of information and assumptions about future events. Pursuant to the City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarial pension systems are conducted by an independent actuarial firm every two years. Such studies assess the reasonableness of the Actuary's calculations of the employer contributions and make recommendations about actuarial methods and assumptions. The Actuary may recommend changes to methods and assumptions based on these studies. Bolton, Inc., an independent actuarial firm, completed their final reports in June 2019. Partially as a result of this study, the Actuary recommended changes to several of the assumptions for each of the NYCRS. This new set of actuarial assumptions and methods are referred to as the "2019 A&M" and were used by the Actuary for determining employer contributions to the NYCRS, and where applicable, Net Pension Liabilities of the NYCRS, beginning in fiscal year 2019.

The 2019 A&M report for each of the NYCRS is available on the web site of the New York City Office of the Actuary (www.nyc.gov/actuary). Such website, and the information and links contained therein, are not incorporated into, and are not part of, this Appendix. Other actuarial methods and assumptions currently in effect include an actuarial interest (discount) rate assumption of 7% per annum which is based on investment earnings net of investment expenses, and the use of the Entry Age Actuarial Cost Method. The initial UAL recognized as of June 30, 2010 is being amortized, with interest of 7% through City contributions over a 22-year period that commenced in fiscal year 2012 with dollar payments increasing at a rate of 3% per year.

Also under the current funding method, emerging unfunded liabilities are recognized and amortized over closed, fixed periods using level dollar payments. Future UAL attributable to actuarial gains and losses is amortized over 15 years; future UAL attributable to changes in actuarial assumptions and methods is amortized over 20 years; and future changes in UAL attributable to benefit improvements is generally amortized over periods reasonably consistent with the remaining working lifetimes of those impacted. Investment earnings above or below expectation are reflected in City pension contributions in two stages: first, the annual earnings above or below expectation are phased in to the actuarial value of assets over a six-year period, with 15% of the total recognized per year in years 1-4 and 20% per year in years 5 and 6. This six-year smoothing period is being changed under the Original 2021 A&M to a five-year smoothing period beginning with investment earnings generated during fiscal year 2020. Second, the portion recognized in each year is then amortized over a 15-year period for the purpose of calculating the City's annual pension contributions. The Actuary uses investment earnings in this calculation and does not calculate an investment rate of return.

The 2019 A&M includes the continued use of the One Year Lag methodology, where census data and asset information as of the June 30 second preceding a fiscal year is used to determine the employer contribution for that fiscal year. For example, for the fiscal year 2020 pension contribution calculation, employee data and the Actuarial Asset Valuation as of June 30, 2018 were used.

The Original 2021 A&M proposal that was used in determining the projected pension contributions contained in the Financial Plan lowered the CPI assumption from 2.5% to 2.3% by reducing it 0.05% each year for four years beginning fiscal year 2021. Lowering the CPI assumption would result in a phased in reduction over four years of the actuarial interest rate assumption from 7% to 6.8% and would result in similar 0.05% annual phased-in reductions to the General Wage Increase and Cost of Living Assumption, since inflation is a component of each. As referenced above, the change in the actuarial interest rate assumption proposed by the Actuary was not adopted by the State Legislature, and therefore, it will remain at 7%. As a result, under the Revised 2021 A&M, the CPI, General Wage Increase and Cost of Living Assumptions will also remain unchanged from pre-2021 figures.

The Original 2021 A&M and the Revised 2021 A&M also include updating post-retirement mortality assumptions to reflect the latest improvement scale released by the Society of Actuaries (MP-2020), resetting the actuarial value of assets equal to the market value of assets, and changing the phase-in schedule for investment performance from the current six-year period to a five-year period at 20% per year going forward. Other changes include amending certain death benefits under NYCERS, TRS, and BERS in order to keep the plans in compliance with OWBPA.

Financial Reporting

City Pension Fund Financial Reporting

The City accounts for its pensions consistent with the requirements of GASB. In fiscal year 2014, the City implemented GASB Statement No. 68, Accounting and Financial Reporting for Pensions ("GASB 68"). The GASB 68 standards apply to actuarial calculations for financial reporting but not to the actuarial calculation of annual City employer pension contributions, which continue to be determined as described above.

In broad terms, GASB 68 separates pension accounting in the City's government-wide financial statements from the phased or smoothed asset and liability figures that the Actuary uses in determining the City's annual pension contributions, as described above. For financial reporting purposes, most changes in assets and liabilities are reflected in the year in which they occur. As a result, pension fund accounting under GASB 68 has increased year-to-year volatility in reported net pension liability. Under GASB 68, net pension liabilities are reported on employers' Government-Wide Statements of Net Assets when the fair value of pension assets falls short of actuarially calculated liabilities, when both are measured as of the same date (fiscal year end). For the cost-sharing multiple employer pension systems, only the City share of net pension liabilities is reported in the Government-Wide Statement of Net Assets. As reported in the Government-Wide financial statements for fiscal years 2016 through 2020, the City membership (active, inactive and retired) and the City's share of total pension liability, Plan fiduciary net position, net pension liability, and plan fiduciary net position as a percent of total pension liability, aggregated across the five pension systems, were as follows:

Summary of City Pension Information, Fiscal Years 2016-2020[(1)]
(Dollars in billions)

	2016	2017	2018	2019	2020
City Membership (active, inactive, retired)[(2)]	551,080	559,210	572,755	609,420	619,659
Total Pension Liability (TPL)	$ 188.2	$ 195.2	$ 198.2	$ 203.1	$ 210.7
Less Plan Fiduciary Net Position (PFNP)	123.4	138.9	150.4	159.8	164.3
Net Pension Liability (NPL)	$ 64.8	$ 56.3	$ 47.8	$ 43.3	$ 46.4
PFNP as percent of TPL	65.6%	71.2%	75.9%	78.7%	77.9%

Source: NYC Annual Reports

(1) Data are aggregated across the five pension systems. Funding amounts and percentages vary between systems. Data for NYCERS, PPF, and FPF include the QPP and VSFs, and data for TRS and BRS are QPP only.

(2) Membership data for fiscal year 2016 through 2018 is as of the June 30th of two years prior. Membership data for fiscal year 2019 and 2020 is as of June 30th of the prior year as a result of a change in methodology beginning with fiscal year 2019.

The reported net pension liabilities do not include future payments on fixed return TDA funds, described below, where the statutory rate of interest for members is higher than the assumed 7% return on QPP assets.

For further information see "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT."

Fiduciary Fund Reporting

The fiscal year 2020 Annual Report contains Fiduciary Funds financial statements for each of the five actuarial pension systems. These financial statements report on the entirety of the five systems, not just the City share. Each of the five actuarial pension systems administers programs in addition to its respective QPP, and these programs are also reported as part of each system's financial statements in the Fiduciary Fund financial statements. The City Annual Reports for fiscal years 2016 through 2020 report a net position (assets plus deferred outflows, less liabilities and deferred inflows), for the five actuarial pension systems, in aggregate, restricted for QPPs, restricted for TDAs, and restricted for VSFs as shown in the following chart. For further information, see "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Pension and Other Employee Benefit Trust Funds Combining Statement of Fiduciary Net Position."

New York City Retirement Systems
Aggregate Net Position,
Fiscal Years 2016-2020
(In Millions)

	2016	2017	2018	2019	2020
Net Position:					
Restricted for QPPs.	$146,917.9	$163,025.5	$175,638.0	$185,963.2	$190,773.8
Restricted for VSFs.	2,642.2	4,911.9	5,926.4	6,135.8	6,137.3
Restricted for TDAs	30,074.4	32,851.8	35,349.8	37,460.8	39,360.3
Total Net Position......................	$179,634.5	$200,789.2	$216,914.2	$229,559.8	$236,271.3

Source: NYC Annual Reports

In addition to the QPPs, TRS and BERS administer TDA Programs. Benefits provided under the TDA programs are derived from members' accumulated contributions. No direct contributions are provided by employers. However certain investment and benefit options, if selected by TDA members, may indirectly affect employer financial obligations, as described below. As of June 30, 2019 and 2020, the total fiduciary net position restricted for TDA benefits was $37.5 billion and $39.4 billion, respectively. Each of the TDA Programs has at least two investment options, broadly categorized as a fixed return fund and one or more variable return funds.

Deposits from members' TDA Program accounts into the fixed return funds are used by the respective QPP to purchase investments, and such TDA Program accounts are credited with a statutory rate of interest, currently 7% for United Federation of Teachers members and 8.25% for all other members. If earnings on the respective QPP are less than the amount credited to the TDA Program members' accounts, the higher cost to the QPP could require additional payments by the City to the pension funds. If the earnings are higher, then lower payments by the City to the pension funds could be required. The Actuary recognizes the difference between the guaranteed rate of 8.25% and the actuarial interest rate of 7.0% in the calculation of the employer contributions to the QPPs each year.

All investment securities purchased and invested by the QPPs with TDA Programs' fixed return funds' balances are owned and reported by the QPP. A receivable due from the respective QPP equal in amount to the aggregate original principal amounts contributed by TDA Programs' members to the respective fixed return funds, plus accrued interest at the statutory rate, is owned by each of the TDA Programs. The balances of TDA Program fixed return funds held by the TRS QPP as of June 30, 2019 and 2020 were $25.6 billion and $27.7 billion, respectively, and interest paid on TDA Program fixed return funds by the TRS QPP for the years then ended were $1.7 billion and $1.8 billion, respectively. The balances of TDA Program fixed return funds held by the BERS QPP as of June 30, 2019 and 2020 were $1.8 billion and $2.0 billion, respectively, and interest paid on TDA Program fixed return funds by the BERS QPP for the years then ended were $141.7 million and $155.7 million, respectively. Deposits from members' TDA Program accounts into the variable return funds are credited with actual returns on the underlying investments of the specific fund selected. Members may reallocate all or a part of their TDA Program contributions between the fixed and variable return funds on a quarterly basis. Retired TDA members may make withdrawals from their TDA accounts or elect to take the balance in the form of an annuity that is calculated based on a statutory rate of interest and mortality assumptions, which are separate and different from the mortality assumptions used in pension liability calculations. Once an annuity has been selected by a member, the payment of those benefits is guaranteed by the QPP.

In addition, certain Tier I and Tier II pension plan members have the right to make supplemental, voluntary member contributions into the QPPs. These contributions are credited with interest at rates set by statute or, for certain employees that may choose variable return investments, the actual return, and may be withdrawn or annuitized at retirement. In general, the assets and liabilities associated with these member contributions are included in the reported assets and actuarially-determined net pension obligations of the respective plans. There were approximately 300 active Tier I and Tier II members remaining in TRS and BERS as of June 30, 2019.

Ultimately, investment earnings of the fixed rate funds that are less than the amounts credited to the members could result in additional required contributions by the City to the pension funds and investment earnings that are greater than the amounts credited to the members could result in lower required contributions by the City to the pension funds.

Pursuant to State law, certain retirees of NYCERS, PPF and FPF are eligible to receive scheduled supplemental benefits from VSFs. Where assets in the VSFs are insufficient, NYCERS, PPF and FPF are required to transfer assets to their respective VSFs to fund those payments that are statutorily guaranteed. The effects of these transfers are included by the Office of the Actuary in calculating required employer contributions to the pension funds. However under current State law, the VSFs are not pension funds or retirement systems and are subject to change by the State Legislature.

For further information regarding the City's pension systems see "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note E.5," "—Pension and Other Employee Benefit Trust Funds—Combining Statement of Fiduciary Net Position" and "—Required Supplementary Information." For information regarding investment allocation of pension assets, see "SECTION III: GOVERNMENTAL AND FINANCIAL CONTROLS—Office of the Comptroller."

Other Post-Employment Benefits

Post-employment benefits other than pensions (referred to as OPEB), which include health insurance, Medicare Part B premium reimbursements and welfare fund contributions, are provided to eligible retirees of the City and their eligible beneficiaries and dependents.

City OPEB Contributions

OPEB costs are currently paid in each fiscal year on a pay-as-you-go basis. The vast majority of such payments are made through the Retiree Health Benefits Trust ("RHBT") discussed below. The City is not required by law or contractual agreement to fund the OPEB obligation other than the pay-as-you-go amounts necessary to provide current benefits to eligible retirees of the City and their eligible beneficiaries and dependents. OPEB costs were \$2.700 billion for fiscal year 2020, and are projected at \$2.792 billion, \$3.079 billion, \$3.219 billion, \$3.426 billion and \$3.593 billion for fiscal years 2021 through 2025, respectively.

In 2006, the City created the RHBT which is used to receive, hold, and disburse assets accumulated to address the OPEB liabilities. Amounts contributed to the RHBT by the City are held in an irrevocable trust and may not be used for any purpose other than to fund the costs of health and welfare benefits of its eligible participants. In fiscal year 2017, 2018 and 2021, the City paid approximately \$400 million, approximately \$300 million, and approximately \$425 million, respectively, for OPEB costs otherwise due in fiscal year 2018, 2019 and 2022, respectively. In addition to such payments, in fiscal years 2014 through 2019, the City contributed \$864 million, \$955 million, \$500 million, \$100 million, \$100 million and \$100 million, respectively, to the RHBT in excess of the City's contribution for OPEB costs due in those fiscal years. In fiscal year 2020, the City contributed approximately \$1.7 billion to the RHBT towards fiscal year 2020 OPEB costs due of approximately \$2.7 billion. As a result, the balance in the RHBT was reduced by approximately \$1 billion in fiscal year 2020. In each of the fiscal years 2021 through 2025, the City expects to contribute the full amount of the projected OPEB costs, without reducing the balance in the RHBT in such years. The following table shows the net position of the RHBT as of the end of each of fiscal years 2015 through 2020.

Retiree Health Benefits Trust
Net Position
(In Millions)

2015	\$3,397
2016	4,036
2017	4,654
2018	4,766
2019	4,680
2020	3,800

Source: NYC Annual Reports

Actuarial Assumptions and Methods

In June 2015, GASB issued Statement No. 74 ("GASB 74") and Statement No. 75 ("GASB 75"), which update financial reporting standards for state and local government OPEB Plans. GASB 74 applies to financial reporting by post-employment benefit plans and GASB 75 covers reporting on post-employment benefit plans by employers. The City implemented GASB 74 and GASB 75 for its financial statements beginning in fiscal year 2017. The fiscal year 2020 Annual Report reported the City's net OPEB liabilities as $107.8 billion and $109.5 billion as of June 30, 2019 and 2020, respectively.

The actuarial assumptions and methods used in the OPEB valuations are a combination of those used in the NYCRS pension valuations, such as the Entry Age Actuarial Cost Method, and certain demographic and economic assumptions proposed by the Actuary that were adopted by each respective Board of Trustees of NYCRS during fiscal year 2019 as discussed above in "City Pension Contributions—Actuarial Assumptions and Methods," in addition to those specific to the OPEB valuations, such as the discount rate described below. As required under GASB 75, the net OPEB liability attributable to benefit changes is now recognized in the current reporting period, investment earnings above or below expectations are recognized over a five year period, and other actuarial liability gains and losses are amortized over the average remaining working lifetimes of all plan members, including inactive plan members. In addition, as required under GASB 75, OPEB valuations assume a discount rate based on a long-term expected rate of return on assets and the index rate for certain highly rated municipal bonds. The fiscal year 2020 OPEB measurement assumed a discount rate of 2.68% per annum.

Summary OPEB Information

As reported in the City's financial statements, the following table summarizes City OPEB information for fiscal years 2018 through 2020.

Summary of City OPEB Information, Fiscal Years 2018 - 2020
(Dollars in billions)

	2018	2019	2020
Participants (active/inactive plan members receiving or eligible to receive benefits)	563,901	583,645	596,681
Total OPEB Liability (TOL)	$ 103.26	$ 112.47	$ 113.26
Less Fiduciary Net Position (FNP)	(4.77)	(4.68)	(3.80)
Net OPEB Liability (NOL)	98.50	107.79	109.46
FNP as percent of TOL	4.6%	4.2%	3.4%
Covered Employee Payroll	$ 26.30	$ 27.76	$ 28.20
NOL as a percent of Covered Employee Payroll	374.5%	388.3%	388.1%

Source: NYC Annual Reports. Totals may not add due to rounding.

For further information regarding OPEB, see "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note E.4," "—Pension and Other Employee Benefit Trust Funds—Combining Statement of Fiduciary Net Position" and "—Required Supplementary Information."

SECTION X: OTHER INFORMATION

Litigation

The following paragraphs describe certain material legal proceedings and claims involving the City and Covered Organizations other than routine litigation incidental to the performance of their governmental and other functions and certain other litigation arising out of alleged constitutional violations, torts, breaches of contract and other violations of law and condemnation proceedings. While the ultimate outcome and fiscal impact, if any, on the City of the proceedings and claims described below are not currently predictable, adverse determinations in certain of them might have a material adverse effect upon the City's ability to carry out the Financial Plan. The City has estimated that its potential future liability on account of outstanding claims against it as of June 30, 2020 amounted to approximately $7.1 billion. See "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—2. OTHER THAN PERSONAL SERVICES COSTS—*Judgments and Claims*."

The City has received in excess of 196 notices of claim from putative plaintiffs, been named as a defendant in approximately 25 legal actions, and received approximately 1,600 workers' compensation claims to date relating to the COVID-19 outbreak in the City. The notices of claim and legal actions include claims that wrongful actions or omissions of the City and/or certain City restrictions related to COVID-19 have resulted in severe medical, psychological and economic damages and/or death. The workers' compensation claims are governed by a no-fault system in which the City, as the claimant's employer, provides wage replacement benefits and medical care for work-related illnesses if the City accepts the employee's claim or the claimant obtains a judgment from the New York State Workers' Compensation Board. Going forward, the City expects to receive additional legal and workers' compensation claims related to COVID-19. The City cannot predict its potential monetary liability from such claims at this time or whether such liability will have a material effect on the finances of the City.

Taxes

1. Numerous real estate tax *certiorari* proceedings alleging overvaluation, inequality and illegality are pending against the City. Based on historical settlement activity, and including an estimated premium for inequality of assessment, the City estimates its potential future liability for outstanding *certiorari* proceedings to be $1.124 billion at June 30, 2020. For a discussion of the City's accounting treatment of its inequality and overvaluation exposure, see "EXHIBIT B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note D.5."

2. Con Edison has challenged the City's method of valuation for determining assessments of certain of its properties in two separate actions. Con Edison has challenged the City's tax assessments on its Manhattan power plants and equipment for tax years 1994/95 through 2020/21 and the special franchise assessments on its electric, gas and steam equipment located in the public right of way for tax years 2009/10 through 2016/17 and 2018/19 through 2020/21. As of February 18, 2021 there are now seven tax years pending in litigation, 2013/14-2016/17 and 2018/19-2020/21. Con Edison and the City have settled the East 60th Street Steam Plant. A monetary settlement in the approximate amount of $5,000,000 will be made from City monies appropriated for such expenditures by the end of 2021. The remainingchallenges could result in substantial real property tax refunds for taxes paid in fiscal years 2022 and beyond. The trial is tentatively scheduled to begin on March 7, 2022 for the challenges to tax years 2013/14 and 2016/17 in the specialfranchise litigation. The court has scheduled oral argument on December 16, 2021 for a pre-trial motion brought by the City to strike Con Edison's appraisal report and dismiss its petitions.

3. Tax Equity Now New York LLC (composed of certain advocacy groups and owners and tenants of properties in the City) commenced an action in New York State Supreme Court on April 24, 2017 against the City and the State. The action alleges that the City's real property tax system violates the State and federal constitutions as well as the Fair Housing Act. The action further alleges the valuation methodology as mandated by certain provisions of the State Real Property Tax Law results in a disparity and inequality in the amount of taxes paid by Black and Hispanic Class 1 property owners and renters. The City and State defendants moved to dismiss the case. In September 2018, the Court denied the City's motion to dismiss the complaint and partially granted the State's motion to dismiss the complaint. The City and State both appealed the lower court decision and the City made a motion before the trial court for a declaration that a statutory stay of the lower court proceeding was in effect by virtue of its filing the Notice of Appeal, or in the alternative, for a discretionary stay of all proceedings pending the appeal. The stay was granted. Following appeals by Tax Equity Now New York LLC and the City, the First Department granted the City's motion to dismiss

and dismissed all claims against the City. The First Department further dismissed the remaining claims against the State. In September 2020, the New York Court of Appeals dismissed the plaintiff's purported appeal as of right of the First Department rulings. The plaintiff filed a motion for leave to appeal on August 12, 2021 and the City filed a response in opposition thereto on August 20, 2021. On October 7, 2021, the Appellate Division denied the plaintiff's motion for leave to appeal to the Court of Appeals.

Miscellaneous

1. In 1996, a class action was brought against the New York City Board of Education (the "BOE) and the State in federal district court of the Southern District of New York under Title VII of the Civil Rights Act of 1964 alleging that the use by the Board of Education of a teacher certification examination mandated by the State from 1996 to 2004, the Liberal Arts and Science Test ("LAST"), and a second version of the teacher certification examination mandated by the State from 2004 to 2014, the Liberal Arts and Science Test 2 ("LAST-2"), had a disparate impact on minority candidates. In 2006, the United States Court of Appeals for the Second Circuit dismissed the claims against the State. The District Court ruled in 2012 and 2015, respectively, that each of LAST and LAST-2 violated Title VII because it did not measure the skills necessary to do the job. Currently, approximately 4,700 LAST and LAST-2 class members have submitted claim forms and may be eligible for damages. Approximately 2,000 judgments have been entered in favorof the claimants and, if ultimately paid, would total approximately $470 million. The City has appealed a majority of these judgments. On January 28, 2021, the Second Circuit denied 347 of the City's appeals and the parties are currently negotiating the timing and payment amounts for those judgments. The remaining appeals have not proceeded beyond the filing of the Notice of Appeal. With the assistance of the court appointed Special Master, the parties have reached an agreement to limit the number of the judgments that would need to be paid in any given fiscal year. The maximum dollar value of judgments to be paid by the BOE would be limited as follows: In fiscal year 2022 – a maximum of $345 million; in fiscal year 2023 – a maximum of $410 million; in fiscal year 2024 – a maximum of $360 million; in fiscal year 2025 – a maximum of $360 million; in fiscal year 2026 – a maximum of approximately $183 million; in fiscal year 2027 – a maximum of approximately $83 million; and in fiscal year 2028 – a maximum of approximately $33 million. The agreement is a cap on payments of judgments entered against the BOE and is not an agreement to compromise claims. BOE will continue to contest individual claims presented to the Special Master. The Special Master will regulate the number of judgments entered against BOE to ensure that the aforementioned caps are not exceeded in any fiscal year.

2. On January 31, 2017, a putative class action was filed in State Supreme Court, Queens County, alleging numerous commercial claims in connection with the November 2013 auctions of wheelchair accessible taxi medallions. In September 2017, the Court dismissed all but a breach of contract rescission and implied covenant of good faith and fair dealing claims and that decision has been appealed by both sides. The Court also denied plaintiffs' motion for class certification as premature. On December 30, 2020, the Appellate Division, Second Department ruled that the plaintiff's causes of action should have been dismissed in their entirety. On October 12, 2021, the New York Court of Appeals granted the plaintiffs' leave for appeal.

On March 23, 2017, a second putative class actions was filed in State Supreme Court, Queens County, also alleging numerous commercial claims in connection with the February 2014 auctions of wheelchair accessible taxi medallions. In November 2017, the Court dismissed the action, which plaintiffs appealed. In March 2019, the Court granted the plaintiffs' motion to reargue the action, and reinstated the implied covenant, rescission and New York State General Business Law claims. In November 2019, the Court granted plaintiffs' motion for class certification. At present, the Court in this filed action has defined the class as all purchasers at the 2013 and 2014 auctions, and their successors or assigns. If the class were to prevail on any of the remaining claims, damages of several hundred million dollars could be sought. The Court recently denied the plaintiffs' motion for partial summary judgment and granted in part, and denied in part, the City's summary judgment motion, allowing the rescission and implied covenant of good faith and fair dealing claims to proceed to trial. The City has filed a motion to dismiss the complaint in light of the binding precedent by the Appellate Division, Second Department from the first filed action.

3. In a putative class action, Soybel et al. v City of New York, on April 6, 2021 two medallion owners who purchased taxi medallions filed claims against the City and former City officials, alleging improper conduct in connection with the sale of taxi medallions from 2004-2017. Plaintiffs allege that the City engaged in a scheme to artificially inflate the value of taxi medallions through fraudulent, collusive, and deceptive means to maximize its profit through actions to artificially inflate the "upset price" for medallions at auction, allowed collusive bidding at

auction to drive up an artificial "floor" for future medallion transactions, published deliberately false and misleading average sales prices for secondary market transactions, deliberately concealed an internal report on medallion values, and launched a false and misleading advertising campaign for medallion sales. Plaintiffs allege that the City engaged in a conspiracy in violation of the Racketeering Influenced and Corrupt Organization statute, violated federal antitrust laws, and that the City's actions constituted unjust enrichment under state law. The case also names as defendants certain purchasers of the medallions. Plaintiffs seek compensatory and treble damages in the amount of $2.6 billion, plus punitive damages against the individually-named City officials and attorneys' fees and costs. The City will vigorously challenge the claims made in the action.

4. In June, 2018, a class action on behalf of blind and visually impaired persons commenced in the United States District Court for the Southern District of New York (American Council of the Blind, et al. v. City of New York, et al.) and by Order dated July 22, 2019 the class was certified. The plaintiffs allege that the City is violating the Americans with Disabilities Act, the Rehabilitation Act and the New York City Human Rights Law by not installing Accessible Pedestrian Signals ("APS") at all intersections that have a pedestrian control signal for sighted pedestrians. Plaintiffs further argue that under these statutes the City is required at a minimum to install APS whenever it installs a new pedestrian control signal and to install APS whenever it alters an existing pedestrian control signal. By Opinion and Order dated October 20, 2020, the Court granted plaintiffs' motion for partial summary judgment as to liability in most respects. The Court determined that the current amount of APS in the City did not provide the plaintiffs with meaningful access under the Americans with Disabilities Act, the Rehabilitation Act and the New York City Human Rights Law. However, the Court found that plaintiffs' claims are time-barred as to any new intersections or alterations completed prior to June 27, 2015. The parties completed remedial discovery, and as of May 14, 2021, proposed remedial plans and opposition to opposing remedial plans have been submitted to the Court. The City cannot currently estimate the potential costs for compliance with the forthcoming remedial order, but expects that they will be substantial.

5. In 2010, a single claimant sued the City for improper jail detention resulting from the City honoring a federal ICE detainer request. By 2017, the Court certified a class of similarly situated individuals who were allegedly wrongfully detained in City jails between 2007 and 2012. Various courts around the country, over the same time period, determined that holding detainees based on an ICE detainer request was unconstitutional, except under certain limited circumstances. During discovery, plaintiffs have asserted that potentially over 14,000 individuals were held in City jails in alleged contravention of these circumstances, allegedly totaling approximately 86,000 additional days of over-detention. The City is pursuing settlement of the suit. It is too early at this stage of the litigation to provide an accurate estimate of the potential cost to the City; however, the exposure could be substantial.

6. In a putative class action filed on August 29, 2019 in New York County Supreme Court, Street v. City, plaintiff challenged the processing of vehicular red light camera tickets issued by the City under the Red Light Camera Program authorized pursuant to New York Vehicle and Traffic Law ("VTL") section 1111-a. Plaintiff claimed, among other things, that the technician certificates issued by the City to verify vehicular red light violations were not notarized as plaintiff alleged is required by VTL section 1111-a(d), and therefore said certificates and the related fines were invalid. Plaintiff, on behalf of the class, seeks refunds of fines paid under the Red Light Camera Program from August 2013 to present. In a decision issued on August 12, 2020, the Court declared that the certificate at issue in plaintiff's case was invalid since it was not notarized; in the same decision, the Court declined to certify a class of similarly situated vehicle owners that received red light camera tickets. In June 2021, the Plaintiff filed an appeal of the denial of class certification. On August 9, 2021, the City filed a memorandum of law in opposition to Plaintiff's appeal and in support of its appeal of the trial court ruling on the notarization issue relating to the technician certificate. In a decision dated March 3, 2021, the trial court denied plaintiff's motion to reargue that court's denial of class certification. If a class were to be certified by the Court and the City was ordered to pay refunds for fiscal year 2014 to fiscal year 2020 for said violations, the potential monetary liability could be substantial.

In a putative class action filed in September 2020 in New York County Supreme Court, Mulhadzhanov v. City, plaintiffs challenged the processing of vehicular speeding tickets issued by the City under the Speed Camera Program authorized pursuant to VTL section 1180-b. Plaintiffs claimed, among other things, that certificates issued by the City to verify speeding violations were not notarized as plaintiffs allege is required by VTL section 1180-b(d) and therefore said certificates and the related fines were invalid. Plaintiffs seek refunds of fines paid under the Speed Camera Program from August 2013 to August 2018 and from July 2019 to present. If a class were to be certified by the Court and the City was ordered to pay refunds for fiscal year 2014 to fiscal year 2020 for said violations, the potential monetary liability could be substantial. The City defendants filed a motion to dismiss in December 2020. The Plaintiff filed an opposition to the motion, and the City's reply was filed on October 15, 2021.

7. In 2019, New York State enacted the Child Victims Act which eliminated various procedural requirements in actions where a plaintiff alleges sexual abuse that occurred when the plaintiff was under 18 years of age. To date, the City has been named as a defendant in approximately 978 cases authorized by the Act, approximately half of which are related to the alleged sexual abuse of children in the City's foster care system. Initial, limited discovery demands have been incorporated into a court order and more complete demands have been proposed by the defendants and plaintiffs. To date, the City has settled approximately 10 of the cases. It is too early at this stage of the litigation to provide an accurate estimate of the potential cost to the City; however, the exposure could be substantial in each of the future years during which settlements are reached.

8. On October 17, 2017, three plaintiffs commenced a putative proposed class action, Lynch et al. v. City, 17-cv-7577, asserting causes of action under the Fourth and Fourteen Amendments of the United States Constitution, 42 U.S.C. Section 1983, and false imprisonment under New York State common law. Each plaintiff was held in the custody of New York City Department of Corrections ("DOC") as a pretrial detainee, received a judicial order fixing bail, posted bail, and alleges that they were not released from DOC custody within a reasonable time thereafter. The complaint references local laws of the City which mandate specific timeframes for pre-trial release, among other related requirements. Plaintiffs seek compensatory damages. The City filed a motion to dismiss, which the Court denied. The City filed an answer and since then, the City has provided substantial discovery, a significant amount of which took place in the first half of 2021 and which led to the parties entering settlement discussions. Based upon the discovery conducted to date, the potential number of individuals included in the settlement class could be approximately 90,000 for the period of October 2014 through present. Since late April 2021, the parties have submitted a series of joint status reports regarding settlement discussions to the Court as the parties continue negotiations. The parties are now negotiating the scope and logistics of notice and the specific administrator who will facilitate, among other things, notice and class member identification and confirmation. The City has agreed to a payment amount of $3,500 per instance of over-detention for the individuals ultimately included in the settlement class. Settlement payments are expected to be made only to those individuals from the settlement class who are able to be located and who respond appropriately to the notice of settlement. It is too early at this stage of the settlement discussions to provide an accurate estimate of the potential cost to the City; however, the exposure could be substantial.

Environmental Matters

The City has more than 500 miles of coastline, bordering the Atlantic Ocean as well as rivers, bays, and inlets. Two of its five Boroughs, Manhattan and Staten Island, are islands and water forms the principal boundary of the remaining three. As a result, the City is directly affected by rising sea levels and exposed to intensifying coastal storms.

Storms

On Monday, October 29, 2012, Sandy hit the Mid-Atlantic East Coast. The storm caused widespread damage to the coastal and other low lying areas of the City and power failures in various parts of the City, including most of downtown Manhattan. On January 29, 2013, President Obama signed legislation providing for approximately $50.5 billion in storm-related aid for the region affected by the storm. Although it is not possible for the City to quantify the full, long-term impact of the storm on the City and its economy, the current estimate of the direct costs to the City, NYCHH and NYCHA is approximately $10.7 billion (comprised of approximately $1.8 billion of expense costs and approximately $8.9 billion of capital project costs). Such direct costs represent funding for emergency response, debris removal, emergency protective measures, repair of damaged infrastructure and long-term hazard mitigation investments. In addition to such direct costs, the City is delivering Sandy-related disaster recovery assistance services, benefiting impacted communities, businesses, homeowners and renters ("Community Costs"). The City anticipates that funding for Community Costs will be primarily reimbursed with federal funds. However, the City is responsible for $134 million of such Community Costs, which are reflected in the Financial Plan. In addition, the City may be responsible for up to approximately $150 million of additional Community Costs, which are not reflected in the Financial Plan.

The Financial Plan assumes that the direct costs described above will largely be paid from non-City sources, primarily the federal government, and that the Community Costs described above will be primarily reimbursed by federal funds. The City expects reimbursements to come from two separate federal sources of funding, FEMA and HUD. The City has secured approximately $10.7 billion in FEMA assistance and other federal emergency response grants ("FEMA Funding"). The maximum reimbursement rate from FEMA is 90% of total costs. Other federal emergency response grants may have larger local share percentages. The City expects to use $720 million of Community Development Block Grant Disaster Recovery funding allocated by HUD to meet the local share requirements of the FEMA funding, as well as recovery work not funded by FEMA or other federal sources. This allocation would be available to fill gaps in such FEMA funding. As of June 30, 2021, the City, NYCHH and NYCHA have received $4.4 billion in reimbursements from FEMA for the direct costs described above. In addition to the FEMA Funding described above, HUD has made available over $4.4 billion for Community Costs, of which approximately $3.8 billion has been received through June 30, 2021. No assurance can be given that the City will be reimbursed for all of its costs or that such reimbursements will be received within the time periods assumed in the Financial Plan. There is no assurance, if the City were to experience a similar storm in the future, that non-City sources, including the federal government, would pay the costs.

On September 1, 2021, Ida hit the Mid-Atlantic East Coast as a post-tropical cyclone, bringing significant rainfall and resulting in severe flooding in parts of the City, including inland areas. Rainfall from Ida exceeded the previous record for the most single-hour rainfall in the City and for the first time the National Weather Service declared a flash flood emergency in the City. Ida resulted in the deaths of 13 people in the City, 11 of which occurred in basement housing units. On September 3, 2021, the Mayor announced a climate-driven rain response plan, which includes developing improved storm warning systems and the creation of the Extreme Weather Response Taskforce composed of representatives from several different City agencies, including DEP, the Department of Transportation, Emergency Management and the Department of Sanitation. On September 27, 2021, the taskforce released its report, *The New Normal: Combating Storm-Related Extreme Weather in New York City.* The report's recommendations, among others, include (i) improvements to emergency preparedness and response, (ii) protecting occupants of basement apartments and (iii) expediting both short-term and long-term investments in infrastructure, including sewers and prevention of flooding in inland communities. The total costs of implementing all of the report's recommendations would be substantial and in some cases would require State and federal funding. To support the report's recommendations, the Mayor has announced plans to increase capital spending through fiscal year 2031 by $2.5 billion and to accelerate to fiscal years 2022 through 2024 approximately $200 million in capital funding previously expected to be spent in fiscal years 2025 through 2028. Approximately $2.1 billion of the new capital spending, and all of the accelerated funding, would be in DEP's capital budget and be funded by the City's water and sewer system through bonds issued by the City's Water Authority. The new and accelerated DEP funding will be used for the installation of both new and replacement sewers along with green infrastructure projects such as bioswales. The remaining $400 million would be funded through the City's Capital Budget. Such increases and acceleration of spending, with respect to fiscal years 2022-2025, are expected to be reflected in the City's Capital Commitment Plan to be released in fall 2021. To support the taskforce's recommendations, approximately $25 million in additional expense funding is also expected to be added to each fiscal year of the City's next financial plan, expected to be released in November 2021. The extent to which funding would be available from State or federal sources is not known at this time.

Climate Change

The 2007 strategic plan *plaNYC, A Greener, Greater New York*, recognized climate change as a new challenge facing the City cutting across all of the issues covered in the plan. The 2007 strategic plan described the City's climate change strategy as the sum of all the initiatives in the plan and announced initiation of a long- term effort to develop a comprehensive climate change adaptation strategy to prepare the City for the climate shifts that are unavoidable. Many actions undertaken by the City followed, including initiation of work with FEMA to ensure that City floodplain maps reflect the most current information and creation of the New York City Panel on Climate Change ("NPCC"). NPCC is a body of more than a dozen leading independent climate and social scientists appointed by the Mayor. Since 2008, NPCC has analyzed climate trends, developed projections, explored key impacts, and advised on response strategies for City planning. NPCC is required to make recommendations to the City regarding climate change projections at least every three years and produced its first report in 2010, with subsequent reports in 2015 and 2019 (collectively, the "NPCC Reports"). The NPCC has identified that the City is already experiencing the impacts of climate change and projects dramatic impacts from climate change on the City in the future.

A Greener, Greater New York was updated in 2011, in June 2013 by *plaNYC A Stronger, More Resilient New York*, and expanded in April 2015 in *One New York: the Plan for a Strong and Just City*, and in April 2019 by OneNYC

2050 (the "OneNYC Reports"). NPCC projections form the basis for the City's climate resiliency planning and are reflected in the OneNYC Reports. Many of the resiliency and other undertakings included in the OneNYC Reports involve coordination and cooperation with multiple public and private stakeholders, and expansion of ongoing maintenance and development, as well as specific initiatives such as those described below.

Building on the recommendations contained in the OneNYC Reports, the City is in the process of implementing, over the next ten years, climate resiliency projects costing in excess of $20 billion, most of which are dedicated to areas previously affected by Sandy and some of which are directed toward mitigating the risks identified in the NPCC Reports. Such plans include both stand-alone resiliency projects and the integration of resiliency protection into the City's ongoing investments. These projects are in various stages of feasibility review, design and construction and/or implementation. Funding for these projects is expected to come from City, State and federal sources. Some projects are expected to require additional funding to the extent that they are in the planning stages or current funding does not provide for the costs of construction.

Several major coastal resiliency projects are currently underway throughout the City, including the East Side Coastal Resiliency Project ("ESCR"), the South Shore of Staten Island Coastal Storm Risk Management Project (the "Staten Island Project") and the Rockaways Shorefront and Back Bay Projects (the "Rockaways Project").

Through ESCR, which broke ground in 2021, the City is constructing an integrated coastal flood protection system for which it will seek FEMA accreditation, create resilient open spaces, and improve waterfront access on Manhattan's east side, from East 25th Street at the north to Montgomery Street at the south. The City anticipates the entire flood protection system will be in place and operational by the 2023 Atlantic hurricane season. The expected cost of ESCR is $1.97 billion, which is fully funded through a combination of City, federal and other funding. Other projects in Lower Manhattan include flood walls and deployable flip-up barriers to protect the Two Bridges neighborhood, which lies south of Montgomery Street at the north to the Brooklyn Bridge at the south, developing a plan that contemplates extending the Manhattan shoreline from the Brooklyn Bridge to the Battery into the East River to protect the Seaport and Financial District area, and an elevated waterfront esplanade in the Battery and flood barriers in Battery Park City. On February 10, 2020, litigation was filed in New York Supreme Court challenging the project on the theory that the project constitutes alienation of parkland, and therefore would require State legislative approval. On August 20, 2020, the litigation was dismissed. On August 28, 2020, petitioners filed a notice of appeal, and the appeal is currently being briefed. On April 26, 2021, separate litigation was filed in New York Supreme Court challenging the City Department of Design and Construction's procurement of the construction contract for a portion of ESCR. On July 14, 2021, the case was dismissed. The contract has been registered with the Comptroller. On July 29, 2021, petitioner filed a notice of appeal.

The Staten Island Project, which is being designed and constructed by the U.S. Army Corps of Engineers ("USACE"), will create a 5.5-mile line of coastal protection on Staten Island between Fort Wadsworth and Oakwood Beach. USACE currently estimates that the project will cost $615 million, with the City responsible for 10.5% of the project costs, and the remaining project costs to be paid for with federal and State funds. USACE expects to bid out contracts for the project in 2021.

The Rockaways Project, which is also being designed and constructed by USACE, consists of coastal protection elements on the Atlantic shorefront and on the Jamaica Bay side of the Rockaways. Construction has begun on the project, which will be fully funded by the federal government, with an expected cost of approximately $590 million.

The City expects that additional resiliency projects will be identified and implemented in the coming years, including projects inside and outside of the areas affected by Sandy and addressing risks identified in the NPCC Reports including coastal storms, sea level rise, extreme heat and intense rainfall.

In 2015, FEMA issued preliminary updated flood insurance rate maps (FIRMs), which would have expanded the 100-year floodplain beyond the areas designated in the flood maps issued in 2007. The City appealed the 2015 preliminary flood maps challenging the modeling FEMA used to develop them. The 2015 preliminary flood maps were adopted into the building code, but the prior 2007 flood maps remain in effect for flood insurance purposes. In 2016, FEMA agreed with the City's appeal, and the City is currently working with FEMA to update the maps. The new maps are expected to generally expand the 100-year floodplain from the 2007 flood maps and may cover different areas than the 2015 preliminary flood maps. Such expansion could negatively impact property values in those newly designated areas. In addition, an increase in areas of the City susceptible to flooding resulting from climate change could result in greater recovery costs to the City if flooding were to occur within such larger areas.

Despite the efforts described above, the magnitude of the impact on the City's operations, economy, or financial condition from climate change is indeterminate and unpredictable. No assurance can be given that the City will not encounter natural disaster risks, such as hurricanes, tropical storms, heatwaves or catastrophic sea level rise in the future, or that such risks will not have an adverse effect on the operations, economy or financial condition of the City.

Superfund Designations

On March 2, 2010, the United States Environmental Protection Agency ("EPA") listed the Gowanus Canal (the "Canal"), a waterway located in the City, as a federal Superfund site under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"). EPA considers the City a potentially responsible party ("PRP") under CERCLA, based on contaminants from currently and formerly City-owned and operated properties, as well as from the City's combined sewer overflows ("CSOs"). On September 30, 2013 EPA issued the Record of Decision ("ROD") for the Canal, setting forth requirements for dredging contaminated sediment in the Canal and covering it with a cap as well as source control requirements. Separate from the in-Canal remedy, the ROD also requires that two CSO retention tanks be constructed as part of the source control component of the remedy. The City anticipates that the actual cleanup costs – including both the in-Canal portion and the CSO portion – will substantially exceed EPA's original cost estimate for the ROD.

On May 28, 2014, EPA issued a unilateral administrative order ("2014 Unilateral Order") requiring the City to design the CSO retention tanks and other storm water control measures, and remediation of the First Street basin (a currently filled-in portion of the Canal). On June 9, 2016, USEPA and the City entered into an Administrative Settlement Agreement and Order ("Administrative Order"), under which the City agreed to milestones relating to the design of one of the CSO tanks. The City estimates that the tanks will actually cost approximately $1.3 billion, which is included in the City's capital plan. The City has notified EPA of potential delays due to the COVID-19 pandemic and is monitoring impacts on its ability to meet the requirements of the ROD. The New York City Department of Environmental Protection ("DEP") is in discussions with EPA to resolve these issues and is subject to penalties under the Unilateral Order and CERCLA.

On March 29, 2021, USEPA issued a Unilateral Order to the City, requiring the City to complete design and construction of both CSO tanks by March 2029; to complete design and construction of a new bulkhead at the City-owned Salt Lot at 2nd Avenue in Brooklyn by August 2023; and to implement additional stormwater controls in the Canal sewershed. The City has informed USEPA that it would complete the design and construction of the CSO tanks as required in the 2021 Unilateral Order, but that it would likely be unable to meet the deadlines imposed in the Order. Based on the concerns the City raised about the 2021 Unilateral Order, USEPA delayed the effective date of the 2021 Unilateral Order and modified the 2021 Unilateral Order in certain respects, but declined to extend the design and construction schedules. The 2021 Unilateral Order took effect on June 30, 2021. The City is subject to penalties stemming from alleged violations of the 2014 Unilateral Order and the Administrative Order, and may also be subject to fines and/or penalties stemming from the 2021 Unilateral Order if it does not meet the design and/or construction deadlines set forth therein.

On January 28, 2020, EPA issued a new Unilateral Order to the six largest PRPs, including the City and National Grid, requiring these parties to implement the in-Canal remedy (consisting of dredging and capping of sediments) in the upper reach of the Canal. EPA estimates that the cost of this work, the first of the three phases, is $125 million, an estimate that the City believes is low. The City's liability for the in-Canal work is unknown at this time, and may ultimately be determined through litigation.

On September 27, 2010, EPA listed Newtown Creek, the waterway on the border between Brooklyn and Queens, New York, as a Superfund site. On April 6, 2010, EPA notified the City that EPA considers the City a PRP under CERCLA for hazardous substances in Newtown Creek. In its Newtown Creek PRP notice letter, EPA identified historical City activities that filled former wetlands and low lying areas in and around Newtown Creek and releases from formerly City-owned and operated facilities, including municipal incinerators, as well as discharges from sewers and CSO outfalls, as potential sources of hazardous substances in Newtown Creek. In July, 2011, the City entered into an Administrative Settlement Agreement and Order on Consent with EPA and five other PRPs to conduct an investigation of conditions in Newtown Creek and evaluate feasible remedies. The investigation and feasibility study is expected to take approximately eleven years. The City's share will be determined in a future allocation proceeding. The settlement does not cover any remedy that may ultimately be chosen by EPA to address the contamination identified as a result of the investigation and evaluation.

On May 12, 2014, EPA listed the former Wolff-Alport Chemical Company site ("Wolff-Alport Site") in Ridgewood, Queens, as a Superfund site. The designation is based on radioactive contamination resulting from the operations of the Wolff-Alport Chemical Company during the 1920s to 1950s, which, among other things, disposed of radioactive material on-site, on the adjacent right-of-way, and via the sewer system. In 2013, EPA, in cooperation with City and State agencies, completed a response action to implement certain interim remedial measures at the Wolff-Alport Site to address the site's short-term public health risks. In 2015 to 2017, EPA undertook a remedial investigation and feasibility study that assessed, among other things, impacts to the sewer system and City right-of-way from operations at the Wolff-Alport Site, and evaluated a range of remedial alternatives. In September 2017, EPA issued its ROD identifying its selected remedy. The ROD requires jet washing and replacement of sewers, and excavation of contaminated portions of the right-of-way. EPA estimated work for the entire Wolff-Alport Site to cost $39 million. The City anticipates that the costs for work in the sewers and the right-of-way could significantly exceed that estimate. In December 2017, EPA notified the City of its status as a PRP for the work on City property and sought to have the City perform some of the work. In February 2018, the City notified EPA that, subject to certain conditions, it was willing to undertake such work and, on September 24, 2019, EPA issued a unilateral administrative order requiring the City to conduct additional pre-design investigatory work and develop a Remedial Design consistent with the ROD.

The National Park Service ("NPS") is undertaking a CERCLA removal action at Great Kills Park on Staten Island to address radioactive contamination that has been detected at the site. Great Kills Park was owned by the City until roughly 1972, when it was transferred to NPS for inclusion in the Gateway National Recreation Area. While owned by the City, the site was used as a sanitary landfill, and the park was also expanded using urban fill. NPS believes that the radioactive contamination is the result of City activities and that the City is therefore liable for the investigation and remediation under CERCLA. The City has negotiated a settlement with NPS to address a remedial investigation and feasibility study. No other PRPs have been identified at this time.

Under CERCLA, a responsible party may be held responsible for monies expended for response actions at a Superfund site, including investigative, planning, removal, remedial and EPA enforcement actions. A responsible party may also be ordered by EPA to take response actions itself. Responsible parties include, among others, past or current owners or operators of a facility from which there is a release of a hazardous substance that causes the incurrence of response costs. The nature, extent, and cost of response actions at either the Canal, Newtown Creek, the Wolff-Alport site or Great Kills Park, the contribution, if any, of discharges from the City's sewer system or other municipal operations, and the extent of the City's liability, if any, for monies expended for such response actions, will likely not be determined for several years and could be material.

Cybersecurity

The City relies on a large and complex technology environment to conduct its operations. As a recipient and provider of personal, private or sensitive information, the City and its agencies and offices face multiple cyber threats including, but not limited to, hacking, viruses, malware and other attacks on computers and other sensitive digital networks and systems. In 2017, pursuant to a Mayoral Executive Order, the Mayor established the New York City Cyber Command ("Cyber Command"), led by the City's Chief Information Security Officer, to protect the people and technological assets of the City.

In collaboration with the City's Department of Information Technology and Telecommunications ("DoITT"), Cyber Command is charged with setting information security policies and standards, directing citywide cyber defense and incident response, deploying defensive technical and administrative controls and providing guidance to the Mayor and City agencies on cyber defense. Cyber Command has over 100 full-time employees and works with designated cybersecurity contacts at each City agency as part of the Citywide Cybersecurity Program. The Financial Plan reflects funding for Cyber Command of $119 million in fiscal year 2021, $128 million in fiscal year 2022 and $132 million in each of fiscal years 2023 through 2025. Such funding does not account for cybersecurity funding at other City agencies, including DoITT. Cyber Command is built around three core cybersecurity functions: threat management, which manages incident response and cyber threat intelligence; security sciences, which manages strategic and tactical cyber defense technologies and initiatives; and urban technology, which identifies unpatched systems in the City's networks and helps agencies prioritize remediation efforts on those systems.

In carrying out its functions, Cyber Command works with a range of City, State, and federal law enforcement agencies, including the New York City Police Department and the Federal Bureau of Investigation's Joint Terrorism Task Force. Cyber Command regularly works with other states and municipalities throughout the country to share cybersecurity threat intelligence and best practices, as well as with non-governmental entities such as utilities, telecommunications providers and financial services companies for the purpose of enhancing collective cyber defenses. The City has developed standard cybersecurity policies and standards for third party vendors of the City to follow, and security provisions for contracts with vendors, which help ensure that the City is notified of cyber breaches and suspected cyber breaches of a vendor's network environment. The City has also developed a Citywide Incident Response Policy, which requires City agencies to develop incident response plans in accordance with Cyber Command policies and standards.

While the City conducts periodic tests and reviews of its networks, no assurances can be given that such security and operational control measures will be successful in guarding against all cyber threats and attacks. New technical cyber vulnerabilities are discovered in the United States daily. In addition, cyber attacks have become more sophisticated and increasingly are capable of impacting municipal control systems and components. The techniques used to obtain unauthorized access to, or to disable or degrade, electronic networks, computers, systems and solutions are rapidly evolving and have become increasingly complex and sophisticated. In addition, there is heightened risk due to an increase in remote access to City systems by City employees as a result of the outbreak of COVID-19. As cybersecurity threats continue to evolve, the City may be required to expend significant additional resources to continue to modify and strengthen security measures, investigate and remediate any vulnerabilities, or invest in new technology designed to mitigate security risks. The results of any successful attack on the City's computer and information technology systems could impact its operations and damage the City's digital networks and systems, and the costs of remedying any such damage could be substantial. Consistent with the City's general policy to self-insure, the City does not carry insurance against cyber attacks.

On Saturday, June 5, 2021, Cyber Command detected unusual activity on one server located within the City Law Department's information technology systems and promptly determined, with the assistance of the Law Department, a third-party had accessed the server in an unauthorized manner. Consistent with the City's Cybersecurity Incident Response protocols, Cyber Command, DoITT, and the Law Department took immediate action to contain the server, identify any additional impacted systems and contain such systems, and engaged in various defensive measures to address the unauthorized activity, including, without limitation, temporarily disabling remote access capability to the Law Department's network and blocking incoming connections from the remote access systems. The disabling and blocking resulted in the inability of Law Department employees to remotely access the Law Department network, although such employees could continue to access the network while present at the Law Department's offices. Such disabling and blocking remained in effect as the City implemented certain security measures which led to continued business interruption. Due to certain COVID restrictions and the remote nature of certain Law Department work, the inability to access the network remotely led to temporary, significant business interruption. Beginning on September 13, 2021, all mayoral agency employees, including Law Department employees, have returned to full in-person work. With the replacement of components and system upgrades, full functionality of the Law Department's computer network is substantially complete. Cyber Command's investigation has found no evidence of data exfiltration or unauthorized encryption of City information technology systems or the presence of ransomware.

Financial Statements

The City's Annual Report for the fiscal year ended June 30, 2020 is included by specific reference in this Appendix as EXHIBIT B. Grant Thornton LLP, the City's independent auditor, has not reviewed, commented on or approved, and is not associated with, this Appendix. The report of Grant Thornton LLP relating to the City's financial statements for the fiscal years ended June 30, 2020 and 2019, which is a matter of public record, is included in the Annual Report for the fiscal year ended June 30, 2020, which is included by specific reference in this Appendix. However, Grant Thornton LLP has not performed any procedures on any financial statements or other financial information of the City, including without limitation any of the information contained, or included by specific reference, in this Appendix, since the date of such report and has not been asked to consent to the inclusion of its report in this Appendix.

Further Information

Orrick, Herrington & Sutcliffe LLP, New York, New York, Special Disclosure Counsel to the City, will pass upon certain legal matters in connection with the preparation of this Appendix. A description of those matters and the nature of the review conducted by that firm is set forth in its opinion and accompanying memorandum which are on file at the office of the Corporation Counsel.

The references herein to, and summaries of, provisions of federal, State and local laws, including but not limited to the State Constitution, the Financial Emergency Act and the City Charter, and documents, agreements and court decisions, including but not limited to the Financial Plan, are summaries of certain provisions thereof. Such summaries do not purport to be complete and are qualified in their entirety by reference to such acts, laws, documents, agreements or decisions, copies of which are available for inspection during business hours at the office of the Corporation Counsel.

Copies of the most recent financial plan submitted to the Control Board are at www.nyc.gov/omb. Copies of the published Comprehensive Annual Financial Reports of the Comptroller are available at www.comptroller.nyc.gov or upon written request to the Office of the Comptroller, Deputy Comptroller for Public Finance, Municipal Building, One Centre Street, New York, New York 10007 and are available on EMMA (https://emma.msrb.org). Financial plans are prepared quarterly, and the Comprehensive Annual Financial Report of the Comptroller is published at the end of October of each year, as required by the City Charter.

THE CITY OF NEW YORK

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EXHIBIT A
TO
APPENDIX D

ECONOMIC AND DEMOGRAPHIC INFORMATION

This section presents certain economic and demographic information about the City. All information is presented on a calendar year basis unless otherwise indicated. The data set forth are the latest available. Sources of information are indicated in the text or immediately following the tables. Although the City considers the sources to be reliable, the City has made no independent verification of the information provided by non-City sources and does not warrant its accuracy.

New York City Economy

The City has a diversified economic base, with a substantial volume of business activity in the financial, professional service, education, health care, hospitality, wholesale and retail trade, information services, and technology industries, and is the location of many securities, banking, law, accounting, new media, and advertising firms.

The City is a major seaport and focal point for international business. Many of the major corporations headquartered in the City are multinational in scope and have extensive foreign operations. Numerous foreign-owned companies in the United States are also headquartered in the City. These firms, which have increased substantially in number over the past decade, are found in all sectors of the City's economy, but are concentrated in trade, professional and business services, tourism, and finance. The City is the location of the headquarters of the United Nations and several affiliated organizations maintain their principal offices in the City. A large diplomatic community exists in the City to staff the missions to the United Nations and the foreign consulates. No single assessed property in the City accounts for more than 0.5% of the City's real property tax revenue.

In recent years, technology, life sciences, and information companies have begun to employ an increasing portion of the City's workforce and the City has become a leading technology center over the past decade. In addition to startup companies, the largest technology firms have a significant presence in the City, both in terms of employees and office space. Biotech and life sciences firms draw talent from the City's world-class universities and health care organizations. These industries, which have seen record-setting venture capital investment in recent years, are attracted to the City due to many factors, including the concentration of advertising, media and financial businesses in the City.

Economic activity in the City has experienced periods of growth and recession and can be expected to experience periods of growth and recession in the future. The City experienced a recession in the early 1970s through the middle of that decade, followed by a period of expansion in the late 1970s through the late 1980s. The City fell into recession again in the early 1990s which was followed by an expansion that lasted until 2001. The economic slowdown that began in 2001 as a result of the September 11 attack, a national economic recession, and a downturn in the securities industry came to an end in 2003. Subsequently, Wall Street activity, tourism and the real estate market drove a broad-based economic recovery until the second half of 2007. The financial crisis spurred by the collapse of the housing market and subsequent Great Recession brought the expansion to a halt in 2008. By 2010, the City began to recover and enjoyed a robust 10-year economic expansion. In 2020, the City encountered significant challenges to its economy as a result of the COVID-19 pandemic.

The United States Department of Commerce Bureau of Economic Analysis produces measures of Gross Domestic Product ("GDP") by metropolitan area. The New York metropolitan area – defined geographically as New York City; Long Island; the Lower Hudson Valley, New York; parts of Northern and Central New Jersey; and Pike County Pennsylvania – is the largest metropolitan economy in the United States.

	TOP TEN GDP BY METROPOLITAN AREA (millions of current dollars)					GDP PER CAPITA
	2015	2016	2017	2018	2019*	2019*
United States (metropolitan areas)	$16,278,285	$16,794,933	$17,510,246	$18,470,553	$19,221,576	$67,962
New York-Newark-Jersey City, NY-NJ-PA	1,576,387	1,640,016	1,699,894	1,799,148	1,861,147	96,853
Los Angeles-Long Beach-Anaheim, CA	918,856	953,307	1,002,932	1,041,691	1,088,676	82,383
Chicago-Naperville-Elgin, IL-IN-WI	632,200	641,567	658,633	691,288	709,160	74,976
San Francisco-Oakland-Berkeley, CA	452,980	484,077	528,287	562,156	591,945	125,099
Washington-Arlington-Alexandria, DC-VA-MD-WV	483,745	502,935	519,059	539,008	559,062	89,016
Dallas-Fort Worth-Arlington, TX	435,858	453,858	478,176	505,769	523,862	69,174
Houston-The Woodlands-Sugar Land, TX	458,707	449,040	468,643	498,008	512,222	72,490
Boston-Cambridge-Newton, MA-NH	405,651	420,059	437,795	464,426	484,621	99,450
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	406,215	414,966	419,201	436,693	454,692	74,510
Seattle-Tacoma-Bellevue, WA	323,494	339,662	363,289	396,751	424,750	106,725

Source: U.S. Bureau of Economic Analysis
* Advance statistics.

Personal Income

From 2010 through 2019 (the most recent year for which City personal income data are available), total personal income for City residents, unadjusted for the effects of inflation, grew at a compounded annual average rate of 5.2% and 4.4% for the City and the nation, respectively. The City's total personal income per capita grew at a compounded annual average rate of 4.9% per year for the same period. In 2019, total personal income per capita in the City exceeded that of the U.S. by 42%.

The following table sets forth information regarding personal income in the City from 2010 to 2019.

PERSONAL INCOME(1)

Year	Total NYC Personal Income (billions)	Per Capita Personal Income NYC	Per Capita Personal Income U.S.	NYC as a Percent of U.S.
2010	$426.1	$52,024	$40,547	128%
2011	457.2	55,266	42,739	129
2012	479.4	57,440	44,605	129
2013	492.4	58,651	44,860	131
2014	518.2	61,443	47,071	131
2015	542.2	64,065	49,019	131
2016	568.9	67,173	50,015	134
2017	617.6	73,203	52,118	140
2018	643.4	76,690	54,606	140
2019	669.6	80,321	56,490	142

Sources: U.S. Department of Commerce, Bureau of Economic Analysis and the Bureau of the Census.
(1) In current dollars. Personal Income is based on the place of residence and is measured from income which includes wages and salaries, supplements to wages and salaries, proprietors' income, personal dividend income, personal interest income, rental income of persons, and transfer payments.

Employment

The City is a leading center for the banking and securities industry, education, healthcare, life insurance, communications, publishing, fashion design, technology, information services, hospitality and retail fields. Over the past two decades the City has experienced a number of business cycles. From 1992 to 2000, the City added 456,500 private sector jobs (growth of 17%). From 2000 to 2003, the City lost 173,200 private sector jobs (decline of 5%). From 2003 to 2008, the City added 257,600 private sector jobs (growth of 9%). From 2008 to 2009, the City lost 103,200 private sector jobs (decline of 3%). From 2009 to 2019, the City added 918,800 private sector jobs (growth of 29%). From 2019 to 2020, the City lost 517,000 jobs due to the COVID-19 pandemic. All such changes are based on average annual employment levels through and including the years referenced.

As of August 2021, total employment in the City was 4,202,300 compared to 4,612,700 in August 2019 and 3,970,500 in August 2020 based on data provided by the New York State Department of Labor, which is not seasonally adjusted.

The table below shows the distribution of employment from 2011 to 2020.

EMPLOYMENT DISTRIBUTION

	Average Annual Employment (In thousands)									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Goods Producing Sectors										
Construction	112.4	116.2	122.3	129.3	139.4	147.3	152.5	158.9	161.3	138.0
Manufacturing	75.7	76.5	76.7	77.1	78.5	76.9	74.1	71.3	68.1	53.0
Service Producing Sectors										
Trade Transportation and Utilities	574.9	590.0	604.5	620.0	629.7	629.7	633.3	635.4	636.4	534.3
Information	171.6	177.6	182.4	189.7	195.0	199.8	207.4	213.1	220.6	206.8
Financial Activities	438.2	438.0	437.0	448.9	459.2	466.2	469.4	477.0	485.1	469.8
Professional and Business Services	597.1	616.5	637.5	660.9	689.0	708.9	726.2	746.1	772.3	709.4
Education and Health Services	789.2	805.9	831.6	867.3	898.1	930.1	963.6	1,008.3	1,055.4	1,004.3
Leisure and Hospitality	343.2	366.8	386.7	409.9	429.4	441.9	458.8	464.4	468.1	271.8
Other Services	165.2	170.5	175.1	180.5	186.1	190.7	192.3	193.7	195.7	158.1
Total Private	3,267.5	3,358.1	3,453.6	3,583.4	3,704.3	3,791.4	3,877.4	3,968.2	4,063.0	3,545.5
Government	573.3	570.6	570.6	573.3	579.5	583.7	584.7	584.7	587.1	588.0
Total	3,840.8	3,928.6	4,024.2	4,156.7	4,283.8	4,375.1	4,462.1	4,552.9	4,650.1	4,133.5

Note: Totals may not add due to rounding or subsector disclosure limitations.
Source: New York State Department of Labor. Data are presented using the North American Industry Classification System ("NAICS").

Sectoral Distribution of Employment and Earnings

In 2019, the City's service-producing sectors provided approximately 3.8 million jobs and accounted for approximately 82% of total employment. Jobs in the service-producing sectors affect the total earnings as well as the average wage per employee because employee compensation in certain of those sectors, such as financial activities and professional and business services, tends to be considerably higher than in most other sectors. Moreover, average wage rates in these sectors are significantly higher in the City than in the nation. In the City in 2019, the employment share for the financial activities and professional and business services sectors was approximately 27% while the earnings share for those same sectors was approximately 44%. In the nation, those same service producing sectors accounted for only approximately 20% of employment and 27% of earnings in 2019. Due to the earnings distribution in the City, sudden or large shocks in the financial markets may have a disproportionately adverse effect on the City relative to the nation.

The City's and the nation's employment and earnings by sector for 2019 are set forth in the following table.

SECTORAL DISTRIBUTION OF EMPLOYMENT AND EARNINGS IN 2019(1)

	Employment		Earnings(2)	
	NYC	U.S.	NYC	U.S.
Goods-Producing Sectors				
Mining and Logging	0.0%	0.5%	0.2%	1.6%
Construction	3.5%	5.0%	3.2%	6.2%
Manufacturing	1.5%	8.5%	0.9%	9.1%
Total Goods-Producing	4.9%	13.9%	4.4%	16.9%
Service-Producing Sectors				
Trade, Transportation and Utilities	13.7%	18.4%	8.7%	15.2%
Information	4.7%	1.9%	8.7%	3.7%
Financial Activities	10.4%	5.8%	23.1%	9.5%
Professional and Business Services	16.6%	14.1%	21.2%	17.7%
Education and Health Services	22.7%	16.0%	11.8%	12.8%
Leisure & Hospitality	10.1%	11.0%	6.0%	4.8%
Other Services	4.2%	3.9%	2.8%	3.6%
Total Service-Producing	82.4%	71.1%	82.4%	67.2%
Total Private Sector	87.4%	85.0%	88.1%	84.2%
Government(3)	12.6%	15.0%	11.9%	15.8%

Note: Data may not add due to rounding or subsector disclosure limitations. Data are presented using NAICS.
Sources: The primary sources are the New York State Department of Labor; the U.S. Department of Labor, Bureau of Labor Statistics; and the U.S. Department of Commerce, Bureau of Economic Analysis.

(1) The sectoral distributions are obtained by dividing each industry's employment or earnings by total non-agricultural employment or earnings.

(2) Includes the sum of wage and salary disbursements, other labor income, and proprietors' income. The latest information available is 2019 data.

(3) Excludes military establishments.

Unemployment

As of August 2021, the total unemployment rate in the City was 9.8%, compared to 14.9% in August 2020, based on data provided by the New York State Department of Labor, which is not seasonally adjusted.

The monthly unemployment rate of the City's resident labor force for 2020 and 2021 is shown in the following table.

MONTHLY UNEMPLOYMENT RATE(1)

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2020	3.8	3.8	4.2	15.5	20.2	18.7	18.8	14.9	14.7	11.7	11.7	11.6
2021	13.1	13.2	11.2	10.8	9.9	10.1	10.2	9.8				

Source: New York State Department of Labor and U.S. Department of Labor, Bureau of Labor Statistics.

(1) Percentage of civilian labor force unemployed: excludes those persons unable to work and discouraged workers (i.e., persons not actively seeking work because they believe no suitable work is available).

The average annual unemployment rate of the City's resident labor force is shown in the following table.

ANNUAL UNEMPLOYMENT RATE(1)
(Average Annual)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
New York City	9.1	9.4	8.8	7.1	5.6	5.1	4.5	4.1	3.9	12.3
United States	8.9	8.1	7.4	6.2	5.3	4.9	4.4	3.9	3.7	8.1

Source: New York State Department of Labor and U.S. Department of Labor, Bureau of Labor Statistics.

(1) Percentage of civilian labor force unemployed: excludes those persons unable to work and discouraged workers (i.e., persons not actively seeking work because they believe no suitable work is available).

Public Assistance

As of August 2021, the number of persons receiving cash assistance in the City was 366,147 compared to 390,441 in August 2020. The following table sets forth the number of persons receiving public assistance in the City.

PUBLIC ASSISTANCE

(Annual Averages in Thousands)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
360.8	341.8	346.9	350.5	351.7	353.9	356.0	342.3	361.9	370.5	366.3	356.1	334.7	363.7

Taxable Sales

The City is a major retail trade market with the greatest volume of retail sales of any city in the nation. The sales tax is levied on a variety of economic activities including retail sales, utility and communication sales, services and manufacturing. Taxable sales and purchases reflects data from the State Department of Taxation and Finance publication "Taxable Sales and Purchases, County and Industry Data." The yearly data presented in this paragraph and the table below covers the period from March 1 of the year prior to the listed year through the last day of February of the listed year. Between 2011 and 2020, total taxable sales volume growth rate averaged 5.5% primarily as a result of an increase in consumption as a result of local employment gains and the local and national economic recoveries, as well as two sales tax base expansions enacted by the City, effective August 1, 2009. In 2021, total taxable sales declined 23.8% due to the COVID-19 pandemic.

The following table illustrates the volume of sales and purchases subject to the sales tax from 2012 to 2021.

TAXABLE SALES AND PURCHASES SUBJECT TO SALES TAX
(In Billions)

Year(1)	Retail(2)	Utility & Communication Sales(3)	Services(4)	Manufacturing	Other(5)	All Total
2012	$41.3	$20.9	$37.2	$4.9	$22.0	$126.3
2013	41.2	20.6	39.2	5.2	23.3	129.5
2014	46.1	22.8	43.9	5.6	20.7	139.1
2015	47.4	23.1	47.5	5.8	21.9	145.7
2016	47.8	22.1	51.1	5.7	23.2	149.9
2017	48.3	22.8	53.1	6.1	25.2	155.5
2018	49.8	23.2	55.4	6.8	27.4	162.4
2019	52.1	24.1	58.5	7.1	30.5	172.3
2020	55.4	25.3	62.0	7.5	32.1	182.2
2021	48.5	26.3	31.1	7.8	25.1	138.8

Source: State Department of Taxation and Finance publication "Taxable Sales and Purchases, County and Industry Data." Data are presented using NAICS.

(1) The yearly data is for the period from March 1 of the year prior to the listed year through the last day of February of the listed year.

(2) Retail sales include building materials, general merchandise, food, auto dealers/gas stations, apparel, furniture, eating and drinking and miscellaneous retail.

(3) Utility and Communication Sales include both residential and non-residential electric, and residential and non-residential gas and communication.

(4) Services include business services, hotel occupancy services (stays for the first 90 days), and other services (auto repair, parking and others).

(5) Other includes construction, wholesale trade, arts, entertainment and recreation, and others. Also included in other are local tax base components of City taxable sales and purchases which include Manhattan parking services, hotel occupancy services (stays 91 to 180 days), and miscellaneous services (credit rating and reporting services, miscellaneous personal services, and other services). Other includes items previously identified as "City Other" except for residential utility, which is reflected in "Utility & Communication Sales."

Population

The City has been the most populous city in the United States since 1790. The City's population is larger than the combined population of Los Angeles and Chicago, the next most populous cities in the nation.

POPULATION

Year	Total Population
1970	7,895,563
1980	7,071,639
1990	7,322,564
2000	8,008,278
2010	8,175,133
2020	8,804,190

Note: Figures do not include an undetermined number of undocumented aliens. Source: U.S. Department of Commerce, Bureau of the Census.

The following table sets forth the distribution of the City's population by age between 2000 and 2010.

DISTRIBUTION OF POPULATION BY AGE

	2000		2010	
Age		% of Total		% of Total
Under 5	540,878	6.8	517,724	6.3
5 to 14	1,091,931	13.6	941,313	11.5
15 to 19	520,641	6.5	535,833	6.6
20 to 24	589,831	7.4	642,585	7.9
25 to 34	1,368,021	17.1	1,392,445	17.0
35 to 44	1,263,280	15.8	1,154,687	14.1
45 to 54	1,012,385	12.6	1,107,376	13.5
55 to 64	683,454	8.5	890,012	10.9
65 and Over	937,857	11.7	993,158	12.1

Note: Applicable data from the 2020 United States Census is not yet available.
Source: U.S. Department of Commerce, Bureau of the Census.

Housing

In 2017, the housing stock in the City consisted of approximately 3,469,240 housing units, excluding certain special types of units primarily in institutions such as hospitals and universities ("Housing Units") according to the 2017 Housing and Vacancy Survey released February 9, 2018. The 2017 housing inventory represented an increase of approximately 69,000 units, or 2.0%, since 2014. The 2017 Housing and Vacancy Survey indicates that rental housing units continue to predominate in the City. Of all occupied housing units in 2017, approximately 32.4% were conventional home-ownership units, cooperatives or condominiums and approximately 67.6% were rental units. Due to changes in the inventory basis beginning in 2002, it is not possible to accurately compare Housing and Vacancy Survey results beginning in 2002 to the results of earlier Surveys until such time as the data is reweighted. The following table presents trends in the housing inventory in the City.

HOUSING INVENTORY
(In Thousands)

Ownership/Occupancy Status	1993	1996	1999	2002	2005	2008	2011	2014	2017
Total Housing Units	2,977	2,995	3,039	3,209	3,261	3,328	3,352	3,400	3,469
Owner Units	825	858	932	997	1,032	1,046	1,015	1,033	1,038
Owner-Occupied	805	834	915	982	1,010	1,019	984	1,015	1,006
Vacant for Sale	20	24	17	15	21	26	31	18	32
Rental Units	2,040	2,027	2,018	2,085	2,092	2,144	2,173	2,184	2,183
Renter-Occupied	1,970	1,946	1,953	2,024	2,027	2,082	2,105	2,109	2,104
Vacant for Rent	70	81	64	61	65	62	68	75	79
Vacant Not Available for Sale or Rent(1)	111	110	89	127	137	138	164	183	248

Note: Details may not add up to totals due to rounding.
Sources: U.S. Bureau of the Census, 1993, 1996, 1999, 2002, 2005, 2008, 2011, 2014 and 2017 New York City Housing and Vacancy Surveys.
(1) Vacant units that are dilapidated, intended for seasonal use, held for occasional use, held for maintenance purposes or other reasons.

EXHIBIT B
TO
APPENDIX D

COMPREHENSIVE ANNUAL FINANCIAL REPORT

The Annual Report for the fiscal year ended June 30, 2020 is included by specific reference in this Appendix as Exhibit B. The report of Grant Thornton LLP relating to the City's financial statements for the fiscal years ended June 30, 2020 and 2019, which is a matter of public record, is included in the Annual Report for the fiscal year ended June 30, 2020, which is included by specific reference in this Appendix. However, Grant Thornton LLP has not performed any procedures on any financial statements or other financial information of the City, including without limitation any of the information contained in this Appendix, since the date of such report and has not been asked to consent to the inclusion of its report in this Appendix.

The Annual Report for the fiscal year ended June 30, 2020 is available for inspection at the Office of the City Comptroller and at https://comptroller.nyc.gov/reports/comprehensive-annual-financial-reports/ and is available on EMMA (https://emma.msrb.org).

**EXHIBIT C
TO
APPENDIX D**

VARIABLE RATE BONDS

Variable Rate Demand Bonds

Series	Outstanding Principal Amount	Provider	Facility Type	Expiration[1]
2004H-6.............	$ 25,320,000	Bank of America, N.A.	LOC[2]	February 28, 2022
2004H-8.............	17,040,000	Bank of America, N.A.	LOC	February 28, 2022
2006E-2.............	87,530,000	Bank of America, N.A.	LOC	August 1, 2022
2006E-3.............	87,530,000	Bank of America, N.A.	LOC	August 1, 2022
2006E-4.............	87,525,000	Bank of America, N.A.	LOC	August 1, 2022
2006I-4..............	125,000,000	TD Bank, N.A.	LOC	May 24, 2024
2006I-8..............	50,000,000	State Street Bank and Trust Company	SBPA[3]	September 9, 2022
2008L-3.............	80,000,000	Bank of America, N.A.	LOC	July 29, 2024
2008L-4.............	100,000,000	US Bank, N.A.	LOC	June 8, 2023
2009B-3.............	100,000,000	TD Bank, N.A.	LOC	January 15, 2025
2010G-4.............	150,000,000	Barclays Bank, PLC	SBPA	March 29, 2024
2012A-4.............	100,000,000	MUFG Bank, LTD.	LOC	June 25, 2024
2012D-3A...........	76,665,000	The Bank of New York Mellon	SBPA	October 30, 2023
2012G-6.............	106,945,000	Mizuho Bank, Ltd.	LOC	March 15, 2024
2013A-2.............	100,000,000	Mizuho Bank, Ltd.	LOC	October 9, 2024
2013A-3.............	100,000,000	Mizuho Bank, Ltd.	LOC	October 9, 2024
2013A-4.............	75,000,000	Sumitomo Mitsui Banking Corporation	LOC	October 15, 2025
2013A-5.............	50,000,000	Sumitomo Mitsui Banking Corporation	LOC	October 15, 2025
2013F-3.............	180,000,000	Bank of America, N.A.	SBPA	March 15, 2022
2014D-4.............	100,000,000	TD Bank, N.A.	LOC	October 16, 2023
2014D-5.............	75,000,000	PNC Bank, National Association	LOC	October 13, 2022
2014I-2..............	100,000,000	JPMorgan Chase Bank, N.A.	SBPA	March 24, 2025
2014I-3..............	200,000,000	Citibank, N.A.	LOC	August 12, 2022
2015F-5.............	100,000,000	Barclays Bank, PLC	SBPA	June 18, 2024
2015F-6.............	100,000,000	JPMorgan Chase Bank, N.A.	SBPA	June 17, 2022
2017A-4.............	200,000,000	Citibank, N.A.	LOC	August 16, 2022
2017A-5.............	81,000,000	JPMorgan Chase Bank, N.A.	SBPA	July 31, 2026
2017A-6.............	50,000,000	JPMorgan Chase Bank, N.A.	SBPA	July 31, 2026
2017A-7.............	50,000,000	Bank of the West	LOC	August 16, 2022
2018B-4.............	100,000,000	Barclays Bank, PLC	SBPA	October 1, 2025
2018B-5.............	100,000,000	Barclays Bank, PLC	SBPA	October 1, 2025
2018E-5.............	50,000,000	TD Bank, N.A.	LOC	March 10, 2023
2019D-4.............	150,000,000	Barclays Bank, PLC	SBPA	December 16, 2022
	$ 3,154,550,000			

Index Rate Bonds[4]

Series	Outstanding Principal Amount	Step up Date
1994E-4	$ 30,000,000	none
2006I-5	75,000,000	May 16, 2024
2006I-6	75,000,000	May 16, 2022
2012A-5	50,000,000	June 28, 2022
2012D-3B	50,000,000	June 28, 2022
2012G-5	75,000,000	September 22, 2023
2015F-7	50,000,000	June 28, 2022
2018E-4	200,000,000	March 1, 2023
	$ 605,000,000	

Fixed Rate Stepped Coupon Bonds[5]

Series	Outstanding Principal Amount	Step up Date
2014D-3	$ 196,920,000	February 1, 2024
2015F-4	85,730,000	December 1, 2025
	$ 282,650,000	

Adjustable Rate Remarketed Securities℠[6]

Series	Outstanding Principal Amount
2020B-3	$ 100,000,000
2021-2	129,675,000
2021-3	129,675,000
	$ 359,350,000

Auction Rate Bonds

Series	Outstanding Principal Amount
Various	$ 586,575,000

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(1) The City expects to renew or replace any expiring Letter of Credit or Standby Bond Purchase Agreement on or prior to its expiration date or convert the related bonds to another interest rate mode.

(2) Letter of Credit.

(3) Standby Bond Purchase Agreement.

(4) The City's index rate bonds pay interest based on a specified index. Such bonds, other than the Series 1994E-4 Bonds, also provide for an increased rate of interest commencing on an identified step up date if such bonds are not converted or refunded.

(5) The City's fixed rate step coupon bonds provide for an increased rate of interest commencing on the step up date if such bonds are not converted or refunded.

(6) The City's Adjustable Rate Remarketed Securities℠ provide for an increased rate of interest if tendered bonds cannot be remarketed for a specified number of days.

APPENDIX E

HUDSON YARDS FINANCING DISTRICT DEVELOPMENT AND REVENUE REPORT

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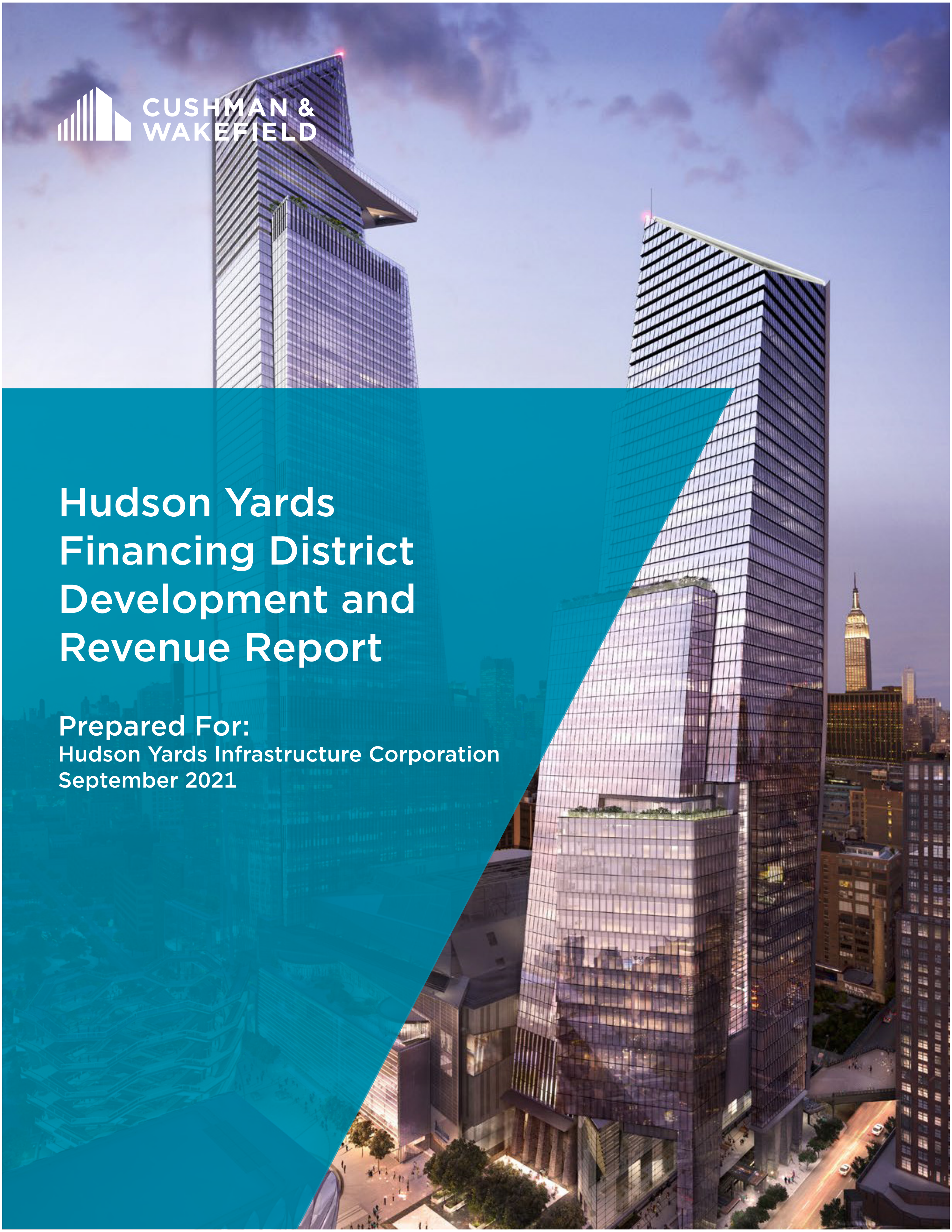
CUSHMAN & WAKEFIELD



Hudson Yards Financing District Development and Revenue Report

Prepared For:
Hudson Yards Infrastructure Corporation
September 2021

Chapter 1A - Executive Summary

The Hudson Yards Infrastructure Corporation (HYIC) engaged Cushman & Wakefield, Inc. (Cushman & Wakefield or C&W) to prepare a Hudson Yards Financing District Development and Revenue Report, which analyzes assessed values of real estate assets, presents market analyses, and reviews the reasonableness of the New York City Office of Management and Budget's revenue forecasts. Incorporating current market data, the report maintains a similar analytical framework to the report prepared by C&W in 2017 to forecast revenues and real estate market fundamentals over a new projection period (fiscal years 2022-2047)[1] for the Hudson Yards district (Hudson Yards, HY, or district)[2], as shown in Exhibit 1-1. C&W has concluded the projected real estate-related revenues from existing and future development within the Hudson Yards Financing District (HYFD)[3] are reasonable. The majority of the forecast revenue is projected to be generated by 17 assets profiled in Chapter 5, which include trophy and Class A office buildings and top tier residential, hotel, and retail properties. These 17 profiled assets account for $15.4 billion or 57 percent of the total forecast.

The dedicated revenues generated by the HY's existing, proposed, and potential development support certain infrastructure expenditures, as allocated by HYIC, the district's financing entity. Revenues pledged to repay HYIC bonds consist primarily of Payments-In-Lieu-of-Taxes (PILOT), Tax Equivalency Payments (TEP) from the City, payments for additional development rights pursuant to the District Improvement Fund Bonus (DIB), and Payments-In-Lieu-of-Mortgage-Recording-Tax (PILOMRT), as highlighted within the applicable chapters of this report.

In this Hudson Yards Financing District Development and Revenue Report, C&W prepared comprehensive analyses of the office, residential, retail and hotel markets. C&W analyzed assessed values for existing buildings in HY and comparable assets in Manhattan. C&W analyzed current and forecasted economic conditions, the impacts from COVID-19 on commercial real estate and the current trend for a majority of office workers continuing to work remotely.

Summary of Revenue Conclusions

Cushman & Wakefield prepared a development and revenue analysis based upon data provided by New York City's Department of Finance, New York City's Office of Management and Budget, and the Hudson Yards Development Corporation. Cushman & Wakefield considers the revenue projections prepared by New York City's Office of Management and Budget to be reasonable and well supported. A summary of all revenues is provided below.

Total Revenue Fiscal Years 2022-2047				
RECURRING REVENUE	**PILOT**	**TEP Residential**	**TEP Hotel & Other**	**Total**
Existing Revenue	$11.6 Billion	$4.9 Billion	$3.8 Billion	**$20.2 Billion**
Future Revenue	$3.4 Billion	$2.5 Billion	$0.5 Billion	**$6.3 Billion**
Total Recurring Revenue	$15.0 Billion	$7.3 Billion	$4.2 Billion	**$26.6 Billion**
NONRECURRING REVENUE	**DIB**	**PILOMRT**		**Total**
	$430.7 Million	$86.9 Million		**$517.6 Million**
TOTAL REVENUE				**$27.1 Billion**
Note: Figures may not sum due to rounding				

[1] C&W's report and forecast pertain to the period from 2022-2047. Note that the forecast is based on the City's Fiscal Year that runs July 1 – June 30.

[2] The Hudson Yards, as considered in this report, comprises approximately 46 blocks. The major zoning and land use approvals for the district were adopted by City Council (NA40500(A) ZRM), January 19, 2005, and further extended to the Western Rail Yard by City Council, December 21, 2009.

[3] HYFD is the area from which revenues are pledged to repay HYIC's bonds, pursuant to Resolution No. 547 of 2006 adopted by the City Council of the City on October 11, 2006. The boundaries are illustrated in Exhibit 1-1.

The projected revenues are contingent on the realization of all the economic and real estate assumptions, analyses, existing zoning, and completion of key infrastructure, and are subject to limiting conditions that are sourced or detailed herein and in Chapter 1B Limiting Conditions.

This executive summary presents the results of our analyses of assessed values, market studies for the office, residential, retail and hotel markets in Manhattan and Hudson Yards ("HY") area, and proposed development in the designated HY Financing District ("HYFD"). In the following chapter (Chapter 2), C&W presents analyses of the office, residential, retail, and hotel markets, with qualitative and quantitative information pertinent to the Hudson Yards district. Chapters 3 and 4 detail New York City's Real Property Taxation platform, and the Tax Exemption and Abatement Programs affecting real estate in the HYFD. Chapter 5 provides an analysis of all completed assets within the district, with particular focus on 17 select assets that generate approximately 57 percent of the revenues projected over the 26-year forecast period. (A summary of the 17 profiled assets and the revenues generated is contained on Page 5). Chapter 6 provides an analysis of numerous developments which are in various stages of construction or planning within Hudson Yards as well as an analysis of new supply which is projected to be built to meet future demand. Conclusions regarding current assessed values and future growth thereof were incorporated into the revenue projections for Chapters 5 and 6. Projections of TEP and PILOT are presented for each asset. Chapter 7 provides an analysis of all nonrecurring items including sales of District Improvement Bonus (DIB) development rights, and PILOMRT. Finally, Chapter 8 provides a summary of the revenue conclusions reported herein.

Exhibit 1-1. Hudson Yards District

Source: Hudson Yards Development Corporation

Notable Highlights of the 2021 Analysis

The following section details notable highlights of the 2021 analysis inclusive of a summary of the office, residential, and hotel developments completed to date and projected during the forecast period; the real estate tax and assessment growth conclusions: the 17 profiled assets; and the annual recurring and nonrecurring revenues projected over the forecast period.

Successful Completion of Initial Goals

New York City, in collaboration with the Metropolitan Transportation Authority (MTA) and the State of New York, began planning the Hudson Yards project in 2002. The zoning controls adopted for Hudson Yards in January 2005 provide for a mix of commercial and residential uses, with a high-density commercial core running along West 33rd Street from Pennsylvania Station to the Eastern Rail Yard (ERY), and north between Tenth and Eleventh Avenues from West 33rd to West 41st Streets.

The five key elements of the Hudson Yards redevelopment plan to support its evolution into a mixed-use, 24/7 district were: 1) zoning for mixed-use development; 2) access to mass-transit; 3) availability of large commercial sites; 4) creation of new public open spaces and cultural amenities; and 5) renovation and expansion of the Javits Center. All of these goals have been accomplished. Since the 2005 rezoning, these accomplishments have included:

- The $2.4 billion extension project of the Number 7 subway line
- The construction or renovation of approximately 17.8 million square feet of office space[4]
- Nearly 10,000 new rental and condominium apartments
- The addition of nearly 8,500 new hotel rooms
- The completion of the first phase of Hudson Park & Boulevard
- The completion of the final phase of the High Line
- The renovation and expansion of the Javits Center

Completed, Under Construction and Future Developments

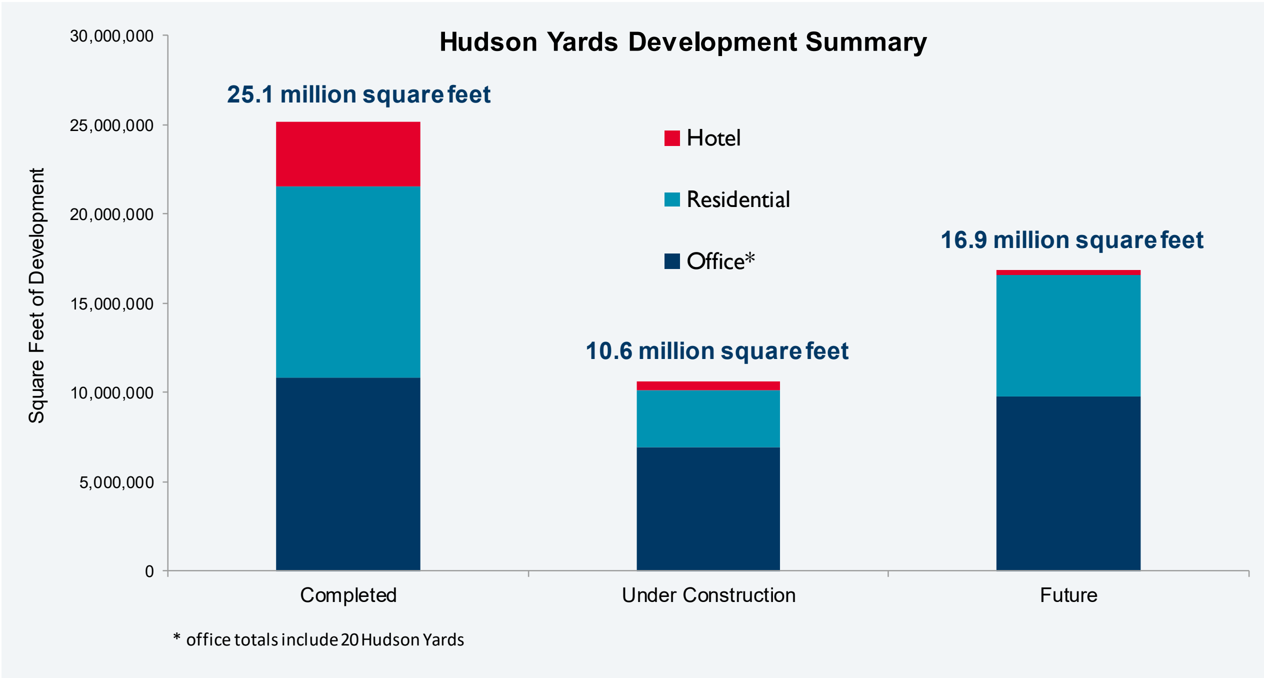
Since the 2005 rezoning, nearly 10.9 million square feet of office, 10.7 million square feet of residential, and 3.6 million square feet of hotel construction has been developed or redeveloped within the HYFD. The completed office square footages reported herein include 20 Hudson Yards, known as the “The Shops and Restaurants at Hudson Yards”. The residential component consist of nearly 10,000 rental and condominium units and the hotel component consists of nearly 8,500 rooms. The scale of completed developments demonstrates the strong desirability of the area for office, residential, retail, and hotel uses.

In addition to the completed developments, approximately 6.9 million square feet of office space, 3.2 million square feet of residential, and 449,538 square feet of hotel space is currently under construction in the HYFD.

Based on the analyses of the respective markets, and the competitive position Hudson Yards holds as the city’s newest office subdistrict, the recent recession and shape of recovery, C&W concludes the pace of future completions to be two years delayed from the conclusions made in its February 2017 report. As a result, the total future development projected equates to 9.8 million square feet of office, 6.8 million square feet of residential, 291,135 square feet of hotel, and 534,420 square feet of retail uses.

[4] Gross building area, inclusive of three office buildings (50 Hudson Yards, 66 Hudson Boulevard, and Two Manhattan West) that are significantly pre-leased and nearing completion

The following chart summarizes completed, under construction, and future development by property type.

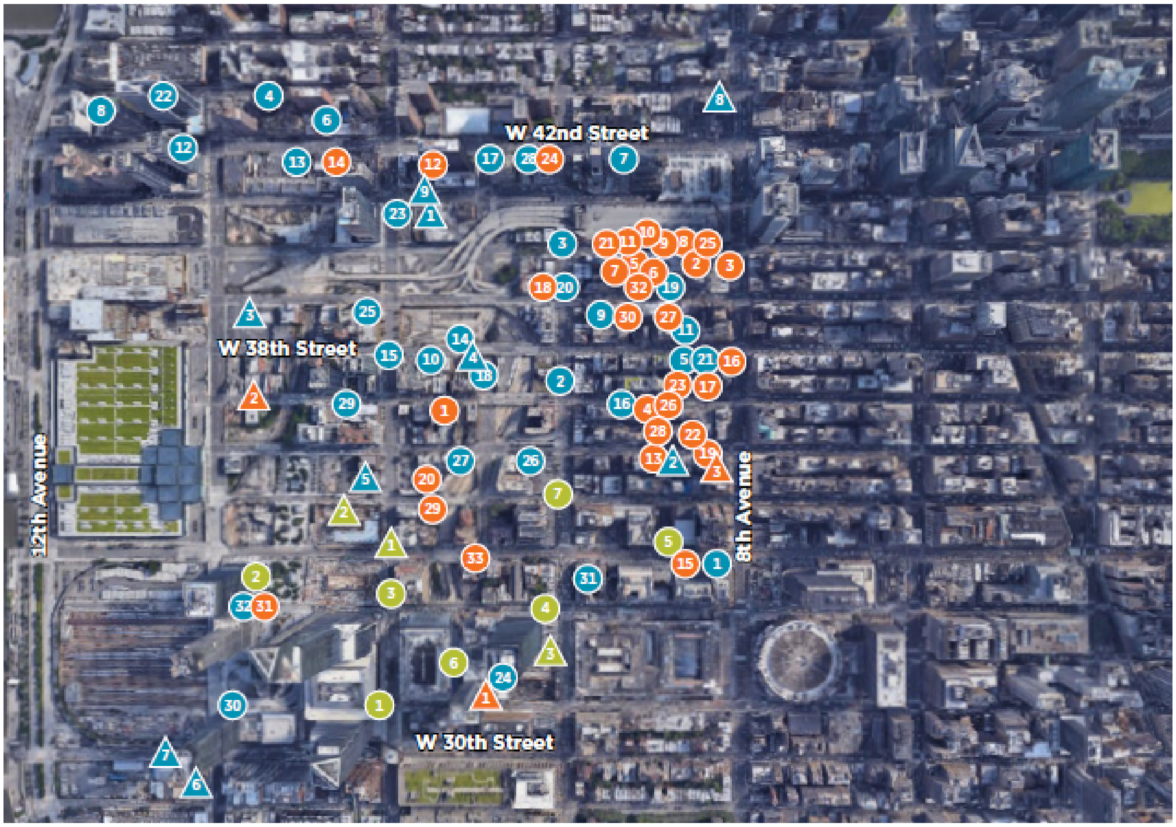


The completed developments and developments under construction are illustrated in the map on the following page:

HUDSON YARDS AREA MAP

All Property Types—Completed & Under Construction

CUSHMAN & WAKEFIELD



OFFICE

Completed
10.9 MSF

1. 10 Hudson Yards
2. 55 Hudson Yards
3. 20/30 Hudson Yards
4. 1 Manhattan West
5. 330 West 34th St.
6. 5 Manhattan West
7. Hudson Commons

Under Construction
6.9 MSF

1. 50 Hudson Yards
2. 66 Hudson Boulevard
3. 2 Manhattan West

RESIDENTIAL

Completed
10.7 MSF

1. 315 W. 33rd St.
2. 400 W. 37th St.
3. 402 W. 40th St.
4. 552 W. 43rd St.
5. 325 W. 37th St.
6. 521 W. 42nd St.
7. 350 W. 42nd St.
8. 635 W. 42nd St.
9. 502 Ninth Ave.
10. 455 W. 37th St.
11. 320 W. 38th St.
12. 600 W. 42nd St.
13. 534 W. 42nd St.
14. 446 W. 38th St.
15. 505 W. 37th St.
16. 350 W. 37th St.
17. 450 W. 42nd St.
18. 433 W. 37th St.
19. 330 W. 39th St.
20. 515 Ninth Ave
21. 321 W. 37th St.
22. 605 W. 42nd St.
23. 555 Tenth Ave.
24. 435 W. 31St. St.
25. 515 W. 38th St.
26. 411 W. 35th St.
27. 445 W. 35th St.
28. 400 W. 42nd St.
29. 515 W. 36th St.
30. 15 Hudson Yards
31. 401 W. 33rd St.
32. 35 Hudson Yards

Under Construction
3.2 MSF

1. 460 W. 41st St.
2. 335 W. 35th St.
3. 555 W. 38th St.
4. 441 W. 37th St.
5. 451 Tenth Ave.
6. 601 W. 29th St.
7. 606 W. 30th St.
8. 308 W. 43rd St.
9. 550 Tenth Ave.

HOTEL

Completed
3.6 MSF

1. 449 W. 36th St.
2. 309 W. 39th St.
3. 305 W. 39th St.
4. 341 W. 36th St.
5. 341 W. 39th St.
6. 337 W. 39th St.
7. 343 W. 39th St.
8. 326 W. 40th St.
9. 330 W. 40th St.
10. 334 W. 40th St.
11. 342 W. 40th St.
12. 570 10th Ave
13. 345 W. 35th St.
14. 510 W. 42nd St.
15. 325 W. 33rd St.
16. 307 W. 37th St.
17. 312 W. 37th St.
18. 515 9th Ave
19. 321 W. 35th St.
20. 444 10th Ave
21. 350 W. 40th St.
22. 320 W. 36th St.
23. 326 W. 37th St.
24. 400 W. 42nd St.
25. 310 W. 40th St.
26. 337 W. 36th St.
27. 333 W. 38th St.
28. 338 W. 36th St.
29. 461 W. 34th St.
30. 351 W. 38th St.
31. 35 Hudson Yards
32. 338 W. 39th St.
33. 438 W. 33rd St.

Under Construction
450K SF

1. 432 W. 31st St.
2. 450 11th Ave.
3. 319 W. 35th St.

Real Estate Tax and Assessment Growth Assumptions

The following chart indicates the property tax and assessment growth rate assumptions modeled for office, residential, and hotel assets within HY. The assessment of retail space within office and residential buildings is determined by the dominant use. In addition, the revenue models assume taxes will grow at the same conservative rates used in the office and residential forecasts.

MODELING ASSUMPTIONS		
Property Type	**Taxes / SF**	**Annual Growth Rate(s)**
Office	$23.00	0% in FY 2023, 3.5% thereafter
20 Hudson Yards (The Shops & Restaurants at Hudson Yards)		-10% in FY 2023, 0% in FY 2024, and 3.5% thereafter
Residential		
Condominium	$27.50	4.0% FY 2023 through 2047
Rental	$20.00	4.0% FY 2023 through 2047
Hotel	$18.00	-7.5% in FY 2023, 2.5% thereafter

The data supporting the property tax and assessment growth rate conclusions for each asset class is detailed in Chapter 3.

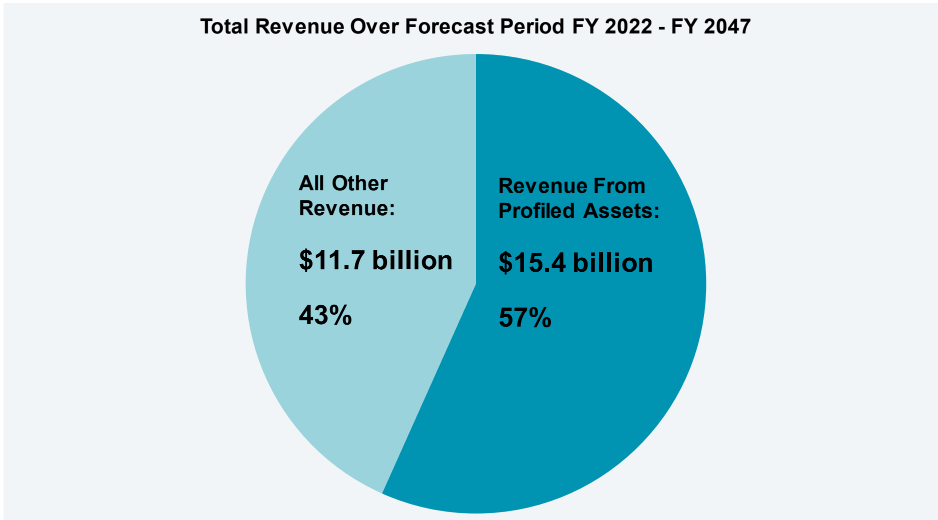
Summary of the 17 Profiled Assets

The profiled office assets were chosen because they include new Class A trophy office assets, are complete (or nearing completion and substantially leased), and contribute significant revenue to the HYIC. Other profiled assets include completed residential rental and condominium buildings and hotels. The profiled assets are identified in the following table.

Profiled Assets	
Asset	Type
10 Hudson Yards	Office
One Manhattan West	Office
30 Hudson Yards	Office
55 Hudson Yards	Office
50 Hudson Yards	Office
66 Hudson Boulevard	Office
Two Manhattan West	Office
20 Hudson Yards	Retail / Office
330 West 34th Street	Office
Hudson Commons	Office
Five Manhattan West	Office
The Olivia	Residential
The Atelier	Residential
The Orion	Residential
MiMA / YOTEL	Residental / Hotel
Marriott Fairfield Inn & Suites	Hotel
Equinox Hotel	Hotel

Ten office assets are profiled, of which seven have their construction completed. The remaining three office assets (50 Hudson Yards, 66 Hudson Boulevard, and Two Manhattan West) were included because they are large, trophy quality buildings nearing completion and have generated significant pre-leasing activity. Seven of the office assets are subject to a PILOT agreement. In addition to the office assets, the retail project at 20 Hudson Yards is subject to a PILOT agreement.

Over the forecast period, the $15.4 billion generated by the 17 profiled assets represents 57 percent of the total revenue projected, which includes recurring revenue from other existing assets in HY, future developments, and all nonrecurring revenues. The chart and table below illustrate the significant percentage of revenue projected to be generated by the 17 profiled assets:



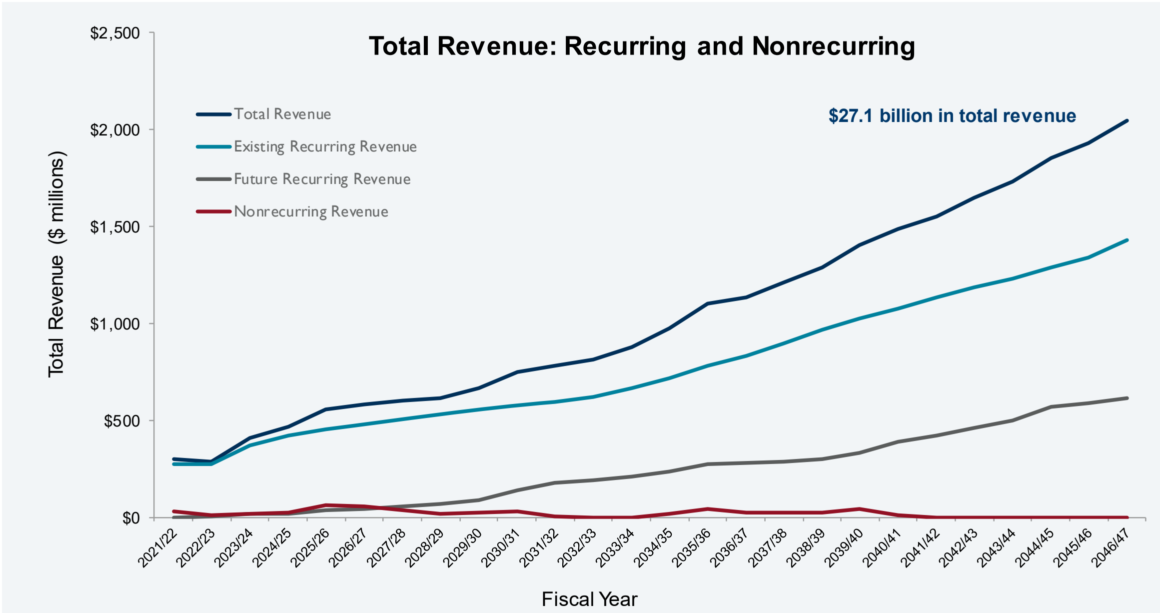
Profiled Asset Revenue vs. Total Revenue (Recurring & Nonrecurring)

	Profiled Asset Revenue	Total Revenue	Profiled Assets As % of Total
FY 2022	206,566,039	302,935,363	68.2%
FY 2023	205,617,360	290,907,921	70.7%
FY 2024	294,584,835	409,743,913	71.9%
FY 2025	342,694,142	466,037,289	73.5%
FY 2026	363,717,344	555,659,928	65.5%
FY 2027	383,660,942	582,170,808	65.9%
FY 2028	396,836,847	599,767,464	66.2%
FY 2029	415,420,057	617,422,990	67.3%
FY 2030	428,572,882	669,506,204	64.0%
FY 2031	446,590,457	750,199,401	59.5%
FY 2032	460,749,075	781,988,000	58.9%
FY 2033	481,629,500	814,346,318	59.1%
FY 2034	501,494,626	877,756,692	57.1%
FY 2035	546,363,003	975,974,485	56.0%
FY 2036	586,209,699	1,101,336,817	53.2%
FY 2037	628,179,695	1,138,582,135	55.2%
FY 2038	667,356,260	1,211,006,653	55.1%
FY 2039	727,355,170	1,290,957,572	56.3%
FY 2040	769,709,758	1,406,047,651	54.7%
FY 2041	810,907,152	1,486,981,083	54.5%
FY 2042	854,059,088	1,553,425,751	55.0%
FY 2043	899,232,100	1,646,285,745	54.6%
FY 2044	934,442,447	1,731,642,325	54.0%
FY 2045	967,442,436	1,855,445,206	52.1%
FY 2046	1,001,612,086	1,930,072,901	51.9%
FY 2047	1,036,992,991	2,048,128,285	50.6%
Total from FY 2022 to FY 2047	**15,357,995,991**	**27,094,328,900**	**56.7%**

Summary of the Revenues Projected

In total, the Hudson Yards Infrastructure District is projected to generate total recurring and nonrecurring revenue of approximately $27.1 billion over the forecast period from fiscal year 2022 through fiscal year 2047. The total revenue projection includes existing and future recurring revenues as well as nonrecurring revenue. The total revenues projected are illustrated in the following table and chart:

	Total Revenue	Annual Chg.
FY 2022	302,935,363	-
FY 2023	290,907,921	-3.97%
FY 2024	409,743,913	40.85%
FY 2025	466,037,289	13.74%
FY 2026	555,659,928	19.23%
FY 2027	582,170,808	4.77%
FY 2028	599,767,464	3.02%
FY 2029	617,422,990	2.94%
FY 2030	669,506,204	8.44%
FY 2031	750,199,401	12.05%
FY 2032	781,988,000	4.24%
FY 2033	814,346,318	4.14%
FY 2034	877,756,692	7.79%
FY 2035	975,974,485	11.19%
FY 2036	1,101,336,817	12.84%
FY 2037	1,138,582,135	3.38%
FY 2038	1,211,006,653	6.36%
FY 2039	1,290,957,572	6.60%
FY 2040	1,406,047,651	8.92%
FY 2041	1,486,981,083	5.76%
FY 2042	1,553,425,751	4.47%
FY 2043	1,646,285,745	5.98%
FY 2044	1,731,642,325	5.18%
FY 2045	1,855,445,206	7.15%
FY 2046	1,930,072,901	4.02%
FY 2047	2,048,128,285	6.12%
Total from FY 2022 to FY 2047	**27,094,328,900**	



For all recurring revenue, inclusive of existing, under construction, and future developments, the total revenue is projected to be approximately $26.6 billion. This revenue projection is detailed in the following table:

Total Recurring Revenues

	PILOT	TEP Residential	TEP Hotel & Other	Total
FY 2022	136,212,312	45,711,199	91,624,855	273,548,366
FY 2023	134,956,331	52,707,964	91,829,098	279,493,393
FY 2024	219,167,742	71,992,330	96,811,934	387,972,007
FY 2025	259,523,873	78,467,783	103,518,657	441,510,312
FY 2026	274,689,262	103,219,212	115,033,689	492,942,163
FY 2027	285,523,706	116,623,151	124,200,341	526,347,198
FY 2028	294,282,267	140,494,915	128,777,648	563,554,829
FY 2029	303,110,981	162,183,345	136,414,772	601,709,098
FY 2030	312,204,565	192,917,693	140,883,851	646,006,109
FY 2031	356,687,362	217,219,658	146,205,464	720,112,484
FY 2032	385,301,663	238,069,821	150,968,485	774,339,969
FY 2033	408,598,056	249,921,550	155,826,713	814,346,318
FY 2034	440,185,160	276,131,383	160,844,445	877,160,988
FY 2035	504,112,003	286,434,390	166,027,023	956,573,416
FY 2036	569,177,034	315,624,165	170,861,135	1,055,662,334
FY 2037	609,998,833	326,711,512	175,840,021	1,112,550,365
FY 2038	647,886,017	359,152,975	181,513,188	1,188,552,181
FY 2039	706,406,704	372,003,313	187,373,021	1,265,783,038
FY 2040	769,164,592	398,276,385	193,425,779	1,360,866,756
FY 2041	860,386,167	412,712,492	199,618,856	1,472,717,515
FY 2042	920,250,263	427,726,042	205,449,446	1,553,425,751
FY 2043	991,490,406	443,340,135	211,455,204	1,646,285,745
FY 2044	1,054,421,995	459,578,791	217,641,540	1,731,642,325
FY 2045	1,143,919,654	487,511,520	224,014,032	1,855,445,206
FY 2046	1,188,818,839	510,675,624	230,578,438	1,930,072,901
FY 2047	1,235,332,464	575,455,125	237,340,696	2,048,128,285
Total from FY 2022 to FY 2047	**15,011,808,252**	**7,320,862,472**	**4,244,078,330**	**26,576,749,054**

The total nonrecurring revenue is projected to be approximately $518 million over the forecast period from fiscal year 2022 through fiscal year 2047. This revenue projection is detailed in the following table:

Nonrecurring Revenue

	DIB	PILOMRT	Total
FY 2022	29,386,997	-	29,386,997
FY 2023	11,414,528	-	11,414,528
FY 2024	21,771,906	-	21,771,906
FY 2025	24,526,977	-	24,526,977
FY 2026	62,717,765	-	62,717,765
FY 2027	45,943,868	9,879,743	55,823,611
FY 2028	31,222,226	4,990,408	36,212,635
FY 2029	13,361,854	2,352,038	15,713,892
FY 2030	19,435,319	4,064,776	23,500,095
FY 2031	24,016,204	6,070,713	30,086,917
FY 2032	-	7,648,031	7,648,031
FY 2033	-	-	-
FY 2034	595,704	-	595,704
FY 2035	19,401,068	-	19,401,068
FY 2036	39,181,547	6,492,935	45,674,483
FY 2037	12,513,171	13,518,598	26,031,770
FY 2038	18,210,926	4,243,547	22,454,473
FY 2039	18,599,053	6,575,481	25,174,534
FY 2040	38,366,512	6,814,383	45,180,895
FY 2041	-	14,263,568	14,263,568
FY 2042	-	-	-
FY 2043	-	-	-
FY 2044	-	-	-
FY 2045	-	-	-
FY 2046	-	-	-
FY 2047	-	-	-
Total from FY 2022 to FY 2047	**430,665,626**	**86,914,221**	**517,579,847**

Key Findings

Emerging trends for National and Manhattan office inventory include:

- Flight to quality by tenants to Class A and Trophy assets.
- Surging tour activity.
- Superior fundamentals for Class A and Trophy office assets including higher occupancy, stronger leasing and absorption, and greater net effective rents.
- Desirability of LEED Certified and Green office buildings.

Cushman & Wakefield concludes corporations will continue to require office space long term, with a decline in workforce physically present therein reduced 5 percent to 10 percent from pre-pandemic levels. This decline will be offset by a reversal of densification trends and office using employment growth long term.

Based on our analyses, most higher office vacancy rate attributed to trends related to employees working from home will be incurred in Class B and C buildings rather than in Class A and Trophy assets. If a material increase occurs, affected Class B and C structures will be considered for adaptive re-use by market participants, a well-defined trend in the Manhattan markets over the past three decades. Manhattan's Class A and Trophy office assets have superior tenant rosters, stronger and more durable cash flows, achieve higher rents and are capturing greater absorption than Class B and C buildings. The existing and proposed office building assets in Hudson Yards share these qualities, which are detailed for specific assets in Chapter 5. The analysis of rent levels and absorption trends is presented in Chapter 2.

Companies will continue to evaluate their real estate needs focusing on providing a secure and safe workplace, but as is the case in all recessions and recoveries, a greater emphasis on cost containment will be a primary focus. In addition, companies were looking to develop new strategies to utilize office space more effectively. The new office buildings in Hudson Yards are designed with this efficiency in mind, with features like column-free spacing.

Hudson Yards Office Desirability

Hudson Yards' master planned concept with incentivized zoning has successfully attracted top tier companies and tenants or owners within new trophy quality office towers. The infrastructure improvement including the No. 7 train extension, new 34th Street No. 7 station, new Moynihan Train Hall, on-going renovation to Pennsylvania Station, updating of AMTRAK's infrastructure (over $150 million expended for expansion of platforms and replacement of tracks and switches), and improved public access including the Hudson Park and Boulevard (Phase I completed, Phase II proposed and funded), have contributed to a dynamic office subdistrict. The LEED certified buildings are also attractive to retain and recruit talent by tenants/occupants. The office market analysis presented in Chapter 2 contains details of major corporations which have relocated to new development in Hudson Yards, creating a vibrant office subdistrict.

While the last 18 months have been a tumultuous time for the New York City real estate market, the economic and real estate effects of COVID-19 are expected to be temporary. The Manhattan office market will recover and perform well in the long term. Hybrid occupancy, with employees rotating between working at home and in an office, may continue to be popular but offices will be an essential part of the corporate environment. New Class A and trophy office assets, which are well amenitized and designed to be more efficient for occupier use with top LEED certifications, are expected to continue to experience strong future leasing activity and occupancy while meeting tenant needs.

The Hudson Yards area has proven to be well positioned to withstand the economic pressure created by the pandemic. Office leasing brokers report that tenant tours of Hudson Yards have been consistent since social distancing restrictions were lifted. While Class A sublease space has significantly increased throughout the pandemic in Midtown and Manhattan overall, almost no sublease space is available in the Hudson Yards and

Manhattan West developments. Class A average asking rents in the Penn Station subdistrict registered $109.31 per square foot in the second quarter of 2021. Removing the average asking rents from Hudson Yards located assets from the statistical sample, Penn Station subdistrict average asking rents decrease to $65.20 per square foot. Asking rents in the Hudson Yards area alone average to $118.54 per square foot, higher than any Class A submarket in New York City.

Office buildings in Hudson Yards will continue to outperform compared to the Manhattan market. Hudson Yards office buildings are generally trophy quality, LEED-certified and green, and are positioned to continue to attract high quality credit tenants. The buildings have the highest rents and absorption rates in the Penn Station subdistrict, and are representative of the type of asset desired most by investors as well as tenants in the Manhattan market. This is a direct result of the master-plan concept for the broader Hudson Yards rezoning which includes expanded public transportation (No. 7 subway extension), renovations to Pennsylvania Station, the new Moynihan train station, the Hudson Park & Boulevard, and the final phase of the High Line park.

Class A asking rents in the Penn Station subdistrict are $109.31 per square foot, 27.3 percent greater than for Midtown overall. Asking rents for Class A space in completed Hudson Yards buildings, profiled in Chapter 5 of this report, range from $105 to $200 per square foot. The occupancy rates in these completed office buildings range from 72.2 percent to 100 percent. Only 501,643 square feet of space is available as of the first quarter of 2021, indicating an average vacancy rate of 4.6 percent for five completed assets, which is lower than the Penn Station subdistrict and Manhattan overall. Asking rents within the office assets nearing completion and substantially leased (50 Hudson Yards, 66 Hudson Boulevard, and Two Manhattan West) range from $103 to $200 per square foot. Initial rents for large anchor tenants in Hudson Yards were in the $75 to $85 per-square-foot range in late 2011. The growth in office rents (from $80 per square foot in 2011 to the average asking rent of $118.54 per square foot) is 4.01 percent annually, and demonstrates the area's desirability as a proven office destination.

Chapter 1B - Limiting Conditions

"C&W" shall mean Cushman & Wakefield, Inc. or any of its affiliates that prepared the C&W Report.

1. The C&W 2021 Hudson Yards Financing District Development and Revenue Report is to be used in whole and not in part. C&W's 2021 Hudson Yards Financing District Development and Revenue Report considers earlier forecasts from its Hudson Yards Demand and Development Report, dated February 2017. Publication of the C&W Report or any portion, description or summary thereof without the prior written consent of C&W is prohibited. Except as may be otherwise stated in the letter of engagement to prepare it, the C&W 2021 Hudson Yards Development and Revenue Report may not be used by any person other than the party that engaged us, or for purposes other than that for which it was prepared. If the C&W 2021 Hudson Yards Development and Revenue Report ("C&W Report") is to be used in an offering memorandum or any other investment materials, its use is subject to the limitations and indemnification sections of the engagement letter to prepare said report. No part of C&W's 2021 Hudson Yards Development and Revenue Report shall be conveyed to the public through advertising, or used in any sales or promotional material without C&W's prior written consent.

2. The information in the C&W Report reflects data available at the date set forth therein and does not reflect data or changes subsequent to that date. Other than as set forth below, the information contained in the C&W Report has been gathered by C&W from sources assumed to be reliable, including publicly available records. Because records of all transactions are not readily available, the information contained in the C&W Report may not reflect all transactions occurring in the geographic area discussed in the C&W Report. In addition, transactions that are reported may not be described accurately or completely in the publicly available records. C&W shall not be responsible for and does not warrant the accuracy or completeness of, or the assumptions underlying, any such information derived from such publicly available records (or information relating to transactions that were not reported).

3. C&W relied on information, reports, and tax revenue forecasts, calculations, and methodology provided by The City of New York ("NYC"), New York City Office of Management and Budget ("OMB"), the New York City Department of Finance ("DOF"), Hudson Yards Infrastructure Corporation ("HYIC"), and Hudson Yards Development Corporation ("HYDC"). C&W assumes no liability resulting from errors, omissions or any other inaccuracies with respect to the information provided by HYIC, HYDC, NYC and any other third parties.

4. Tax data provided by the New York City Office of Management and Budget ("OMB") and the New York City Department of Finance ("DOF") are on a New York City Fiscal Year Basis. The City's Fiscal Year commences on July 1st of a Calendar year and ends on June 30th of the subsequent Calendar Year. For example, the City's Fiscal Year 2022 commences on July 1, 2021, and ends on June 30, 2022. In reviewing revenue estimates for modeling purposes, it is assumed that the forecast schedule of completions (which form part of the revenue estimates), which are on a Calendar Year basis, would fall within the corresponding City Fiscal Year ending as of June 30. Actual timing of completions, as well as the operation and timing of the City's assessment mechanism, may affect the revenue results.

5. In connection with the C&W Report, C&W makes numerous assumptions with respect to industry performance, general business and economic conditions, and other matters. Any estimates or approximations contained therein could reasonably be subject to different interpretations by other parties. Because predictions of future events are inherently subject to uncertainty, neither C&W, nor any other person can assume that such predicted rental rates, absorption, or other events will occur as outlined or predicted in the C&W Report. Reported asking rents for properties do not necessarily reflect the rental rates at which properties may actually be rented. In many instances, asking rents and actual rental rates differ significantly.

6. Changes in local, national, or global economic conditions will affect the markets described in the C&W Report. Therefore, C&W can give no assurance that occupancy, absorption levels, and rental rates as of the date of the C&W Report will continue or that such occupancy levels and rental rates will be attained at any time in the future. Forecasts of absorption rates, rental activity, and replacement costs are C&W's estimates as of the date of the C&W Report. Actual future market conditions may differ materially from the forecasts and projections contained therein.

7. Many of the figures presented in this report have been generated using sophisticated computer models that make calculations based on numbers carried out to three or more decimal places. In the interest of simplicity, most numbers have been rounded. Thus, totals may not be completely accurate.

8. As the C&W 2021 report opines on the forecast is provided over a 26-year period and the revenue projections are made over a 26-year period, it is important to revisit all the assumptions and variables that are based on current market conditions, enabling legislation, zoning, and tax programs as these variables have an increased probability of changing over a longer forecast period.

9. Many of the variables associated with these forecasts, tax rates, incentive programs, and legislation are policy-driven. C&W is neither opining on nor predicting future policy changes. It is assumed that legislation relating to tax programs and PILOTs associated with revenues in the model will not change. It is also assumed that future development of other sites within the Hudson Yards Financing District ("HYFD") owned by the State of New York ("State") or Port Authority of New York and New Jersey ("PA") will not materially reduce revenue to the HYIC.

10. Among the assumptions on which projections of the revenues expected to be received by the HYIC were based is that owners of commercial sites in the Hudson Yards will either enter into PILOT agreements with the New York City Industrial Development Agency ("IDA") or the Metropolitan Transportation Authority ("MTA") (relating to the Eastern Rail Yard and Western Rail Yard), or pay real property taxes to the City and make certain DIB payments in exchange for the right to increase the size of their buildings. In addition to the IDA, the Empire State Development Corporation has statutory powers that may be utilized in the Hudson Yards, giving Urban Development Corporation ("UDC") the power to enter separately into agreements with developers to provide development incentives in exchange for reduction or elimination of real property taxes otherwise payable to the City without a PILOT agreement with the IDA, and to build larger buildings without making DIB payments. In addition, development on property owned by the State, MTA, or the PA in the Hudson Yards will not, by operation of law, result in real property tax revenues to the City or PILOT revenues to the HYIC, but could capture some of the demand projected for commercial and residential developments within the Hudson Yards and therefore could reduce the revenues payable to the HYIC.

11. In assessing the reasonableness of the projected growth rates of taxes (assessments) used in the revenue model, C&W examined the data from a historical perspective by comparing the projected growth rates in taxes (assessments) with their historic average growth rate between 1985 and 2022. The cyclicality of the economy and real estate markets could cause growth in any year to differ from the long-term projected growth rates used in the model. The analysis does not take into account the potential impact of a major economic shock other than for the possibility of four recessionary years during the forecast period, and assumes that growth will not deviate significantly from the historic long-term trends.

12. In the event that any party makes a claim against C&W or any of its affiliates or any of their respective officers or employees in connection with or in any way relating to the C&W Report, the maximum damages recoverable from C&W or any of its affiliates or their respective officers or employees shall be the amount of the monies actually collected by C&W for this assignment, and under no circumstances shall any claim for consequential damages be made. Any opinions and conclusions expressed by the C&W professionals during this assignment are representations made as employees and not as individuals. C&W's responsibility is limited to HYIC and use of the C&W Report by third parties shall be solely at the risk of said third parties.

13. C&W does not take any responsibility for, or make any representations with respect to, the reasonableness or appropriateness of coverage projections for any debt instruments issued relating to Hudson Yards.

14. C&W is part of a national network of affiliated companies providing real estate services. As such, from time to time, C&W and its affiliates may have provided and in the future may provide real estate related services, including brokerage and leasing agent services, to HYIC, for whom it prepared the C&W Report.

Chapter 2 - Current Market Overview

Introduction

The New York City economy and real estate markets have been significantly impacted by the COVID-19 pandemic since March 2020. Each major asset class has been impacted in different ways, and the subsequent recovery period for each has varied. This chapter will analyze the existing market conditions prior to the pandemic, the market conditions during the pandemic, and the future outlook for each major asset class relevant to Hudson Yards: office, residential, hotel, and retail. While the pandemic is still impacting the markets and economy, the vaccines have proven highly effective. Wide-scale vaccinations started at the end of 2020, and a majority of the adult population is now vaccinated. With this, many businesses have resumed normal activities. As of August 1, 2021, approximately two-thirds of adults in New York City have been fully vaccinated according to the Citywide Immunization Registry. Considering the study period extends from 2022 through 2047, the pandemic is not expected to have a long-term impact on the assets in Hudson Yards.

Cushman & Wakefield's assessment of current market conditions is briefly summarized below:

Office Market

Though impacted in the short-term, the Hudson Yards office market has outperformed the Manhattan market, owing to its composition of Class A and trophy quality assets with efficient design, credit-worthy tenants, and green building features. As a result, the outlook for the office market is positive. See Page 32 for additional detail on these conclusions.

Residential Market

The overall Manhattan and Hudson Yards rental markets have fully recovered from the effects of the pandemic, with respect to leasing activity, occupancy, and concession levels. Rents have begun to increase and are expected to continue increasing into 2022. The condominium market is still recovering from the effects of the pandemic, though recent contract activity suggests that the remainder of 2021 will be a strengthening market. As a result, the outlook for the residential market is positive. See Page 53 for additional detail on these conclusions.

Hotel Market

The hotel market was negatively impacted by the restrictions on travel and closures of area venues which drew a record level of tourists to New York City in 2019. As of September 2021, national travel restrictions have been rescinded, office employees are returning, Broadway theatres are reopening, and sports venues, museums, and restaurants no longer have capacity limits. Coupled with vaccine mandates, the long-term outlook for hotel performance is good. See Page 60 for additional detail on these conclusions.

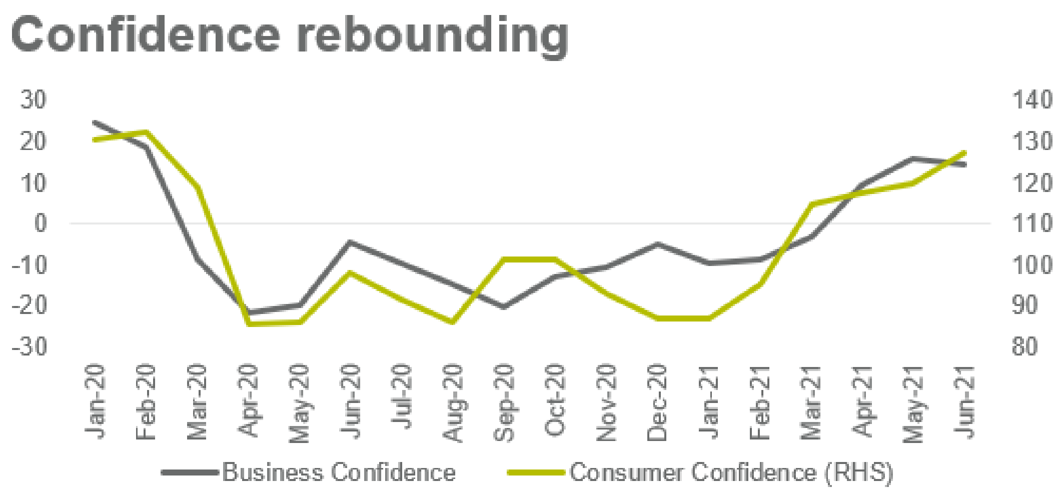
Retail Market

Hudson Yards' retail assets were not immune to the pandemic's negative impact on the New York City retail market. In particular, the bankruptcy of Neiman Marcus in May 2020 led to a significant increase in vacancy. However, the vacant space is currently being reconfigured for office use. Although the effects of the pandemic are presenting significant challenges to the Manhattan retail market, positive market activity such as increased tenant tours, and leasing activity are starting to show positive trends. While some market metrics are improving, the overall leasing activity, rental rates and availabilities remain significantly off from pre-pandemic levels. See Page 65 for additional detail on these conclusions.

Economic Overview

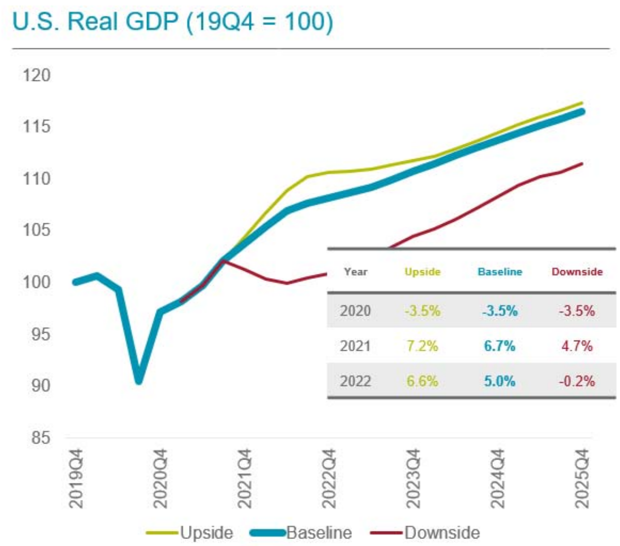
Real estate fundamentals typically lag leading economic indicators. In this section, we identify several trends emerging in the national economy which influence real estate. This is followed by a summary of the recent and projected economic performance for New York City.

Following a precipitous decline in the March to May 2020 period, both consumer and business confidence indexes are at post-COVID highs. The trend in consumer confidence followed the pattern established by the COVID-19 virus, whereby economies re-opened, adjusted due to levels of infection, and slowed as the second wave hit in October 2020 to January 2021. Both consumer and business confidence have increased monthly since January 2021, as infection rates fell from peak levels. Interestingly, the current Delta variant of the virus, which has infections increasing significantly throughout the United States, has not caused the consumer confidence index to turn negative, while the business confidence index is marginally down.



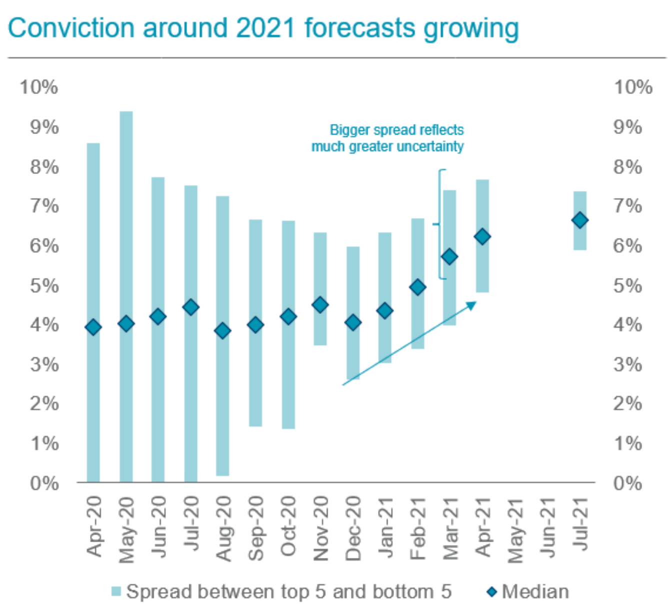
Source: Moody's Analytics, Conference Board, Moody's Analytics/CNN Business, U.S. Bureau of Economic Analysis, Federal Reserve, Cushman & Wakefield Research

National real Gross Domestic Product ("GDP") experienced a record decrease between March and May 2020. The severe but short recession was followed by record GDP growth in the latter half of 2020. As of the end of the third quarter of 2021, GDP was approximately back to year-end 2019 levels. The following chart presents the rapid decline in GDP, its rebound and baseline, upside and downside forecasts from leading economists through 2025. As shown below, the baseline forecast for GDP in 2021 is 6.7 percent and 5.0 percent for 2022.



Source: U.S. Bureau of Economic Analysis, WSJ, Moody's Analytics
Note: In 2021, WSJ moved to quarterly consensus reporting from monthly.

As progress is made in combating the COVID-19 virus, economists are expressing greater conviction in 2021 GDP forecasts, through mid-year 2021. The graph below details the narrowing spread between the top five and bottom five forecasts.



Source: U.S. Bureau of Economic Analysis, WSJ, Moody's Analytics
Note: In 2021, WSJ moved to quarterly consensus reporting from monthly.

Current Trends

Pre-COVID-19 Outbreak

In 2016, Governor Andrew Cuomo unveiled a planned expansion of the Jacob K. Javits Convention Center, a convention center used to host events such as the New York International Auto Show and the New York Comic Con. This expansion significantly increased the convention center's potential as an economic engine and maximize its ability to host more high-profile events from around the world. The expansion added an additional 1.2 million square feet of space to the north end of the existing facility and build a roof terrace for outdoor events. The project serves as a long-term catalyst for new job creation, business opportunities, and enhanced revenue for the hotel, restaurant, tourism, and transportation industries.

- The $1.6 billion expansion of the Farley Building, now called the Moynihan Train Hall, is nearing completion. The West End Concourse, completed in June 2017, is a pedestrian entrance connecting Pennsylvania Station to the project on Eighth Avenue. Development is led by Vornado Realty Trust and Related Companies. In addition to the West End Concourse, this project includes: the construction of a train hall (completed as of January 1, 2021), 730,000 square feet (sf) of commercial office space, as well as a ground level retail concourse that will connect Pennsylvania Station to Ninth Avenue, Hudson Yards, and beyond. In August 2020, Facebook announced that it signed a lease for 730,000 square feet of office space in the building.
- Early in 2020, Governor Cuomo announced a proposed plan dubbed the Empire Station Complex to expand Pennsylvania Station. The Moynihan Train Hall opened on January 1, 2021, and serves as the new home for the Long Island Rail Road and Amtrak. This relocation will allow for an overhaul of Pennsylvania Station. According to a July 2020 Draft Scope of Work from the Empire State Development organization, the State proposed to acquire the Block directly south of the station to add an additional five platforms and nine additional tracks to increase capacity by 40 percent and decrease passenger congestion. The project is expected to take 16 years to complete. As of the date of this report, the plan has not yet been approved.
- Along with Governor Cuomo's proposal to revitalize the Pennsylvania Station area, Vornado Realty Trust is planning to develop a 7.4 million square foot project that will deliver five skyscrapers to Midtown Manhattan over the next few years. Vornado is spending more than $2 billion to transform the area near the train station and Madison Square Garden. Vornado is renovating PENN 1 and PENN 2, offering 4.1 million square feet of upgraded office and retail space. PENN 1 will include over 80,000 square feet of adaptable office space, a 20,000 square foot conferencing facility, 150,000 square feet of retail and a 35,000 square foot fitness and wellness center, while PENN 2 will be transformed into a new tower offering 88,000 square feet of office space, 70,000 square feet of retail space, a 8,000 square foot restaurant and a 280-person town hall. The project aims to elevate Midtown Manhattan and would be one of the biggest construction projects in the city since Related Companies' Hudson Yards.
- The Greater East Midtown rezoning proposal was passed by the City Council's Land Use Committee in August 2017, which entails changes to air rights pricing and requirements for new spaces. The rezoning promotes development over approximately a 78-block area in Midtown centered around Grand Central Terminal. North-south, the rezoning starts at East 39th Street goes up to East 57th Street. East-West, it spans from Third Avenue to midway between Madison and Fifth Avenues. The rezoning is expected to create approximately 6.6 msf of new office space in the Midtown East district over the next 20 years.
- The New York City Council passed the Climate Mobilization Act in April of 2019, setting increasingly strict limits on carbon emission for buildings over 25,000 sf beginning in 2024. The bill will require these buildings to decrease their greenhouse gas emissions by 40 percent by 2030. These new standards require retrofitting buildings with new energy efficient technology. As of November 15, 2019, New York City requires all new construction and major roof renovations to include a "sustainable roofing system", which includes green roofs, solar panels, or a combination thereof.

Post-COVID-19 Outbreak

Governor Cuomo announced on March 20, 2020, that all non-essential businesses in New York had to close under executive order 202.6, or the New York State on PAUSE order, a policy initiative that aimed to “flatten the curve” of COVID-19 infections. Non-essential businesses were only permitted to resume limited operations once their business category qualified. Businesses in the New York City region were only able to reopen upon their business category qualifying under a four-part plan. All regions in New York State successfully entered the Governor Cuomo’s final phase in 2020. New York City was the last region in the state to enter each of the respective stages.

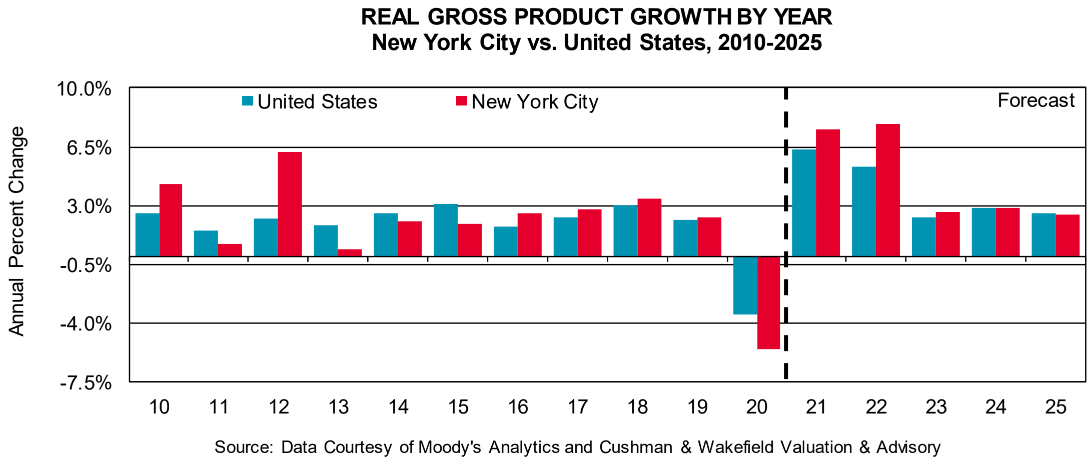
In April 2021, Governor Cuomo announced that indoor dining occupancy in NYC and hair salons, barber shops and other personal care services were permitted to expand to 75 percent capacity on May 7th, bringing New York City in line with the rest of New York State. Gyms and fitness centers were permitted to increase capacity to 50 percent beginning on May 15th. Offices increased capacity to 75 percent on May 15th as well. On May 19th, professional sports stadiums were permitted to increase capacity to 33 percent, and large-scale indoor and outdoor venues were permitted to operate at 30 percent and 33 percent, respectively. As of July 2021 all capacity limitations were eliminated. Broadway theaters reopened with 100 percent capacity in September 2021.

- A moratorium on COVID-19-related residential and commercial evictions officially expired on July 31, 2021. As of August 1, however, many politicians at the local and national level were pushing for an extension in some form. Governor Hochul replaced Governor Cuomo in August 2021; one month later she signed into law a new moratorium on COVID-related residential and commercial evictions for New York State effective through January 15, 2022.
- After falling over 90 percent during the peak of the pandemic, subway ridership has slowly increased since the vaccine was released; ridership on August 1, 2021 was down 44.8 percent compared to the pre-pandemic equivalent day. On May 17, 2021, 24-hour subway service returned, nearly one year after the system was shut down for overnight cleaning. With reduced operating revenue being generated from fares, tolls and subsidies, the Metropolitan Transportation Authority (MTA) faces a $16.2 billion deficit through 2024. The MTA received $4 billion from the federal government in 2020 and expects to receive another $10.5 billion in aid in 2021.
- In August 2020, Moody’s downgraded New York City and State’s credit ratings to Aa2 from Aa1 amidst significant revenue declines related to COVID-19. In May 2021, Moody’s affirmed the Aa2 rating assigned to the City’s $38.7 billion of outstanding general obligation bonds and revised its outlook to stable from negative. In August 2021, Fitch Ratings also revised its outlook from negative to stable, rating the City’s $1.2 billion in general obligation bonds AA-. Per the New York State Department of the Budget, Moody’s ratings for New York State bonds are Aa2 (August 2021). Fitch Ratings affirmed its AA+ rating for New York State bonds in June 2021. In March 2021, federal aid from the American Rescue Plan totaling $12.6 billion was awarded to New York State with an additional $31.65 billion to be awarded directly to cities, local governments, transit systems, schools, and other interests.

Gross Metro Product

Following the 2.3 percent annual increase in gross metro product (GMP) to $809.1 billion in 2019, the city’s 2020 GMP fell 5.6 percent year-over-year measuring $763.7 billion due to COVID-19-related disruption to all business sectors. GMP is forecast to exhibit positive annual growth of 7.6 percent in 2021 and is projected to continue registering positive in all subsequent years through 2025 with the greatest growth occurring in 2022 at 7.8 percent. GMP growth is also forecast to outpace the growth of GDP in 2022.

The following graph compares annual GMP growth for New York City and the United States:



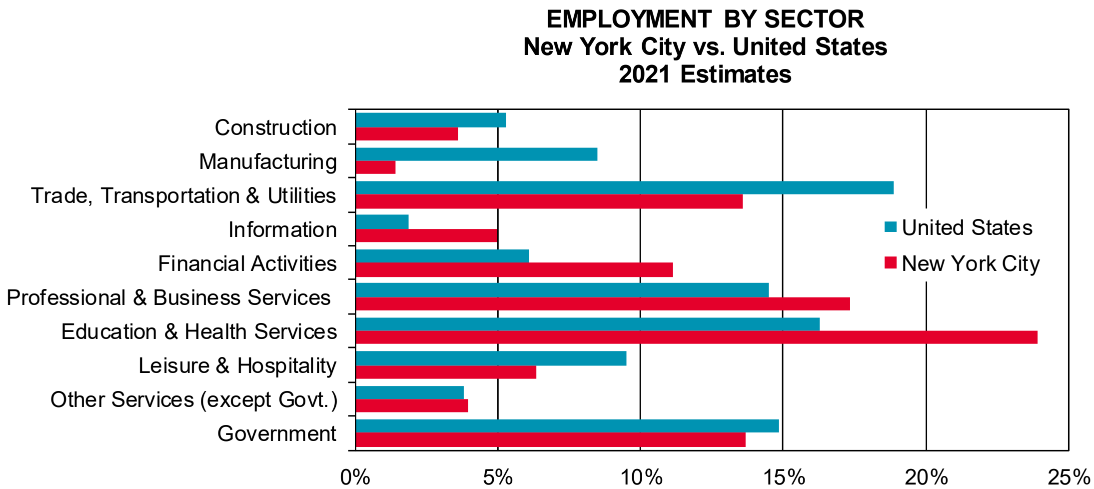
Employment Distribution

Education and health services comprise 23.7 percent of all jobs in New York City in 2021, representing the greatest share of any sector. Education and health services is followed by the professional and business services, trade, transportation and utilities, and financial activities sectors forecast to account for 17.3 percent, 13.6 percent and 11.1 percent of New York City's total 2021 employment, respectively.

The abundance of service jobs in New York City has shielded its economy from the gradual decline of manufacturing employment in the United States over the past few decades. Despite service industries protecting the city with respect to a shift in the nation's economic structure, the disruption caused by COVID-19 has subjected all types of businesses, including service-related ones, to employment losses as 2020 New York City employment estimates exhibit negative growth across all sectors. Job losses in 2020 were the greatest within the leisure and hospitality sector with employment declining 38.2 percent year-over-year to 285,390 jobs. Employment in the sector is projected to decline 5.4 percent year-over-year to 270,110 in 2021, before bouncing back in 2022.

Construction employment in 2020 fell 13.4 percent year-over-year to 134,670 jobs. Despite the 2020 decline, employment in this sector is projected to quickly surpass pre-COVID-19 levels, making a near full recovery in 2021 and surpassing 2019 levels in 2022 to a historic high.

The following graph compares the non-farm employment bases by sector of New York City and the United States:



Source: Data Courtesy of Moody's Analytics and Cushman & Wakefield Valuation & Advisory

Major Employers

New York City is home to the headquarters of 73 Fortune 500 companies, more than any city. Of the 10 largest employers in New York City, five are in healthcare, three in financial services, and two in education.

The table below lists New York City's largest employers by number of employees and their respective industry:

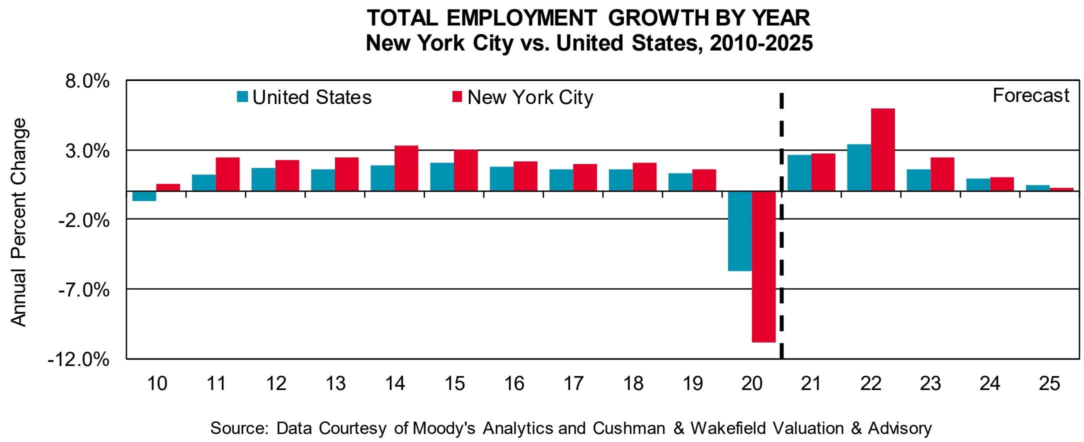
Largest Employers New York City, NY		
Company	**No. of Employees**	**Business Type**
Northwell Health	68,088	Healthcare
Mount Sinai Health System	39,000+	Healthcare
JPMorgan Chase & Co.	37,000+	Financial Services
Montefiore Health System	32,881	Healthcare
NYU Langone Health	25,847	Healthcare
Bank of America Co.	23,674	Financial Services
New York Presbyterian Healthcare System	22,268	Healthcare
New York University	19,000+	Education
Columbia University	18,703	Education
Citigroup Inc.	17,053	Financial Services

Sources: *Crain's New York Business 2020 Book of Lists* , Bloomberg, employer w ebsites, and Cushman & Wakefield Valuation & Advisory

Employment Growth

In the years leading up the pandemic, New York City experienced significant job growth compared to the United States. However, the COVID-19 pandemic forced closures of businesses and the employment situation has yet to return to pre-COVID levels. New York City employment estimates for 2020 decreased year-over-year at a faster pace than national estimates. Following slight annual growth in 2021, total employment is projected to increase at a faster rate in 2022, surpassing the pace of the United States, and remain positive through 2025. Office-using industries account for 31.9 percent of total employment in New York City as of May 2021 with over 1.3 million jobs. Total employment in 2020 fell 10.8 percent and has increased 1.5 percent through the first quarter of 2021. Office-using job increases are forecast to increase 1.2 percent through 2021 and expected to average annual growth of 1.8 percent through 2025.

The graph below shows annual total non-farm employment growth for New York City and the United States:



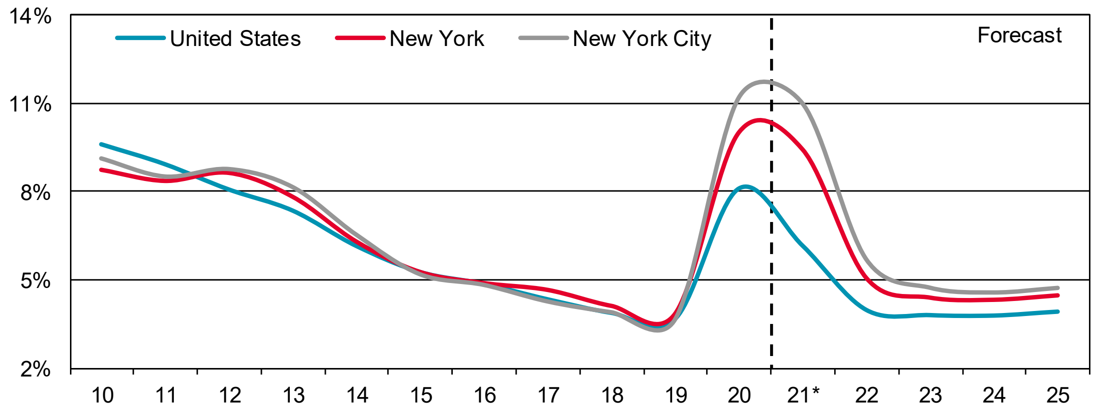
Unemployment

Retail establishments, restaurants, passenger transportation, schools, and leisure activities were required to close in March 2020 while customers self-quarantined and practiced social distancing as per state government sanctions regarding COVID-19. Reopening for most business sectors was somewhat meaningful in June and July as the City entered the last three phases of the State's four-part reopening plan, albeit most New York City business categories are still subject to restrictive social distancing sanctions and regulations. Even though many businesses have already rehired furloughed employees, firms are required to reduce occupancies of their physical places of work and inevitably, some businesses will not rehire everybody in order to comply with these new regulations associated with slowing the spread of COVID-19 or to reduce expenses if revenues are not covering operating expenses.

Furthermore, many businesses have remained partially or permanently closed since March, also contributing to rising unemployment levels in 2020. As a result, unemployment in the city measured 11.3 percent at the end of 2020, up 7.54 percentage points over the year. Through 2021, it is forecasted to decrease year-over-year by 230 basis points and continuing to trend downward thereafter. New York State and City unemployment rates are projected to remain above the national rate through 2025.

The following graph compares unemployment rates for New York City, New York State, and the United States:

UNEMPLOYMENT RATE BY YEAR
New York City vs. New York vs. United States, 2010-2025



Source: Data Courtesy of Moody's Analytics and Cushman & Wakefield Valuation & Advisory
*First Quarter 2021

Conclusion

New York City has been significantly impacted by the COVID-19 pandemic since March 2020. In response to the spreading virus, the State of New York passed strict shelter-in-place mandates. Employment fell precipitously in March and April of that year, with job losses heavily concentrated in the leisure and hospitality sector.

The city began to recover in May and June of 2020 as the most stringent lockdown measures were lifted. This recovery accelerated in 2021 when vaccines became more widely available. The rapid distribution of vaccines in New York City led to most of the remaining restrictions being lifted in June 2021. The recovery is expected to continue throughout 2021 and into 2022, with many companies planning to return most employees to the office by the end of the year. Mayor de Blasio ended fully remote work for 80,000 City employees in May 2021. Though the Delta variant of the virus has caused some recent delays in these “return-to-office” plans, a growing list of companies and organizations are planning to require vaccination as a prerequisite for employment.

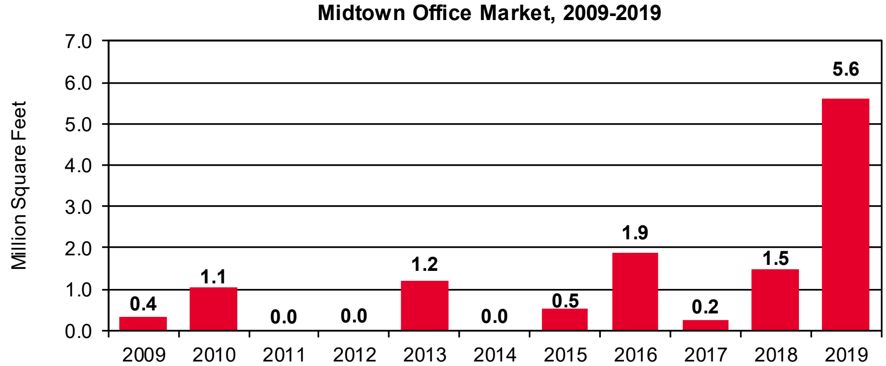
Office Market Overview

Market Conditions Prior to the COVID-19 Pandemic

Before the coronavirus pandemic began to affect the United States in March 2020, New York City's office market was on an optimistic trajectory. The city was experiencing historically low unemployment, and its gross metro product had increased from the previous year by 2.3 percent. The state of the office market in the city was healthy, and office-using employment increased by 19,100 jobs in 2019. Since the end of 2009, employment in the city grew faster each year than the nation as a whole, resulting in a strong office market.

Office construction in Manhattan was booming prior to the pandemic. Construction completions reached 5.8 million square feet by the end of 2019, up from approximately 4.7 million square feet in 2018. Completions in 2018 and 2019 increased significantly from the previous three years, which registered a combined total of 2.9 million square feet of construction completed between 2015 and 2017. Of the 5.8 million square feet completed in 2019, 5.6 million square feet were located in the Hudson Yards area. The number of construction permits issued by New York City's Department of Buildings had also risen. Permits had risen in each of the last ten years, peaking in 2019 with over 176,000 construction permits issued. Despite growing construction completions and permit numbers, overall vacancy rates grew by only 260 basis points between 2015 and 2019, even as over 13.4 million square feet were added to the Manhattan market over the same time period. The graph below details Midtown's construction completions between 2009 and 2019:

CONSTRUCTION COMPLETIONS
Midtown Office Market, 2009-2019

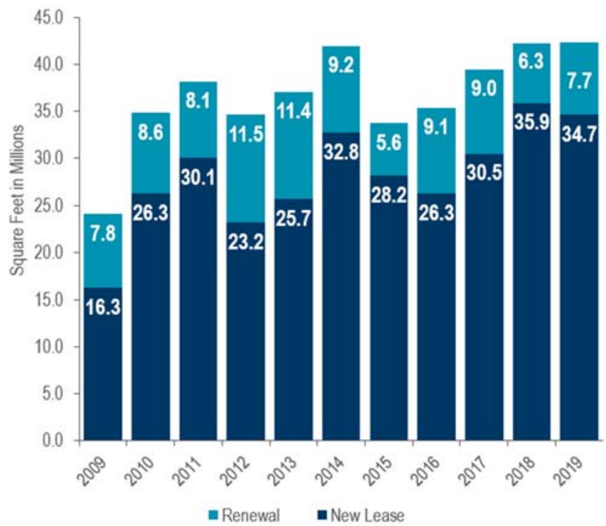


Source: Cushman & Wakefield Research; compiled by C&W V&A

Manhattan's pre-pandemic market was also characterized by strong leasing activity. Leasing activity grew each year from 2016 to 2018, peaking at nearly 35.9 million square feet leased in 2018, a record for the city. While 2019's leasing activity declined 3.3 percent to 34.7 million square feet, it was still the second largest annual amount since 2001. Large deals defined the office market in 2019, as 33 leases over 100,000 square feet were signed throughout the year. The increase in large-lease activity was fueled by continued technology related tenant expansions, led by Facebook leasing 1.5 million square feet throughout three Hudson Yards towers (30, 50, and 55 Hudson Yards) and Amazon leasing 338,593 square feet at 410 Tenth Avenue.

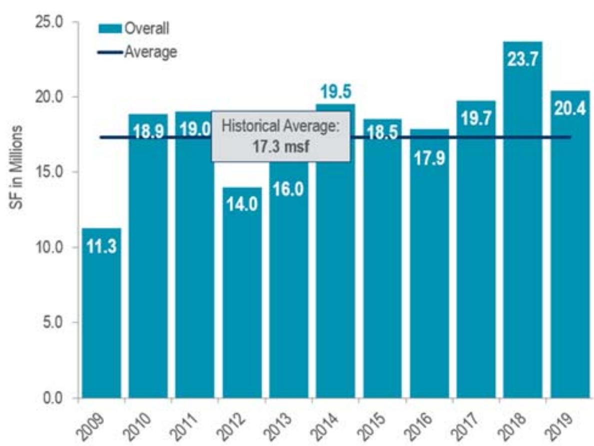
Renewal activity increased significantly to 2.8 million square feet in the fourth quarter of 2019, boosted by Morgan Stanley's 1.2 million-square-foot renewal at One New York Plaza. Manhattan's leasing totals from 2009 through 2019 are exhibited in the chart below:

Manhattan New Leases vs. Renewals, 2009-2019



Midtown's new leasing total was 20.4 million square feet in 2019, marking only the third time in 25 years that annual leasing exceeded 20.0 million square feet. The increase in activity was driven by a significant uptick in the Penn Station subdistrict, which reached an all-time quarterly high of 2.6 million square feet. In 2019, a total of 80.6 percent of Penn Station subdistrict leasing activity occurred within new buildings in the Hudson Yards and Manhattan West developments. Since 2016, 65.6 percent of new leasing in the Penn Station subdistrict occurred in the Hudson Yards area, accounting for 11.1 million square feet. Midtown's new leasing totals and the historical average for the for the period 2009 through 2019 are exhibited below:

Midtown Leasing Activity, 2009-2019



Overall asking rents were also climbing during this period. Overall asking rents in Manhattan were $10 per square foot higher in 2019 than in 2013, and nearly $20 per square foot higher than in 2010. Direct asking rents followed a similar trajectory and increased from 2010 on, reflecting the recovery from the Great Financial Recession, before rent growth flattened in 2017 and 2018. Manhattan's increase in asking rent can be attributed to the addition of several large blocks of Class A space, inclusive of newly constructed Class A product. Eight large blocks priced above $100 per square foot came to the market in 2019, including 441 Ninth Avenue, 30 Hudson Yards, and One Manhattan West, adding 2.2 million square feet priced at the top of the market.

Overall vacant space increased in 2019, largely due to 15 blocks of space each greater than 100,000 square feet entering the market, including the delivery of One Manhattan West, 441 Ninth Avenue and 30 Hudson Yards. Manhattan's quarterly direct and sublease space additions in the years leading up to 2020 are shown below:

The co-working and flex space movements quickly evolved before the pandemic, led by WeWork's rapid expansion in the city. Co-working enables small businesses and large tenants to lease minimal office space on short-term leases, offering employees amenities typically found in start-up companies, while providing flexibility for future expansion. In 2010, WeWork had 3 locations in New York City, accounting for 105,508 square feet. By the end of 2019, WeWork had 95 locations in the city, with over 8.2 million square feet, making it Manhattan's largest space occupier.

Despite the company's rapid expansion, WeWork also suffered pitfalls in 2019. After filing their initial public offering in August 2019, investors became concerned with the company's culture and path to profitability. In September 2019, WeWork delayed its IPO. SoftBank, WeWork's largest investor, took control of the company in October 2019, and 2,400 employees were laid off the following month.

The development of the Hudson Yards area has prompted businesses of all sizes to flock to the west side of Manhattan. By the end of 2019, five office buildings had completed construction, adding over 9 million rentable square feet to Manhattan's office inventory. Each of the five trophy quality buildings were 90 percent leased or more, and buildings in the complex that were still under construction had achieved significant pre-leasing. Facebook signed a lease at 50 Hudson Yards in 2019, taking 1.2 million square feet in the building. BlackRock also signed a lease at 50 Hudson Yards, taking 970,000 square feet and leaving their space in Park Avenue Plaza. Other major tenants moving to the Eastern Rail Yard complex include Warner Media (1.46 million square feet in 30 Hudson Yards), Tapestry (formerly known as Coach, 694,687 square feet in 10 Hudson Yards), Ernst and Young (636,416 square feet in One Manhattan West), and Pfizer (798,278 square feet in The Spiral).

A chart of major tenant migrations to Hudson Yards is exhibited below:

Market Conditions During the COVID-19 Pandemic

During the pandemic, the Manhattan office market experienced a significant slowdown in construction and leasing. The city's unemployment rate increased to record highs. A general wait-and-see approach has been prevalent among both tenants and landlords as they navigate the economic uncertainty introduced by COVID-19 and reactions from government mandates. Between February 2020 and August 2021, over 108,000 office-using jobs were lost throughout New York City, and the fallout can be detected in nearly every facet of the commercial real estate market.

New York State declared a state of emergency on March 8, 2020, due to the rapid spread of the coronavirus, and signed the New York on PAUSE act on March 20, 2020, which declared that all non-essential workers must work remotely and all non-essential construction be put on hold until the state was able to "flatten the curve". As a result, the number of employees working in offices plummeted in 2020, hitting a low in April 2020 with 4.3 percent of employees reportedly working in the office, according to an analysis from Kastle Systems. The vast majority of New York City employees worked from home for the remainder of 2020.

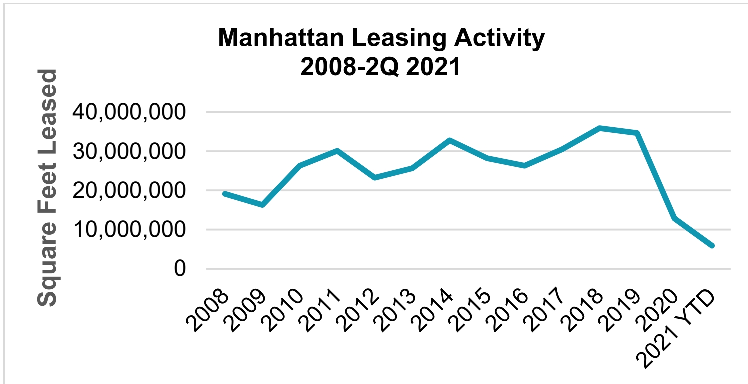
The number of employees working in offices continued to stagnate in 2021, starting the year with 11.3 percent office occupancy in January, reaching a peak of 24.2 percent occupancy in July, only to slide back down to 23.4 percent in August as seasonal vacations and concerns regarding the Delta variant caused companies to reevaluate their return-to-office plans. Many large companies, such as Apple and Blackstone, allowed their employees to return to the office starting in summer 2021, while more were poised to return in the fall. Some companies, such as Twitter, Salesforce, and Facebook, are allowing their employees to work from home permanently, although this is not anticipated to be a widespread trend. It should also be noted that a growing list of companies, particularly those in the financial services or commercial real estate sectors like Goldman Sachs, JPMorgan Chase, and Morgan Stanley, have mandated that employees both return to the office and be vaccinated. As of September 9, 2021, President Biden has mandated all employers with 100 or more employees to require vaccinations for workers, or a weekly test for the virus in lieu of vaccination.

Public transit ridership was also dramatically reduced during the pandemic. Subway ridership in April 2020 was just 8.3 percent of the ridership exhibited in April 2019. Other methods of public and private transportation were also affected. Bus ridership decreased an average of 40.1 percent from its pre-pandemic equivalent week, Long Island Rail Road ridership decreased 43.8 percent, Metro North ridership decreased 60.0 percent, and bridge and tunnel use decreased 20.7 percent.

A New York State eviction moratorium for residential and commercial properties is in place until January 15, 2022, and was enacted to curb the financial hardships faced by thousands of New Yorkers across the city and state. Several lawsuits have been filed contesting the moratorium. The halt in evictions has affected rent collection for Class B and C properties in Manhattan but has reportedly had far less of an impact on the city's Class A and trophy office properties. Class A office buildings tend to have much stronger and more financially secure tenant rosters than the Class B and C properties.

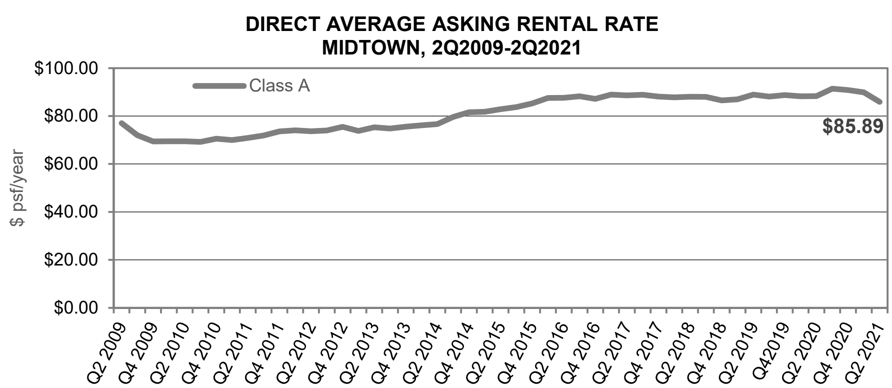
Leasing activity in the office market declined significantly during the pandemic. Manhattan ended 2019 with 34.7 million square feet leased. In 2020, only 12.8 million square feet were leased in total, 5.5 million square feet of which were leased in the first quarter before the pandemic began. The Penn Station subdistrict accounted for 17.8 percent of all Manhattan leasing in 2020, led by leasing activity in Hudson Yards developments. Leasing activity for 2021 is on a similar path, with only 5.9 million square feet leased during the first two quarters. The first quarter of 2021 had the lowest quarterly leasing activity of the last 26 years. Some of this inactivity can be blamed on tenants' inability to physically tour new space during the worst months of the pandemic in 2020, however a "wait-and-see" approach has permeated the market. Many tenants are delaying real estate decisions in order to gauge the long-term viability of the work-from-home option, while many landlords are allowing short-term leases to cover costs while they wait for a solid tenant to lease the space long term.

The chart below illustrates Manhattan leasing activity since 2008:

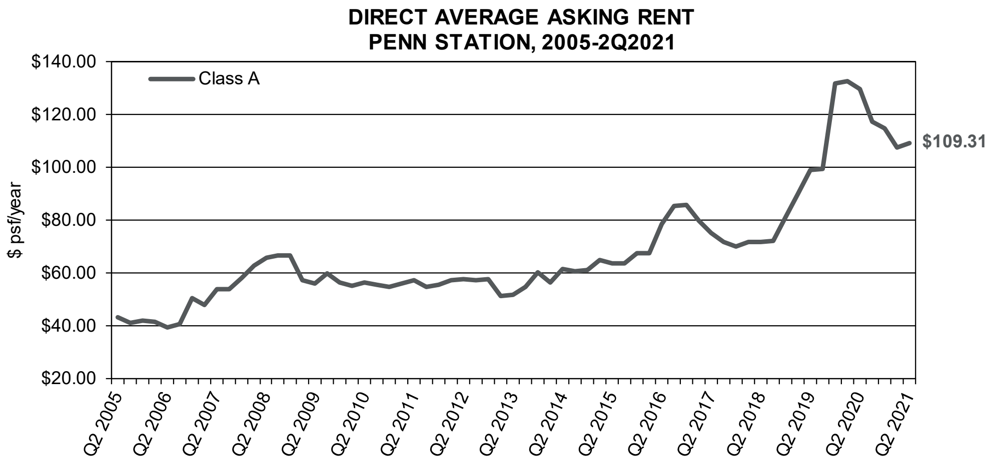


Manhattan's Class A direct asking rents have not been dramatically influenced by the pandemic and decreased by $0.60 per square foot, from $84.85 per square foot in the fourth quarter of 2019 to $84.25 per square foot in the second quarter of 2021. Manhattan's Class B direct asking rents witnessed a more notable decrease of $3.17 per square foot over the same time period, dropping from $66.84 per square foot to $63.67 per square foot.

Similar to overall Manhattan, Midtown's Class A asking rent has not been significantly affected by the pandemic, on a direct or sublease basis. Class A direct asking rents in the Penn Station subdistrict have fallen by 17.1 percent since the start of the pandemic. This is due to a slight reduction in asking rents and primarily the lease-up of higher priced space in the area. In addition, Class A asking rents in the Penn Station subdistrict remain 27.1 percent above the Class A direct asking rents for the Midtown submarket, and 29.7 percent above overall Manhattan. The office space in Hudson Yards is priced at the upper end of the range.The charts below and on the following page show Midtown and Penn Station Class A direct asking rents since 2009:

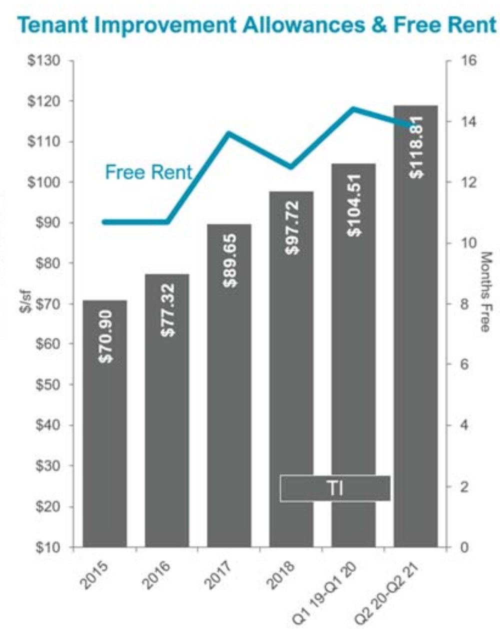


Source: Cushman & Wakefield Research; compiled by C&W V&A



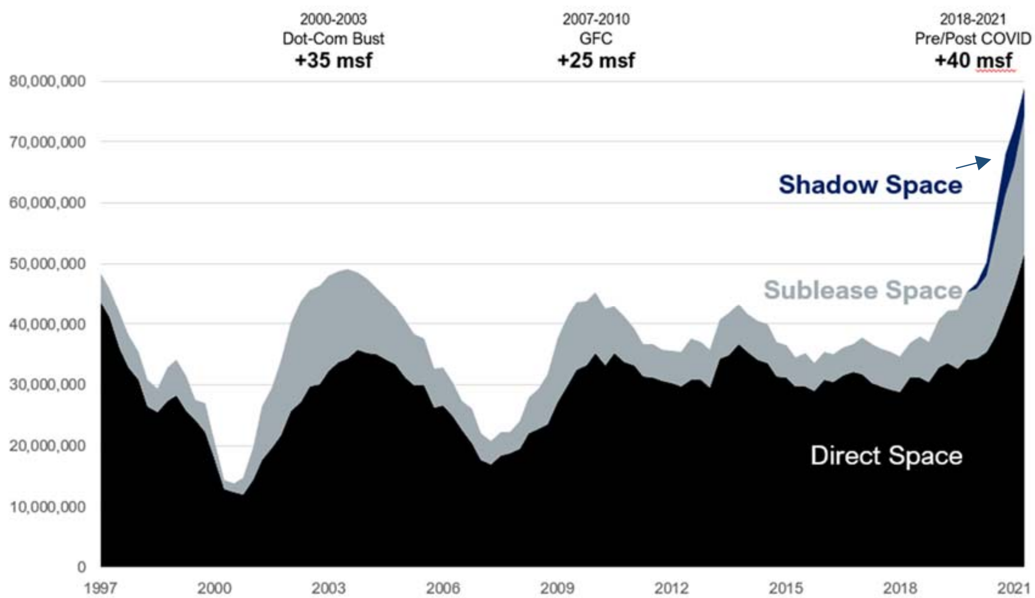
Source: Cushman & Wakefield Research; compiled by C&W V&A

As landlords attempted to secure tenants without reducing rents, free rent and tenant improvement allowances rose throughout the pandemic. The increasing trend in tenant improvement allowances started pre-pandemic but accelerated throughout the pandemic. While asking rents have not decreased dramatically, net effective rents have been impacted. Between 2017 and 2019, the average net effective rent was a 19.2 percent discount from its base rent. Since the pandemic began, the average discount between net effective rents and base rents was 26.7 percent. Average tenant improvement allowances have also increased 13.7 percent over the last five quarters. The charts below illustrate Manhattan's Class A base rent and net effective rent since 2015, and tenant improvement allowances and free rent over the same period:



Overall vacancy in Manhattan's office market is the highest since 1994. Sublease vacancies were hit the hardest, doubling over the course of the pandemic. Manhattan sublease vacancies increased from 10.6 million square feet at the close of 2019 to 22.4 million square feet at the end of the second quarter of 2021. The surge of sublease vacancies are a result of companies altering their office footprints, whether it be a permanent push for less space as employees work from home for the foreseeable future, or due to economic pressures compelling companies to reduce their employee count. Direct space also witnessed a significant increase in vacancy throughout the pandemic, growing from 33.9 million square feet in 2019 to 51.7 million square feet in the second quarter of 2021. Class A vacancy in the Penn Station subdistrict has been positively impacted by leasing activity in the Hudson Yards developments. Class A direct vacancy for the Penn Station subdistrict as a whole registered 5.1 percent in the second quarter of 2021. If the Hudson Yards buildings were removed from the Penn Station statistical sample the subdistrict's Class A vacancy would adjust to 21.6 percent. Space that is leased but is not being utilized is referred to as shadow space, which usually enters the market as sublease space. The chart below illustrates historical trends for direct space, sublease space, and shadow space in Manhattan:

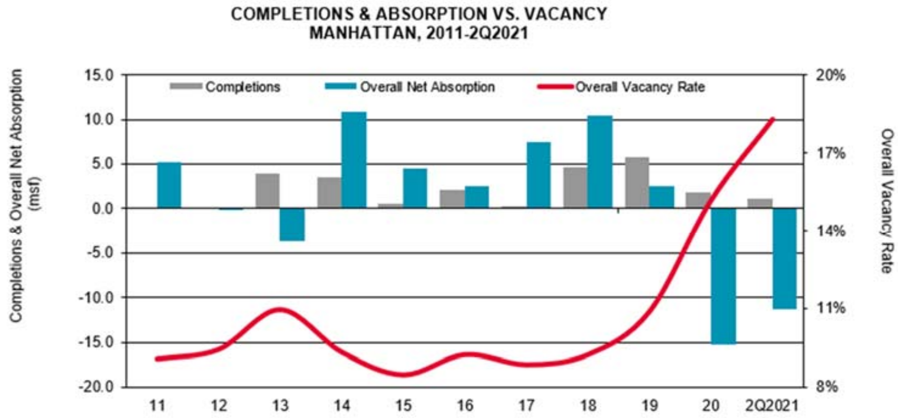
Manhattan Direct, Sublease, & Shadow Space, 1997-2021



Co-working firms also vacated space during the pandemic, adding to the overall availability. By the end of 2020, WeWork had exited 106 underperforming or not-yet-opened locations and negotiated more than 100 lease amendments that totaled an estimated $4 billion reduction in future lease payments. WeWork has also struggled with rent collection. In April 2021, the company was sued for $37 million by one of its landlords, Walter & Samuels, for defaulting on a lease in Manhattan. Knotel, another flex space operator in New York City, filed for bankruptcy in 2021, after laying off 30 percent of its workforce in 2020 due to the pandemic. Shifts in co-working trends have put pressure on Class A and B assets but have not had a significant effect on trophy buildings and new construction.

Construction activity was permitted to resume in June 2020, two months after it was suspended, but the industry was quick to feel the impact. Construction spending in 2020 decreased below the previous year's spending for the first time since 2011. Nonresidential construction spending declined 21.4 percent from 2019's spending, falling to $16.6 billion. Manhattan construction completions in 2020 reached only 1.8 million square feet, a 68.9 percent drop from the 5.8 million square feet of construction completed in 2019. The number of construction permits issued by the Department of Buildings also decreased to 141,500 in 2020, declining 19.8 percent from 2019. Notable construction completions during the pandemic include One Vanderbilt Avenue and 809 Broadway, which added 1.7 million square feet to the market.

The chart on the following page illustrates construction completions, overall net absorption, and overall vacancy since 2011. Net absorption is defined as the net change in occupied space, excluding renewals.



Source: Cushman & Wakefield Research; compiled by C&W V&A

Summary and Outlook

The office sector's near-term performance remains clouded and is still clearly tied to a resolution of the pandemic. Yet, despite the uncertainty, C&W is witnessing encouraging signs forming in the office recovery. The following includes excerpts from C&W's Office Tour Activity Report, August 2021. The trends identified herein apply to National Markets, except where New York City statistics are specifically identified.

Green Shoots Everywhere

There are lagging indicators on one side and leading indicators on the other. Lagging indicators confirm that the pandemic created the worst recession the office sector has ever faced. The U.S. has shed 171 million square feet of space (3.1 percent of total inventory) since the pandemic started. The entirety of the Great Financial Crisis (GFC) shed 104 million square feet of space. On the other hand, the leading indicators are consistently lining up to suggest the worst of the impact is either over, or almost over. C&W is now observing multiple positive indicators in the leading data.

The first green shoot to note is the recovery of office jobs. The U.S. cut 2.9 million office-using jobs in March and April of 2020. Since then, the economy has recovered 76 percent of that loss (2.2 million jobs) through July 2021.[1] At the current pace, the U.S. will return to pre-pandemic peak levels of office employment sometime in the first quarter of 2022. For context, it took six years for office employment to fully recovery from the GFC.

The second green shoot is the trend of businesses signing longer-term leases, which C&W interprets as a sign of confidence in the long-term future of office. Over 75 percent of new leases signed in the first half of 2021 have been for more than four years, and one-fourth have been for 10+ years−percentages consistent with pre-pandemic norms.

A third green shoot is leasing activity, which notably improved in the second quarter of 2021. New leasing totals were up 18 percent from the first quarter of the year, and up 28 percent from the second quarter of 2020. Perhaps the most notable green shoot is space search activity. As of December 2020, office tour activity was 65 percent below pre-pandemic levels (i.e., February 2020). But 2021 has been a different story. After improving every month in the first quarter of 2021, tour activity in March, April, May and June ranged between 80 percent and 90 percent

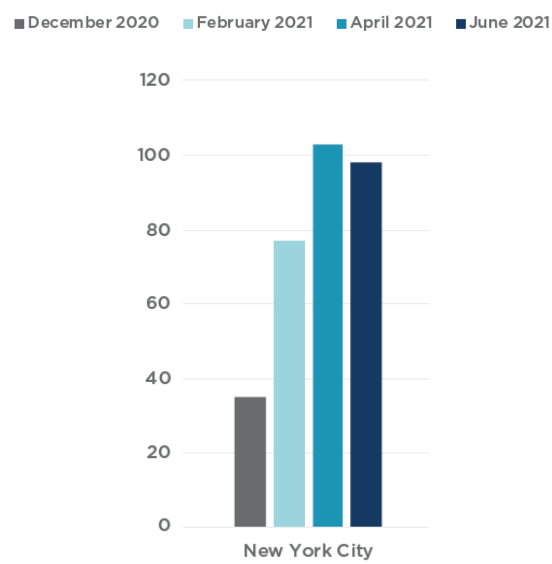
[1] U.S. Bureau of Labor Statistics: Current Employment Statistics.

of pre-pandemic levels. Touring activity in four of the six gateway markets[2] more than doubled from December 2020 to May 2021.[3]

Tour Activity Is Picking Up / Surging

Corporations are in the market searching for space again. After nearly a year of muted activity, the first half of 2021 has seen tours of available office space in gateway cities return to near pre-pandemic levels (February 2020). Below illustrates the tour activity for New York City.

New York City Tenant Tour Activity, 2020-2021



Source: VTS Office Demand Index (VODI), July 2021 Report

Nationally, new leasing and renewals increased quarter-over-quarter by 18 percent and 7 percent, respectively, in the second quarter of 2021. New leasing was stronger than in any of the previous four quarters. The four-quarter rolling total of new leasing appears to have bottomed out in the first quarter of 2021, increasing 11 million square feet in the second quarter of 2021, the single largest increase since the first quarter of 2017.

Is This Out of the Ordinary?

The COVID-19 recession is different than previous ones due to its brevity and severity. In the previous two recessions, growth in office-using employment was negative year-over-year (YoY) for nine consecutive quarters: third quarter of 2001 through third quarter of 2003, and second quarter 2008 through second quarter of 2010. However, this time around, the most recent quarter−ending in June 2021−is positive YoY (+5.1 percent). This is due to the "shape" of the recession, which involved a record-breaking severity of job losses confined to two months (March and April 2020) followed by growth each quarter since.

During previous recoveries, office space absorption followed a nearly identical path as office job growth. Four-quarter rolling net absorption hit its trough at -62.5 million square feet in the same quarter that office employment hit bottom (-3.4 percent). And again, after the GFC, net absorption hit its lowest point at -87.0 million square feet amidst office employment's second worst quarter (-6.6 percent).

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[2] U.S. gateway markets include Boston, Chicago, Los Angeles, Manhattan, San Francisco and Washington, DC.

[3] VTS Office Demand Index (VODI), July 2021 Report.

Over the last five quarters, there has been a negative relationship (-81 percent) between office job growth and net absorption. This has meant that even occupiers that are growing are not rushing to add space to accommodate new hires. The ambiguity related to remote work versus physical occupancy may weaken the correlated relationship between office-using job growth and net absorption in the short-term.[4]

What to Expect Moving Forward

A lag between when new leases are executed and when tenants physically occupy the space is when net absorption is realized. In the first half of this year, that lag has averaged 117 days (or just under four months), down from the first half of 2019 when the average was 140 days, which may indicate some urgency among occupiers who sat on the sidelines for most of 2020 and have now resumed actively exploring their lease options. The five-year average was 134 days (or 4.4 months).

Large leases signed in April, May or June 2021 will not, on average, show up in absorption statistics until the first quarter of 2022.

While the occupancy lag may be longer in Class A buildings, it should be noted that the volume of leasing post-recession is expected to be weighted towards higher quality product. Immediately after the previous two recessions (2003 and 2010-2012), Class A product made up over 80 percent of net absorption.

The average lease in New York City is 31 percent larger than the overall average, which is likely a driving factor in why nearly a third of first-half 2021 new leasing square footage in New York is not expected to be occupied until the first half of 2022.

These findings are in line with Cushman & Wakefield's office forecast for negative absorption peaking in the middle of 2021 before turning positive in the second half of 2022.

The following details emerging trends within the Manhattan office market, which mirrors what is occurring in other gateway cities.

Return to Office Results Released – August 2021[5]

The work from home mandate in March 2020 for non-essential workers spanned a continuance of a large majority of workers continuing this trend throughout 2021. Corporations reported better than expected financial performance in 2020 despite work from home ("WFH") initiatives. When the WFH mandate was issued locally in March 2020, private sector workforces comprised of personnel predominantly well known to each other, were able to achieve better than expected financial productivity while working from home. Corporations benefited from a level playing field, that is competitor firms in any given field, were also mandated to work from home. However, competitive industries are not motivated to work in unison. As such, non tech-heavy corporations with high levels of remote workers may not prove to be competitive long term compared to firms with its employees working in offices.

The Partnership for New York City surveyed major employers between August 9 and August 20, 2021, to develop projections on how long Manhattan's one million office workers will continue to work remotely.

According to survey results, 23 percent of Manhattan office workers have returned to the workplace. Employers expect that 41 percent of office workers will return by September 30. This is still significantly below estimates from a previous Partnership survey in late May, 2021, when employers projected that 62 percent of employees would return to the office by the end of September. By January 2022, a full 76 percent of office employees are expected

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[4] For insights from Cushman & Wakefield's Total Workplace consulting team on how clients are evolving new ways of working with an agile approach: Leading an Active Recovery to Build the Best Workplace Experience

[5] Partnership for New York City – Return to Office Survey Results: August 2021
https://pfnyc.org/news/return-to-office-results-released-august-2021/

to return to the office. The new survey also finds that 81 percent of New York City-based employees of the companies represented in the survey are fully vaccinated.

The Partnership survey of employers found:

- 44 percent of employers have delayed their return-to-office plans because of the recent rise in COVID-19 cases due to the Delta variant, 54 percent have not delayed their return-to-office plans and 2 percent have not yet determined whether to delay.
    - Among employers that have delayed their return-to-office plans, 42 percent postponed for one month or less, 18 percent for between two and three months, 10 percent for three months or more, and 28 percent are evaluating on an ongoing basis.
- Large employers (5,000+ employees) contributed most to the summer return to office
- Consistent with past survey findings, the vast majority (70 percent) of employers are adopting a rotating or “hybrid” office schedule in which employees can work remotely for part of the week; only 26 percent of employers are requiring employees to be in the office full time; 5 percent will not require employees to return to the office at all.
- 58 percent of companies that disclosed their vaccination policy plan to require that all employees are vaccinated for COVID-19 (with appropriate exemptions). Thirty-seven percent of companies reported not having a vaccination policy. Several employers noted that regular testing is required for unvaccinated employees.
- 63 percent of employers say they will restrict unvaccinated employees’ attendance at in-person meetings, 57 percent will restrict attendance at client meetings and 43 percent will restrict business travel for unvaccinated employees.
- 49 percent of employers will require all returning employees to wear masks while in the office, 32 percent will mandate masks only for unvaccinated employees and 19 percent of employers will not have a mask mandate.
- 81 percent of New York City-based workers are vaccinated, according to responses from companies that disclosed vaccination estimates (companies were asked for vaccination rates for all employees, not just Manhattan office employees).
- The majority of surveyed employers have offices in Midtown West (38 percent), Midtown East (33 percent) or the Financial District (16 percent).
- The majority of respondents are in financial services (36 percent), real estate (17 percent), law (11 percent), media (6 percent), tech (5 percent) and consulting (4 percent).

Based on our analyses, any higher office vacancy rate due to trends related to employees working from home will be incurred in Class B and C buildings rather than in Class A and Trophy assets. If material, affected Class B and C structures will be considered for adaptive re-use, a well-defined trend in the Manhattan markets over the past three decades. Manhattan’s Class A and Trophy office assets have superior tenant rosters, stronger and more durable cash flows, achieve higher rents and are capturing greater absorption than Class B and C buildings. The existing and proposed office building assets in Hudson Yards share these qualities, which are detailed for specific assets in Chapter 5.

Companies will continue to evaluate their real estate needs focusing on providing a secure and safe workplace, but as is the case in all recessions and recoveries, a greater emphasis on cost containment will be a primary focus. In addition, companies are looking to develop new strategies to utilize office space more effectively. The new office buildings in Hudson Yards are designed with this efficiency in mind, with features like column-free spacing. The new office assets in Hudson Yards feature highly efficient layouts sought by office tenants.

Cushman and Wakefield published the “Global Office Impact Report and Recovery Timing” study, which provides a new perspective on COVID-19’s impact on the commercial real estate (CRE) industry and the future of the office.

The study examined both the aggregate cyclical and structural impacts on the office sector's fundamentals. For the study, Cushman & Wakefield surveyed companies around the world about the future of the office.

In the study, Cushman and Wakefield concluded that the structural impacts of work-from-home trends will be offset by factors such as economic growth, office-using job growth, and other factors, which means demand for office will continue to grow over that study's 10-year forecast horizon. Furthermore, office space is essential for companies to foster innovation, productivity, learning and teamwork.

Corporate Performance & Competitiveness

United States corporate performance was unexpectedly better than projected in 2020. The very short, but severe recession was unlike the Great Financial Crises (GFC), the Dot-Com recession of 2001-2003 and earlier recessions. Recovery to pre-recession GDP averaged 9 business quarters in prior cycles. For the recession caused by COVID and governments' responses, GDP is projected to return to pre-pandemic levels in 4 business quarters.

Office works best for collaboration and innovation. Work from home policies are generally preferred more by younger generation workers. But younger workers lose the intangible and tangible benefits of in-person experiences, mentoring, strategic planning, networking, and innovation.

Through year-end 2020, average office occupancy was 15 to 25 percent in New York City, as businesses were not yet requesting or demanding a return of workforces to offices. This was supported by corporate profitability. Long-term WFH initiatives must be evaluated based on maintaining competitive advantages within industries. WFH worked as well as it did as all non-essential firms embarked on this policy. In addition, WFH initiatives were bolstered by colleagues generally experienced in working together for various durations of time. In the long term, as new employees are hired, the cohesion emanating from past working relationships erodes. WFH does not foster brand recognition, collaboration, business development, mentorship, training, nor implementation of new strategic plans.

Working from offices allows for mentoring new and developing professionals, networking, learning, training; all of which lead to better client service long term.

Given the pace and level of vaccinations, we are observing major firms beginning to require workers to return. In addition, as the Delta variant causes increases in infections during third quarter 2021, new mandates for vaccinations on federal, state, union and corporate levels are emerging with frequent testing for non-vaccinated employees. While many employers established summer 2021 re-openings, most are flexing this to October 1, 2021 through year end.

Residential Leasing as Leading Indicator for Office Occupancy

New York City's residential vacancy rate rarely exceeds 3.5 percent. In the second quarter of 2020, new leasing activity fell precipitously. Leasing activity was overwhelmingly renewal in nature and with rental concession packages increasing throughout the year. With federal (CDC), NY State and industry (Fannie Mae, Freddie Mac loan programs) moratoriums on evictions, landlords were forced to maintain services in the face of increasing bad debt/non rent payments. Tenants, especially wealthier households, availed themselves the opportunity to WFH in locales with less strict lockdown regulations and in housing options with some combination of larger room formats, lower monthly rents and access to private outdoor spaces. The out-migration from market-rate residential buildings led to headlines of people "fleeing New York City." In fact, the NYC metro region typically had more outflows than inflows over the prior 3 years. The rise in net migration reflects the sharp decline for in-migration to New York City. This trend in 2020 reflected institutions or higher learning adopting remote teaching and corporations either delaying hiring or hiring workers remotely.[6]

[6] New York Fed/Equifax Consumer Credit Panel/ACS/Cleveland Fed

Vacancy rates varied greatly in New York City in 2020, with some newer rental assets in neighborhoods with significant competitive supply and greater reliance on student residents reaching 35 percent vacancy. Statistics indicate that new leasing activity year-over-year turned positive in Manhattan in October 2020. This trend increased through year-end 2020 and early 2021. By second quarter 2021, new leasing activity surged as households and residents returned to the city in anticipation of the return-to-office policies.

The following table illustrates the increase in new residential leases. New leases in the first quarter of 2021 numbered 17,802, 45.3 percent greater than the period 5 years prior in the first quarter of 2016. New leases in the second quarter of 2021 numbered 28,220, 86.2 percent greater than the same period in 2016.

MANHATTAN RENTAL MARKET STATISTICS

	Q2 2021	Q1 2021	Quarterly % Change	Q2 2020	Annual % Change	Q2 2016	5-year % Change
Days On Market	97	79	22.3%	30	227.0%	43	127.3%
Listing Inventory	17,207	18,688	-7.9%	7,641	125.2%	7,007	145.6%
Number of New Leases	28,220	17,802	58.5%	6,768	317.0%	15,153	86.2%
Market-Wide Vacancy	3.42%	4.32%	-	1.91%	-	1.69%	-

Source: Douglas Elliman; Corcoran (Vacancy Rate)

It is rare that residential leasing trends have implications to office occupancies, but this is a meaningful statistic indicating people returning to the city. People are still evaluating work-life choices, but the prospects of possible reductions in compensation for remote work and other enticements are positively affecting city leasing and new leasing statistics.

Return to office initiatives are also helped by schools opening for in-person teaching and vaccine mandates for certain federal and state employees, along with private sector initiatives. New York City's public school system opened in September 2021 for full-time, in person instruction. The area's private schools were overwhelmingly open for in-person instruction for the 2020/2021 academic year.

Green is Good: Sustainable Office Outperforms in Class A Urban Markets

Environmental, Social, and Governance (ESG) refers to an investment strategy which seeks equivalent or higher returns while simultaneously making a positive impact in three areas: environmental, social and governance. As investor interest in ESG strategy rises, LEED-certified office space provides a key indicator of comparative performance. LEED stands for "Leadership in Energy and Environmental Design" and is a standard rating systems for green buildings.

By 2023, 80 percent of investors intend to incorporate ESG into their strategy.[7] As demand for ESG-committed assets has grown, a key question has arisen: do these assets perform better than their non-ESG peers?

While sustainability strategies include a wide array of energy, water and waste tracking, we utilize green certifications as an indicator of commitment to positive environmental impact. The most prominent of these certifications are LEED, BREEAM and ENERGY STAR.

We analyzed LEED-certified buildings delivered over the 2010-2020 period. On average LEED-certified buildings attained higher rents than otherwise comparable buildings at the cost of somewhat lower occupancy. The combined effect, measured by revenue per available square foot ("RevPAF"), showed that LEED-certified buildings have generated greater cash flows on average. RevPAF is defined as total lease revenue divided by the net rentable area.

[7] The Rise of ESG, Preqin: https://www.preqin.com/esg/rise-of-esg

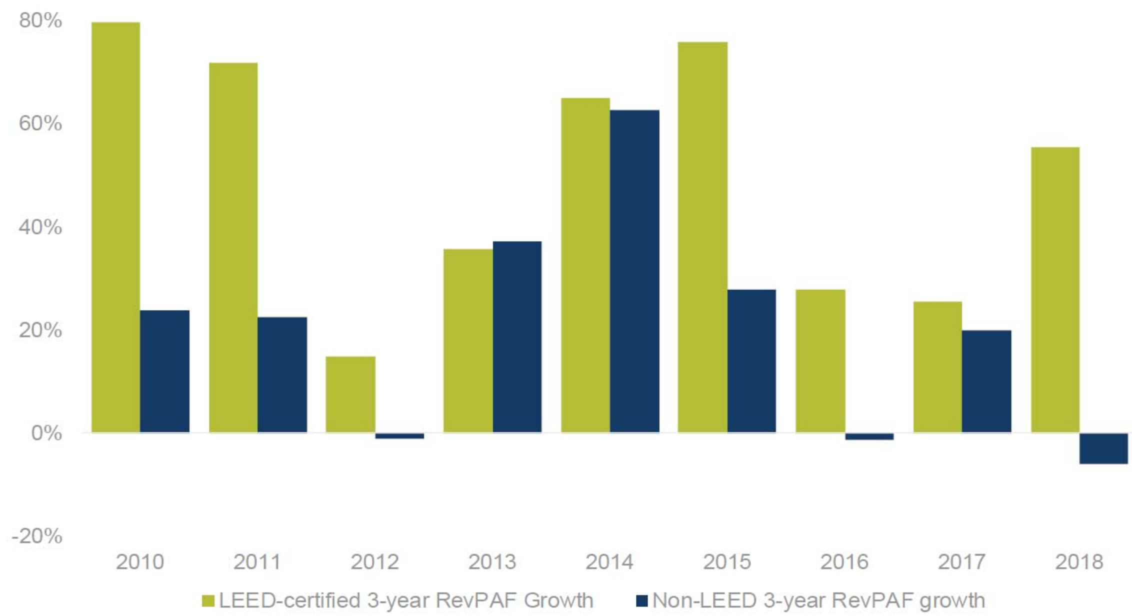
LEED-certified buildings have consistently achieved higher rents compared to their non-LEED counterparts. Since 2015, rents for LEED certified buildings averaged $4.13 or 11.1 percent higher rent than non-LEED certified buildings.

Research has shown that construction costs to attain LEED certification can increase between 7.4 percent to 9.4 percent, compared to non-LEED buildings.

LEED-certified assets outperform during recession-recovery periods, outpacing RevPAF growth of non-LEED assets by at least 49 percentage points during both the post-GFC and COVID-19 periods. Additionally, LEED-certified assets have trended towards having lower vacancy than their non-LEED counterparts in the wake of COVID-19.

The pandemic accelerated tenant demand for ESG assets. Since the first quarter of 2020, non-LEED occupancy in the United States has fallen from 90 percent to 88 percent; yet the occupancy rate for LEED-certified assets has increased from 90 percent to 92 percent over the same period.

3-year RevPAF Growth by Vintage



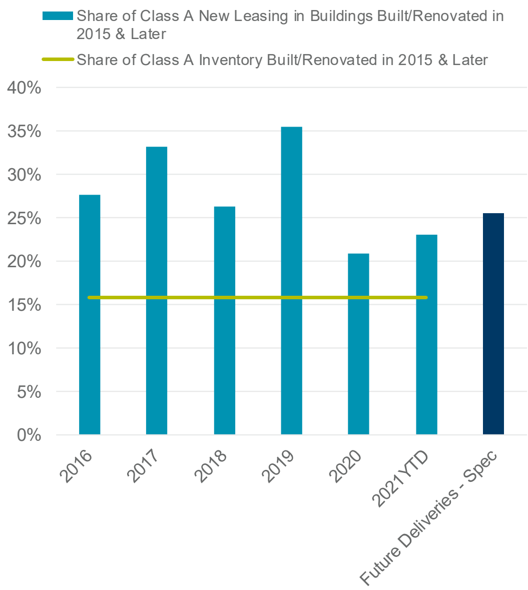
Source: CoStar, Cushman & Wakefield Research

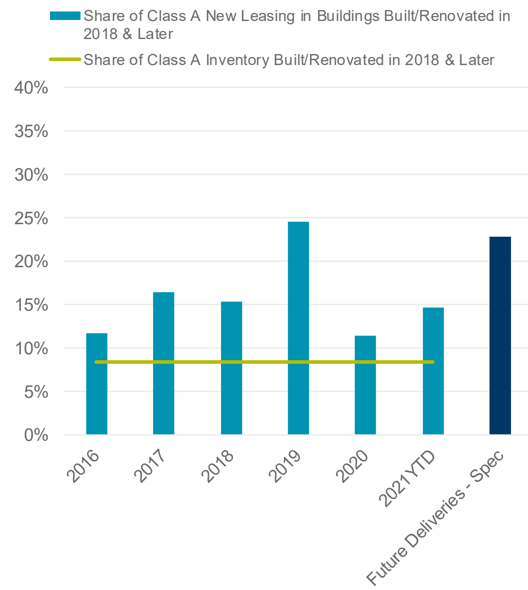
Out of the eight years surveyed, LEED-certified buildings outperformed non-LEED in the first three years of asset life, averaging 29.6 higher percentage points of RevPAF growth. Intriguingly, the performance difference was strongest at the beginning of the decade, 2010-2012. During this period, LEED-certified buildings strongly outperformed the non-LEED set. This suggests that in the market softness during the immediate post-GFC era, newly delivered LEED-certified assets had more resilient revenue streams. Throughout the middle of the decade, 2013-2014, RevPAF growth was fairly even between the two sets. This would align with the notion that, as the office market reheated and vacancies fell, amenities such as LEED certification became less of a differentiator as more fundamental factors such as supply and demand drove pricing. Entering the next two years, LEED certified performance once again became noticeably stronger, as office deliveries grew across markets and tenants began to race for high-quality assets that would act as differentiators for the purposes of employee recruitment and retention.

Manhattan Class A New Leasing Share

Class A buildings that were new construction and delivered in 2015 or later, or were significantly renovated within that period, comprise 15.9 percent of Manhattan's office inventory. However, these buildings capture an outsize share of leasing activity, and they do so consistently, as illustrated in the charts below. Future deliveries have preleasing rates that are consistent with this trend.

Based on Buildings Built or Renovated in 2015 or Later



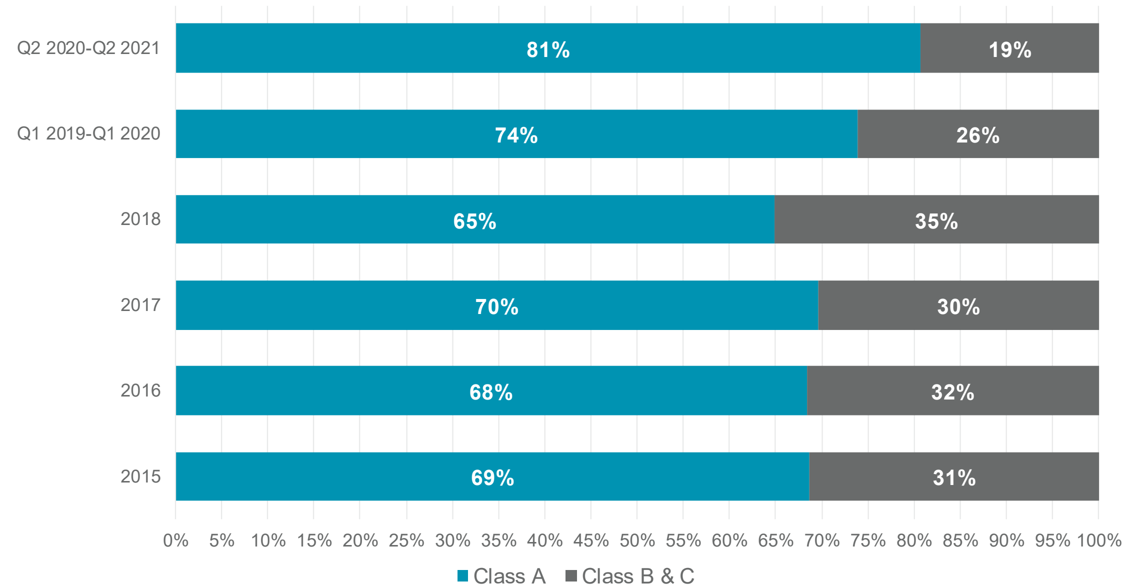


Cushman & Wakefield | © 2021

Demand for Better Quality Assets

From 2015 through the first quarter of 2019, Class A assets accounted for an average of 69 percent of total leasing annually. Since COVID, a flight to quality has occurred, as 81 percent of the leases signed were in Class A assets.

81 percent of Total Leasing Activity Occurred in Class A Assets During COVID-Era



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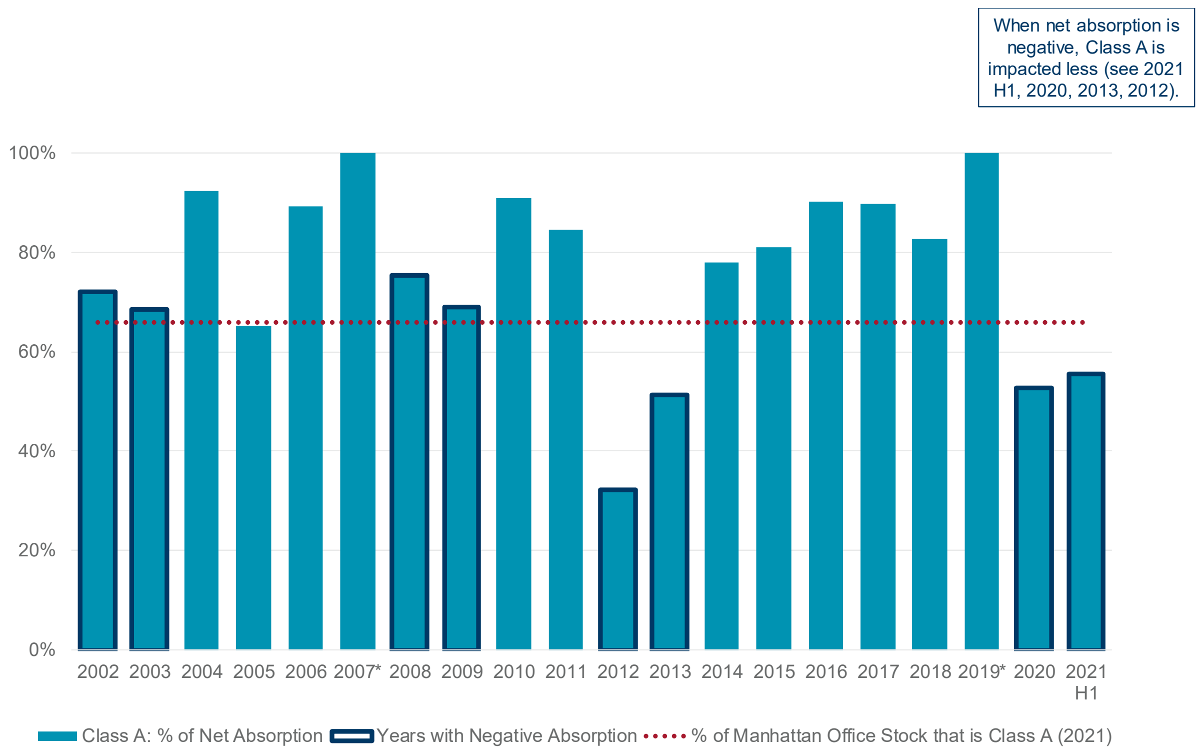
Flight to Quality Persists

Immediately after the previous two recessions, Class A product made up over 80 percent of net absorption (see 2004 and 2010-2011). This focus on quality has continued during the pandemic. While Class A product accounts for 66 percent of Manhattan inventory it has only accounted for 54 percent of the negative absorption since Q2 2020. In 2007 and 2019, Class A accounted for more than 100 percent of Manhattan's overall net absorption (i.e., Class B & C absorption was negative).

Manhattan Class A: As a % of Net Absorption



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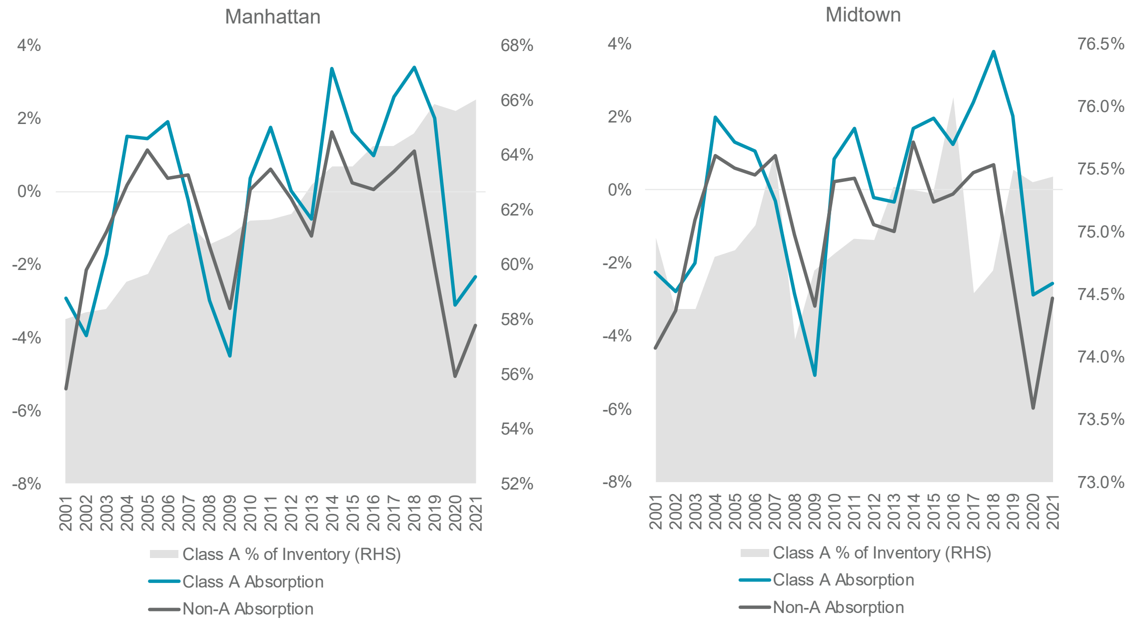
Class A Absorption Rates Outperform

The absorption rate is net absorption divided by inventory. As illustrated in the charts on the following page, when the blue line is above the grey line, this shows that on an absorption basis, which controls for move-outs unlike leasing alone, that Class A is outperforming. Since 2010, Class A has outperformed consistently. During the GFC only, Class A was more impacted than the broader market. This may have been due to the idiosyncratic shock to the finance sector in particular, which tends to occupy quality space.

Net Absorption Rates



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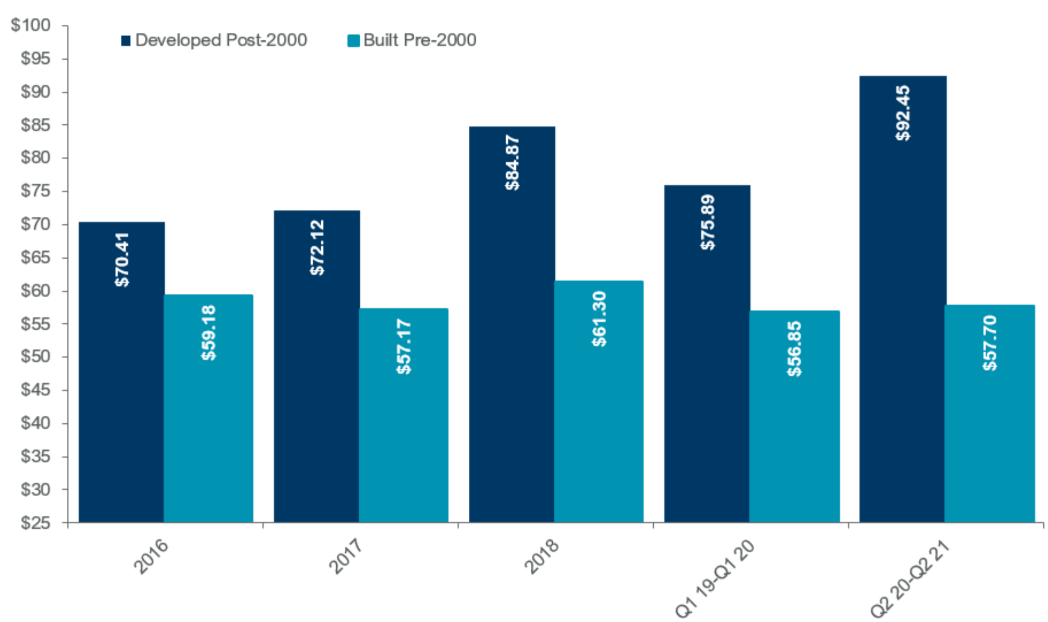
Manhattan Class A Net Effective Rents

The market continues to be bifurcated as Class A net effective rents (NERs) on buildings built pre-2000 averaged a 60 percent discount since the pandemic began. Current NERs on buildings built post-2000 is significantly higher due to leasing success at One Vanderbilt and 425 Park Avenue where NERs have averaged $132 per square foot.

36 percent NER Premium For Newer Developed Properties Since 2016



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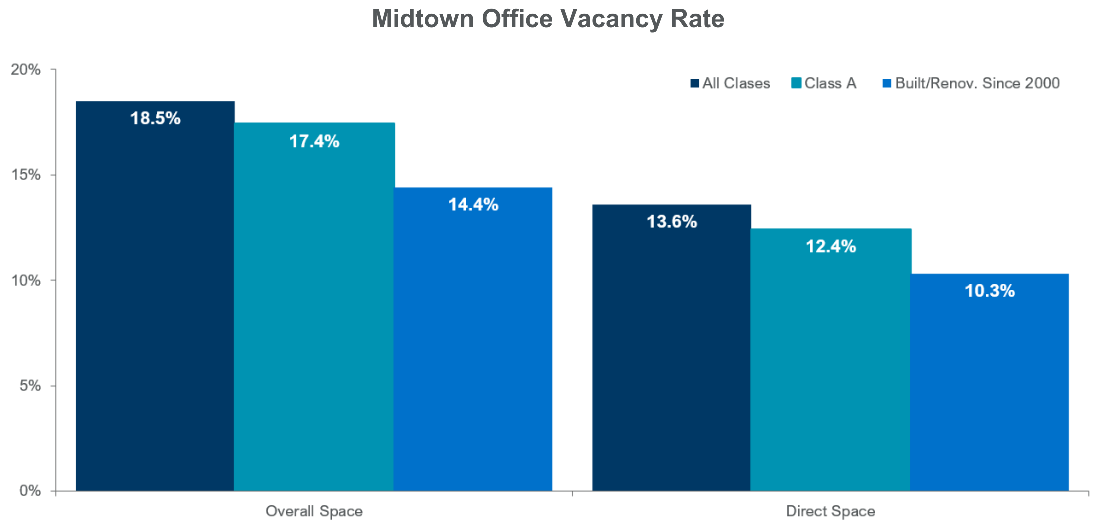
Midtown Vacancy

The chart below further demonstrates the flight to quality trend, with vacancy in buildings built or renovated since 2000 tending to be lower than the rest of the market.



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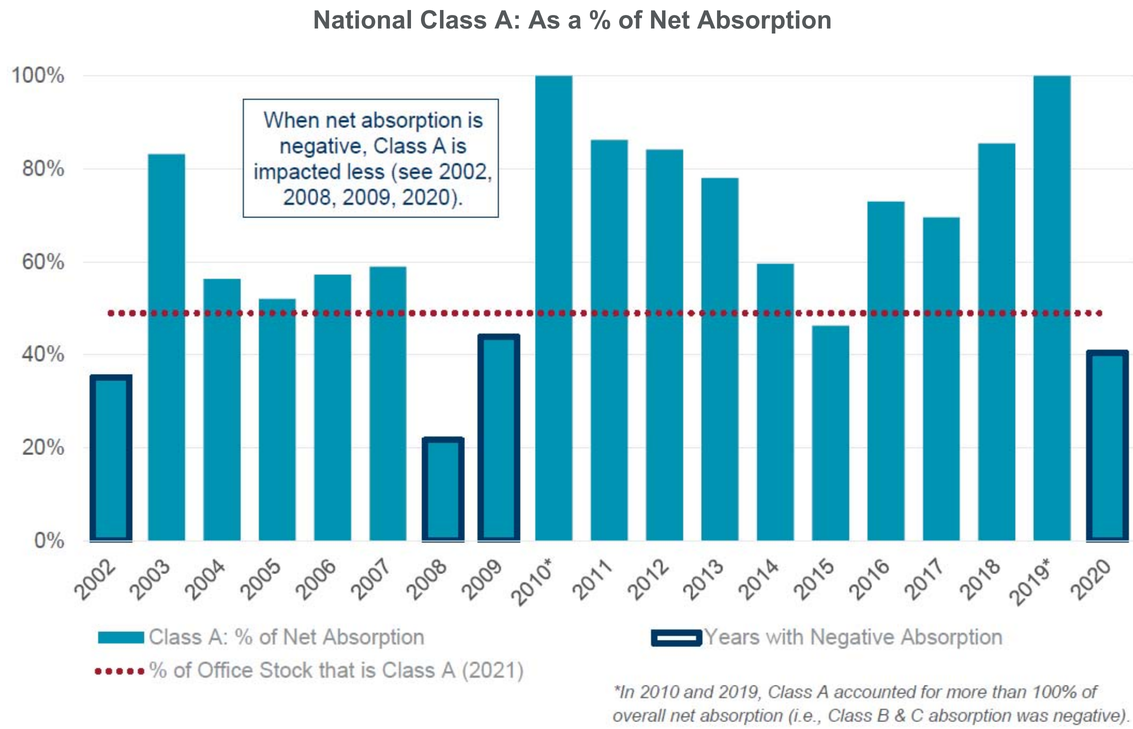
Flight to Quality Post-Recession (National Basis)

Similar to the previous findings for the Manhattan office, there is a focus on quality space on a national basis. The chart on the following page reflects that Class A product accounts for 49 percent of United States office inventory (denoted with the red dotted line). The blue columns reflect the share of overall net absorption by Class A stock. Since the second quarter of 2020, Class A has only accounted for 43 percent of the negative absorption, which indicates this class has fared better than Classes B and C. Furthermore, immediately after the previous two recessions, Class A office product accounted for over 80 percent of net absorption (see 2003 and 2010-2012 in the chart on the following page).

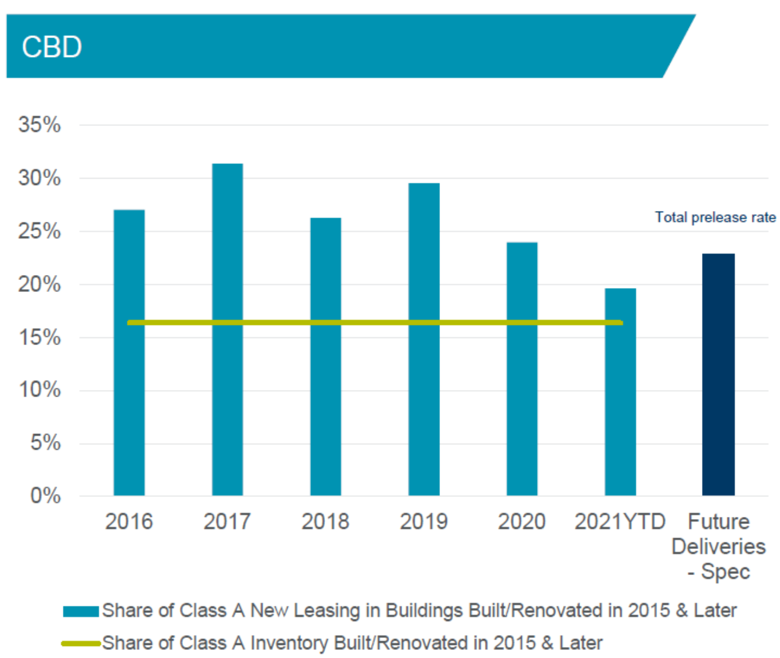


Source: Cushman & Wakefield Research

Class A New Leasing Share (National Basis)

Similar to the Manhattan market, Class A space in Central Business Districts is witnessing greater leasing activity.

Based on Buildings Built or Renovated in 2015 or Later



Source: Cushman & Wakefield Research

While the commercial real estate industry was negatively impacted as a result of the pandemic, it is worth noting that the issues experienced over the last 18 months were inflicted on a historically strong market and economy. The previous two downturns, in 2001 and in 2008, began during softer market periods and worsened the negative impact. As a result of market conditions existing at the start of the pandemic and the Federal stimulus packages, the current downturn was shorter and is projected to cause less severe short-term effects, especially for well located Class A and trophy assets.

Vaccinations began in early 2021 and became available for every person over 12 years old on April 6, 2021. As of September 2021, 71.0 percent of adults in New York City have received both doses of the vaccine, while 78.4 percent of adults have received at least one dose. The Delta variant of the coronavirus, a more contagious mutation of the original virus, also emerged in early 2021. The spread of this variant has introduced some additional short-term uncertainty into the market. As a result, some companies have pushed back their initial return-to-office date, while others are requiring employees to provide proof of their vaccination status.

The unemployment rate in New York City has significantly recovered since the height of the pandemic. The city's unemployment rate peaked in May 2020, reaching 20.0 percent, but has decreased to 10.5 percent as of July 2021. Many more companies will return to the office throughout the remainder of 2021 and into 2022, potentially creating pent-up demand for new space and reducing the vacancy rate. The influx of returning workers is bound to refocus companies on their real estate needs, especially those that delayed their space requirement decisions during the pandemic.

The number of tenants looking for space has already increased significantly since the height of the pandemic. According to Cushman & Wakefield, in June 2020 there were 271 tenants with real estate leasing requirements looking for 18.9 million square feet of space, whereas July 2021 saw 362 tenants looking for 22.9 million square feet.

Since the COVID-19 pandemic began, a flight to quality has occurred, as discussed above. This trend is evident on a local and national level. From 2015 through the first quarter of 2019, Class A assets accounted for an average of 69 percent of total leasing in Manhattan. The share of Class A leases grew to 74 percent in 2019, before the pandemic began. Since the second quarter of 2020, 81 percent of leases signed were in Class A assets. New construction buildings, such as those in the Hudson Yards area, are anticipated to continue to outperform inferior Class B and C assets and older Class A assets. Leasing activity in the Penn Station subdistrict further highlights this trend. While 77.3 percent of the office product in the Penn Station subdistrict is Class A, 65.6 percent of leasing activity over the last five years occurred in the Hudson Yards area.

Companies will continue to evaluate their real estate needs focusing on providing a secure and safe workplace, but as is the case in all recessions and recoveries, a greater emphasis on cost containment will be a primary focus. In addition, companies are looking to develop new strategies to utilize office space more effectively. The new office buildings in Hudson Yards are designed with this efficiency in mind, with features like column-free spacing.

In September 2020, Cushman and Wakefield released the "Global Office Impact Report and Recovery Timing" study, the first in a four-part series that provides a new perspective on COVID-19's impact on the commercial real estate industry and the future of the office. The study examined both the aggregate cyclical and structural impacts on the office sector's fundamentals. For the study, Cushman & Wakefield surveyed companies around the world about the future of the office. The following are some of the key findings.

- Office leasing fundamentals will be significantly impacted while vacancies will reach an all-time high. The COVID-19 recession and structural impacts will result in 95.8 million square feet of negative net absorption between the second quarter of 2020 and the third quarter of 2021 worldwide.

- Of the 95.8 million square feet of negative absorption, 82 percent is related to cyclical factors—namely office-using job losses and co-working impacts. The remaining 18 percent is related to structural factors, largely based on the assumption that the share of both permanent remote workers and agile workers—those who work remotely some of the time—will increase.
- The potential reversal of a decades-long trend of densification in which businesses have been absorbing less space per office-using employee. COVID-19 is requiring society to social distance in the near-term and disrupting the trend.

In the study, Cushman and Wakefield concluded that the structural impacts of work-from-home trends will be offset by factors such as economic growth, office-using job growth, and other factors, which means demand for office will continue to grow over the 10-year forecast horizon. Furthermore, office space is essential for companies to foster innovation, productivity, learning and teamwork.

Cushman & Wakefield also partnered with the George Washington University School of Business Center for Real Estate and Urban Analysis and Places Platform LLC for a thorough review of academic literature and industry studies, examining the benefits of office and working from home focused on several key areas, including productivity, creativity/innovation, corporate culture, branding, employee engagement, and walkable places. The report, "Purpose of Place: History and Future of the office," was released in October 2020, and reviewed the main drivers affecting the future of office in the post-COVID-19 world. The study found that it is unlikely that organizations will see sustained 100 percent remote work in the long run given mixed evidence in the research and occupiers' mixed experiences with their employees.

In January 2021, Cushman & Wakefield released the "Workplace Ecosystems of the Future" report, which examined the future of the office in a post-COVID-19 world by exploring investor, occupier and placemaker feedback and analyzed historical work-rom home (WFH) penetration rates. The research relied on focus groups and interview survey insights from building owners, building occupiers and business improvement district executive directors in major U.S. markets. A key finding was a consensus among leaders that people working entirely remotely will lead to declines in workplace culture, innovation and creativity.

According to a study [8] from McKinsey & Company, only 11 percent of employees would prefer a fully remote working environment after the pandemic. An August 2021 survey from the Partnership for New York City found that employers expect 76 percent of office workers to return by the end of January 2022.

As employees spend more time working virtually, the demand for better quality physical environments and experiences will increase, causing more variation in how office space is used. As a result, the future after COVID-19 will be characterized by organizations determining the right balance of remote work to advance their organizational priorities rather than one that sees a move toward an office-free world.

Although the effects of the pandemic are posing significant challenges to Manhattan's major office markets, there are some positive market insights to consider. Office-using employment has been less impacted than during the previous two downcycles. Cushman & Wakefield expects office-using employment in the New York City metropolitan area to recover throughout the rest of 2021 and reach pre-COVID levels by the third quarter of 2022, despite the rise of work from home and remote work opportunities.

While the last 18 months have been a tumultuous time for the New York City real estate market, the economic and real estate effects of COVID-19 are expected to be temporary. The Manhattan office market will recover and perform well in the long term. Hybrid occupancy, with employees rotating between working at home and in an office, may continue to be popular but offices will be an essential part of the corporate environment. New Class A and trophy office assets, which are well amenitized and designed to be more efficient for occupier use with top LEED

[8] Reimagine Work: Employee Survey (Dec 2020 – Jan 2021)

certifications, are expected to continue to experience strong future leasing activity and occupancy while meeting tenant needs.

The Hudson Yards area has proven to be well positioned to withstand the economic pressure created by the pandemic. Office leasing brokers report that tenant tours of Hudson Yards have been consistent since social distancing restrictions were lifted. While Class A sublease space has significantly increased throughout the pandemic in Midtown and overall Manhattan, almost no sublease space is available in the Hudson Yards and Manhattan West developments. Class A average asking rents in the Penn Station subdistrict registered $109.31 per square foot in the second quarter of 2021. Removing the average asking rents from Hudson Yards located assets from the statistical sample, Penn Station subdistrict average asking rents decrease to $65.20 per square foot. Asking rents in the Hudson Yards area alone average to $118.54 per square foot, higher than any Class A submarket in New York City.

Office buildings in Hudson Yards will continue to outperform compared to the Manhattan market. Hudson Yards office buildings are generally trophy quality, LEED-certified and green, and are positioned to continue to attract high quality credit tenants. The buildings have the highest rents and absorption rates in the Penn Station subdistrict, and are representative of the type of asset desired most by investors as well as tenants in the Manhattan market. This is a direct result of the master-plan concept for the broader Hudson Yards rezoning which includes expanded public transportation (No. 7 subway extension), renovations to Pennsylvania Station, the new Moynihan train station, the Hudson Park & Boulevard, and the final phase of the High Line park.

Class A asking rents in the Penn Station subdistrict are $109.31 per square foot, 27.3 percent greater than for Midtown overall. Asking rents for Class A space in completed Hudson Yards buildings, profiled in Chapter 5 of this report, range from $105 to $200 per square foot. The occupancy rates in these completed office buildings range from 72.2 percent to 100 percent. Only 501,643 square feet of space is available as of the first quarter of 2021, indicating an average vacancy rate of 4.6 percent for five completed assets, which is lower than the Penn Station subdistrict and Manhattan overall. Asking rents within the office assets nearing completion and substantially leased (50 Hudson Yards, 66 Hudson Boulevard, and Two Manhattan West) range from $103 to $200 per square foot. Initial rents for large anchor tenants in Hudson Yards were in the $75 to $85 per-square-foot range in late 2011. The growth in office rents (from $80 per square foot in 2011 to the average asking rent of $118.54 per square foot) is 4.01 percent annual, and demonstrates the area's desirability as a proven office destination.

Residential Market Overview

Market Conditions Prior to the COVID-19 Pandemic

Prior to the COVID-19 pandemic, the Manhattan condominium market was generally characterized by declining sales volume and pricing, and increased negotiability on the part of sellers. These trends were the result of a perceived oversupply of new luxury condominium product, as well as regulatory changes which impacted sales volume. Notably, these regulatory changes included an increased New York City "mansion" tax, and a reduced limit on the mortgage interest deduction as a result of the Tax Cuts and Jobs Act (TCJA). These changes are detailed below.

In July 2019, New York City's "mansion" tax increased significantly. Under the original tax, which was first created in 1989, buyers of apartments or homes of at least $1 million in price paid a one-time transfer tax of 1.0 percent. The updated tax set the amount on a sliding scale, starting at a 1.0 percent tax for properties at $1 million, and capping at a 3.9 percent tax for properties of at least $25 million. The increased "mansion tax" was passed instead of a more aggressive "pied-a-terre" tax that had been proposed by lawmakers in early 2019.

The TCJA, signed in 2017 by President Trump, reduced the amount of mortgage interest that homeowners could deduct from $1 million to $750,000. This change had an outsized impact in markets like Manhattan, where home prices routinely exceed these limits.

Manhattan's rental market, on the other hand, was exhibiting significant strength prior to March 2020. Average rents grew by more than 6 percent in the 12-month period through December 2019, according to Douglas Elliman. During this period, brokerage firms reported that the weak sales market was pushing potential purchasers into the rental market, at least temporarily. In addition to spillover demand from the sales market, the supply of market-rate apartments was impacted by the Housing Stability and Tenant Protection Act of 2019. This law became effective in June 2019 and significantly reformed the existing laws governing rent regulation in New York. Among other sweeping changes, the new law removed most of the mechanisms by which rental units could become deregulated. As a result, the number of units entering the market-rate inventory in any given year was greatly reduced, putting pressure on the existing stock to absorb new tenants.

Market Conditions During the COVID-19 Pandemic

The COVID-19 pandemic began impacting New York City in the final two weeks of March 2020. The most significant impact to the Manhattan residential market initially was the shelter-at-home order which effectively ended in-person showings for real estate. Rental leasing volume declined significantly in the early months of the pandemic. As leases expired in April and May of 2020, many tenants initially chose to renew rather than make major moving decisions. In April 2020, there were only 1,407 new leases signed, compared to 4,831 in the previous April. When the shelter-in-place order was lifted in June 2020, leasing activity began to slowly return. By that point, the extent of the pandemic was better understood and tenants were able to make informed decisions regarding living situations, especially in regards to extended work-from-home policies that most major companies had enacted.

During this time period, a portion of the renter population left Manhattan for a variety of reasons. Some tenants moved to Brooklyn or Queens in search of larger apartments, some moved home to live with family, and others moved to second homes or rented seasonal vacation homes. This exodus coincided with travel restrictions that reduced international demand for rentals, decreased demand from college students with most schools enacting virtual learning programs, and corporations either delaying hiring or hiring workers remotely. The net result of these inbound and outbound factors [9] was a significant decrease in the demand for Manhattan rental apartments during

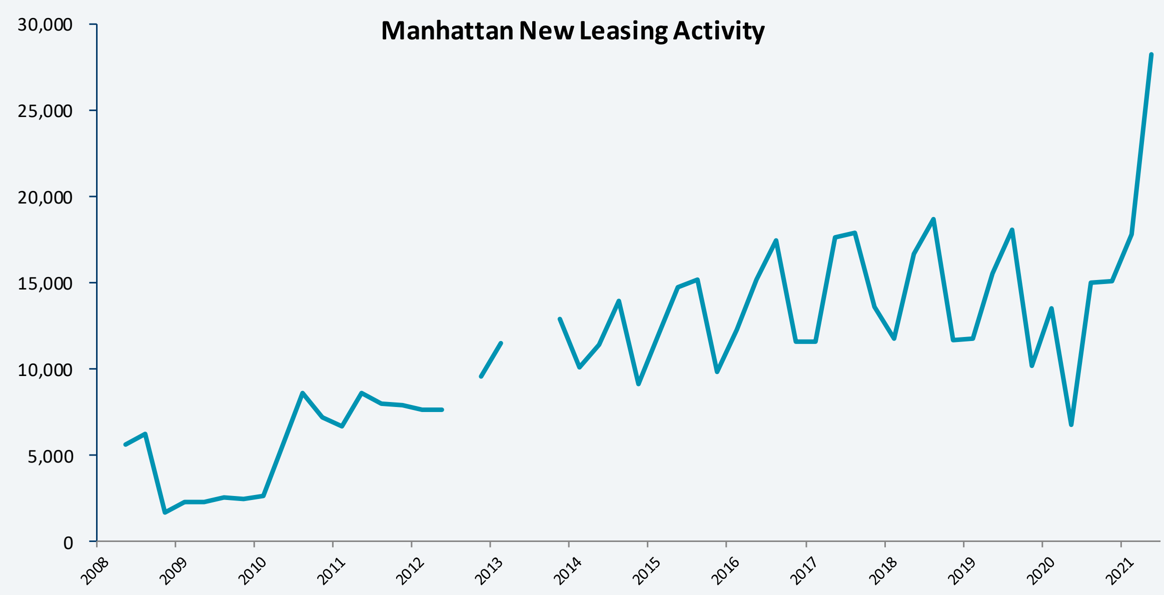
[9] New York Fed/Equifax Consumer Credit Panel/ACS/Cleveland Fed

the second half of 2020. Tenants who remained in Manhattan during this period were able to negotiate large concession packages with owners seeking to maintain occupancy levels. Depending on the submarket, these concessions generally ranged from two to four months of free rent. Overall rental rates in Manhattan generally declined by 15 to 20 percent during the pandemic, with most unit types reaching the trough during the end of 2020 or early 2021.

Rental vacancy rose through the end of 2020 according to Corcoran, peaking at over five percent during the fourth quarter. While the overall vacancy rate reached five percent, some individual buildings experienced more severe vacancy issues, exceeding 30 percent in some cases. Generally speaking, high vacancy was typically found in market-rate buildings that catered to younger, more transient renters with the financial means to leave. Older buildings with rent-regulated units, however, faced rent collection issues rather than high vacancy.

By the third quarter of 2020, new leasing activity began to return. This trend sharply accelerated in the first half of 2021, growing to record levels as the vaccines became widely available. In the second quarter of 2021, tenants signed more than 28,000 new leases. Each month during the quarter surpassed 9,000 new leases, the highest monthly total for any month since at least 2008. Douglas Elliman notes that the increase in leasing activity was a result of inbound migration from people returning to the city, particularly as the vaccine distribution pace exceeded expectations.

The chart below illustrates historical new leasing activity and the sharp rebound that began in the second half of 2020:

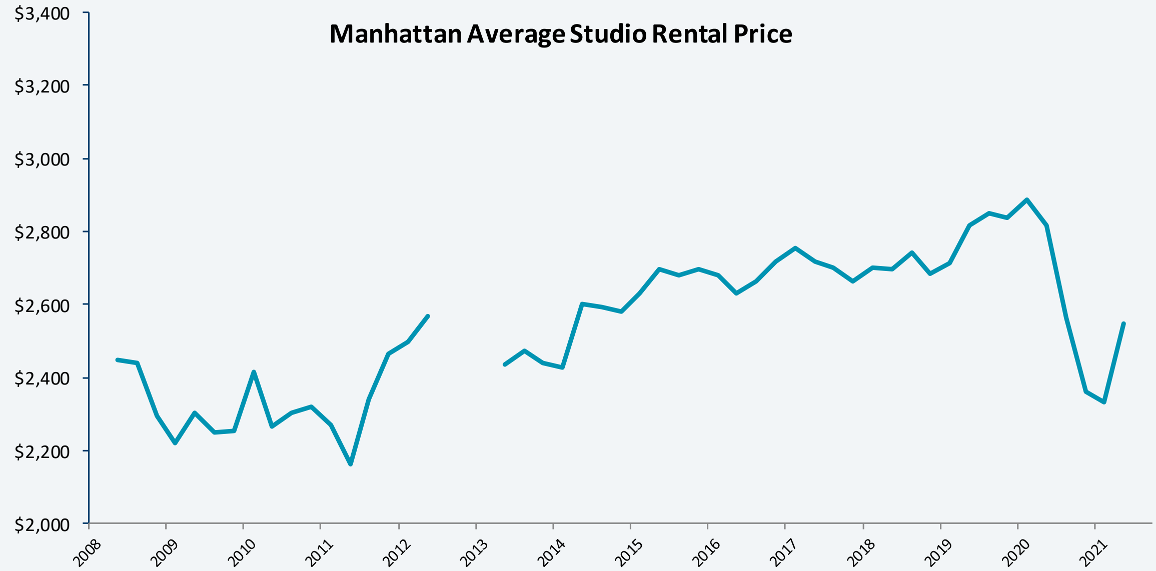


Source: Douglas Elliman

Note: Breaks in the line indicate that data was not released by the source for that period.

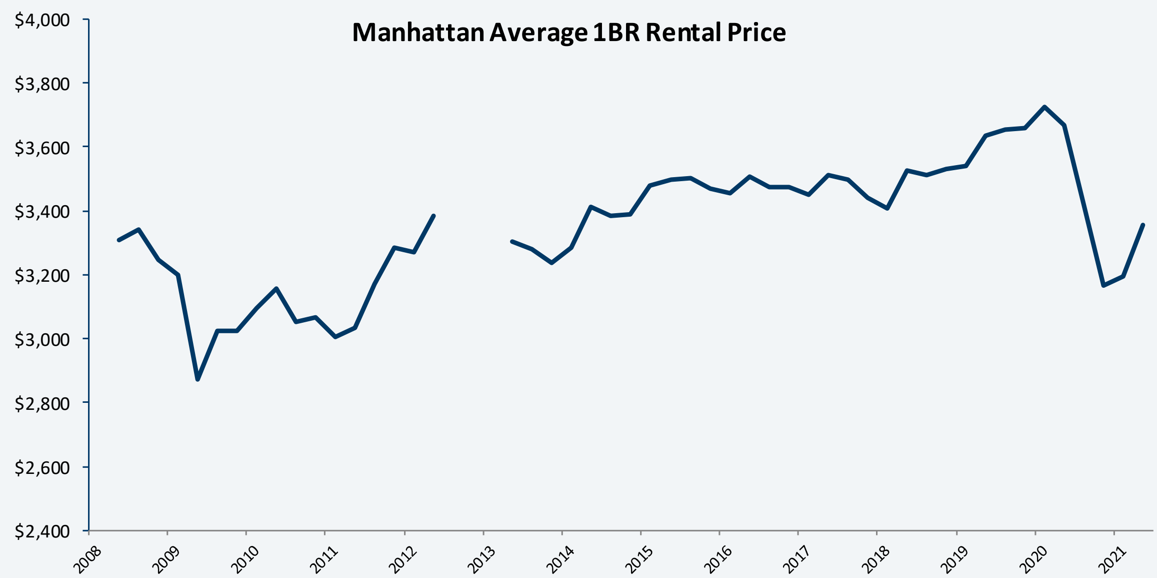
Though average pricing remains lower than it did during the same period last year, pricing was stable or increased for most unit types in the second quarter of 2021. Concession use also began to dissipate during the second quarter, and many of the buildings which experienced elevated vacancy issues in 2020 were able to be rapidly re-leased, reaching typical stabilized occupancy levels.

The charts below and on the following page illustrate the decline and subsequent rebound in average rental rates in Manhattan:



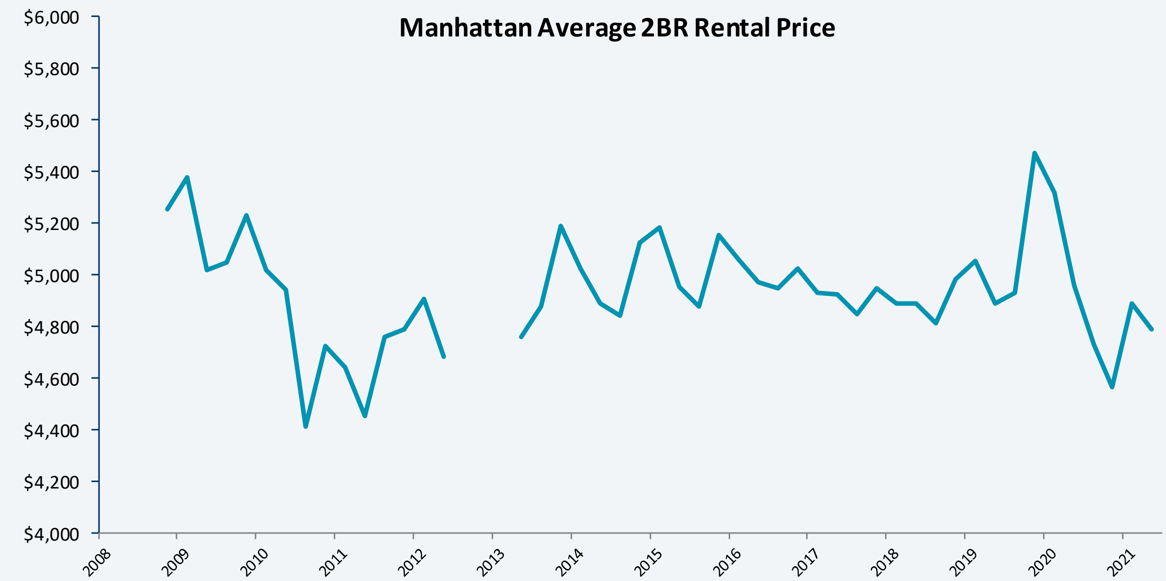
Source: Douglas Elliman

Note: Breaks in the line indicate that data was not released by the source for that period.



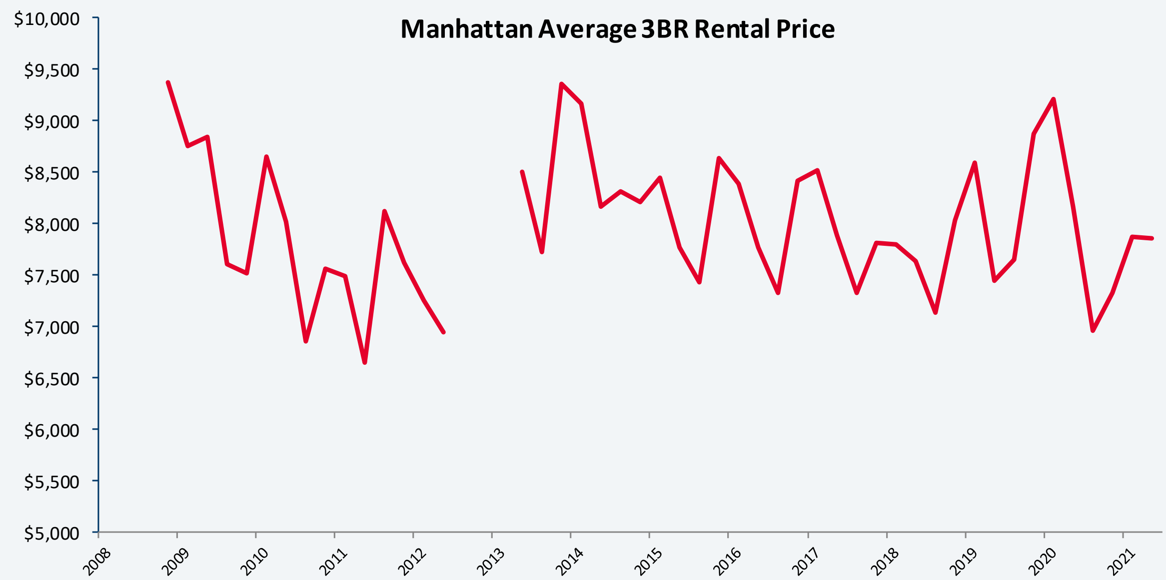
Source: Douglas Elliman

Note: Breaks in the line indicate that data was not released by the source for that period.



Source: Douglas Elliman

Note: Breaks in the line indicate that data was not released by the source for that period.



Source: Douglas Elliman

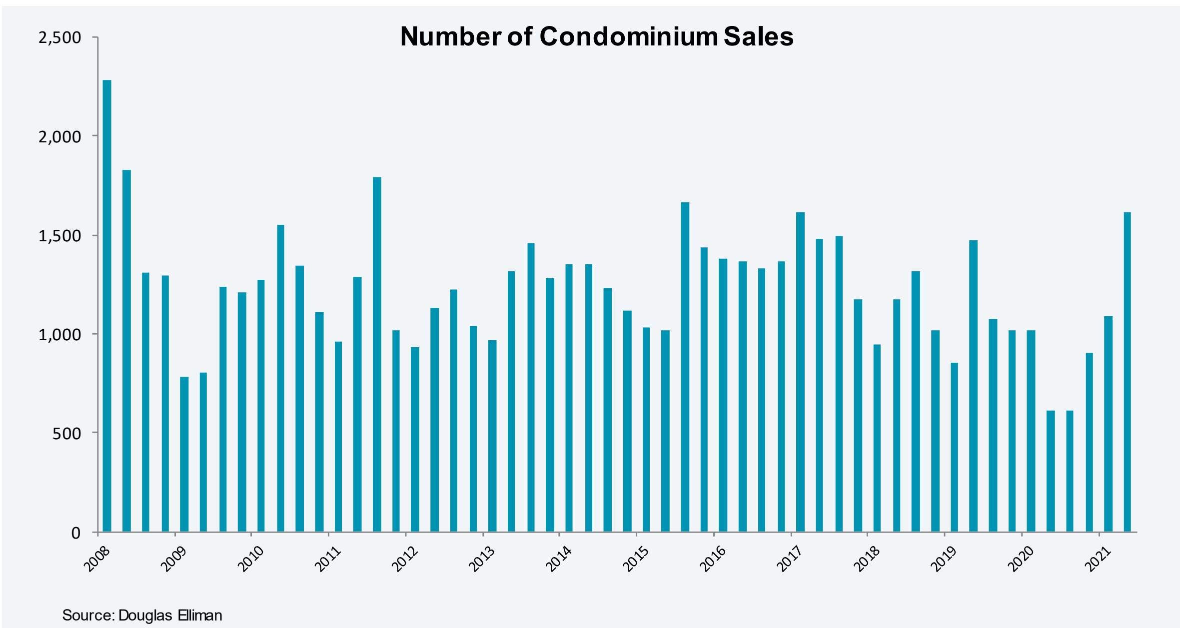
Note: Breaks in the line indicate that data was not released by the source for that period.

The pandemic had a similar impact on the Manhattan condominium market, beginning with the shelter-at-home order in March 2020. The spring, which is typically a busy selling season, was severely affected. Condominium sales volume declined precipitously during the second and third quarters of 2020, with only 616 and 612 closed sales recorded, respectively. These represented the lowest quarterly sales totals since at least 2008, according to Douglas Elliman.

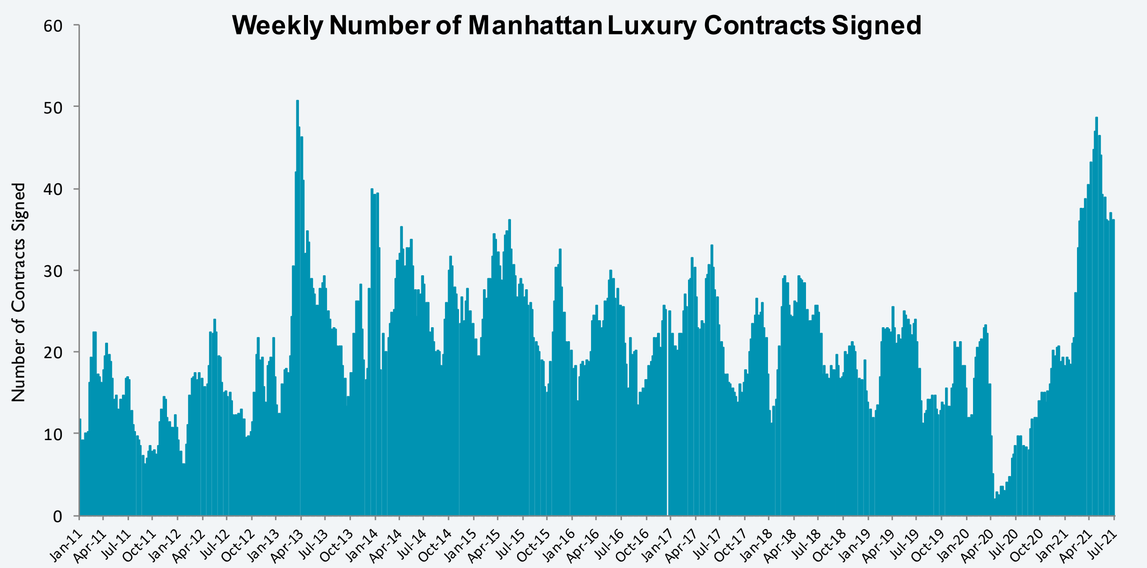
Sales activity began rebounding towards the end of 2020 and accelerated into 2021, with 162 percent more sales during the second quarter of 2021 compared to the same period in 2020. It was the highest quarterly total since the third quarter of 2015. The surge in sales volume was a result of buyers returning to the city following the distribution of vaccines, as well as sellers reducing prices to meet the market. Though condominium pricing has yet to fully recover, the major brokerage firms report that pricing has improved through the first half of 2021.

The luxury market's [10] rebound was influenced by the same trends as the overall condominium market, with declining prices and vaccine distribution helping to spur increased sales volume. While year-over-year prices remain lower, there was significant momentum during the first half of 2021. Olshan Properties, which tracks luxury contract activity, noted that the second quarter ended with 22 straight weeks of 30 or more luxury signed contracts. This level of sustained activity has not been observed in the luxury market since at least 2006.

The charts below and on the following page detail the decline and rebound of sales volume within the overall Manhattan condominium market, and contract activity within the luxury market:



[10] The luxury market is typically defined as the top 10 percent of the market by price.



Source: Olshan Properties
Note: Trailing 4-Week Average

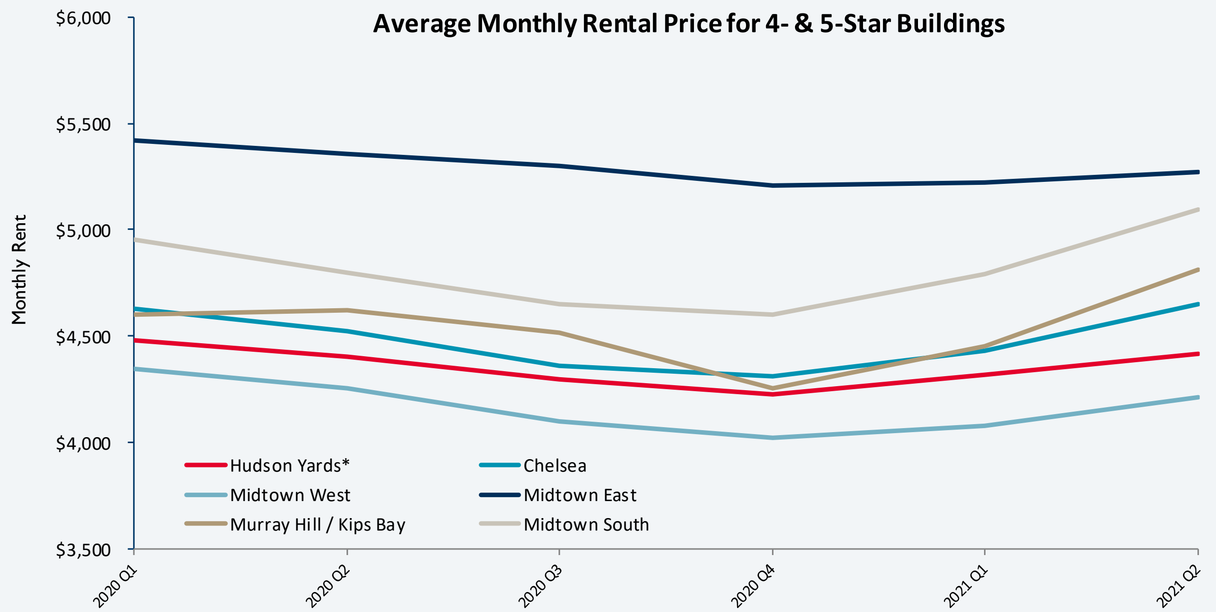
Summary and Outlook

In terms of leasing activity, occupancy, and concession levels, the Manhattan rental market is fully recovered. Rents are expected to continue increasing throughout 2021 and into 2022. The condominium market is still recovering from the effects of the pandemic, though recent contract activity suggests that the remainder of 2021 will be a strengthening market.

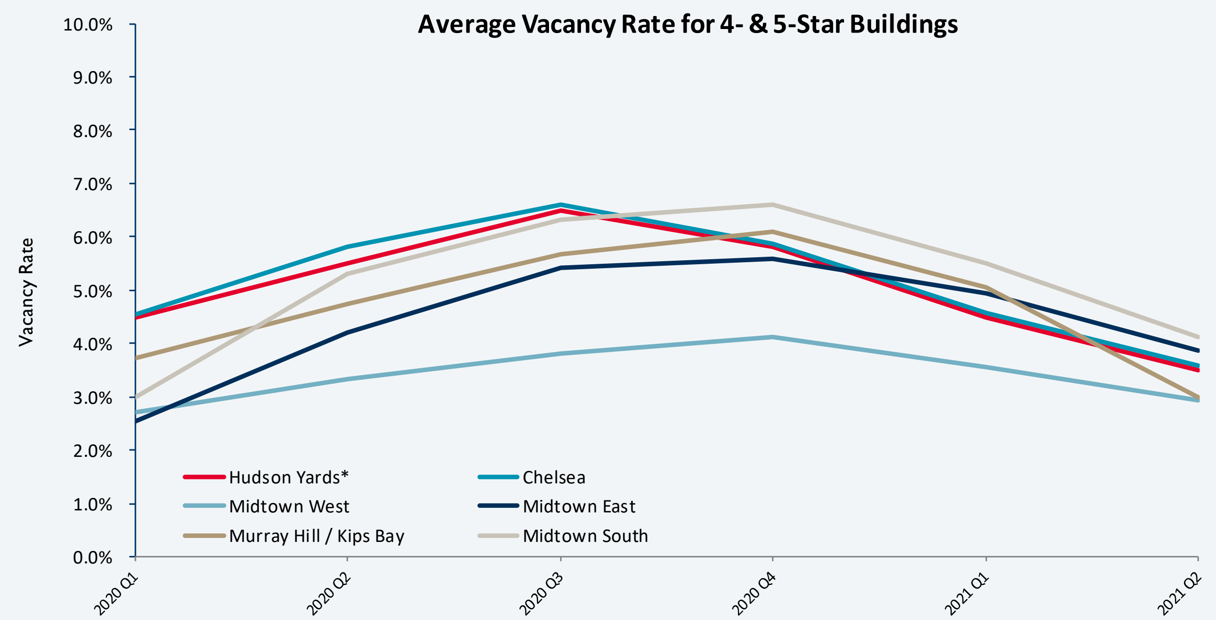
Though not specifically tracked by any major brokerage firm or data service provider, the Hudson Yards rental submarket was impacted by the pandemic in a similar manner to other competive submarkets in Manhattan. Vacancy increased throughout the neighborhood beginning in April 2020, as households sought other locations with less stringent lockdown regulations, along with the other factors described earlier in this section. As a result, rental rates decreased and concession use generally increased as well.

The surge in leasing during the first half of 2021 has brought occupancy back to normal stabilized levels in Hudson Yards, with market rents increasing commensurate with the overall Manhattan market. For example, one large 80/20 asset in Hudson Yards is now fully leased with a waiting list of prospective tenants, after being 78.2 percent occupied in March 2021. Another Class A building in Hudson Yards rebounded from 79.5 percent occupancy in May 2021 to 98.4 percent less than a month later.

The charts on the following page illustrate recent rental rate and vacancy trends within Hudson Yards and other competitive submarkets in Manhattan. Among other buildings, the charts include the Olivia and the MiMA, both of which are profiled in further detail in Chapter 5. Notably, the charts demonstrate that the Hudson Yards residential rental market has performed at least as well as its peer submarkets. Given the recent rebound in occupancy, and the continued buildout of the Hudson Yards office district and other area amenities, residential assets in Hudson Yards will continue to keep pace with or outpace the overall Manhattan luxury market.



Source: CoStar
* these are the 17 residential rental properties within HYFD categorized as 4- or 5-star buildings by CoStar



Source: CoStar
* these are the 17 residential rental properties within HYFD categorized as 4- or 5-star buildings by CoStar

In Chapter 5, we also profile the Atelier, the Orion, and Manhattan View at MiMA, all of which were built between 2006 and 2011. The average price per square foot for sales in these buildings between July 2020 and June 2021 was $1,347, $1,384, and $2,398, respectively. Compared to $1,245 per square foot, the average price of a resale

Midtown condominium[11], these represent a market premium ranging from 8.2 percent to 92.6 percent. Unsold condominium inventory in Hudson Yards primarily consists of the luxury apartments at 15 and 35 Hudson Yards. These two buildings offer unobstructed views of the Hudson River, extensive amenity packages, and top-tier finishes. Recent sponsor sales in these buildings indicate average pricing between $2,500 and $3,500 per square foot, which exceeds the average Manhattan price point. Because of this composition of luxury product, the neighborhood is well positioned to take advantage of the significant increase in luxury contract activity detailed above.

[11] The Corcoran Group

Hotel Market Overview

Market Conditions Prior to the COVID-19 Pandemic

Prior to the COVID-19 pandemic, Manhattan's hotel market played a critical role in supporting the city's tourism industry. NYC & Company, the city's official convention and visitors bureau, estimates a record 66.6 million people visited the city in 2019, increasing by 2.5 percent from the previous year and marking the tenth straight year in which tourism hit a new high. Visitor spending also set a record at roughly $70.0 billion. To meet the increasing demand for hotel rooms, Manhattan developers built over 14,500 new hotel rooms in the six-year period ending in 2019.

STR, a data and analytics specialist recognized by the lodging industry as the standard source of reliable data, provided operating statistics on the Midtown South and Manhattan hotel markets as a whole. The Hudson Yards hotel market is not currently recognized as a submarket by STR. Nevertheless, the vast majority of lodging facilites located within Hudson Yards are accounted for and located within STR's Midtown South hotel submarket. Therefore, it has been considered in this analysis. Despite an unprecedented amount of new supply entering the market, Manhattan hotel occupancy climbed steadily reaching an all-time high of 88.1 percent in 2018 before dropping by 100 basis points in 2019. New hotels located within Hudson Yards recorded occupancies in the low to mid 90.0 percent range, ahead of the Manhattan hotel market at large. This is testament to the desirability of Hudson Yards as a premier destination. The current hotel stock consists primarily of independent, upper midscale, and upscale class hotels. Considering the age, size, location, and class of existing hotels, RevPAR growth has historically been achieved through occupancy at the expense of ADR. We expect this trend to continue for the forseable future.

Despite increases in visitation, the significant level of new supply entering the market caused the market's average daily rate (ADR) to decline between 2015 and 2019, as new hotels offered bargain prices to entice trial and repeat visitation. Although pricing power briefly returned to the market in 2018, an inflection point was experienced in 2019 with an additional 2,931 hotel units entering the market, resulting in a 4.3 percent decrease in revenue per available room (RevPAR).

The advancement of the sharing economy and the proliferation of short-term rental units is believed to have reached a saturation point. However, the introduction of this elastic product type has placed downward pressure on traditional hotel ADRs, particularly during high demand periods when hotels employ yield-management techniques for their inventory of guest rooms. The increased popularity of short-term rental units has inevitably hampered rate growth at traditional hotels. Although this so called "shadow inventory" appears to be well absorbed, its impact on traditional hotel use, with a focus on pricing power, will continue to be top-of-mind.

The year 2020 commenced as anticipated with sluggish gains in occupancy and ADR through February, as New York City continued to navigate steady head winds brought on by new supply and the evolution of various homeshare platforms. Signs of progress were evident in emerging markets such as Midtown South, which introduced over 1,600 units, or over 56.0 percent of new hotel supply. The new completions and renovations encouraged market participants who were expecting the novel hotel product, combined with a diminishing supply pipeline, to bolster rate growth.

Market Conditions During the COVID-19 Pandemic

In March 2020, the COVID-19 pandemic began to have a significant negative impact on the New York City hotel market. According to STR, New York City was hit the hardest with regards to GOPAR (gross operating profit divided by available hotel rooms), which fell by 203.0 percent in March 2020, relative to 2019. Hotels that suspended operations continued to incur operating expenses and fixed charges that resulted in negative operating income.

Occupancies fell dramatically to an all-time low of 28.5 percent in July 2020 before the start of a recovery began to form.

Hotel demand in New York City began to improve meaningfully in the second quarter of 2021 as vaccines became widely available. Select operating hotels with attractive food and beverage programs, particularly those benefitting from outdoor dining space, activated ahead of their peers. In Manhattan, younger, smaller, independent hotels located in residential neighborhoods such as the Upper East Side, West Village, SoHo, and Tribeca led the reboot ahead of older, larger, group and corporate dependent, Midtown-centric hotels. In large part due to the significant leisure demand generators developed within Hudson Yards, many hotels in the immediate area remained open throughout the pandemic. These tourist attractions include but are not limited to The Shops and Restaurants at Hudson Yards, the Edge, the Vessel, High Line park, and Hudson Park & Boulevard, to name a few. However, a sizeable amount of hotel inventory located in nearby Midtown West/Times Square and Midtown East remains idle, with plans to resume operating over the next six to twelve months. Nevertheless, meaningful demand growth was observed citywide starting in March 2021, which saw a 27.2 percent increase in demand over the prior month. This trend continued through June with an average monthly increase in demand of 20.0 percent. As the second half of the year commenced, Manhattan was capturing over 1.3 million room nights per month. This level of hotel demand represents an increase of more than 115.0 percent over the monthly average room nights captured between April 2020 and February 2021. The recent uptick in demand, combined with strong ADR growth, resulted in marked improvement to top line fundamentals, as indicated by a 147.2 percent increase in RevPAR for June.

The rapid distribution of vaccines in New York City has further improved the prospect of travel. A growing list of venues, companies, and organizations now require vaccination as a prerequisite for employment or attendance. Union Square Hospitality Group, a best-in-class food and beverage operator led by Executive Chef Danny Meyer, now requires patrons to be fully vaccinated to dine indoors. PUBLIC Hotel, an independent upscale lifestyle brand created by renowned hotelier Ian Schrager, requires full vaccination for all hotel employees and guests. As of August 2021, Mayor de Blasio has mandated vaccines for all indoor dining, gyms, and performances. This is expected to foster room night growth in New York City.

Signs of progress have become increasingly evident in the second half of 2021. Broadway shows such as The Lion King and The Phantom of the Opera, as well as performances at Lincoln Center Theatre, have already reopened or are planning to reopen during the Fall 2021 season. New York City & Co, with major sponsors including Citi, Expedia, and Anheuser-Busch, produced “WE LOVE NYC: The Homecoming Concert” on August 21, 2021. The Metropolitan Museum of Art’s annual Costume Institute Gala (aka the Met Gala), a coveted event for the fashion industry which historically kicked off on the first Monday in May, returned in September 2021 after being cancelled last year. The successful and safe execution of these events is expected to fuel future leisure hotel demand.

The charts on the following page illustrate Midtown South and Manhattan’s overall hotel market performance since 2018 and quarterly changes through the second quarter of 2021:

Midtown South Supply, Demand, Occupancy, ADR and RevPAR

Period	Supply	% Change	Demand	% Change	Occ %	% Change	ADR	% Change	RevPAR	% Change
2018	24,860	6.0%	8,065,391	7.6%	88.9%	1.6%	$ 238.19	3.0%	$ 211.72	4.6%
2019	26,526	6.7%	8,542,188	5.9%	88.2%	-0.7%	$ 234.42	-1.6%	$ 206.82	-2.3%
2020	21,533	-18.8%	3,542,888	-58.5%	45.1%	-48.9%	$ 133.97	-42.9%	$ 60.39	-70.8%
Avg Annual % Change		-6.9%		-33.7%		-28.8%		-25.0%		-46.6%
YTD June 2020	23,078	----	2,282,044	----	54.6%	----	$ 144.21	----	$ 78.78	----
YTD June 2021	20,919	-9.4%	1,848,147	-19.0%	48.8%	-10.7%	$ 128.83	-10.7%	$ 62.88	-20.2%
Jan-21	19,911	-29.2%	215,192	-67.1%	34.9%	-53.5%	$ 105.09	-2.0%	$ 36.64	-68.0%
Feb-21	19,911	-30.3%	219,439	-66.1%	39.4%	-51.3%	$ 109.84	-1.2%	$ 43.23	-66.0%
Mar-21	20,006	-30.0%	280,849	-5.9%	45.3%	34.5%	$ 109.99	-19.5%	$ 49.81	-7.3%
Apr-21	20,532	4.2%	320,284	38.2%	52.0%	32.7%	$ 119.99	-53.5%	$ 62.39	39.4%
May-21	22,526	8.9%	374,269	29.6%	53.6%	19.0%	$ 139.19	-55.8%	$ 74.60	44.3%
Jun-21	22,572	8.1%	438,114	68.0%	64.7%	55.3%	$ 159.68	-51.5%	$ 103.31	104.8%
1Q 2020	28,642	----	1,607,552	----	62.4%	----	$ 155.71	----	$ 97.10	----
1Q 2021	19,725	-31.1%	715,480	-55.5%	39.9%	-36.1%	$ 108.47	-30.3%	$ 43.24	-55.5%
2Q 2020	8,835	----	674,492	----	42.2%	----	$ 116.79	----	$ 49.26	----
2Q 2021	10,942	23.8%	1,132,667	67.9%	56.9%	34.9%	$ 141.69	21.3%	$ 80.59	63.6%

Source: STR (formerly known as Smith Travel Research)

Manhattan Supply, Demand, Occupancy, ADR and RevPAR

Period	Supply	% Change	Demand	% Change	Occ %	% Change	ADR	% Change	RevPAR	% Change
2018	98,961	2.9%	31,831,659	3.6%	88.1%	0.6%	$ 281.25	2.5%	$ 247.85	3.2%
2019	101,893	3.0%	32,375,033	1.7%	87.1%	-1.2%	$ 272.61	-3.1%	$ 237.31	-4.3%
2020	73,831	-27.5%	11,337,330	-65.0%	42.1%	-51.7%	$ 159.99	-41.3%	$ 67.31	-71.6%
% Change		-13.6%		-40.3%		-30.9%		-24.6%		-47.9%
YTD 2020	80,122	----	7,517,925	----	51.8%	----	$ 172.26	----	$ 89.30	----
YTD 2021	67,839	-15.3%	5,519,203	-26.6%	44.9%	-13.3%	$ 163.71	-5.0%	$ 73.58	-17.6%
Jan-21	63,146	-39.1%	614,825	-74.0%	31.4%	-57.3%	$ 124.02	-32.4%	$ 38.95	-71.1%
Feb-21	62,946	-39.6%	647,195	-71.7%	36.7%	-53.2%	$ 130.79	69.8%	$ 48.03	-67.4%
Mar-21	63,241	-39.2%	823,417	-17.5%	42.0%	35.6%	$ 134.79	69.1%	$ 56.61	-6.3%
Apr-21	65,991	4.9%	918,177	56.8%	46.4%	49.4%	$ 154.72	120.8%	$ 71.76	80.4%
May-21	74,081	9.9%	1,147,424	32.8%	50.0%	20.8%	$ 180.32	142.2%	$ 90.10	71.8%
Jun-21	77,406	12.6%	1,368,165	73.3%	58.9%	53.9%	$ 206.61	160.6%	$ 121.73	147.2%
1Q 2020	243,152	----	5,627,720	----	25.7%	----	$ 187.19	----	$ 48.14	----
1Q 2021	62,423	-74.3%	2,085,437	-62.9%	36.7%	42.8%	$ 130.37	-30.4%	$ 47.86	-0.6%
2Q 2020	28,402	----	1,890,205	----	36.8%	----	$ 127.80	----	$ 46.99	----
2Q 2021	36,255	27.6%	3,433,766	81.7%	52.0%	41.5%	$ 183.95	43.9%	$ 95.73	103.7%

Source: STR (formerly known as Smith Travel Research)

As previously discussed, a record 66.6 million people visited New York City in 2019. In 2020, total visitation declined to an estimated 22.3 million visitors. As many cultural attractions and entertainment venues begin to re-open, leisure demand is anticipated to drive New York's hotel recovery, first from drive-to demand and then as travel restrictions continue to loosen, from fly-to domestic, and finally international visitors. Market participants believe that domestic leisure demand will reach 2019 levels by year-end 2021; however, corporate and foreign inbound travel is expected to take more time to recover. Corporate travel and entertainment spending is anticipated to be anemic in the near term as companies significantly cut travel and entertainment budgets. Additionally, many office buildings in the city maintain low physical occupancies as many employees continue working from home. This dynamic is expected to shift meaningfully by year-end 2021 as office buildings and employers provide a safe working environment to welcome back employees. Many hoteliers are confident that corporate entertainment dollars will begin to flow more regularly in 2022.

However, New York City is also dependent on international visitation. The return of this segment is critical for the long-term success of the market. The city's visitor's bureau forecast domestic travel to return to 2019 levels by 2023 and international travel by 2024. Presently, organizers of sizable meetings and events are beginning to check rates and availability for 2022 and beyond. However, concerns over novel variants are expected to prolong recovery in the group segment, as recently demonstrated by the cancellation of the 2021 New York International Automobile Show at the Jacob K. Javits Convention Center, only two weeks prior to arrival. Reportedly, the show typically attracts over 1.0 million visitors. Large events in New York City are not anticipated to occur until late 2021 before a more robust rebound is forecasted. RevPAR performance in New York City is expected to take two to four years to return, with profitability to follow.

Influences and Responses to COVID-19

The pandemic's impact is anticipated to be more than just the initial shock evidenced in 2020. Some of the observed New York City hotel trends include:

Closures

- According to STR, 98 hotels or 32,800 rooms remained off-line (or more than 25.0 percent of total New York City hotel supply) through year-end 2020. Industry experts believe that 20.0 to 30.0 percent of properties off-line may not find it feasible to re-open.

Conversions

- A decrease in hotel supply has also been experienced due to a growing number of hotels being converted into shelters by the New York City Department of Homeless Services (DHS). DHS has reportedly added over 60 hotels to its existing portfolio of shelters and market participants believe that over 10,000 hotel rooms in the city have been recently converted. However, City officials have indicated that the COVID inspired expansion of shelters is expected to unwind by year-end 2021.
- Non-traditional hotel investors have begun to target the sector for conversions to government sponsored shelter housing, senior housing, workforce housing, and outright demolition in select cases.

Workforce Constraints

- Hotels today are generally being operated by skeleton crews represented by some of the finest hoteliers in the business while many other employees were furloughed and subsequently influenced by expanded, but temporary, unemployment benefits. Sourcing high-skilled hospitality labor is anticipated to be difficult in the near term until profitability allows for moderate wage growth. Owners and operators that are able to provide career growth and opportunity will naturally attract and retain the best talent.

Technology Innovation

- The need to re-examine the industry through a health and cleanliness lens accelerated tremendously over the past year and early evidence indicates that travelers overall welcome contactless services.
- In a very short period of time, operational efficiencies were borne through the use of mobile technology. Various traditional hospitality tasks such as check-ins, providing guests with room keys, providing guests with menus, and taking food and beverage orders, now have streamlined technology solutions which are gaining traction in the current environment.
- Through the adoption of touchless technology, certain departments such as the front desk, housekeeping, and food and beverage, appear to be trending towards more touchless service options versus personal service touch points, effectively reducing the need for certain tasks typically completed by hotel staff. Many owners believe that operational costs will be reduced while service levels are preserved.

Citywide Hotel Special Permit

- This proposed amendment to New York City's Zoning Resolution, if adopted, would require all future hotel developments to seek approval from the City Planning Commission. The amendment is currently undergoing a public review process which is expected to be completed by the Fall of 2021. In the event the proposed zoning text is implemented, hotel supply may be constrained for the foreseeable future.

Historically, hotel supply growth in New York City has been kept in check due to natural barriers to entry as well as escalating construction and land costs. But as the market begins to recover from the effects of the COVID-19 pandemic, the hotel landscape has shifted with closures and conversions on the rise. The proposed modifications to New York City's Zoning Resolution, if approved, would also hamper hotel development for the foreseeable future.

Considering these factors, hotel supply could potentially see a decline of more than 10.0 percent. Historically, market cycles that have experienced a decrease in supply have benefitted from robust pricing power brought on by rate compression. In the near term, however, hotel supply is anticipated to be in flux. Most hotels are expected to open when economically viable to do so in the second half of 2021, although some properties will not. Hotel developments under construction are trying to keep the projects going while others are seeking to delay opening until adequate demand returns. Proposed hotel projects that have not started construction are likely to be delayed for several years or canceled.

Summary and Outlook

New York City continues to reopen and its hotel market is in an infancy stage of recovery. Hotel occupancy rates improved with hotel demand in the second quarter of 2021, increasing by more than 15 percentage points over the prior quarter. As the second half of the year commenced, the southern and northern Manhattan hotel submarkets, in general, have experienced accelerated demand growth over trade areas that are more Midtown-centric and populated with older, larger, group dependent hotels. The southern and northern hotel submarkets are also located within proximity to popular residential districts, which have started to re-activate largely due to the expansion of local food and beverage offerings.

Hudson Yards has evolved into a tourism destination of its own featuring significant leisure hotel demand generators. In September 2021, the Federal Government announced that travelers from the United Kingdom and Europe will be permitted entry to the United States in November 2021, subject to proof of vaccination. The current hotel stock, highlighted by some recent openings such as the 286-room Fairfield Inn (Upper Midscale), 284-room Springhill Suites (Upscale), 399-room Courtyard (Upscale), and 212-room Equinox (Independent), has been absorbed swiftly and for the most part, many hotels located in Hudson Yards remained open throughout the pandemic. Considering the superior attributes of the location, along with the class of hotel inventory which consists primarily of independent, upper midscale, and upscale hotels, properties located within Hudson Yards are anticipated to enjoy elevated demand levels and higher occupanices, relative to the overall Manhattan hotel market.

As previously discussed, vaccination requirements are expected to fuel access to recreational and entertainment venues citywide. The State of New York recently launched a user-friendly app known as the Excelsior Pass. The pass serves as a secure digital proof of vaccination and/or negative test results. There is no one-size-fits-all recovery timeline due to the varying hotel profiles in the market which are highly influenced by characteristics such as age, room count, labor, quality and condition, as well as product class. Hotels that suspended operations with plans to reopen expect to restart in the second half of 2021. NYC & Company estimates visitation to return to pre-COVID levels by 2024. Overall, RevPAR performance in New York City is expected to take two to four years to return, with profitability to follow. Despite near-term concerns attributed to recovery from the pandemic, the city is strong and resilient and is expected to improve over the long term. Lessons learned from prior cycles indicate that recovery often presents the best opportunity for significant net income growth and investment returns.

Retail Market Overview

Market Conditions Prior to the COVID-19 Pandemic

The retail industry was struggling before the coronavirus crisis and was in the midst of a massive restructuring. Manhattan's retail market has been plagued by increasing availability and softening asking rents since 2017. While the effects of COVID-19 were especially apparent in the retail industry, the troubles faced by retailers of all sizes began to manifest pre-COVID.

Retail rental rates have been on a downward trend generally since 2017. The most expensive retail rents have historically been located in the Midtown submarket of Manhattan, including Times Square and Fifth Avenue, which receive a heavy flow of traffic from tourists. In 2019, eight of the 11 Manhattan submarkets saw their retail asking rent fall year-over-year. Retail located in Hudson Yards is not currently part of any subdistrict defined by Cushman & Wakefield. The Madison Avenue submarket had the largest reduction, with asking rents falling 21.8 percent between 2018 and 2019. The Herald Square/West 34th Street and Flatiron/Union Square West submarkets felt similar dips in asking rent between 2018 to 2019, falling by 20.6 percent and 18.9 percent, respectively. As shown in the chart below, every retail submarket in Manhattan had witnessed a reduction in rents in 2019 when compared to 2017 rents:

MANHATTAN RETAIL MARKET STATISTICS
Rental Rates

Retail Submarket	4Q19	4Q18	4Q17	4Q10	2018 to 2019 Percent Change	2017 to 2019 Percent Change	2010 to 2019 Percent Change
Upper Fifth Avenue	$2,673	$2,668	$2,982	$2,254	0.2%	(10.4%)	18.6%
Upper Fifth Avenue*	$2,843	$2,682	$2,925		6.0%	(2.8%)	
Lower Fifth Avenue	$831	$996	$1,138	$538	(16.6%)	(27.0%)	54.5%
Madison Avenue	$921	$1,178	$1,413	$847	(21.8%)	(34.8%)	8.7%
SoHo	$370	$414	$440	$277	(10.6%)	(15.9%)	33.6%
Third Avenue	$230	$240	$274	$234	(4.2%)	(16.1%)	(1.7%)
Times Square	$2,005	$2,050	$2,020	$747	(2.2%)	(0.7%)	168.4%
Upper West Side	$326	$332	$365	$290	(1.8%)	(10.7%)	12.4%
Flatiron	$351	$433	$413		(18.9%)	(15.0%)	
Meatpacking District	$367	$354	$383		3.7%	(4.2%)	
Herald Square/West 34th Street	$489	$616	$691		(20.6%)	(29.2%)	
Lower Manhattan	$366	$362	$419		1.1%	(12.6%)	

Source: Cushman & Wakefield Research; compiled by C&W V&A
*Direct space only

Availabilities were also on the rise in Manhattan's retail sector even before the pandemic began in 2020. The Times Square-Bowtie submarket felt the greatest shift, with availability growing from 20.0 percent in 2018 to 27.5 percent in 2019. Availability had been on an upward trend for several years, and 2019 witnessed increased availability in seven of Manhattan's 11 submarkets when compared to availability rates in 2017, as shown in the chart on the following page:

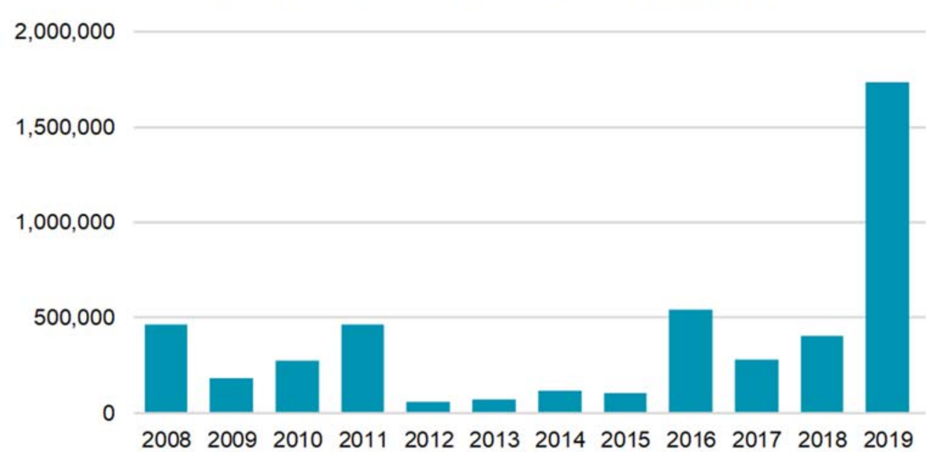
MANHATTAN RETAIL MARKET STATISTICS Availability Rate							
Retail Submarket	4Q19	4Q18	4Q17	4Q10	2018 to 2019 Percentage Point Change	2017 to 2019 Percentage Point Change	2010 to 2019 Percentage Point Change
Upper Fifth Avenue	26.5%	27.5%	18.8%	11.3%	(1.0%)	7.7%	15.2%
Upper Fifth Avenue*	11.8%	14.5%	10.1%		(2.7%)	1.7%	
Lower Fifth Avenue	14.8%	23.3%	34.5%	9.0%	(8.5%)	(19.7%)	5.8%
Madison Avenue	24.9%	28.2%	22.9%	12.8%	(3.3%)	2.0%	12.1%
SoHo	23.8%	24.5%	24.1%	8.4%	(0.7%)	(0.3%)	15.4%
Third Avenue	17.6%	19.2%	18.3%	10.9%	(1.6%)	(0.7%)	6.7%
Times Square	27.5%	20.0%	11.1%	9.3%	7.5%	16.4%	18.2%
Upper West Side	13.8%	10.4%	12.5%	5.7%	3.4%	1.3%	8.1%
Flatiron	19.6%	13.9%	15.1%		5.7%	4.5%	
Meatpacking District	21.3%	24.1%	26.6%		(2.8%)	(5.3%)	
Herald Square/West 34th Street	26.2%	32.8%	34.5%		(6.6%)	(8.3%)	
Lower Manhattan	18.2%	15.3%	15.3%		2.9%	2.9%	

Source: Cushman & Wakefield Research; compiled by C&W V&A

*Direct space only

New retail construction in Manhattan has shifted toward more experiential retail, to offer customers a unique experience compared to shopping online. Brands have begun to shy away from large flagship stores in favor of boosting their online presence, as eCommerce continues to grow in popularity. Construction on the TSX Broadway project at 1568 Broadway in Times Square is estimated to include 75,000 square feet of retail, which will occupy 10 floors and include 15,000 square feet of ground-floor space and 100 feet of frontage facing Times Square. Pre-COVID, developers expected the experiential retail portion to draw 15 million people per year. Other major retail construction with experiential components include Fulton Transit Center on Broadway, the $1.7 billion redevelopment of the South Street Seaport/Pier 17, and the Westfield World Trade Center. The $1.6 billion expansion of the Farley Building, now called the Moynihan Train Hall, was also underway. This project includes the construction of a train hall (which is now complete), 700,000 square feet of commercial office and retail space, as well as a ground level retail concourse that will connect Pennsylvania Station to Ninth Avenue, Brookfield Properties' Manhattan West, Related Companies' Hudson Yards, and beyond. The chart below shows Manhattan retail construction completions between 2008 and 2019:

Manhattan Retail Construction Completions



Source: Cushman & Wakefield Valuation & Advisory and CoStar Group, Inc.

Prior to the pandemic, pop-up stores became a staple in the Manhattan retail market, allowing brands to test the marketplace. These pop-up stores bring exclusive collaborations between established brands and eCommerce tenants into physical stores ranging from one day to one year. Food halls also became more popular, as a unique alternative to the typical restaurant. Pre-pandemic, food halls enabled consumers to interact with food and physical space in different ways depending on the seating, setup, and social events. They were also being used to revitalize dated and/or more traditional retail projects. New food halls in Manhattan include 8SIA, Asian-inspired street food in the News Building at 220 East 42nd Street, the Hugh at 601 Lexington Avenue, and the Market Line in the Essex Crossing development on the Lower East Side, offering dozens of international cuisines. Any area in Manhattan with high pedestrian traffic was witnessing the growth of the food hall concept.

Before the pandemic, New York City's cultural and historical landmarks collection positioned it as the country's top tourist destination. New York City's international presence has long provided a substantial flow of spending in the market, subsequently generating retail space demand. Prior to COVID-19, New York City tourism numbers had increased each year for the last ten years, with 2019 reaching a record high, as discussed earlier.

The pre-covid Manhattan retail market could be characterized as continuing to face challenges, but leasing was improving. Manhattan retail leasing activity totaled more than 4.0 million square feet in 2019, up from 3.4 million square feet in 2018, as the market adjusted and tenants took advantage of lower rents. Leasing velocity in 2019 also outpaced the 2017 total by 9.7 percent. More than 800 retail transactions were closed in 2019, 80 of which were greater than 10,000 square feet. Food users and apparel retail space takers continued to dominate as the most active industries.

Market Conditions During the COVID-19 Pandemic

During the past 18 months, Manhattan continued to experience declining asking rents, increasing availability across the submarkets, and declining leasing activity, as tenants delayed major decisions and waited for the city to return to normal.

New York State declared a state of emergency on March 8, 2020 due to the rapid spread of the coronavirus, and signed the New York on PAUSE act on March 20, 2020, which declared that all non-essential workers must work remotely. Some retail businesses were deemed essential, such as grocery stores, convenience stores, and pharmacies, and did not shutter during the worst of the pandemic. Far more retailers were declared non-essential and forced to close operations.

The first phase of New York's reopening occurred on June 8, 2020, and allowed most other retail establishments to reopen for delivery and in-store pickup. The second phase permitted retail stores to reopen for in-store shopping, but with a 50 percent capacity, and took effect June 22, 2020. Public gatherings of 25 people or less were permitted during phase 3, as well as indoor dining limited to 50 percent capacity, with social distancing restrictions. Finally, phase 4 allowed indoor gatherings of 50 people or less and reopened malls, museums, and religious facilities, also with reduced capacities and social distancing guidelines. Movie theaters, concert venues, and amusement parks remained closed in phase 4. Broadway theaters remained closed throughout the pandemic, before finally reopening in September 2021.

Manhattan felt the most obvious impact of the retail decline through the pandemic, as foot traffic decreased dramatically and office employees worked from home. As of August 2021, the majority of office-using workers had not returned full-time to the office, taking a significant percentage of the day-to-day traffic away from the retailers that relied on it. The pandemic had less of an impact in retail corridors with strong residential bases like the Upper East Side than corridors that rely heavily upon tourists and daytime commuters such as Madison Avenue, Fifth Avenue, and Times Square.

In 2020, the number of tourists visiting the city plummeted to 22.3 million, decreasing by two-thirds from 2019's total. NYC & Company has forecast 36.4 million visitors in 2021 and expects domestic travel to return to 2019 levels by 2023 and international travel by 2024.

The retail market felt the brunt of the pandemic in terms of leasing activity in the second quarter of 2020. Manhattan leasing activity totaled less than 250,000 square feet across 33 transactions—down nearly 75 percent compared to the volume of space leased during the second quarter of 2019—as most neighborhood and high street locations registered a downturn in deal velocity. Six transactions greater than 10,000 square feet accounted for 61.1 percent of leasing activity in the second quarter of 2020. Leasing activity in Manhattan has improved since the height of the pandemic, and has picked up in the first half of 2021, increasing by 27.6 percent in a year-over-year comparison.

Taxable retail sales declined by nearly one-third from March 2020 to May 2020, compared to one year earlier, with every subsector seeing declines except non-store retailers. During the second quarter of 2020, the decline in taxable sales slowed, sitting just 4.6 percent below the second quarter of 2019, and improvements were noted in every retail subsector.

Federal relief has been provided in the form of small business loans, forgivable loans, and grants. More than half of the city's retail businesses received approval for the Paycheck Protection Program, which allowed small businesses to receive loans that would be forgiven if they met a few criteria, such as maintaining employee compensation levels and using the proceeds for payroll costs and other eligible expenses. Despite Federal relief and stimulus, several well-known retailers were forced to declare bankruptcy amidst the pandemic, including Modell's Sporting Goods, Neiman Marcus, Brooks Brothers, and Lord & Taylor. Rent collection has also been an issue and some commercial landlords have sued retail tenants for months of delinquent rent. Landlords in New York City are prohibited from evicting commercial tenants over pandemic-related rent until January 15, 2022. Foreclosures on property owners cannot take place through the same date. As of September 2021, several lawsuits have been filed to contest the eviction moratorium.

Despite an increase in leasing activity during the second quarter of 2021, availability rates in Manhattan continued to climb in a year-over-year comparison. Excluding the Upper Fifth Avenue Direct submarket, which only includes direct spaces on the corridor, ground floor direct availability rates continued to exceed 20 percent in all Manhattan submarkets through the second quarter of 2021. Madison Avenue, home to high-end luxury stores, recorded the highest availability rate at 39.2 percent while the Upper West Side recorded the lowest rate at 21.1 percent. Madison Avenue incurred the largest impact of the pandemic, increasing by 14.3 percent since the fourth quarter of 2019. The chart on the following page highlights the changes in Manhattan submarket availability rates over the last quarter, the last year, and since the fourth quarter of 2019, which was the last quarter unaffected by the coronavirus:

Retail Market Statistics by Submarket
Manhattan
Availability Rate

Retail Submarket	2Q21	1Q21	2Q20	4Q19	Quarterly Percentage Point Change	Annual Percentage Point Change	Pre-Pandemic Percentage Point Change
Upper Fifth Avenue	21.7%	20.3%	23.5%	26.5%	1.4%	(1.8%)	(4.8%)
Upper Fifth Avenue Direct*	13.0%	11.6%	11.8%	11.8%	1.4%	1.2%	1.2%
Lower Fifth Avenue	25.9%	27.8%	20.4%	14.8%	(1.9%)	5.5%	11.1%
Madison Avenue	39.2%	40.3%	32.8%	24.9%	(1.1%)	6.4%	14.3%
SoHo	26.6%	29.8%	23.5%	23.8%	(3.2%)	3.1%	2.8%
Third Avenue	21.3%	23.1%	17.8%	17.6%	(1.8%)	3.5%	3.7%
Times Square	31.4%	31.3%	33.3%	27.5%	0.1%	(1.9%)	3.9%
Upper West Side	21.1%	20.8%	15.7%	13.8%	0.3%	5.4%	7.3%
Flatiron/Union Square	28.3%	29.0%	19.6%	19.6%	(0.7%)	8.7%	8.7%
Meatpacking	30.0%	29.3%	24.0%	21.3%	0.7%	6.0%	8.7%
Herald Square/W. 34th Street	33.9%	30.5%	25.4%	26.2%	3.4%	8.5%	7.7%
Lower Manhattan	25.7%	25.1%	20.3%	18.2%	0.6%	5.4%	7.5%

Source: Cushman & Wakefield Research; compiled by C&W V&A

*Direct space only

The pre-pandemic downward pressure on average asking rental rates has continued, with year-over-year rents down in all of Manhattan's retail submarkets. In contrast to the availability rates, which grew at the start of the pandemic and have begun to normalize, average ground-floor rents have continued to fall each quarter nearly across the submarkets. Every Manhattan retail submarket has witnessed reduced average ground-floor asking rent when comparing the second quarter of 2021 to the fourth quarter of 2019, as shown in the chart below:

MANHATTAN RETAIL MARKET STATISTICS
Rental Rates

Retail Submarket	2Q21	1Q21	2Q20	4Q19	Quaterly Percent Change	Annual Percent Change	Pre-Pandemic Percent Change
Upper Fifth Avenue	$2,405	$2,389	$2,620	$2,673	0.7%	(8.2%)	(10.0%)
Upper Fifth Avenue*	$2,733	$2,733	$2,843	$2,843	0.0%	(3.9%)	(3.9%)
Lower Fifth Avenue	$613	$631	$706	$831	(2.9%)	(13.2%)	(26.2%)
Madison Avenue	$743	$754	$822	$921	(1.5%)	(9.6%)	(19.3%)
SoHo	$274	$279	$319	$370	(1.8%)	(14.1%)	(25.9%)
Third Avenue	$198	$204	$223	$230	(2.9%)	(11.2%)	(13.9%)
Times Square	$1,549	$1,728	$1,929	$2,005	(10.4%)	(19.7%)	(22.7%)
Upper West Side	$272	$274	$298	$326	(0.7%)	(8.7%)	(16.6%)
Flatiron	$279	$286	$329	$351	(2.4%)	(15.2%)	(20.5%)
Meatpacking District	$325	$342	$364	$367	(5.0%)	(10.7%)	(11.4%)
Herald Square/West 34th Street	$386	$401	$463	$489	(3.7%)	(16.6%)	(21.1%)
Lower Manhattan	$349	$356	$399	$366	(2.0%)	(12.5%)	(4.6%)

Source: Cushman & Wakefield Research; compiled by C&W V&A
*Direct space only

As previously discussed, Manhattan retail construction reached a record high in 2019, surpassing each year since 2008 by more than one million square feet. The New York on PAUSE act prohibited non-essential construction between March and June 2020 but is not fully responsible for the lack of construction completions in 2020. The first half of 2021 has already surpassed the entire previous year of construction completions.

Summary and Outlook

By August 2020, activity in essential stores had returned to pre-pandemic levels while most other retail subsectors, such as clothing stores, remained below levels from one year earlier. After more than a year of capacity restrictions and social distancing requirements, New York State lifted all COVID-19 related restrictions in June 2021, allowing businesses to operate as they did before the pandemic.

While concert venues, movie theaters, and Broadway theaters have resumed service, many require proof of vaccination. The NY State Excelsior Pass application was launched in August 2021, allowing New Yorkers to easily access their verified proof of vaccination on their phones for entry into establishments where it is required.

The coronavirus pandemic has intensified trends previously noted in the retail market, namely the increase of online sales. The short-term economic impact of the pandemic is expected to result in consumers focusing on value and essentials, both in-store and online. eCommerce sales are expected to continue to grow for the foreseeable future. Many retailers are attempting to reinvent their business models, using modern technology to motivate and retain customers, including advertising for online coupon codes, bulk discounts, and free shipping. As a result, shopping continues to transition to an omni-channel model, as new construction indicates an increased interest in experiential retail. While consumers are expected to return to brick-and-mortar stores in the long-term, there is likely a permanent shift in online shopping behavior for many consumers. Brick-and-mortar retail accounted for 85 percent of all sales before the pandemic. By the end of 2020, retail sales in New York City had surpassed the total from 2019 with $137 billion. [12] These figures were strengthened by online sales.

[12] United States Census Bureau and Oxford Economics

Faster recoveries are expected in local amenity-based submarkets. Submarkets that thrive on sales of luxury goods, like Upper Fifth and Madison Avenues, and those driven by tourism, like Times Square, are expected to have a longer road to normalcy. Sales figures for Manhattan's Midtown and Downtown office submarkets should be bolstered when office workers, many of whom have been working from home since the pandemic began, return to the office. As discussed in the office market analysis, many firms have delayed their planned returns to various points throughout the remainder of 2021, though in some cases to January 2022.

Retailers that have signed new leases since the pandemic began have taken advantage of tenant-favorable market conditions, including flexible leases, increased tenant improvement allowances, deferred rent, rent abatements, and free rent. Retailers who have fared well financially during the pandemic have used the market's downturn as an opportunity to move to larger locations without a significant increase in gross rent, while others have downsized their brick-and-mortar footprint to save on costs.

Hudson Yards was not immune to the pandemic's negative impact on the New York City retail market, but serves as a relevant example of how landlords are repositioning retail properties to recoup costs. The retail component at 20 Hudson Yards, also known as "The Shops and Restaurants at Hudson Yards", contains approximately 720,000 square feet of gross leasable area and includes tenants such as Zara, H&M, Tiffany, and Cartier. The building was initially designed and developed as an upscale indoor shopping mall anchored by Neiman Marcus. The upscale retailer announced its 50-year lease in September 2014, making it the first anchor tenant at 20 Hudson Yards. The developers reportedly spent approximately $80 million to build out the store for Neiman Marcus, which was intended to attract other retailers to the mall. However, Neiman Marcus filed for bankruptcy in May 2020 and closed its 20 Hudson Yards store in August 2020, leading the developers to reposition its former space for office use. In June 2020, the developers began marketing Neiman's retail space as office space, the approximate time when Facebook Inc. indicated interest in expanding its footprint into 20 Hudson Yards. As of August 2021, approximately 300,000 square feet is available for lease, which includes Neiman's former anchor store as well as other vacant suites at the mall. Removing the retail that will be leased as office space, occupancy at 20 Hudson Yards is in line with availability rates throughout Manhattan.

Several trends that emerged shortly before or during the pandemic are anticipated to continue to gain traction and evolve. Pop-up stores are expected to remain an essential part of the Manhattan retail landscape in its recovery. Landlords will continue to allow short-term leases, which bring short-term cash flow and reduce the risk of non-payment from struggling tenants that signed long-term leases. Additionally, short-term leases enable landlords to wait to find a quality long-term tenant. Food halls should expect to see a boost in customers after more than a year of dealing with COVID-19. A number of food hall vendors were able to create new operations and strategies to abide by the new social distancing measures. New York City's Open Storefronts program, which allows businesses to operate partially on the sidewalk adjacent to their storefront, may continue after the pandemic due to its popularity. The number of open storefront businesses in Times Square increased 158 percent from March 2020 when the public health crisis began.

The retail sector is the most adaptive and innovative in commercial real estate; it must react quickly to changing consumer preferences. In a post-COVID-19 world, Cushman & Wakefield expects the emergence of a new wave of retailers and businesses, just as Uber and Airbnb did during the financial crisis of 2008 and anticipates some new entrants into the retail market, similar to what occurred during the "retail apocalypse" of 2016. Although the effects of the pandemic are presenting significant challenges to the Manhattan retail market, positive market activity such as increased tenant tours, and leasing activity are starting to show positive trends. While some market metrics are improving, the overall leasing activity, rental rates and availabilities are significantly off from pre-pandemic levels.

Chapter 3 - New York City Real Property Taxation

Overview

Under the current New York State Real Property Tax Law, all real property in the city is separated into four classes based upon use and type of building. The tax classes are as follows:

- Class 1 property includes one, two and three family houses.
- Class 2 property consists of all other residential property, including cooperatives, residential condominium and rental buildings.
- Class 3 comprises utilities' real property
- Class 4 includes all other commercial property such as retail stores, hotels, office buildings and vacant land.

The majority of completed, on-going, and proposed developments in Hudson Yards fall within Class 2 and Class 4.

The New York City property tax levy is determined as the final component in the City's budgetary process. The levy is the result of subtracting total expenses in the fiscal year[1] from all other projected sources of revenues (income and use taxes, fees and intergovernmental transfers). The difference equals the property tax levy that by statute results in a balanced budget as mandated by the state constitution.

The total property tax levy is distributed across the different property classes into class levies by a mechanism that incorporates base year shares, market value growth since the base year and physical changes since the base year. This calculation is made in accordance with regulations published by the New York State Office of Real Property Services pursuant to New York State Real Property Tax Law.

Class Shares x Total Tax Levy = Class Levy

Dividing the Class Levy by the Class billable assessed value derives the tax rates for each Class.

Class Levy / Class Billable Assessed Value = Class Tax Rate

Assessments

All properties are assessed each year and a tentative assessment for each property is produced in mid-January. Taxpayers are allowed to dispute their assessment by initiating an appeal with the tax commission. Adjustments are then reflected in the final roll which is published in May of each year.

Assessment increases due to equalization changes are subject to certain restrictions. For Class 1 properties, assessment increases are limited to 6.0 percent annually and no more than 20.0 percent over five years. Increases for small properties in Class 2 with fewer than 11 units are limited to 8.0 percent per year and 30.0 percent over five years. Assessment increases for all other Class 2 properties and all Class 4 properties are not subject to any limitations.

Changes in assessments due to equalization changes for properties in Class 2 and Class 4 are phased in over a five-year time period at 20.0 percent per year. The phase-in period results in an interim assessment referred to as the transitional assessment. The lower of the actual or transitional assessed value is then used to determine the

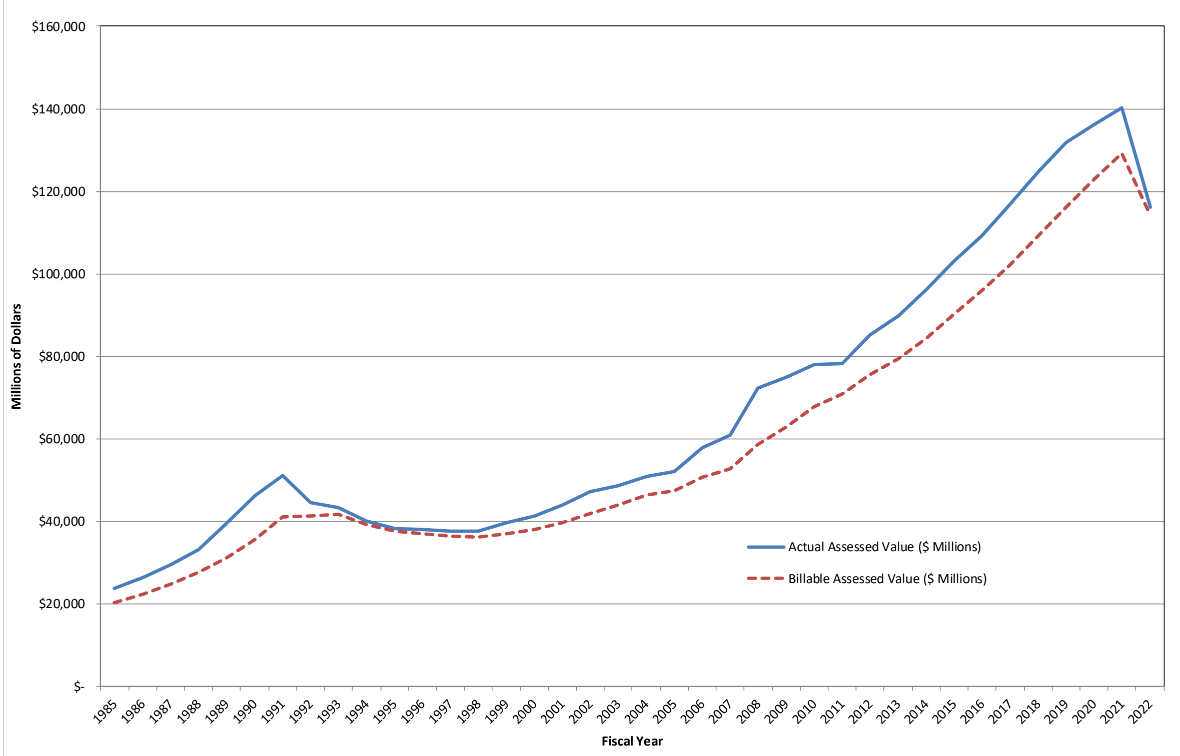
[1] Tax Revenue data provided by the New York City Office of Management and Budget and Department of Finance refers to the City fiscal year that anticipates the calendar year by six months running from July 1st to June 30th (i.e., FY 2022 runs from July 1, 2021 to June 30, 2022).

billable assessed value used to compute taxes (for Class 1 and Class 3 properties, billable and actual assessments are identical). This formula has a twofold effect on Class 4 assessments as shown in Exhibit 3-1.

In periods of market downturns and declining market assessments, billable assessment can continue to rise as a result of the pipeline effect. For example, during the market downturn in the early 1990s, even though market assessments and actual assessments began to decline in 1990, billable assessed value continued to increase, as the pipeline of assessment phase-ins from the strong years of 1985 to 1990 worked its way into the transitional assessment. It was only in 1994 that this pipeline effect capped and assessed and billable values converged. Conversely, in market upturns actual assessed value tends to outstrip billable assessments, since increases are phased in gradually to market. This is evident during the post-2000 period as illustrated below. The residual effect of this pipeline contributes to the relative stability of the real estate tax base.

As a result of the impact of COVID-19, Class 4 billable assessed values decreased 11.65 percent in fiscal year 2022, and actual assessed values decreased 17.8 percent. The acute decrease in actual and billable assessments in fiscal year 2022 is evident in the following chart. As illustrated, the sharp decrease was unprecedented over the prior 38 years.

Exhibit 3-1: Class 4 Commercial Properties – Actual and Billable Assessed Value, 1985-2022



Source: NYC Department of Finance

Although Class 4 billable assessed values decreased sharply in fiscal year 2022 (11.65 percent), the decrease was mitigated for trophy office buildings in Manhattan. Most of the completed office properties in Hudson Yards are trophy assets. According to the Department of Finance, assessed values for trophy office buildings declined 7.07 percent in fiscal year 2022. The lower than average decrease reflects the resiliency of trophy buildings, which typically consist of newly completed, well-located buildings with high occupancy rates and strong rent rolls comprised of institutional and credit-worthy tenants with long-term leases. These attributes are consistent with the office assets profiled in Chapter 5. Four of the ten profiled office assets (10 Hudson Yards, 1 Manhattan West, 30 Hudson Yards, and 5 Manhattan West) were complete and stabilized in fiscal years 2021 and 2022. As illustrated in the following table, billable assessments for these four assets decreased an average of 0.82 percent in fiscal year 2022.

Asset	Billable Assessment FY 2021	Billable Assessment FY 2022	% Change
10 Hudson Yards	$359,204,780	$348,648,750	-2.94%
1 Manhattan West	$428,000,000	$420,000,000	-1.87%
30 Hudson Yards	$530,553,012	$530,119,402	-0.08%
5 Manhattan West	$220,018,971	$223,578,716	1.62%

The nominal decrease in billable assessed values reflects the quality and long-term stability of the assets.

Buildings under construction are assessed based on the percentage completed, for a maximum allowable three year construction period. During the construction period, a tentative assessment is made, using the income approach typically used in assessments (the assessment mechanism is discussed in further detail on the following pages). During the three-year construction period the tentative or progress assessment for new buildings is not reflected in the final roll, but serves merely as a progress assessment. After the three-year construction period ends, properties are fully assessed based on the income approach. Demolition and alterations and changes in taxable status are not subject to the phase-in and are immediately assessed at market value.

Actual assessments and billable assessments for each property type are shown in Exhibit 3-2. Average annual growth rates are computed for the 38 fiscal years of 1985 to 2022. Overall actual assessed values for Class 2 and Class 4 properties experienced the highest rate of growth over the prior 38 years with a compound average rate of 5.5 percent and 4.4 percent, respectively. Exclusive of the sharp decrease that occurred in fiscal year 2022, Class 2 and Class 4 assessments increased at a compound average rate of 5.9 percent and 5.1 percent, respectively, between 1985 and 2021.

The growth in Class 4 assessments, however, has been more uneven than Class 2. Class 4 actual assessments experienced sharp declines in the early 1990s as the economic downturn caused vacancies to rise and rents to fall, particularly in the Downtown market. Furthermore, conversions of office space in Downtown and the boroughs from commercial to residential use also impacted the overall Class 4 assessment as part of the commercial stock was converted to residential usage. In contrast, following the 2001 downturn (fiscal year 2002), Class 4 assessments continued to rise as the effect of the downturn was mitigated by the scarce amount of inventory built during the 1990s and continued to increase even through the 2009-2010 recession as the Manhattan market remained relatively healthy. The decrease in assessed values in fiscal year 2022 represents the first decrease in Class 2 values since 1995, and the first decrease in Class 4 values since1998.

Exhibit C-2: Real Estate Property – Actual and Billable Assessed Value, 1985-2022

Exhibit 3-2: Real Estate Property - Actual and Billable Assessed Value, 1985-2022

	Actual Assessed Value ($ Millions)					**Billable Assessed Value ($ Millions)**				
Year	Class 1	Class 2	Class 3	Class 4	Total	Class 1	Class 2	Class 3	Class 4	Total
1985	6,505.3	14,170.0	9,160.1	23,754.4	53,589.8	6,505.3	12,668.2	8,792.4	20,300.5	48,266.4
1986	6,776.9	15,411.4	10,058.0	26,326.6	58,572.9	6,776.9	13,548.7	9,798.2	22,346.1	52,469.9
1987	6,794.0	16,504.2	9,327.6	29,346.8	61,972.6	6,794.0	14,260.2	9,327.6	24,707.6	55,089.4
1988	7,204.5	18,333.4	8,829.7	33,132.3	67,499.9	7,204.5	15,542.9	8,829.7	27,534.4	59,111.5
1989	7,591.9	21,210.3	8,261.2	39,513.8	76,577.2	7,591.9	17,197.4	8,261.2	31,091.1	64,141.6
1990	7,995.1	24,381.1	7,366.6	46,103.8	85,846.6	7,995.1	19,169.2	7,366.6	35,523.0	70,053.9
1991	8,442.0	26,736.7	5,266.5	51,088.9	91,534.1	8,442.0	21,615.9	5,266.5	41,009.2	76,333.6
1992	8,676.8	25,354.4	4,965.5	44,614.3	83,611.0	8,676.8	23,557.2	4,965.5	41,268.1	78,467.6
1993	8,619.1	25,441.3	4,312.4	43,341.8	81,714.6	8,619.1	24,552.3	4,312.4	41,695.3	79,179.1
1994	8,521.3	24,447.9	6,309.8	40,017.5	79,296.5	8,521.3	24,079.9	6,309.8	39,266.5	78,177.5
1995	8,702.2	23,852.8	6,129.3	38,122.8	76,807.1	8,702.2	23,604.4	6,129.3	37,583.5	76,019.4
1996	8,871.5	24,308.9	6,140.2	38,102.9	77,423.6	8,871.5	23,751.2	6,140.2	37,088.7	75,851.6
1997	8,976.8	24,585.4	6,370.8	37,576.3	77,509.3	8,976.8	23,838.8	6,370.8	36,308.6	75,495.0
1998	9,164.4	25,351.0	6,548.9	37,706.0	78,770.3	9,164.4	24,228.8	6,548.9	36,078.6	76,020.7
1999	9,234.8	26,734.9	6,512.5	39,672.5	82,154.7	9,234.8	24,965.2	6,512.5	36,986.2	77,698.7
2000	9,424.7	28,524.5	6,619.5	41,299.3	85,868.0	9,424.7	26,126.4	6,619.5	37,918.8	80,089.4
2001	9,778.9	30,597.6	6,320.5	43,872.8	90,569.7	9,778.9	27,501.7	6,320.5	39,657.0	83,258.0
2002	10,096.6	33,653.8	6,530.8	47,205.2	97,486.4	10,096.6	29,674.9	6,530.8	41,987.3	88,289.6
2003	10,611.6	36,552.1	6,836.1	48,704.9	102,704.7	10,611.6	31,993.7	6,836.1	43,845.9	93,287.4
2004	11,132.5	37,738.2	7,021.6	50,897.1	106,789.4	11,132.5	34,151.9	7,021.6	46,328.4	98,634.4
2005	11,547.1	39,108.8	7,488.7	52,171.8	110,316.4	11,547.1	35,950.8	7,488.7	47,380.7	102,367.3
2006	12,146.9	43,941.4	8,501.9	57,891.4	122,481.6	12,146.9	38,630.6	8,501.9	50,734.6	110,014.1
2007	12,712.6	45,048.7	9,078.4	60,797.3	127,637.0	12,712.6	40,528.3	9,078.4	52,800.0	115,119.3
2008	13,289.3	51,260.2	8,725.2	72,311.2	145,585.9	13,289.3	43,751.6	8,725.2	58,695.3	124,461.4
2009	13,955.3	53,457.0	9,589.1	74,997.1	151,998.6	13,955.3	46,544.1	9,589.1	62,908.1	132,996.7
2010	14,417.8	55,055.0	10,450.8	78,029.1	157,952.6	14,417.8	49,267.8	10,450.8	67,712.2	141,848.5
2011	14,952.7	55,530.8	11,036.0	78,176.1	159,695.6	14,952.7	50,771.3	11,036.0	70,869.2	147,629.2
2012	15,293.9	60,102.9	10,875.3	85,083.5	171,355.6	15,293.9	53,697.0	10,875.3	75,550.2	155,416.4
2013	15,784.7	62,215.4	11,349.0	89,774.4	179,123.6	15,784.7	55,880.9	11,349.0	79,330.8	162,345.5
2014	16,229.0	65,564.7	12,244.5	96,158.9	190,197.2	16,229.0	58,921.5	12,244.5	84,352.6	171,747.5
2015	16,915.4	70,514.5	12,355.1	103,077.4	202,862.4	16,915.4	63,037.3	12,355.1	90,206.9	182,514.7
2016	17,727.6	77,316.8	13,476.6	109,121.6	217,642.6	17,727.6	67,943.2	13,476.6	96,038.0	195,185.4
2017	18,393.9	85,118.5	14,203.3	116,826.1	234,541.7	18,393.9	73,978.9	14,203.3	102,035.1	208,611.1
2018	19,442.8	92,585.8	14,683.9	124,770.4	251,482.9	19,442.8	81,049.9	14,683.9	109,284.7	224,461.3
2019	20,146.8	100,491.1	15,225.6	131,841.2	267,704.7	20,146.8	88,220.1	15,225.6	116,136.8	239,729.3
2020	21,042.9	107,146.0	16,649.3	136,210.1	281,048.4	21,042.9	96,097.5	16,649.3	122,798.5	256,588.3
2021	22,018.2	112,123.5	17,064.6	140,146.9	291,353.3	22,018.2	102,509.6	17,064.6	129,201.3	270,793.7
2022	22,801.4	102,628.9	18,484.9	116,072.9	259,988.0	22,801.4	101,239.3	18,484.9	114,153.7	256,679.3
Average Annual Growth, 1985-2022										
	3.4%	**5.5%**	**1.9%**	**4.4%**	**4.4%**	**3.4%**	**5.8%**	**2.0%**	**4.8%**	**4.6%**

Source: New York City Department of Finance, Office of Management and Budget

Real Estate Property Class Shares and Class Levy

The total City property levy is distributed across the four property classes through Class shares. Class shares are updated annually to reflect the relative changes in market value among property classes. Relative changes in Class market value reflect both assessment increases in existing properties as well adjustments due to changes in the physical stock. These include changes due to new construction, demolition, alterations and reclassifications.

The current mechanism for adjusting Class shares accounts for changes in market value and physical stock and was first applied in 1992, using the change from the prior year (1991) as the base. Consequently the 1991 Class share is referred to as the base percentage. Under the current mechanism, higher relative changes in market values for a given property Class lead to a correspondingly higher overall share of the overall tax levy. As with assessments, increases in Class shares are capped. Any excess over this cap is redistributed to the remaining classes at the New York City Council's discretion.

The Class levy by property type is obtained by multiplying the total tax levy in each year by the respective Class shares. Historic data on Class shares and the Class levy are shown in Exhibit 3-3. Class 1 and Class 2 shares combined have increased from an initial 37 percent of the overall levy to over 54 percent, while Class 4 has seen a corresponding decline in its share, reflecting the higher relative strength of the residential Class 1 and Class 2 markets. However, the Class 4 levy maintained an average growth rate of 3.6 percent as the overall property tax levy continued to rise by an average growth rate of 4.6 percent. The Class 4 levy has only declined six times, five consecutive years (1994-1998) and in 2022. As indicated in Exhibit C-2, Class 4 billable assessed values also declined in those years. The levy and assessed value amounts in 1994-1998 also consider the large number of office building conversions in Manhattan during that period.

Exhibit 3-3: Property Class Shares and Class Levy, 1991-2022

Exhibit 3-3: Property Class Shares and Class Levy, 1991-2022

	Total Levy	Class Shares					Class Levy $ millions			
Year	$millions	Class 1	Class 2	Class 3	Class 4		Class 1	Class 2	Class 3	Class 4
1991	7,743.00	10.92%	25.76%	10.34%	52.98%		845.5	1,994.60	800.6	4,102.30
1992	8,318.80	11.46%	28.00%	7.80%	52.74%		953	2,328.90	649.6	4,387.30
1993	8,392.50	11.28%	29.00%	6.57%	53.15%		946.9	2,433.40	551.8	4,460.40
1994	8,113.20	11.56%	30.78%	5.76%	51.90%		938.1	2,497.00	467.2	4,210.90
1995	7,889.80	11.92%	31.57%	5.98%	50.53%		940.1	2,490.90	472.1	3,986.70
1996	7,871.40	12.19%	32.61%	6.18%	49.01%		959.9	2,567.00	486.4	3,858.10
1997	7,835.10	12.47%	33.64%	6.37%	47.51%		977.4	2,635.80	499.5	3,722.50
1998	7,890.40	12.73%	33.92%	6.87%	46.48%		1,004.40	2,676.50	542.4	3,667.20
1999	8,099.30	12.96%	33.22%	7.08%	46.74%		1,049.80	2,690.60	573.1	3,785.90
2000	8,374.30	13.26%	34.08%	7.43%	45.23%		1,110.20	2,854.10	622.1	3,787.80
2001	8,730.30	13.50%	34.50%	7.63%	44.37%		1,178.40	3,012.10	666.2	3,873.60
2002	9,271.20	13.65%	34.94%	7.43%	43.98%		1,265.20	3,239.70	688.4	4,077.90
2003	10,688.80	13.87%	34.92%	7.41%	43.80%		1,482.80	3,732.10	792	4,681.80
2004	12,250.70	14.09%	35.56%	7.12%	43.23%		1,726.10	4,356.70	871.9	5,295.90
2005	12,720.00	14.69%	34.87%	7.39%	43.05%		1,868.00	4,435.80	940	5,476.20
2006	13,668.10	14.95%	35.43%	7.66%	41.96%		2,042.90	4,842.50	1046.5	5,736.20
2007	14,291.20	15.23%	36.51%	7.63%	40.63%		2,176.50	5,217.80	1090.1	5,806.80
2008	14,356.30	15.12%	36.72%	7.04%	41.13%		2,170.40	5,271.40	1010.1	5,904.40
2009	15,903.50	14.96%	37.21%	7.32%	40.51%		2,378.50	5,918.40	1163.9	6,442.70
2010	17,588.10	14.82%	37.47%	7.57%	40.14%		2,607.10	6,589.80	1331.7	7,059.50
2011	18,323.80	15.09%	37.42%	7.61%	39.88%		2,765.40	6,856.30	1394	7,308.10
2012	19,284.50	15.39%	37.81%	7.03%	39.77%		2,967.00	7,290.80	1356.4	7,670.40
2013	20,133.10	15.46%	36.97%	7.03%	40.54%		3,113.00	7,442.50	1416	8,161.70
2014	21,285.20	15.49%	36.75%	6.85%	40.91%		3,297.00	7,822.80	1457.4	8,708.10
2015	22,591.50	15.07%	36.18%	6.08%	42.66%		3,405.20	8,174.10	1374.5	9,637.70
2016	24,145.00	15.03%	36.55%	6.04%	42.38%		3,629.50	8,824.70	1,457.20	10,233.60
2017	25,794.10	14.89%	37.26%	6.02%	41.83%		3,841.30	9,610.60	1,553.00	10,789.10
2018	27,726.20	14.84%	37.42%	6.30%	41.44%		4,115.40	10,374.90	1,746.10	11,489.90
2019	29,574.70	14.68%	37.81%	6.23%	41.29%		4,341.80	11,181.50	1,841.20	12,210.20
2020	31,629.80	14.45%	38.04%	6.60%	40.91%		4,571.00	12,031.90	2,087.20	12,939.70
2021	33,371.40	14.22%	37.81%	6.56%	41.40%		4,746.40	12,619.40	2,188.70	13,817.00
2022	31,636.00	14.72%	39.29%	7.18%	38.81%		4,657.00	12,429.60	2,271.70	12,277.80
Average Growth 1991-2022										
	4.6%	1.0%	1.4%	-1.2%	-1.0%		5.7%	6.1%	3.4%	3.6%

Source: New York City Department of Finance, Office of Management and Budget

Real Estate Property Tax Rates

The tax rate for each Class is then obtained by dividing each Class's levy by its respective billable assessment. Tax rates for each property type are shown in Exhibit 3-4 and summarized for 1991 through 2022. Prior to 2002, the average tax rate across classes was held constant by the action of the New York City Council and Mayor. Following the revenue shortfalls projected following September 11, 2001, terrorist attacks, the Mayor and the City Council enacted an 18.5 percent rate increase mid-year through fiscal year 2003. The Mayor and the City Council enacted a 7.5 percent rate cut in 2008 before reversing it mid-fiscal 2009.

Exhibit 3-4: Property Tax Rates by Class, 1991-2022 (Per $100 of Assessed Values)[2]

Year	Class 1	Class 2	Class 3	Class 4	Citywide
1991	$9.920	$9.228	$15.200	$10.004	$10.135
1992	10.888	9.885	13.083	10.631	10.591
1993	10.888	9.91	12.794	10.698	10.591
1994	10.9	10.369	7.404	10.724	10.366
1995	10.694	10.552	7.702	10.608	10.366
1996	10.725	10.807	7.922	10.402	10.366
1997	10.785	11.056	7.84	10.252	10.366
1998	10.849	11.046	8.282	10.164	10.366
1999	10.961	10.739	8.8	10.236	10.366
2000	11.167	10.851	9.398	9.989	10.366
2001	11.255	10.847	10.54	9.768	10.366
2002	11.609	10.792	10.541	9.712	10.366
2003	11.936 / 14.160	10.564 / 12.517	10.607 / 12.565	9.776 / 11.580	10.366 / 12.283
2004	14.55	12.62	12.418	11.431	12.283
2005	15.094	12.216	12.553	11.558	12.283
2006	15.746	12.396	12.309	11.306	12.283
2007	16.118	12.737	12.007	10.997	12.283
2008	15.434	11.928	11.577	10.059	11.423
2009	15.605 / 16.787	12.139 / 13.503	11.698 / 12.577	9.870 / 10.612	11.423 / 12.283
2010	17.088	13.241	12.743	10.426	12.283
2011	17.3643	13.353	12.6312	10.3117	12.283
2012	18.205	13.433	12.473	10.152	12.283
2013	18.569	13.181	12.477	10.288	12.283
2014	19.191	13.145	11.902	10.323	12.283
2015	19.157	12.855	11.125	10.684	12.283
2016	19.554	12.883	10.813	10.656	12.283
2017	19.9913	12.8915	10.934	10.5739	12.283
2018	20.385	12.719	11.891	10.514	12.283
2019	20.919	12.612	12.093	10.514	12.283
2020	21.167	12.473	12.536	10.537	12.283
2021	21.045	12.267	12.826	10.694	12.283
2022	19.963	12.235	12.289	10.755	12.283

Source: New York City Department of Finance, Office of Management and Budget

Assessment Guidelines

Class 2 and all Class 4 properties are generally assessed as income-producing properties. All properties having assessed values greater than $40,000 are required to file an RPIE (Real Property Income and Expense Statement) with the New York City Department of Finance. While other assessment formulas based on a sales approach and/or cost approach have been used in the past and are still used for select property types (gas stations, utilities) assessor guidelines established by the New York City Department of Finance have emphasized the income approach beginning in the early 1990s. Assessments are made for both buildings and the underlying land.

[2] For years 2003 and 2009, left figures indicate the tax rate for first half year and the right figures indicate the second half year tax rates.

In the Assessor's income approach, operating expenses are subtracted from effective gross income to determine net operating income. Items excluded from income include interest income and real estate tax refunds. On the other hand, concessions and tenant improvements are deducted from income. Assessors prorate the cost of tenant improvements over a 15-year period intended to recapture the lifetime cycle of these improvements. Expense items such as depreciation, ground rents, and partnership and corporate taxes are excluded from deductible expenses. Mortgage principal and interest are also excluded from this calculation, since properties are valued as free from encumbrances.

Reported revenues and expenses are compared to what is typical for similar properties. Physical characteristics, amenities offered, and geographic locations are all factors considered in determining comparable properties for comparison purposes. Assessors examine deviations in reported income and expenses from what is typical for comparable buildings and markets and have the discretion of making adjustments. For example, reported income in Class 4 properties with vacancy rates exceeding 50 percent of the market average are adjusted upwards, treating "excess" vacant space as occupied at comparable or prorated rental rates.

Assessors also compare rent levels and income in comparable buildings to determine whether rents accurately reflect current market conditions. A mark-to-market approach is used in assessing rental income. Properties that have higher rental incomes because of leases stipulated in more favorable times and that can expect rental rates to fall on renewal are assessed with adjusted capitalization rates.

The Department of Finance's (DOF) market value is determined by dividing net operating income by a capitalization rate. DOF employs the "Band of Investment" approach to develop the cap rates. The variables for cap rate calculations are: 1) the mortgage equity ratio – the ratio of the mortgage to the equity for a property; 2) the property's mortgage interest rate; and 3) a rate of return on owner's equity. DOF uses either the Aaa or Baa bond rate on or close to January 5th to estimate the owner's rate of return. In addition, consideration is given to the fact that a property as an asset class is considerably less liquid than a bond, and also the fact that a property unlike a bond requires the expenditure of resources in its management.

Property Tax and Assessment Growth Rate Conclusions

The following chart indicates the property tax and assessment growth rate assumptions modeled for office, residential, and hotel assets within HY. As detailed on a following page, the assessment of retail space within office and residential buildings is determined by the dominant use. In addition, the revenue models assume taxes will grow at the same conservative rates used in the office and residential forecasts.

MODELING ASSUMPTIONS		
Property Type	**Taxes / SF**	**Annual Growth Rate(s)**
Office	$23.00	0% in FY 2023, 3.5% thereafter
20 Hudson Yards		-10% in FY 2023, 0% in FY 2024,
(The Shops & Restaurants at Hudson Yards)		and 3.5% thereafter
Residental		
Condominium	$27.50	4.0% FY 2023 through 2047
Rental	$20.00	4.0% FY 2023 through 2047
Hotel	$18.00	-7.5% in FY 2023, 2.5% thereafter

The data supporting the property tax and assessment growth rate conclusions for each asset class is displayed on the following pages.

Office Property Tax and Assessment Growth Rates

Comparable Property Taxes

A review of current property taxes for comparable Class A office buildings was undertaken to serve as the basis for computing full taxes for office assets in HY. The ten comparable buildings were constructed between 2002 and 2016. A review of the properties revealed an average tax burden of $24.20 per square foot, as detailed in the table below.

Exhibit 3-5. Office Tax Comparables, FY 2022

		YEAR	GBA	TRANSITIONAL		ACTUAL			TAXES
	ADDRESS	BUILT	SQ. FT.	LAND	TOTAL	LAND	TOTAL	TAXES	PSF
1	430 West 15th Street	2016	111,300	$765,000	$23,052,600	$765,000	$21,053,790	$2,264,335	**$20.34**
2	7 Bryant Park (1045 Sixth Ave)	2015	404,413	$7,529,400	$108,867,150	$7,529,400	$109,583,880	$11,708,662	**$28.95**
3	330 Hudson Street	2013	351,759	$6,937,650	$45,556,200	$6,937,650	$56,037,507	$4,899,569	**$13.93**
4	51 Astor Place	2013	385,831	$6,480,000	$73,503,000	$6,480,000	$81,691,133	$7,905,248	**$20.49**
5	One Bryant Park	2005	2,245,112	$98,915,400	$587,422,800	$98,915,400	$730,751,265	$63,177,322	**$28.14**
6	300 Madison Avenue	2002	1,142,417	$40,491,900	$233,586,450	$40,491,900	$264,705,583	$25,122,223	**$21.99**
7	510 Madison Avenue	2007	292,663	$7,881,300	$113,932,350	$7,881,300	$116,184,614	$12,253,424	**$41.87**
8	11 Times Square	2007	742,761	$51,462,000	$152,669,700	$51,462,000	$193,932,250	$16,419,626	**$22.11**
9	250 West 55th Street	2008	843,564	$18,334,350	$186,588,000	$18,334,350	$200,357,960	$20,067,539	**$23.79**
10	10 Hudson Yards	2016	1,835,464	$25,904,250	$348,648,750	$25,904,250	$357,934,530	$37,497,173	**$20.43**
	Minimum								**$13.93**
	Maximum								**$41.87**
	Average								**$24.20**

Source: New York City Department of Finance, Cushman & Wakefield, Inc.

Based on the above, it is reasonable to estimate real estate tax liabilities of $23.00 per square foot for new Class A office construction as of third quarter of 2021.

Comparable Property Taxes Growth Rates

In order to estimate the growth rate for HY full property taxes, a survey of property taxes for five Class A buildings in Midtown is summarized in Exhibit 3-6. The average annual growth rate in taxes for the Class 4 comparables was 3.9 percent from 1991 through 2022. The average annual growth rate exclusive of FY 2022 (between 1991 and 2021) equates to 4.5 percent.

Exhibit 3-6. Select Midtown Office Buildings Tax Survey, 1981 – 2022

	Year Built	Square Feet (GBA)	Low Taxes	High Taxes	Average Taxes	FY 2022	Annual Compound Rate of Change 1991-2022*	Annual Compound Rate of Change 1991-2021**
1177 Avenue of the Americas	1991	912,955	$6.28	$20.67	$11.64	$ 16.87	*3.2%*	*4.1%*
565 Fifth Avenue	1994	345,048	$5.79	$23.22	$12.19	$ 23.22	*4.9%*	*4.8%*
1540 Broadway	1992	921,210	$7.34	$34.96	$14.40	$ 27.06	*3.7%*	*4.8%*
1585 Broadway	1997	1,028,336	$7.01	$26.83	$16.23	$ 26.83	*4.3%*	*4.5%*
152 West 57th Street	1996	542,584	$7.66	$25.80	$17.28	$ 19.14	*3.6%*	*4.5%*
Minimum		426,065	$5.79	$20.67	$11.64	$ 16.87	*3.2%*	*4.1%*
Maximum		2,508,386	$7.66	$34.96	$17.28	$ 27.06	*4.9%*	*4.8%*
Average		**1,259,631**	**$6.82**	**$26.30**	**$14.35**	**$ 22.62**	***3.9%***	***4.5%***

*Growth rate calculated from year built for properties constructed after 1991

**Growth rate calculated from year built for properties constructed after 1991, excluding FY 2022

Source: Cushman & Wakefield, Inc.

The average annual compound growth rate in this survey is influenced by significant renovations over the life of the buildings. These renovations typically result in increases in the potential gross revenue of a property and thus increases in real estate tax liability. Based on Exhibit 3-6 (tax survey), a projected annual tax growth rate of 0.0 percent in fiscal year 2023, and 3.5 percent thereafter (fiscal year 2024 through 2047) is used in the office revenues forecast.

For certain time periods, particularly during the forecast years following economic downturns, full taxes in HY could grow by more than the projected long-term rate of 3.5 percent. An analysis of the annual growth in taxes for the fiscal years following the 2001 and 2009 recessions (2002 and 2010) indicates an average growth rate of 5.24 percent. This data indicates an above average level of growth in the fiscal years following a recession. The flat rate of growth modeled in 2023 is conservative by historical metrics.

This conclusion also considers the long-term growth in Class 4 billable assessed value, as shown in Exhibit 3-2. During the 1990s economic downturn, billable assessed values for Class 4 properties declined on average by 2.9 percent from 1993 through 1998. Over a longer time horizon, however, the growth rate in Class 4 billable assessed values increased 4.4 percent from 1985 to 2022. This 4.4 growth is also influenced by the addition of new completions. Exhibit 3-6 (tax survey) and Exhibit 3-2, indicate that the projected growth rates in the revenue model (0.0 percent growth in fiscal year 2023, followed by the 3.5 percent annual growth rate thereafter) would likely provide a sufficient margin to compensate for the continued recovery from the 2021 recession as well as other future downturns[3]. In addition, as previously reported, billable assessments within trophy assets are typically more resilient to macroeconomic influences, such as national and global recessions. As illustrated, the billable

[3] The effect of market downturns is further mitigated by the assumption that all development in HY would take place with pre-leasing agreements consistent with long established development trends in Manhattan.

assessments in four of the ten profiled office assets (10 Hudson Yards, 1 Manhattan West, 30 Hudson Yards, and 5 Manhattan West) decreased an average of 0.82 percent in fiscal year 2022.

PILOT Program

Eight of the 17 profiled assets benefit from the PILOT agreement. The PILOT (which is further explained in Chapter 4), provides a discount to market level taxes ranging between 15 and 40 percent in Years 1 through 4 post-completion, followed by minimum increases of 3.0 percent in Years 5 through 20 of the program. Given the nature of the program, revenues generated by assets that benefit from the PILOT program are highly unlikely to decrease for the entirety of the 20-year term. The following assets benefit from the PILOT program.

- 10 Hudson Yards
- One Manhattan West
- 30 Hudson Yards
- 55 Hudson Yards
- 50 Hudson Yards
- 66 Hudson Boulevard
- Two Manhattan West
- 20 Hudson Yards

Residential Property Tax and Assessment Growth Rates

Hudson Yards Residential Property Tax Analysis

In order to compute the revenues associated with new residential development in Hudson Yards, a survey of property taxes for comparable condominium and rental buildings was undertaken.

Exhibit 3-7 shows the comparable market rate condominiums and Class A rental buildings located within or near HY. The rental comparables consist of a mix of recently completed 75/25 and 80/20 apartment buildings.

Exhibit 3-7. Residential Condominium and Rental Tax Comparables, FY 2022

Condomium Buildings	Residential SF	Total Actual Assessed Value	Total Transitional Assessed Value	Total Taxes	Taxes / SF
Manhattan View at MiMA	146,348	$43,712,101	$33,253,192	$4,068,528	$27.80
Atelier	384,734	$59,750,163	$54,857,666	$6,711,835	$17.45
The Link	208,266	$37,066,064	$36,564,710	$4,473,692	$21.48
505 West 43rd Street	127,180	$27,709,209	$26,680,196	$3,264,322	$25.67
15 Hudson Yards	531,794	$144,873,918	$146,002,981	$17,725,324	$33.33
35 Hudson Yards	409,279	$101,528,050	$101,528,021	$12,421,953	$30.35
	Minimum				**$17.45**
	Maximum				**$33.33**
	Average				**$26.01**

Rental Buildings	GBA (SF)	Total Actual Assessed Value	Total Transitional Assessed Value	Total Taxes	Taxes / SF
Henry Hall	195,935	26,782,650	29,308,677	$3,276,857	$16.72
Hudson 36	321,693	51,858,450	51,858,450	$6,344,881	$19.72
555 Tenth Avenue	468,454	88,392,149	91,962,172	$10,814,779	$23.09
Sky at 605 West 42nd Street	745,819	117,432,250	138,388,191	$14,367,836	$19.26
MiMA	480,963	78,388,676	82,018,172	$9,590,855	$19.94
Abington House	276,388	48,211,200	51,287,903	$5,898,640	$21.34
	Minimum				**$16.72**
	Maximum				**$23.09**
	Average				**$20.01**

Source: New York City Department of Finance, Cushman & Wakefield, Inc.

The comparables indicate an average tax burden of $27.94 per square foot for residential condominium assets and an average tax burden of $20.01 per square foot for rental assets. Based on the above, it is reasonable to estimate real estate tax liabilities of $27.50 per square foot for new residential condominium assets and tax liabilities of $20.00 per square foot for new residential rental assets as of third quarter of 2021.

Projected Growth Rates in Property Taxes

The billable assessed values for the comparable condominium buildings increased 0.81 percent on average in fiscal year 2022. The billable assessed values for the comparable rental buildings decreased 6.18 percent on average in fiscal year 2022. The billable assessed values for fiscal year 2022 are based on market conditions prevailing prior to January 2021. As detailed in Chapter 2, leasing activity in the rental market and sales activity in the condominium market have increased significantly throughout calendar year 2021. Consistent with recent market data and market sentiment in the residential market, the revenue model assumes Class 2 (residential) real estate taxes grow 4.0 percent annually over the forecast years, 2022 to 2047. This conclusion also considers the long-term growth in Class 2 billable assessed value, as shown in Exhibit 3-2. As illustrated, the compound average growth rate in assessed value for Class 2 properties between 1985 to 2022 was 5.5 percent. The average annual growth rate exclusive of 2022 (between 1985 and 2022) equates to 5.9 percent. The economy's cyclical nature could cause growth in any given year to deviate from this long-term trend.

<u>Affordable New York (421-a) Program</u> – The projected feasibility of residential condominiums is not predicated on the incentives offered under the Affordable New York program (AFNY) or any other subsequent 421-a program. However, the City's revenue model assumes rental developers take advantage of the existing Affordable New York program and the subsequent 421-a program, assumed to be enacted after the June 2022 expiration of AFNY.

Real estate taxes for residential rental assets are modeled based on the allocated land assessment, assumed to be 25 percent of the total assessed value.

It is further assumed that the annual appropriation of revenues associated with new residential development is assigned to HYIC by the New York City Council. If this does not occur and the revenues are not appropriated to HYIC, future revenue streams are likely to be lower than modeled herein.

Hotel Property Tax and Assessment Growth Rates

In order to compute the revenues associated with new hotel development in Hudson Yards, a survey of property taxes for comparable hotels was undertaken. The eight comparable hotels were constructed between 2017 and 2019. A review of the properties revealed an average tax burden of $18.79 per square foot, as detailed in the table below.

Exhibit 3-8. Hotel Tax Comparables, FY 2022

Brand/Name	Address	Square Feet	Assessed Value	Taxes	Tax / SF
DoubleTree by Hilton Hotel New York Times Square West	350 W. 40th Street	97,882	$25,039,327	$2,692,980	$27.51
Crowne Plaza HY36 Midtown Manhattan	320 W. 36th Street	119,347	$16,568,550	$1,781,948	$14.93
Hilton Garden Inn New York Times Square South	326 W. 37th Street	94,374	$16,022,700	$1,723,241	$18.26
The Pod Hotel Times Square	400 W. 42nd Street	147,665	$28,731,600	$3,090,084	$20.93
Staypineapple New York	337 W. 36th Street	39,291	$4,135,950	$444,821	$11.32
Courtyard New York Manhattan/Midtown West	461 W. 34th Street	218,640	$30,221,100	$3,250,279	$14.87
Hyatt Place New York City /Times Square	350 W. 39th Street	179,130	$31,063,500	$3,340,879	$18.65
Equinox Hotel New York Hudson Yards	35 Hudson Yards	198,784	$44,129,973	$4,746,179	$23.88
	Minimum				**$11.32**
	Maximum				**$27.51**
	Average				**$18.79**

Based on the above, it is reasonable to estimate real estate tax liabilities of $18.00 per square foot for new hotel construction as of third quarter of 2021.

It is assumed that tax revenues associated with hotel development will be paid as TEP to HYIC and are, therefore, subject to annual appropriations by the New York City Council.

Projected Growth Rates in Property Taxes

To project the revenues over the forecast period, the revenue model assumes constant growth rates for taxes from 2022 through 2047. The billable assessed values for the comparable hotel buildings decreased 15.93 percent on average in fiscal year 2022. The billable assessed values for fiscal year 2022 are based on market conditions prevailing prior to January 2021. As detailed in Chapter 2, although the hospitality market has begun its recovery, many hotels remain closed and corporate and international travel have yet to rebound. Based on current conditions of the hotel market (detailed in Chapter 2) the real estate taxes are modeled to decrease 7.5 percent in 2023 and then stabilize at a conservative 2.5 percent annual growth rate, thereafter. The long term growth rate of 2.5 percent is significantly lower than the historic average for Class 4 properties. The growth rate is considered to provide a sufficient margin to compensate for downturns during the forecast period.

Retail Property Tax and Assessment Growth Rates

Consistent with the Hudson Yards Demand and Development Report dated February 2017 (C&W 2017 Report), the forecast for retail demand assumes it will be accommodated within the new office and residential buildings in Hudson Yards. The retail forecast is derived by taking 3.3 percent of both overall forecast office and residential square footage in each year.

According to the C&W 2017 Report and information provided by the New York City Office of Management and Budget the assessment of retail space within office and residential buildings is determined by the dominant use. The applicable PILOTs or TEP from office and residential development are applied to the retail portion within each to obtain the forecast total retail revenues in the Hudson Yards.

Projected Growth Rates in Property Taxes

To project retail revenues over the forecast period, the revenue model assumes taxes will grow at the same conservative rates used in the comparable office and residential forecasts. As such, retail revenues contained within office assets are modeled to remain flat in 2023 with a constant growth rate of 3.5 percent thereafter. Retail revenues contained within residential assets are modeled to increase at a constant growth rate of 4.0 percent from 2022 through 2047.

Given the size and nature of 20 Hudson Yards (known as "The Shops and Restaurants at Hudson Yards"), it is the only retail asset for which property specific growth rates were modeled. As detailed in Chapter 5, the property is a 1.1 million square foot mixed-use asset, that was initially designed and developed as an upscale indoor shopping mall anchored by Neiman Marcus ("Neiman"). However, Neiman Marcus filed for bankruptcy in May 2020 and closed its 20 Hudson Yards store in August 2020 and the developer is repositioning the approximately 200,000 square foot space for office use. Tax revenues for 20 Hudson Yards are modeled to decrease 10.0 percent in 2023, remain flat in 2024, and increase 3.5 percent per annum thereafter.

Conclusion

Cushman & Wakefield prepared a real estate tax analysis based upon analyses of market conditions, economic conditions, and assessed value trends, and calculations provided by New York City's Department of Finance, New York City's Office of Management and Budget, and the Hudson Yards Development Corporation. Cushman & Wakefield considers the current revenue projections detailed in this report, prepared by New York City's Office of Management and Budget, to be reasonable.

The revenues are contingent on the realization of all the economic and real estate assumptions and analyses, existing zoning, and completion of key infrastructure, and are subject to limiting conditions that are sourced or detailed herein and in Chapter 1B Limiting Conditions.

Chapter 4 - New York City Tax Exemption and Abatement Programs

Overview

Developers within the Hudson Yards district may be eligible for a variety of exemptions and tax abatements depending on the use and location of the property within Hudson Yards (“HY”). The available programs include:

- Payment-in-Lieu-of-Taxes (“PILOT”)
- Industrial & Commercial Abatement Program (“ICAP”)
- Legacy 421-a Tax Abatement Program
- Affordable New York Housing Program (replacement for the legacy 421-a program)
- Class Two Cooperative and Condominium Partial Tax Abatement

Excluding the Class 2 Cooperative and Condominium Partial Tax Abatement, the programs listed above provide developers with financial incentives to facilitate the successful development of the Hudson Yards district. Use of these programs for future projects within the district is expected. A summary of each program is presented on the following pages.

PILOT Program

Under the PILOT program, new building owners will make PILOT payments instead of paying property taxes. The PILOT payments provide a discount to full property taxes, and are set by the Industrial Development Agency (“IDA”) pursuant to New York City’s IDA Uniform Tax Exemption Program (“UTEP”) [1] amendment for Hudson Yards. As structured, PILOT payments will extend for a 15-year period following construction and then phase out to the equivalent of full taxes over the ensuing five-year period.

Under the UTEP, commercial construction projects[2] in HY are divided into three zones with a PILOT discount ranging from 40 percent of full taxes for initial developers west of Tenth Avenue, to a 25 percent discount between Eighth and Tenth Avenue, and 15 percent for projects in later years throughout the district. There is no discount for properties east of Eighth Avenue, as shown on Exhibits 4-1 and 4-2. The 40 percent discount has been fully subscribed.

In order to qualify for the PILOT program, commercial projects must equal or exceed 90 percent of the maximum zoning floor area applicable to a development site (including available bonus floor area) as set forth in the Hudson Yards Special District Zoning Resolution. The IDA retains discretion to qualify a project that does not meet the size and density requirement for PILOT payments. Projects smaller than 1.0 million zoning square feet will not be considered as eligible. Given the projected demand and tax advantage offered by the PILOTs, developers to date have utilized the maximum zoning FAR, and it is assumed they will continue to do so.

Additionally, pursuant to an agreement between the City of New York and the MTA[3], the MTA agreed that development on both the Eastern Rail Yards (“ERY”) and Western Rail Yards (“WRY”) would be subject to a PILOT

[1] NYC IDA’s UTEP, pages 3-45 to 3-49

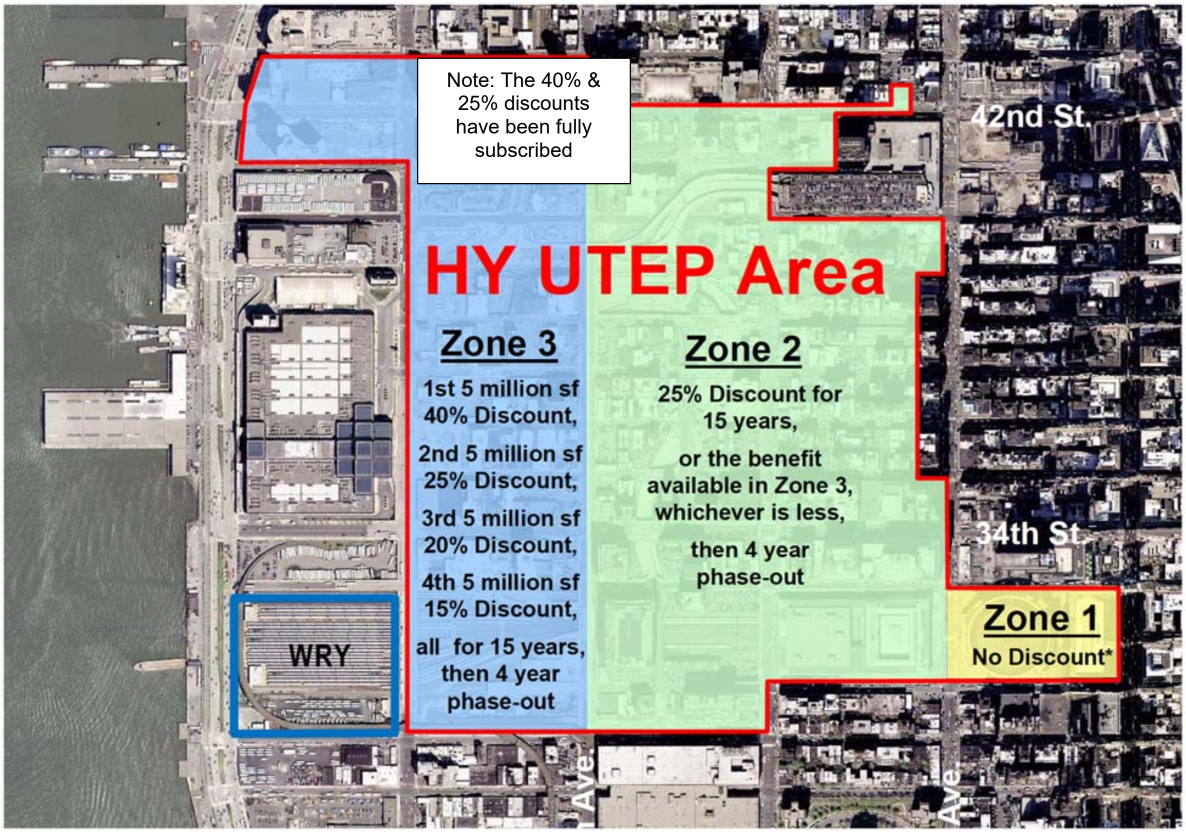
[2] Designation of a commercial development project is at the sole discretion of the NYC IDA

[3] Metropolitan Transportation Authority, owner of the rail yards

payment. The PILOT payment is in accordance with the UTEP for commercial office space, and is equivalent to real property taxes. The PILOT payment shall be paid to HYIC. [4]

The Hudson Yards development zones, a summary table of the PILOT schedule associated with each zone, as set in the UTEP, and a table illustrating the PILOT square foot allotment for each zone are provided in the following exhibits.

Exhibit 4-1. Development Zones Illustrating Percentage Discount to Actual Taxes Available for Office Buildings in the Hudson Yards UTEP Area



** Program provides fixed 3% annual increase for 15 years*

Source: Hudson Yards Development Corporation, NYC Industrial Development Agency

[4] Rail Yards Agreement between the City of New York and the Metropolitan Transportation Authority, September 28, 2006

Exhibit 4-2. Hudson Yards Development PILOT Schedule and Zones

<table>
<tr><th colspan="4"><u>Zone 1- (East of Eighth Ave)</u></th></tr>
<tr><td colspan="4">• Years 1-4 following building completion - Full taxes
• Years 5-19 - 3% increase over previous year's payment
• Year 20 and thereafter - Full Taxes</td></tr>
<tr><th colspan="4"><u>Zone 2- (Between 8th Ave and 10th Ave)</u></th></tr>
<tr><td colspan="4">
<table>
<tr><td>Until 10 million SF has been authorized in Zone 3 the following schedule shall apply:</td><td>Once 10 million SF has been authorized in Zone 3, and until a total of 15 million SF has been authorized in Zone 3, the following schedule shall apply:</td><td>Once a total of 15 million SF has been authorized in Zone 3 the following schedule shall apply:</td></tr>
<tr><td>• Years 1-4 following building completion- 75% of Full Taxes</td><td>• Years 1-4 following building completion- 80% of Full Taxes</td><td>• Years 1-4 following building completion- 85% of Full Taxes</td></tr>
<tr><td>• Years 5-15 - 3% increase over previous year's payment</td><td>• Years 5-15 - 3% increase over previous year's payment</td><td>• Years 5-15 - 3% increase over previous year's payment</td></tr>
<tr><td>• Years 16-20 - 80%, 85%, 90%, 95%, 100% of Full Taxes respectively</td><td>• Years 16-20 - 84%, 88%, 92%, 96%, 100% of Full Taxes respectively</td><td>• Years 16-20 - 88%, 91%, 94%, 97%, 100% of Full Taxes respectively</td></tr>
</table>
</td></tr>
<tr><th colspan="4"><u>Zone 3- (Between 10th Ave and 12th Ave)</u></th></tr>
<tr><td>Category A Developments- 1st 5 million SF Authorized*</td><td>Category B Developments- 2nd 5 million SF Authorized</td><td>Category C Developments- 3rd 5 million SF Authorized</td><td>Category D Developments- 4th 5 million SF Authorized</td></tr>
<tr><td>• Years 1-4 following building completion- 60% of full taxes</td><td>• Years 1-4 following building completion- 75% of full taxes</td><td>• Years 1-4 following building completion- 80% of full taxes</td><td>• Years 1-4 following building completion- 85% of full taxes</td></tr>
<tr><td>• Years 5-15 - 3% increase over previous year's payment</td><td>• Years 5-15 - 3% increase over previous year's payment</td><td>• Years 5-15 - 3% increase over previous year's payment</td><td>• Years 5-15 - 3% increase over previous year's payment</td></tr>
<tr><td>• Years 16-20 - 68%, 76%, 84%, 92%, 100% of Full Taxes respectively</td><td>• Years 16-20 - 80%, 85%, 90%, 95%, 100% of Full Taxes respectively</td><td>• Years 16-20 - 84%, 88%, 92%, 96%, 100% of Full Taxes respectively</td><td>• Years 16-20 - 88%, 91%, 94%, 97%, 100% of Full Taxes respectively</td></tr>
</table>

* The Agency shall reduce the 5 million SF eligible for treatment as Zone 3 Category A Developments, or any remaining portion thereof, by an amount equal to the zoning floor area of any development on the blocks bounded by 30th St, 11th Ave, 34th St, and 12th Ave that would otherwise be eligible for benefits if it were within the Hudson Yards UTEP Area.

Source: Hudson Yards Development Corporation, New York City Industrial Development Agency

Exhibit 4-3. Hudson Yards Development PILOT Square Footage Allotment

PILOT Allotment - Square Feet Used/Remaining					
HY UTEP Area Zone 3		**Discount**			
Building Name	**Address**	**40%**	**25%**	**20%**	**15%**
10 Hudson Yards	501 West 30th Street	1,421,776			
20 & 30 Hudson Yards	500 West 33rd Street	3,056,000			
55 Hudson Yards	380 Eleventh Avneue	522,224	596,072		
50 Hudson Yards	427 Tenth Avenue		2,281,125		
66 Hudson Bld	509 West 34 Street		2,122,803	103,087	
Total Square Feet Used		**5,000,000**	**5,000,000**	**103,087**	**-**
Total Square Feet Remaining		**-**	**-**	**4,896,913**	**5,000,000**

HY UTEP Area Zone 2		**Discount**			
Building Name	**Address**	**40%**	**25%**	**20%**	**15%**
1 Manhattan West	391 Ninth Avenue		1,653,912		
2 Manhattan West	389 Ninth Avenue			1,531,467	

Source: Hudson Yards Development Corporation, New York City Industrial Development Agency

Industrial and Commercial Abatement Program (ICAP)

The ICAP tax abatement program was created by the City of New York with the specific intent of encouraging commercial or industrial construction and renovation by providing a partial real estate tax abatement of a building's assessed value to respective applicants who undertake either commercial or industrial improvements to their properties or new conforming developments. The ICAP program is in place through March 2022 and subject to renewals.

The ICAP provides abatements of real estate taxes for varying periods of 10 to 25 years for eligible industrial and commercial buildings that are built, modernized, rehabilitated, expanded, or otherwise physically improved.

The ICAP abatement durations and abatement benefits vary by location. ICAP benefits commence on the July 1 following the first Taxable Status Date following the earlier of (i) completion of construction or (ii) four (4) years from the date of issuance of the project's first building permit. For example, if a project were to complete construction on July 1, 2021, benefits would commence on July 1, 2022.

Eligible ICAP applicants receive an abatement of their taxes equal to a percentage of the "Abatement Base." The "Abatement Base" is equal to the "Post-completion Tax" minus 115 percent of the "Initial Tax."

- The "Post-completion Tax" is the taxable assessed value (the lower of the actual or transitional assessed values) shown on the assessment roll with a Taxable Status Date immediately following the earlier of (1) completion of construction or (2) four years from the date of issuance of the project's first building permit, multiplied by the "Initial Tax Rate."
- The "Initial Tax Rate" is the tax rate applicable to the assessment roll with a Taxable Status Date immediately preceding the issuance of the first building permit.
- The "Initial Tax" is the taxable assessed value indicated on the assessment roll with a Taxable Status Date immediately preceding issuance of the first building permit multiplied by "Initial Tax Rate."

Both the Initial Tax and the Post-completion Tax include only building assessed value. The ICAP abatement does not reduce any tax liability attributed to the assessed value of the land. The Abatement Base calculation is summarized as follows:

Abatement Base = Post-completion Tax – 115% of the Initial Tax

Legacy 421-a Tax Abatement Program

The 421-a tax abatement program is a state law administered by the City's Department of Housing, Preservation and Development to promote multi-family residential construction by providing a declining exemption on the increase in assessed value resulting from the improvement.

The legacy 421-a tax abatement was available to developers that constructed new housing in the City outside of certain geographic exclusion areas. The 421-a tax abatement legislation was amended in July 2008 with changes that limited the tax savings implemented. The 2008 legislation also expanded the geographic exclusion areas. The 2008 legislation permitted a 20-year abatement for new developments in Manhattan that offer at least 20 percent of the units to low and moderate income families.

- The 421-a tax abatement program allows for a 3-year construction period followed by a 20-year post-completion period in which the property taxes are abated. During the economic downturn in 2009, the City approved measures to allow for developers with stalled construction projects to retain the full post-completion benefits even if the construction period required more than 3 years.
- The 20-year 421-a tax abatement program allows the property's increase in assessed value to be 100 percent exempt for 12 years. The increase in the assessment is phased in with 20 percent increments every two years beginning in the 13th year. Full taxes for this component will not be incurred until the 21st year after completion. With a 421-a tax designation, taxes are based on the property's pre-construction assessment.
- The 2008 legislation also established an exemption cap of $65,000 on the average assessed value per dwelling unit. This exemption limit increases annually by 3.0 percent beginning January 2009. The exemption limit as of January 1, 2021, was $93,117 per unit. With developments that meet the 20 percent on-site affordable housing requirements, the exemption cap does not apply.
- If a building contains space used for commercial, community facility, or accessory uses that exceed 12 percent of the aggregate floor area of the development (inclusive of below grade areas), there is a diminution in the benefits equal to the amount in excess of the 12 percent threshold. This does not include parking located up to 23 feet above curb level.
- The abatement has a term of 25 years if the development is located in an exclusion area in the outer boroughs.

In June 2015, the 421-a tax abatement legislation was again modified. The modified legislation was more stringent in terms of the amount of affordable housing to be provided, but extended the length of the abatement through the end of 2015. The 421-a tax abatement program legislation has since expired. As of January 15, 2016, the legislation was not renewed and the program lapsed. Any project that began construction in Manhattan after January 15, 2016, did not qualify for the program.

In April 2017, the replacement for the 421-a tax abatement program, renamed "Affordable New York Housing Program" was codified as part of the 2017-2018 New York State budget. The program allows for a longer abatement period in return for a larger percentage of affordable housing units.

421-a Extended Affordability Benefits Program

The Extended Affordability Benefit Program is available to rental projects that began construction prior to July 1, 2008, and qualified for a 20-year or 25-year 421-a tax exemption. The Extended Affordability Benefits program permits an additional 10-year tax abatement of 50 percent or an additional 15-year tax abatement of 50 percent depending on the duration of the additional benefit period (25 or 20 years, respectively). During this extended benefit period, the owner is required to increase the affordable component from 20 percent of the units to 25 percent of the units. These additional units must be leased to qualified households based on an Area Median Income (AMI) threshold of 130 percent. In addition, the owner of the property is restricted from converting the building or portions thereof to a condominium form of ownership for the duration of the extended benefit.

Affordable New York

In April 2017, a replacement program for the expired 421-a tax abatement was included in the adopted New York State budget. This program, known as "Affordable New York", provides for partial tax exemptions for up to 35 years for qualifying projects, depending on the specifics of a project. The chart below details the current program:

Standard 35-Year Benefit

The standard 35-year benefit allows for a 100% exemption for a construction period of up to three years, followed by 25 years of a post-completion 100% exemption, and 10 additional years of an exemption equal to the percentage of affordable units during the last 10 years.

Projects eligible for the standard 35-year benefit must choose from one of the following three affordability options:

- Option A
  - 10% of units not exceeding 40% AMI
  - 10% of units not exceeding 60% AMI
  - 5% of units not exceeding 130% AMI
  - May not receive any government grants, loans, or subsidies aside from tax exempt bond proceeds and 4% tax credits
- Option B
  - 10% of units not exceeding 70% AMI
  - 20% of units not exceeding 130% AMI
- Option C
  - 30% of units not exceeding 130% AMI
  - Can't be located south of 96th Street in Manhattan
  - May not receive any government grants, loans, or subsidies

Enhanced 35-Year Benefit

The enhanced 35-year benefit (100% exemption for all 35 years) is eligible to projects with 300 or more dwelling units that are located within one of the enhanced affordability areas, or elect to comply with the minimum average hourly wage requirements for construction workers. The three enhanced affordability areas include:

- Manhattan south of 96th Street
- Brooklyn within one mile of the waterfront and in Community Boards 1 and 2
- Queens within one mile of the waterfront and in Community Boards 1 and 2

Projects eligible for the enhanced 35-year benefit must choose from one of the following three affordability options:

- Option E
  - 10% of units not exceeding 40% AMI
  - 10% of units not exceeding 60% AMI
  - 5% of units not exceeding 120% AMI
  - May not receive any government grants, loans, or subsidies aside from tax exempt bond proceeds and 4% tax credits
- Option F
  - 10% of units not exceeding 70% AMI
  - 20% of units not exceeding 130% AMI
- Option G
  - 30% of units not exceeding 130% AMI
  - Only available to projects in Brooklyn and Queens enhanced affordability areas
  - May not receive any government grants, loans, or subsidies

The Affordable New York program is available to projects that commence construction between January 1, 2016, and June 15, 2022, and are completed on or before June 15, 2026. Projects are entitled to a 100 percent exemption for a construction period of up to three years and a 35-year post-construction tax exemption (either 100 percent exemption during the first 25 years and an exemption equal to the percentage of affordable units during the last 10 years, or a full 35-year 100 percent exemption). The enhanced 35-year benefit (100 percent exempt for all 35 years) is eligible to projects with 300 or more dwelling units that are located within one of the enhanced affordability areas, or elect to comply with the minimum average hourly wage requirements for construction workers.

Developers are required to choose from different affordability options and comply with the requirements for the entire benefit period. The options require that projects designate either 25 or 30 percent of units as affordable, and the options have varying Area Median Income (AMI) threshold requirements. The following applicable project requirements must be met for the subject to comply with the Statute:

- The project must be an eligible multiple dwelling
- The project must not be utilized as a hotel
- Affordable units must share the same common entrances and common areas as market rate units, and shall not be isolated to a specific floor or area of the building
- Affordable units in the project must remain rent stabilized and allow tenants holding a lease and in occupancy at the expiration of the 35-year period to remain as rent stabilized tenants for the duration of their occupancy
- The market rate units must be subject to rent stabilization unless the monthly rent of any such market rate unit exceeds the applicable high-rent vacancy deregulation threshold amount ($2,816 per month)

The benefit granted shall be reduced if the floor area of the project's eligible commercial, community facility and accessory use space exceeds 12 percent of the aggregate floor area. With an Affordable New York tax designation, taxes are based on the property's pre-construction assessment. Typically, developers will wait to file for the tax abatement until all improvements have been demolished and the site is clear. Although the Affordable New York program will expire June 15, 2022, the revenue model conservatively assumes a replacement program will be available for future, qualified, rental developments in HY.

Class Two Cooperative and Condominium Partial Tax Abatement

This tax abatement program was enacted in 1996 to provide partial tax relief to condominium unit owners and cooperative shareholders to help reduce the disparity in property taxation between Class 1 and Class 2 residential property. Eligibility for this program includes owners and tenant shareholders with no more than three dwelling units under condominium and cooperative forms of ownership, who are not already receiving tax exemptions and/or abatements based on State or local law except in specific circumstances. Recipients of the Class Two Cooperative and Condominium Partial Tax Abatement are ineligible for a variety of exemptions as well as the ICAP and ICIP programs. This abatement only commences upon expiration of any 421-a or J-51 tax abatements/exemptions.

The program legislation was amended in 2013 to include revised benefits and an expiration at the end of fiscal year 2015. As of fiscal year 2013, a unit that was not the owner's primary residence was no longer eligible for the abatement. However, if the owner received an abatement in 2012, the abatement was phased-out by the end of fiscal year 2014, with the owner being responsible for full taxes in fiscal year 2015.

In July 2021, Gov. Andrew M. Cuomo signed into law a two-year extension of the Class Two Cooperative and Condominium Partial Tax Abatement program. The extension will remain in place until June 30, 2023.

Under the revised program, condominium and cooperative shareholders that are the owner's primary residence are allowed to receive the following benefits.

	Benefit Amount Per Year
Average Assessed Value of Residential Units	FY 2015 - FY 2023
$50,000 or less	28.1%
$50,001 - $55,000	25.2%
$55,001 - $60,000	22.5%
$60,001 and above	17.5%

Chapter 5 - Completed Developments

Introduction

This chapter will analyze and discuss the completed projects within the HYFD. Since the 2005 rezoning, completed projects contain more than 10.9 million square feet of office space, nearly 10.7 million square feet of residential space, more than 3.6 million square feet of hotel space, and more than 720,000 square feet of retail space. Of these buildings, 17 are profiled in extensive detail in this chapter. The profiled office assets were chosen because they include new Class A trophy office assets, are complete (or nearing completion and substantially leased), and contribute significant revenue to the HYIC. Other profiled assets include completed residential rental and condominium buildings and hotels. As detailed on Page 92, the 17 profiled assts are projected to generate $15.4 billion (57 percent) of the total revenues projected over the 26-year forecast period. The profiled assets contribute 76.2 percent of revenues generated by existing assets.

Ten office assets are profiled. Seven of which are already completed. The remaining three assets (50 Hudson Yards, 66 Hudson Boulevard (also known as "The Spiral"), and Two Manhattan West) were included because they are large, trophy quality buildings nearing completion and have generated significant pre-leasing activity. Seven of the office assets are subject to a PILOT agreement. In addition to the office assets, the retail project at 20 Hudson Yards is subject to a PILOT agreement and will be profiled at the end of this chapter. The profiled office assets include:

- 10 Hudson Yards
- One Manhattan West
- 30 Hudson Yards
- 55 Hudson Yards
- 50 Hudson Yards
- 66 Hudson Boulevard (The Spiral)
- Two Manhattan West
- 330 West 34th Street
- Hudson Commons
- Five Manhattan West

Four residential assets are profiled, including the following:

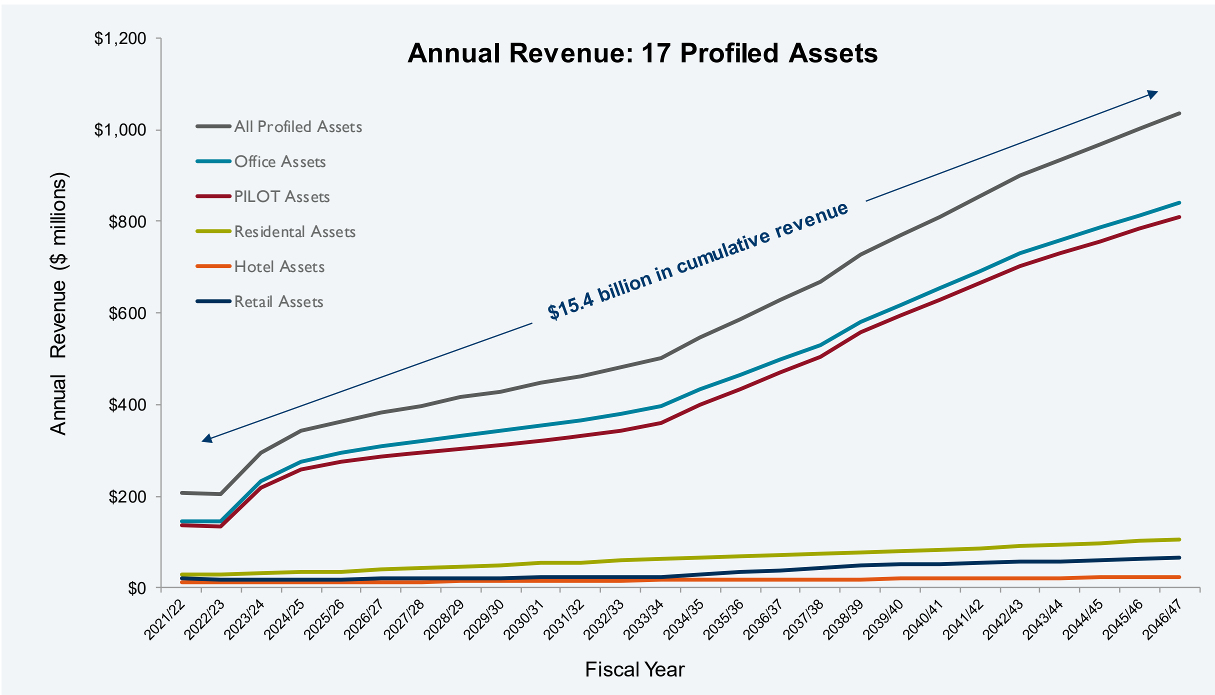
- The Olivia
- The Atelier
- The Orion
- The MiMA

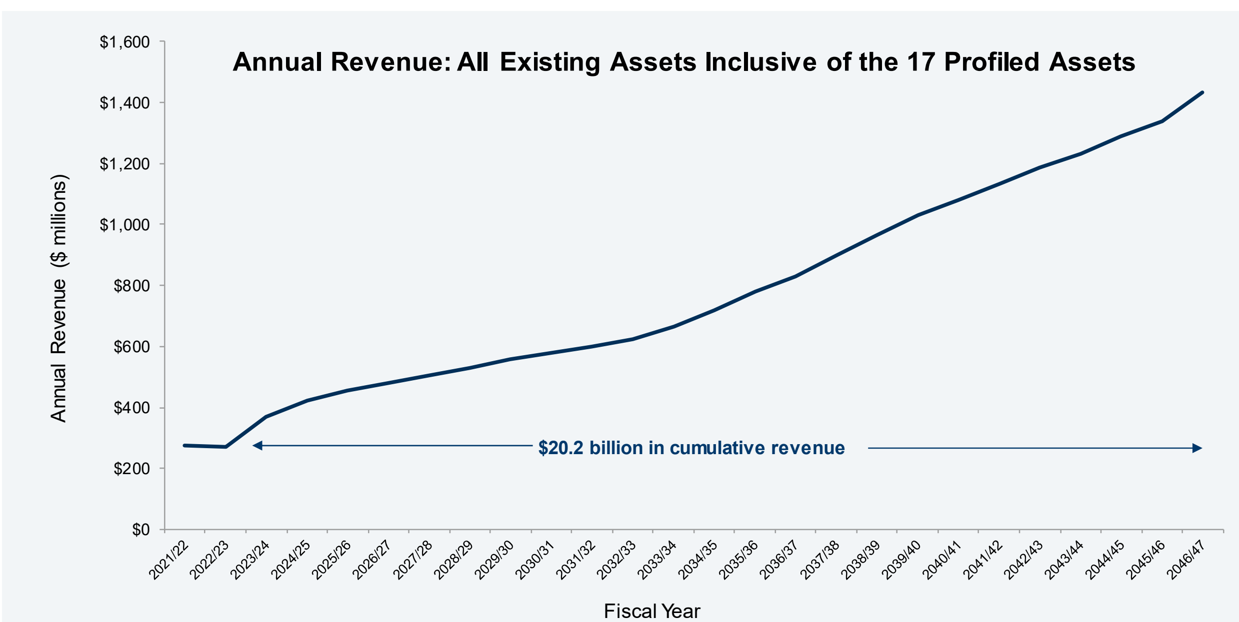
The three profiled hotel assets include:

- YOTEL New York (profiled together with the MiMA in the residential section)
- Marriott Fairfield Inn & Suites
- The Equinox Hotel

Revenue Forecast for Profiled Assets

In total, the assets profiled in this chapter are projected to generate $15.4 billion in revenue over the forecast period from fiscal year 2022 through fiscal year 2047. Of this total, $11.6 billion will emanate from the assets subject to PILOT agreements. For all of the existing assets within Hudson Yards, inclusive of the profiled assets, the total revenue is projected to be $20.2 billion. These projections are summarized in the charts below.



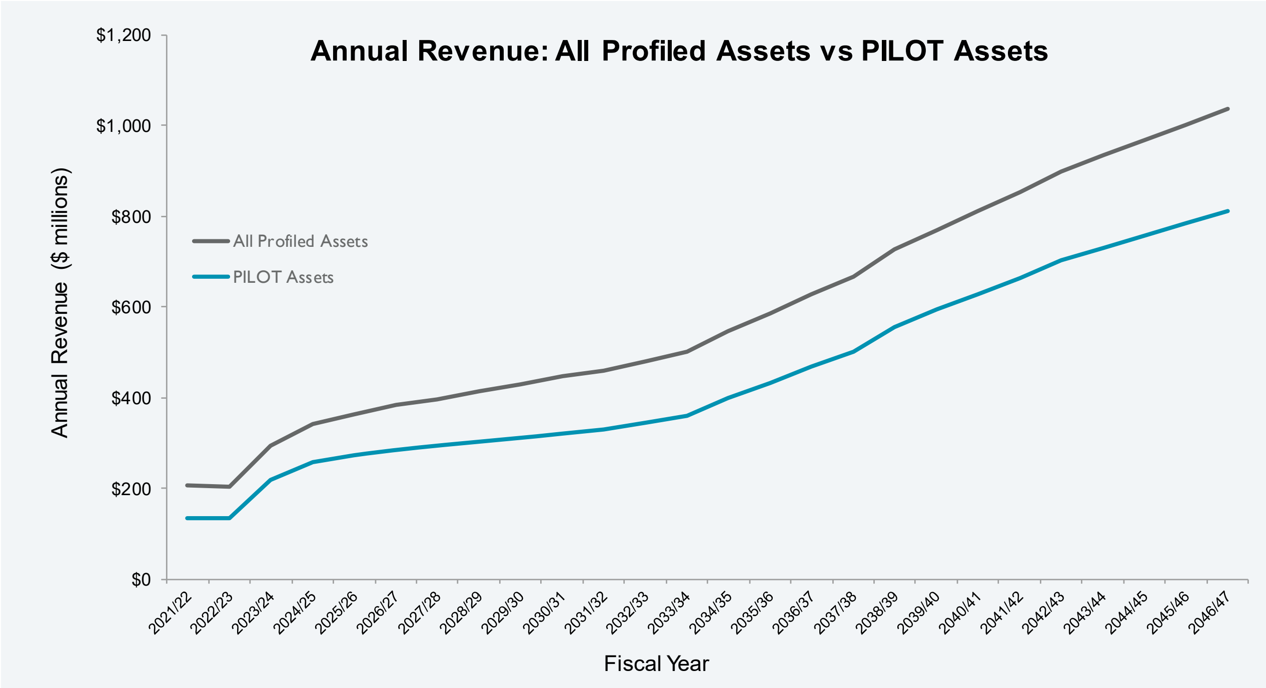


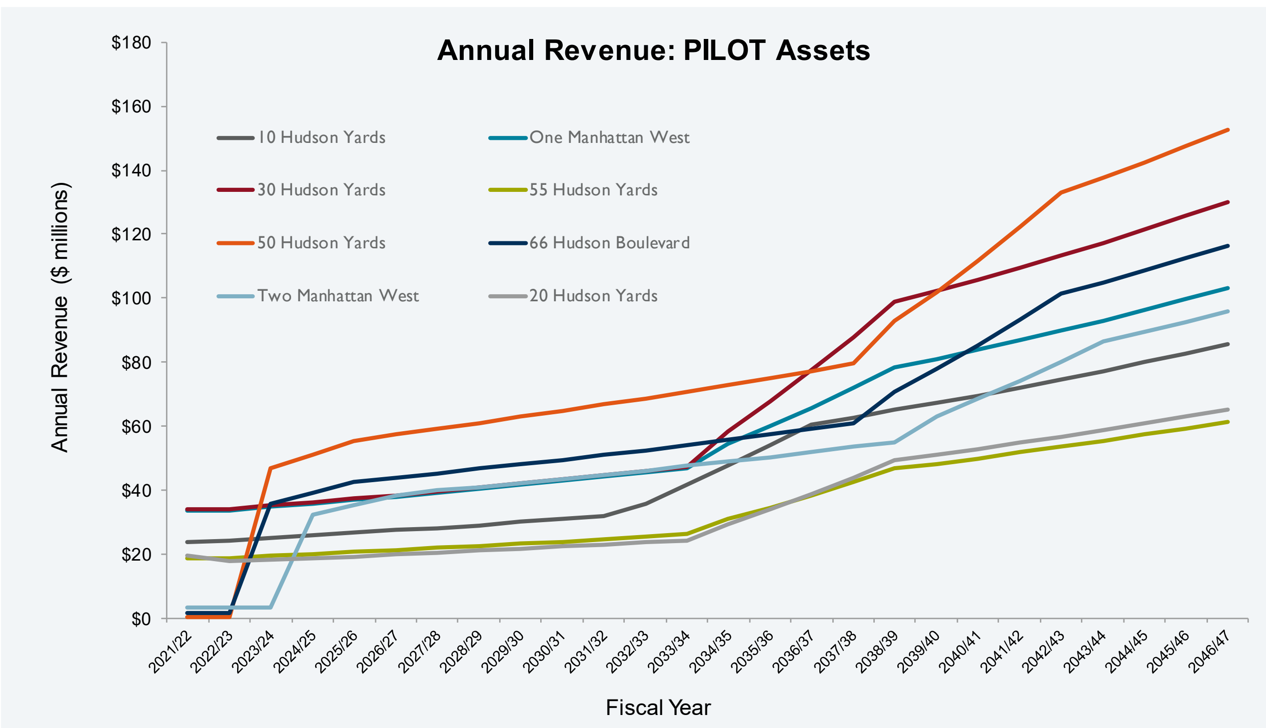
The following tables illustrate the revenues projected for the 17 assets which are profiled in the subsequent sections of this chapter.

PROJECTION YEAR	FISCAL YEAR	10 Hudson Yards (PILOT)	One Manhattan West (PILOT)	30 Hudson Yards (PILOT)	55 Hudson Yards (PILOT)	50 Hudson Yards (PILOT)	66 Hudson Boulevard (PILOT)	Two Manhattan West (PILOT)	20 Hudson Yards (PILOT)
1	2021 / 22	$23,739,456	$33,878,250	$34,225,188	$18,952,916	$546,166	$1,683,633	$3,505,053	$19,681,650
2	2022 / 23	$24,451,640	$33,878,250	$34,225,188	$18,952,916	$546,166	$1,683,633	$3,505,053	$17,713,485
3	2023 / 24	$25,185,189	$34,894,598	$35,252,151	$19,521,503	$46,715,828	$35,725,854	$3,627,730	$18,244,890
4	2024 / 25	$25,940,745	$35,941,435	$36,309,930	$20,107,148	$51,037,042	$39,030,496	$32,364,841	$18,792,236
5	2025 / 26	$26,718,967	$37,019,678	$37,399,450	$20,710,363	$55,603,514	$42,522,698	$35,358,588	$19,356,003
6	2026 / 27	$27,520,536	$38,130,269	$38,521,664	$21,331,674	$57,549,637	$44,010,992	$38,522,252	$19,936,683
7	2027 / 28	$28,346,152	$39,274,177	$39,677,551	$21,971,624	$59,276,126	$45,331,322	$39,870,530	$20,534,784
8	2028 / 29	$29,196,536	$40,452,402	$40,868,124	$22,630,773	$61,054,410	$46,691,262	$41,066,646	$21,150,827
9	2029 / 30	$30,072,433	$41,665,974	$42,094,423	$23,309,696	$62,886,042	$48,092,000	$42,298,646	$21,785,352
10	2030 / 31	$30,974,606	$42,915,954	$43,357,519	$24,008,987	$64,772,623	$49,534,760	$43,567,605	$22,438,913
11	2031 / 32	$31,903,844	$44,203,432	$44,658,518	$24,729,256	$66,715,802	$51,020,802	$44,874,633	$23,112,080
12	2032 / 33	$35,967,557	$45,529,535	$45,998,556	$25,471,134	$68,717,276	$52,551,426	$46,220,872	$23,805,443
13	2033 / 34	$41,606,000	$46,895,421	$47,378,805	$26,235,268	$70,778,794	$54,127,969	$47,607,498	$24,519,606
14	2034 / 35	$47,595,074	$54,605,186	$58,603,804	$31,053,919	$72,902,158	$55,751,808	$49,035,723	$29,309,305
15	2035 / 36	$53,952,417	$60,048,640	$67,783,185	$34,644,299	$75,089,223	$57,424,363	$50,506,795	$33,903,970
16	2036 / 37	$60,696,469	$65,806,245	$77,533,332	$38,443,603	$77,341,900	$59,147,093	$52,021,999	$38,784,357
17	2037 / 38	$62,820,845	$71,893,323	$87,882,954	$42,470,933	$79,662,157	$60,921,506	$53,582,659	$43,964,839
18	2038 / 39	$65,019,575	$78,325,883	$98,862,073	$46,728,411	$92,758,883	$70,888,291	$55,190,139	$49,460,444
19	2039 / 40	$67,295,260	$81,067,289	$102,322,245	$48,363,905	$102,005,784	$77,898,356	$63,259,464	$51,191,560
20	2040 / 41	$69,650,594	$83,904,644	$105,903,524	$50,056,642	$111,786,338	$85,312,287	$68,591,334	$52,983,264
21	2041 / 42	$72,088,365	$86,841,307	$109,610,147	$51,808,624	$122,126,575	$93,159,568	$74,218,941	$54,837,678
22	2042 / 43	$74,611,457	$89,880,753	$113,446,502	$53,621,926	$133,053,689	$101,441,508	$80,156,456	$56,756,997
23	2043 / 44	$77,222,858	$93,026,579	$117,417,130	$55,498,694	$137,710,568	$104,991,960	$86,418,679	$58,743,492
24	2044 / 45	$79,925,658	$96,282,509	$121,526,729	$57,441,148	$142,530,438	$108,666,679	$89,443,333	$60,799,514
25	2045 / 46	$82,723,056	$99,652,397	$125,780,165	$59,451,588	$147,519,004	$112,470,013	$92,573,849	$62,927,497
26	2046 / 47	$85,618,363	$103,140,231	$130,182,471	$61,532,394	$152,682,169	$116,406,463	$95,813,934	$65,129,960
TOTAL YEARS 1-26		**$1,280,843,650**	**$1,579,154,364**	**$1,836,821,328**	**$919,049,342**	**$2,113,368,310**	**$1,616,486,741**	**$1,333,203,255**	**$929,864,830**

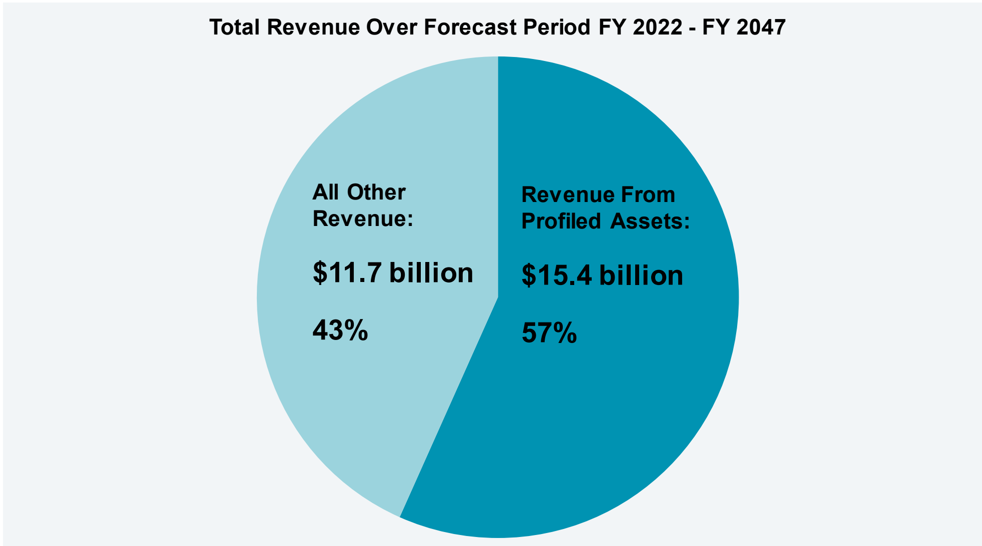
PROJECTION YEAR	FISCAL YEAR	330 W. 34th Street (Office)	Hudson Commons	Five Manhattan West	The Olivia	The Atelier	The Orion	MiMA / Yotel	Equinox Hotel	Marriott	AGGREGATE PILOT & TEP REVENUE
1	2021 / 22	$8,672,032	$5,649,997	$14,993,383	$9,224,884	$6,886,530	$10,389,196	$5,628,664	$4,746,179	$4,162,863	$206,566,039
2	2022 / 23	$8,672,032	$5,649,997	$14,993,383	$9,593,879	$7,178,073	$10,840,984	$5,491,817	$4,390,215	$3,850,648	$205,617,360
3	2023 / 24	$8,975,553	$5,981,997	$17,645,491	$9,977,635	$7,465,196	$11,274,624	$5,649,713	$4,499,971	$3,946,914	$294,584,835
4	2024 / 25	$9,289,697	$6,325,618	$20,327,055	$10,376,740	$7,763,804	$11,725,609	$8,703,691	$4,612,470	$4,045,587	$342,694,142
5	2025 / 26	$9,614,836	$7,448,408	$23,039,106	$10,791,810	$8,074,356	$12,194,633	$8,990,425	$4,727,782	$4,146,727	$363,717,344
6	2026 / 27	$9,951,356	$8,583,646	$25,782,711	$11,223,482	$8,397,330	$12,682,418	$12,419,921	$4,845,976	$4,250,395	$383,660,942
7	2027 / 28	$10,299,653	$9,731,768	$26,748,474	$11,672,421	$8,733,223	$13,189,715	$12,855,546	$4,967,126	$4,356,655	$396,836,847
8	2028 / 29	$10,660,141	$10,893,224	$29,558,539	$12,139,318	$9,082,552	$13,717,304	$16,701,124	$5,091,304	$4,465,571	$415,420,057
9	2029 / 30	$11,033,246	$11,301,336	$30,593,088	$12,624,891	$9,445,854	$14,265,996	$17,308,109	$5,218,586	$4,577,210	$428,572,882
10	2030 / 31	$11,419,410	$12,490,877	$31,663,846	$13,129,887	$9,823,688	$14,836,636	$21,614,457	$5,349,051	$4,691,641	$446,590,457
11	2031 / 32	$11,819,089	$12,928,058	$32,772,081	$13,655,082	$10,216,636	$15,430,101	$22,417,952	$5,482,777	$4,808,932	$460,749,075
12	2032 / 33	$12,232,757	$13,380,540	$33,919,104	$14,201,285	$10,625,301	$16,047,305	$26,412,407	$5,619,847	$4,929,155	$481,629,500
13	2033 / 34	$12,660,904	$13,848,859	$35,106,273	$14,769,337	$11,050,313	$16,689,197	$27,407,655	$5,760,343	$5,052,384	$501,494,626
14	2034 / 35	$13,104,035	$14,333,569	$36,334,992	$15,360,110	$11,492,326	$17,356,765	$28,441,183	$5,904,351	$5,178,693	$546,363,003
15	2035 / 36	$13,562,676	$14,835,244	$37,606,717	$15,974,515	$11,952,019	$18,051,036	$29,514,481	$6,051,960	$5,308,161	$586,209,699
16	2036 / 37	$14,037,370	$15,354,477	$38,922,952	$16,613,495	$12,430,100	$18,773,077	$30,629,103	$6,203,259	$5,440,865	$628,179,695
17	2037 / 38	$14,528,678	$15,891,884	$40,285,255	$17,278,035	$12,927,304	$19,524,000	$31,786,661	$6,358,341	$5,576,886	$667,356,260
18	2038 / 39	$15,037,182	$16,448,100	$41,695,239	$17,969,156	$13,444,396	$20,304,960	$32,988,831	$6,517,299	$5,716,308	$727,355,170
19	2039 / 40	$15,563,483	$17,023,783	$43,154,573	$18,687,923	$13,982,172	$21,117,159	$34,237,355	$6,680,232	$5,859,216	$769,709,758
20	2040 / 41	$16,108,205	$17,619,616	$44,664,983	$19,435,440	$14,541,459	$21,961,845	$35,534,045	$6,847,237	$6,005,697	$810,907,152
21	2041 / 42	$16,671,992	$18,236,302	$46,228,257	$20,212,857	$15,123,117	$22,840,319	$36,880,782	$7,018,418	$6,155,839	$854,059,088
22	2042 / 43	$17,255,512	$18,874,573	$47,846,246	$21,021,371	$15,728,042	$23,753,932	$38,279,523	$7,193,879	$6,309,735	$899,232,100
23	2043 / 44	$17,859,455	$19,535,183	$49,520,865	$21,862,226	$16,357,163	$24,704,089	$39,732,301	$7,373,726	$6,467,478	$934,442,447
24	2044 / 45	$18,484,536	$20,218,914	$51,254,095	$22,736,715	$17,011,450	$25,692,252	$41,241,231	$7,558,069	$6,629,165	$967,442,436
25	2045 / 46	$19,131,495	$20,926,576	$53,047,988	$23,646,184	$17,691,908	$26,719,942	$42,808,508	$7,747,021	$6,794,894	$1,001,612,086
26	2046 / 47	$19,801,097	$21,659,007	$54,904,668	$24,592,031	$18,399,584	$27,788,740	$44,436,418	$7,940,696	$6,964,767	$1,036,992,991
TOTAL YEARS 1-26		**$346,446,420**	**$355,171,553**	**$922,609,362**	**$408,770,709**	**$305,823,894**	**$461,871,833**	**$658,111,902**	**$154,706,113**	**$135,692,384**	**$15,357,995,991**

As evidenced in the charts below, a majority of the revenue generated by the Profiled assets emanates from the PILOT assets, which consist of the newly constructed office towers (inclusive of 50 Hudson Yards, 66 Hudson Boulevard (The Spiral), and Two Manhattan West) and the 20 Hudson Yards retail asset.





Over the forecast period, the $15.4 billion generated by the 17 profiled assets represents 57 percent of the total revenue that will be collected, which includes recurring revenue from other existing assets, future developments, and all nonrecurring revenues. These other revenue sources will be detailed in later chapters. The chart and table below illustrate the significant percentage of revenue projected to be generated by the 17 profiled assets:



Profiled Asset Revenue vs. Total Revenue (Recurring & Nonrecurring)

	Profiled Asset Revenue	Total Revenue	Profiled Assets As % of Total
FY 2022	206,566,039	302,935,363	68.2%
FY 2023	205,617,360	290,907,921	70.7%
FY 2024	294,584,835	409,743,913	71.9%
FY 2025	342,694,142	466,037,289	73.5%
FY 2026	363,717,344	555,659,928	65.5%
FY 2027	383,660,942	582,170,808	65.9%
FY 2028	396,836,847	599,767,464	66.2%
FY 2029	415,420,057	617,422,990	67.3%
FY 2030	428,572,882	669,506,204	64.0%
FY 2031	446,590,457	750,199,401	59.5%
FY 2032	460,749,075	781,988,000	58.9%
FY 2033	481,629,500	814,346,318	59.1%
FY 2034	501,494,626	877,756,692	57.1%
FY 2035	546,363,003	975,974,485	56.0%
FY 2036	586,209,699	1,101,336,817	53.2%
FY 2037	628,179,695	1,138,582,135	55.2%
FY 2038	667,356,260	1,211,006,653	55.1%
FY 2039	727,355,170	1,290,957,572	56.3%
FY 2040	769,709,758	1,406,047,651	54.7%
FY 2041	810,907,152	1,486,981,083	54.5%
FY 2042	854,059,088	1,553,425,751	55.0%
FY 2043	899,232,100	1,646,285,745	54.6%
FY 2044	934,442,447	1,731,642,325	54.0%
FY 2045	967,442,436	1,855,445,206	52.1%
FY 2046	1,001,612,086	1,930,072,901	51.9%
FY 2047	1,036,992,991	2,048,128,285	50.6%
Total from FY 2022 to FY 2047	**15,357,995,991**	**27,094,328,900**	**56.7%**

Hudson Yards Overview

New York City, in collaboration with the Metropolitan Transportation Authority (MTA) and the State of New York, began planning the Hudson Yards project in 2002. Formerly zoned as a manufacturing district, the area now known as Hudson Yards could only accommodate low-density commercial and industrial development. Large-scale commercial development was prohibited, as was most residential construction.

The zoning controls adopted for Hudson Yards in January 2005 provide for a mix of commercial and residential uses, with a high-density commercial core running along West 33rd Street from Pennsylvania Station to the Eastern Rail Yard (ERY), and north between Tenth and Eleventh Avenues from West 33rd to West 41st Streets. A mix of residential and lower-density commercial uses was also provided to the north and east towards Ninth Avenue. These corridors complement the residential properties concentrated along West 42nd Street, and between Ninth and Tenth Avenues, as well as the community's existing lower-density "main street" along Ninth Avenue. In 2009, the MTA Western Rail Yard (WRY) was rezoned to enable an additional 5.7 million square feet of mixed-use development.

The five key elements of the Hudson Yards redevelopment plan to support its evolution into a mixed-use, 24/7 district were: 1) zoning for mixed-use development; 2) access to mass-transit; 3) availability of large commercial sites; 4) creation of new public open spaces and cultural amenities; and 5) renovation and expansion of the Javits Center. All of these goals have been accomplished. Since the 2005 rezoning, these accomplishments have included:

- The $2.4 billion extension project of the Number 7 subway train
- The construction or renovation of approximately 17.8 million square feet of office space[1]
- Nearly 10,000 new rental and condominium apartments
- The addition of nearly 8,500 new hotel rooms
- The completion of the first phase of Hudson Park & Boulevard
- The completion of the final phase of the High Line
- The renovation and expansion of the Javits Center

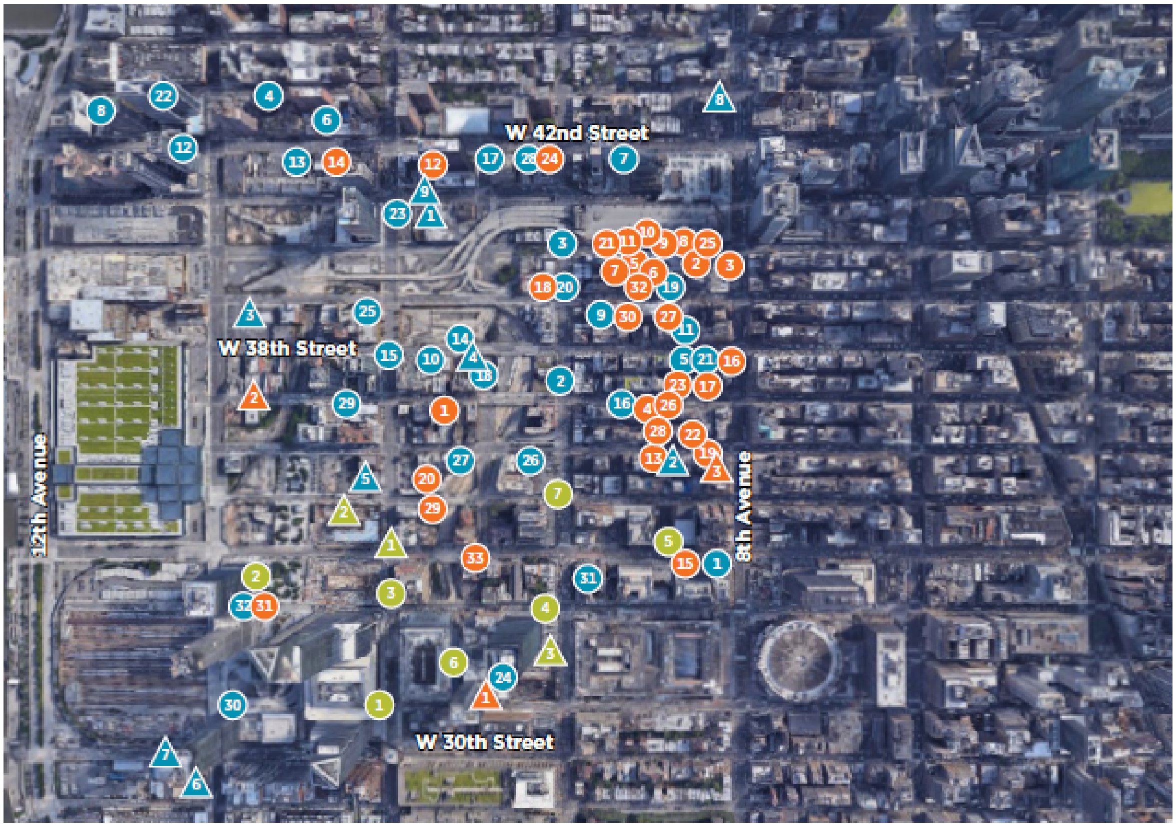
The completed developments are illustrated in the map on the following page:

[1] Gross building area, inclusive of three office buildings (50 Hudson Yards, 66 Hudson Boulevard (The Spiral), and Two Manhattan West) that are significantly pre-leased and nearing completion

HUDSON YARDS AREA MAP

All Property Types—Completed & Under Construction

CUSHMAN & WAKEFIELD



OFFICE

Completed
10.9 MSF

1. 10 Hudson Yards
2. 55 Hudson Yards
3. 20/30 Hudson Yards
4. 1 Manhattan West
5. 330 West 34th St.
6. 5 Manhattan West
7. Hudson Commons

Under Construction
6.9 MSF

1. 50 Hudson Yards
2. 66 Hudson Boulevard
3. 2 Manhattan West

RESIDENTIAL

Completed
10.7 MSF

1. 315 W. 33rd St.
2. 400 W. 37th St.
3. 402 W. 40th St.
4. 552 W. 43rd St.
5. 325 W. 37th St.
6. 521 W. 42nd St.
7. 350 W. 42nd St.
8. 635 W. 42nd St.
9. 502 Ninth Ave.
10. 455 W. 37th St.
11. 320 W. 38th St.
12. 600 W. 42nd St.
13. 534 W. 42nd St.
14. 446 W. 38th St.
15. 505 W. 37th St.
16. 350 W. 37th St.
17. 450 W. 42nd St.
18. 433 W. 37th St.
19. 330 W. 39th St.
20. 515 Ninth Ave
21. 321 W. 37th St.
22. 605 W. 42nd St.
23. 555 Tenth Ave.
24. 435 W. 31St. St.
25. 515 W. 38th St.
26. 411 W. 35th St.
27. 445 W. 35th St.
28. 400 W. 42nd St.
29. 515 W. 36th St.
30. 15 Hudson Yards
31. 401 W. 33rd St.
32. 35 Hudson Yards

Under Construction
3.2 MSF

1. 460 W. 41st St.
2. 335 W. 35th St.
3. 555 W. 38th St.
4. 441 W. 37th St.
5. 451 Tenth Ave.
6. 601 W. 29th St.
7. 606 W. 30th St.
8. 308 W. 43rd St.
9. 550 Tenth Ave.

HOTEL

Completed
3.6 MSF

1. 449 W. 36th St.
2. 309 W. 39th St.
3. 305 W. 39th St.
4. 341 W. 36th St.
5. 341 W. 39th St.
6. 337 W. 39th St.
7. 343 W. 39th St.
8. 326 W. 40th St.
9. 330 W. 40th St.
10. 334 W. 40th St.
11. 342 W. 40th St.
12. 570 10th Ave
13. 345 W. 35th St.
14. 510 W. 42nd St.
15. 325 W. 33rd St.
16. 307 W. 37th St.
17. 312 W. 37th St.
18. 515 9th Ave
19. 321 W. 35th St.
20. 444 10th Ave
21. 350 W. 40th St.
22. 320 W. 36th St.
23. 326 W. 37th St.
24. 400 W. 42nd St.
25. 310 W. 40th St.
26. 337 W. 36th St.
27. 333 W. 38th St.
28. 338 W. 36th St.
29. 461 W. 34th St.
30. 351 W. 38th St.
31. 35 Hudson Yards
32. 338 W. 39th St.
33. 438 W. 33rd St.

Under Construction
450K SF

1. 432 W. 31st St.
2. 450 11th Ave.
3. 319 W. 35th St.

Development in the Hudson Yards district is anchored by two large-scale master-planned projects known as Hudson Yards and Manhattan West. These developments are discussed in further detail below.

Hudson Yards

The largest master-planned development in the Hudson Yards district is the 26-acre MTA rail yards site and an adjacent 2-acre parcel, where a joint venture between Related Companies and Oxford Properties Group is developing a mixed-use project also named Hudson Yards. The group was designated the master developer of the ERY and WRY by the MTA, and entered into a 99-year ground lease in 2013. [2]

The first phase, which is nearing completion, consists of the ERY development, as well as an additional parcel along the northern border. This phase contains over 11 million square feet of space encompassing office, residential, retail, hotel, and cultural uses. Projects in the first phase include the following:

- 10 Hudson Yards – a 54-story trophy Class A office tower that was completed in 2016.
- 30 Hudson Yards – a 90-story trophy Class A office tower that was completed in 2019.
- 15 Hudson Yards – a 910-foot-tall residential tower with 391 condominium and rental units. Condominium owners began closing on units in 2019.
- 35 Hudson Yards – a 1,000-foot-tall mixed-use tower containing residential condominium units and an Equinox Hotel. The hotel opened in 2019, while residential owners began closing on units in late 2020.
- 50 Hudson Yards – a 57-story trophy Class A office tower that is significantly pre-leased and nearing completion.
- 55 Hudson Yards – a 51-story trophy Class A office tower that was completed in 2018.
- 20 Hudson Yards – the multi-level retail component of Hudson Yards that is located between 10 and 30 Hudson Yards. It was completed in 2019.
- The Shed – a 200,000-square-foot visual and performing arts institution that opened in 2019.
- Public Square and Gardens and the Vessel – the central open space and visual centerpiece of the ERY development.

The second phase will consist of the development of the WRY. Similar to the ERY, the developer must build a platform over the site before constructing any new buildings. Preliminary plans indicate approximately 5.7 million square feet of development, encompassing office space, residential space, a school, and open space.

Manhattan West

Manhattan West is currently being developed by a joint venture between Brookfield Properties and the Qatar Investment Authority. The 8-acre site is bound by Ninth Avenue, Tenth Avenue, 31st Street, and 33rd Street. To facilitate the development, Brookfield Properties first constructed a platform above the open railyards below the site. The 2.6-acre platform was completed in 2014. The Manhattan West project includes four new buildings and redevelopment of two existing buildings, all of which are centered on a large plaza. The complex includes:

[2] "MTA, Related and Oxford close on 99-year Hudson Yards lease", MTA press release April 10, 2013

- One Manhattan West – a 70-story trophy Class A office tower that was completed in 2019.
- Two Manhattan West – a 61-story trophy Class A office tower that has secured an anchor tenant and is nearing completion.
- Five Manhattan West – a 16-story building that was renovated and repositioned into a Class A office property in 2017.
- The Lofts at Manhattan West – 424 West 33rd Street, a 13-story existing commercial loft building that underwent a complete renovation and full integration into the Manhattan West complex.
- The Pendry Manhattan West – a 21-story boutique hotel with 164 rooms, which opened in September 2021.
- The Eugene - a 62-story luxury residential tower with 844 rental apartments that was completed in 2017.
- Landscaped Plaza and Retail – a newly created two-acre public plaza which transects the Manhattan West complex. The plaza is level with Ninth Avenue, creating a new pedestrian thoroughfare from Moynihan Station to the balance of the Hudson Yards district. The plaza features green space and approximately 240,000 square feet of retail, restaurants and amenities.

Office Completions

Since the 2017 report, Hudson Yards has matured into a prime destination for office space in Manhattan. The master-planned developments at Manhattan West and the ERY have largely come to fruition. A total of seven office projects have been built or undergone substantial renovations and are contributing revenues to the district. These seven properties represent approximately 10.9 million square feet of space. In addition to the completed projects, there are three major buildings that are nearing completion and have significant pre-leasing activity, totaling another 6.9 million square feet. These three properties consist of 50 Hudson Yards, 66 Hudson Boulevard (The Spiral), and Two Manhattan West. All of these are profiled in detail on the following pages.

HUDSON YARDS AREA MAP
Office Properties—Completed& Under Construction

CUSHMAN & WAKEFIELD

OFFICE

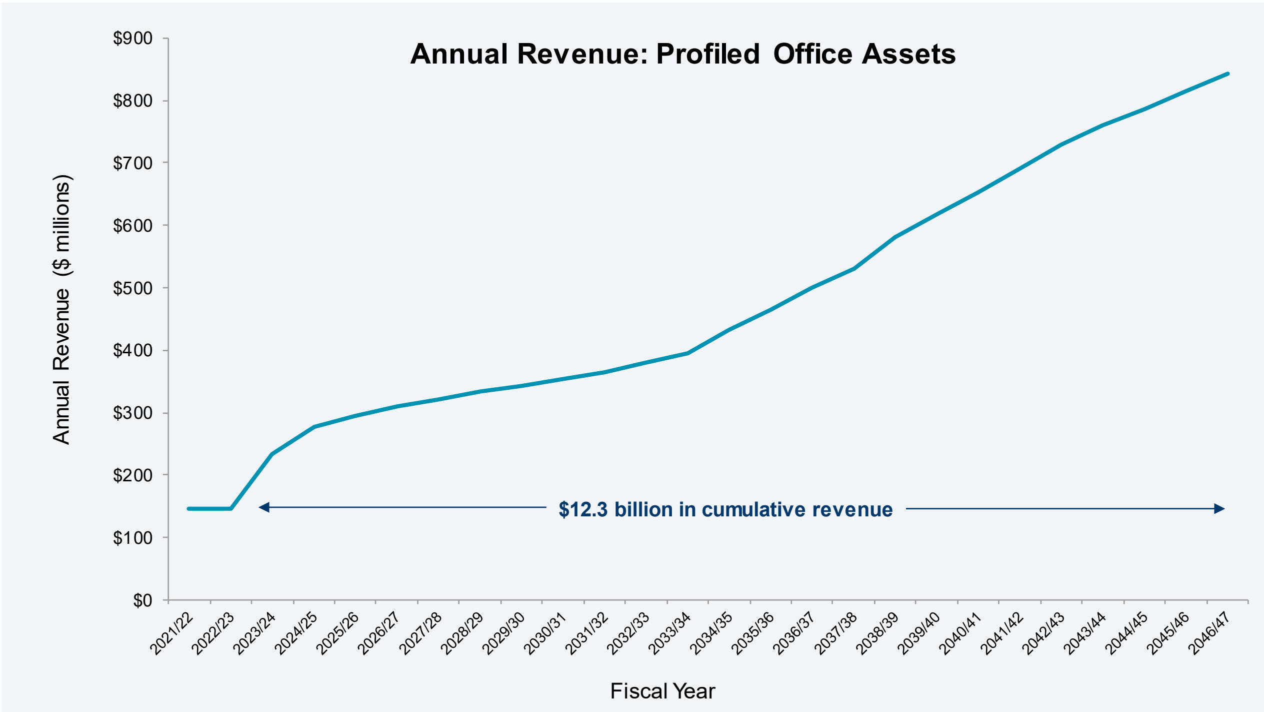
● *Completed*
10.9 MSF

1. 10 Hudson Yards
2. 55 Hudson Yards
3. 20/30 Hudson Yards
4. 1 Manhattan West
5. 330 West 34th St.
6. 5 Manhattan West
7. Hudson Commons

▲ *Under Construction*
6.9 MSF

1. 50 Hudson Yards
2. 66 Hudson Boulevard
3. 2 Manhattan West

The chart below illustrates the projected revenue from the office assets which are profiled in this chapter. In total, these assets are projected to generate $12.3 billion in revenue over the forecast period of fiscal year 2022 through fiscal year 2047.


Annual Revenue: Profiled Office Assets
Annual Revenue ($ millions)
$900
$800
$700
$600
$500
$400
$300
$200
$100
$0
$12.3 billion in cumulative revenue
2021/22
2022/23
2023/24
2024/25
2025/26
2026/27
2027/28
2028/29
2029/30
2030/31
2031/32
2032/33
2033/34
2034/35
2035/36
2036/37
2037/38
2038/39
2039/40
2040/41
2041/42
2042/43
2043/44
2044/45
2045/46
2046/47
Fiscal Year

10 Hudson Yards

Overview

10 Hudson Yards is a trophy Class A office building located in the Hudson Yards district of Manhattan. The 54-story building is situated on the northwest corner of West 30th Street and Tenth Avenue, rising 895 feet above street level. Designed by Kohn Pedersen Fox Associates (KPF), construction commenced in the fourth quarter of 2012 and was completed in May 2016. [3] 10 Hudson Yards was 90 percent leased as of December 2016 and 99 percent leased as of March 2018. [4, 5] Construction costs were reported to be approximately $979 million, exclusive of the land and leasing costs, according to the New York City Industrial Development Agency's ("NYCIDA") Project Cost/Benefit Analysis, dated July 19, 2012.

The building, which achieved U.S. Green Building Council's Leadership in Energy and Environmental Design Platinum ("LEED") certification in January 2018, offers column-free spacing with 45 feet of core-to-glass dimension, 13.5-foot ceilings slab-to-slab, floor-to-ceiling glass windows, views in all directions, and a pedestrian connection to The Shops & Restaurants at Hudson Yards. In addition, 10 Hudson Yards is also the only Class A office building with a direct connection to the High Line. The steel-and-glass tower contains approximately 1.81 million square feet of rentable office and retail space. [6] The office floors are located on the 9th through 37th and 40th through 52nd floors, while the grade and mezzanine levels contain retail space. Mechanical space is located in the basement and on the 3rd, 4th, 5th, 38th, 39th, 53rd and 54th floors. The parking garage is below grade.

[3] Cushman & Wakefield, Inc.

[4] Hudson Yards Infrastructure Corporation Second Indenture Revenue Bonds, Page E-175

[5] "Rating Action: Moody's Affirms Six CMBS Classes of Hudson Yards 2016-10-HY." *Moody's Investor Service*. August 10, 2018

[6] Trepp Loan Detail 10 Hudson Yards.

Property Information

TABLE 1: BUILDING INFORMATION				
Street Address:	501 West 30th Street (10 Hudson Yards)			
Block / Lot:	702 / 10			
Developer / Owner:	The developer of 10 Hudson Yards was a joint venture of The Related Companies, L.P. ("Related Companies"), Oxford Properties Group, Kuwait Investment Authority, and JP Morgan. In 2016, Allianz Real Estate of America, LLC, purchased a 44.31 percent equity interest from the joint venture. The current owner is Legacy Yards Tenant, L.P.			
Ownership Interest:	Fee			
Number of Floors:	54 (inclusive of mechanical floors)			
Year Built:	2016			
Gross Building Area [7]:	1,835,464 square feet			
Rentable Area:				
Office Area:	1,745,000 square feet [8]			
Retail & Storage Area:	68,465 square feet			
Total Area:	1,813,465 square feet [9]			
Major Tenants: [10]	Tenant Name	Rentable Area (SF)	Expiration Year	Renewal Options
	Tapestry, Inc.	694,687	7/2036	2x5 yrs & 2x10 yrs [11]
	L'Oréal USA	417,112	6/2031	10 yrs [12]
	Boston Consulting Group	201,493	4/2032	10 yrs [13]
	SAP America	144,065	5/2032	10 yrs [14]
	Intersection	67,058	1/2027	Not Avail.

[7] City of New York Department of Finance

[8] Cushman & Wakefield, Inc.

[9] Trepp Loan Detail 10 Hudson Yards.

[10] Trepp Loan Detail 10 Hudson Yards.

[11] Memorandum of Lease, Coach Inc., August 1, 2016. Document ID 2016080201392022.

[12] Memorandum of Lease, L'Oréal USA., April 10, 2013. Document ID 2013041500721035.

[13] Memorandum of Lease, The Boston Consulting Group, November 15, 2015. Document ID 2016012700275001.

[14] Memorandum of Lease, SAP SE, April 10, 2013. Document ID 2013041500721039.

Real Property Tax / PILOT Information

10 Hudson Yards, located on the northwest corner of West 30th Street and Tenth Avenue, is subject to a Payment-in-Lieu-of-Taxes ("PILOT") agreement pursuant to New York City's Industrial Development Agency's ("NYCIDA") Uniform Tax Exemption Program ("UTEP") amendment for Hudson Yards. The property is located within Zone 3 of the Hudson Yards' UTEP area and is eligible for PILOT payments under the Category A Developments.

10 Hudson Yards is obligated to make PILOT payments as set by the NYCIDA pursuant to the Hudson Yards UTEP amendment. Under this PILOT structure, PILOT payments are calculated as described below:

- 60% of full taxes in Years 1 through 4,
- 103 percent of the prior year's PILOT payment in Years 5 through 15,
- the greater of 103 percent of the prior year's PILOT payment and 68% of full taxes in Year 16,
- the greater of 103 percent of the prior year's PILOT payment and 76% of full taxes in Year 17,
- the greater of 103 percent of the prior year's PILOT payment and 84% of full taxes in Year 18,
- the greater of 103 percent of the prior year's PILOT payment and 92% of full taxes in Year 19, and
- 100% of full taxes in Year 20.
- The annual PILOT payments are not permitted to exceed full taxes over the PILOT program.

Cushman & Wakefield, Inc., modeled the PILOT and tax payments based on the asset's current assessment and our projection of future assessments.

The PILOT exemption commenced in the 2017/2018 fiscal year and is scheduled to expire in the 2036/2037 fiscal year. The PILOT payments through 2021/2022 are based on the property's assessed value as determined by fiscal New York City Department of Finance ("DOF"). Projections for Class 4 office lots assume no assessment growth in fiscal year 2023 followed by fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis period.

10 HUDSON YARDS
BLOCK 702, LOT 10
NEW YORK, NEW YORK

ASSESSMENT AND PAYMENT-IN-LIEU-OF-TAXES (PILOT) / UTEP PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	FULL FISCAL YR TAXES	PILOT YEAR	PILOT SCHEDULE	CALCULATED TAX	FIXED ESCALATION PRIOR YEAR	PAYABLE FISCAL YR PILOT/TAXES*
1	2021 / 22	$348,648,750	-	10.755%	$37,497,173	5	103% of prior year	-	-	**$23,739,456**
2	2022 / 23	$348,648,750	-	10.755%	$37,497,173	6	103% of prior year	-	-	**$24,451,640**
3	2023 / 24	$360,851,456	3.5%	10.755%	$38,809,574	7	103% of prior year	-	-	**$25,185,189**
4	2024 / 25	$373,481,257	3.5%	10.755%	$40,167,909	8	103% of prior year	-	-	**$25,940,745**
5	2025 / 26	$386,553,101	3.5%	10.755%	$41,573,786	9	103% of prior year	-	-	**$26,718,967**
6	2026 / 27	$400,082,460	3.5%	10.755%	$43,028,869	10	103% of prior year	-	-	**$27,520,536**
7	2027 / 28	$414,085,346	3.5%	10.755%	$44,534,879	11	103% of prior year	-	-	**$28,346,152**
8	2028 / 29	$428,578,333	3.5%	10.755%	$46,093,600	12	103% of prior year	-	-	**$29,196,536**
9	2029 / 30	$443,578,575	3.5%	10.755%	$47,706,876	13	103% of prior year	-	-	**$30,072,433**
10	2030 / 31	$459,103,825	3.5%	10.755%	$49,376,616	14	103% of prior year	-	-	**$30,974,606**
11	2031 / 32	$475,172,459	3.5%	10.755%	$51,104,798	15	103% of prior year	-	-	**$31,903,844**
12	2032 / 33	$491,803,495	3.5%	10.755%	$52,893,466	16	Greater of 103% prior year PILOT and 68% of full taxes	$35,967,557	$32,860,959	**$35,967,557**
13	2033 / 34	$509,016,617	3.5%	10.755%	$54,744,737	17	Greater of 103% prior year PILOT and 76% of full taxes	$41,606,000	$37,046,583	**$41,606,000**
14	2034 / 35	$526,832,199	3.5%	10.755%	$56,660,803	18	Greater of 103% prior year PILOT and 84% of full taxes	$47,595,074	$42,854,180	**$47,595,074**
15	2035 / 36	$545,271,325	3.5%	10.755%	$58,643,931	19	Greater of 103% prior year PILOT and 92% of full taxes	$53,952,417	$49,022,927	**$53,952,417**
16	2036 / 37	$564,355,822	3.5%	10.755%	$60,696,469	20	Greater of 103% prior year PILOT and 100% of full taxes	$60,696,469	-	**$60,696,469**
17	2037 / 38	$584,108,276	3.5%	10.755%	$62,820,845	-	-	-	-	**$62,820,845**
18	2038 / 39	$604,552,065	3.5%	10.755%	$65,019,575	-	-	-	-	**$65,019,575**
19	2039 / 40	$625,711,388	3.5%	10.755%	$67,295,260	-	-	-	-	**$67,295,260**
20	2040 / 41	$647,611,286	3.5%	10.755%	$69,650,594	-	-	-	-	**$69,650,594**
21	2041 / 42	$670,277,681	3.5%	10.755%	$72,088,365	-	-	-	-	**$72,088,365**
22	2042 / 43	$693,737,400	3.5%	10.755%	$74,611,457	-	-	-	-	**$74,611,457**
23	2043 / 44	$718,018,209	3.5%	10.755%	$77,222,858	-	-	-	-	**$77,222,858**
24	2044 / 45	$743,148,846	3.5%	10.755%	$79,925,658	-	-	-	-	**$79,925,658**
25	2045 / 46	$769,159,056	3.5%	10.755%	$82,723,056	-	-	-	-	**$82,723,056**
26	2046 / 47	$796,079,623	3.5%	10.755%	$85,618,363	-	-	-	-	**$85,618,363**
							TOTAL PAYABLE PROJECTION YEARS 1-26			**$1,280,843,650**

*During years 5 through 15: 3% increase over previous year's PILOT payment

Property Equity and Debt Overview [15]

Pursuant to the Trepp Loan Detail report for 10 Hudson Yards, the "As Is" appraised value upon completion, as of July 1, 2016, was reported to be $2,150,000,000.

The property was offered as collateral on debt totaling $900 million from Goldman Sachs Mortgage Company and Deutsche Bank AG. The origination date was August 1, 2016, and the scheduled maturity date is August 6, 2026. The 10-year loan, which includes 11 senior notes and two junior notes, was securitized as a commercial mortgage backed security. It provided whole-loan proceeds to, among other uses, facilitate the refinancing of the asset, purchase the fee interest in the underlying site and development rights from the Metropolitan Transportation Authority, repurchase Coach's indirect interest, and return equity to investors. The mortgage trust, totaling $600 million, includes two of the senior notes totaling $408.1 million and both of the junior B notes. The remaining notes were contributed toward four other commercial mortgage backed securities. [16]

The transaction was also supported by a $300 million mezzanine loan with a maturity date of August 6, 2026, and $950 million of sponsor equity. [17]

TABLE 2: DEBT SUMMARY [18]

Tier	Debt Amount
11 Senior A Notes:	$ 708,100,000
2 Junior B Notes:	$ 191,900,000
Subtotal:	$ 900,000,000
Mezzanine Debt:	$ 300,000,000
Total	**$ 1,200,000,000**

Based on the total debt, ownership had approximately $950 million in equity as of the date of financing in 2016.

[15] Trepp Loan Detail 10 Hudson Yards.

[16] "DBRS Morningstar Confirms Ratings of Hudson Yards 2016-10HY Mortgage Trust." Press Release, April 26, 2021.

[17] "DBRS Morningstar Confirms Ratings of Hudson Yards 2016-10HY Mortgage Trust." Press Release, April 26, 2021.

[18] "DBRS Morningstar Confirms Ratings of Hudson Yards 2016-10HY Mortgage Trust." Press Release, April 26, 2021.

Ownership Overview

The current owner of 10 Hudson Yards is Legacy Yards Tenant, L.P. 10 Hudson Yards was developed by ERY Tenant LLC, which is a joint venture of Related Companies, Oxford Properties Group, Kuwait Investment Authority, and JP Morgan. In August 2016, Allianz Real Estate of America, LLC, purchased a 44.31 percent equity interest in 10 Hudson Yards from ERY Tenant LLC, based on a total valuation of $2,150,000,000. Based on the total debt, ownership had $950 million in equity as of the date of the financing in 2016.

Related Companies

Founded in 1972 by Stephen Ross, Related Companies is a privately held global real estate company headquartered in New York City. The company employs more than 4,000 people around the world at offices in Boston, Chicago, Dallas, Los Angeles, San Francisco, Miami, London, and Abu Dhabi. Related Companies' portfolio consists of more than $60 billion in assets across sectors such as residential, office, retail, and hospitality. The company is recognized as a premier developer and manager of luxury projects and large-scale master-planned developments. It is also the largest private owner of affordable housing assets. Notable projects include the Eastern and Western Rail Yards of Hudson Yards, the Time Warner Center (now known as the Deutsche Bank Center), 70 Vestry Street, 520 West 28th Street, the Lantern House, One Madison, the Grand LA, the 78 in Chicago, 400 Lake Shore Drive, MiMA, and Superior Ink.

Oxford Properties Group

Oxford Properties Group is a Toronto-based real estate investment group, developer, and asset manager. The company manages $70 billion in assets on four continents, representing 150 million square feet of commercial space, 3,000 hotel rooms, and 10,000 residential units. Oxford Properties Group was formed in 1960 and is backed by OMERS, which is one of Canada's largest pension plans with approximately $105 billion in global assets.

Tenant Overview

10 Hudson Yards is 99 percent leased to 11 office tenants and two retail tenants. Overall, the average remaining lease term for the office tenants is approximately 11 years, with expiration dates ranging from 2022 through 2036.

The five largest tenants represent 87.4 percent of the total office net rentable area. These tenants include Tapestry, Inc. (694,687 SF); L'Oréal USA (417,112 SF); Boston Consulting Group (201,493 SF); SAP America (144,065 SF); and Intersection (67,058 SF). In addition, the retail component is fully leased to Hudson Food Hall and Sweet Green.

Profiles of the four largest office tenants are presented on the following pages.

Tapestry, Inc.

Company Profile

Tapestry, Inc. ("Tapestry") is a New York-based company of luxury accessories and lifestyle brands that includes Coach, Kate Spade of New York, and Stuart Weitzman, all of which have been part of the American fashion landscape for over 25 years. Initially known as Coach, Inc., the business repositioned itself as Tapestry, Inc., in October 2017.

As of June 2020, Tapestry Inc., employed approximately 17,300 globally, excluding seasonal and temporary employees. In 2020, the company reported global net sales of $4.961 billion.

The company is publicly traded on the New York Stock Exchange under the ticker symbol "TPR." As of July 2021, Tapestry, Inc. has a market capitalization of over $11 billion. Tapestry is rated investment grade by Moody's and S&P Global. A summary of the company's most recent credit ratings are detailed in the chart below.

CREDIT RATINGS

Agency	Issuer Rating	Last Rating Action	Outlook
Moody's	Baa2	May-21	Stable
Fitch	BB	Mar-21	Stable
S&P	BBB-	Feb-21	Stable

Source: Moody's, Fitch, S&P

Lease Information

Tapestry leases 694,687 square feet of space on floors 9 through 23. The lease commenced in August 2016 and expires in July 2036. The lease includes two initial 5-year renewal options, followed by a 10-year renewal option or two 10-year renewal options. The tenant also has certain expansion rights and rights of first offer to lease additional floors in the building. [19]

[19] Memorandum of Lease, Coach Inc., August 1, 2016. Document ID 2016080201392022.

L'Oréal SA

Company Profile

L'Oréal, headquartered in Paris, is the world's largest cosmetics and beauty company. The group operates under L'Oréal SA, the publicly traded parent company.

The company has 35 global brands that include names such as Kiehl's, Lancôme, Giorgio Armani Beauty, Yves Saint Laurent Beauté, Ralph Lauren, Clarisonic, Maybelline New York, Essie, Kérastase, Biotherm, Shu Uemura, Viktor&Rolf, Maison Martin Margiela, Urban Decay, Redken, Vichy, La Roche-Posay, Diesel, Garnier, The Body Shop, and L'Oréal Paris.

In 2020, the firm employed nearly 85,400 people in 150 countries, registered 500 patents, and reported global revenues of €27.992 billion. [20] The company's U.S. headquarters is located at 10 Hudson Yards. Although a credit rating is not available, the firm is considered to be institutional quality.

Lease Information

L'Oréal leases 417,112 square feet of space on floors 27 through 36. The lease commenced in July 2016 and expires in June 2031. The lease includes an option to renew for a 5-year or a 10-year term. The tenant also has certain expansion rights and rights of first offer to lease additional areas as set forth in the lease. [21]

Boston Consulting Group, Inc. [22]

Company Profile

Boston Consulting Group ("BCG") is a global management consulting and business strategy and advisory firm. Founded in 1963, Boston Consulting Group, Inc., is a privately held corporation that is wholly owned by the members of its partnership. As of April 2021, BCG had 22,000 employees in more than 90 offices within over 50 counties. In 2020, the company reported total revenues of $8.6 billion. Although a credit rating is not available, the firm is considered to be institutional quality.

Lease Information

Boston Consulting Group leases 201,493 square feet of space on floors 42 through 47. The lease commenced in January 2017 and expires in April 2032. The lease includes two 5-year renewal terms, or one renewal term of 10 years. The tenant also has certain expansion rights and rights of first offer to lease additional areas as set forth in the lease. BCG also has certain contraction rights to terminate the lease with respect to certain portions of the premises as described in the lease. [23]

[20] L'Oréal Annual Report 2020

[21] Memorandum of Lease, L'Oréal USA., April 10, 2013. Document ID 2013041500721035.

[22] Boston Consulting Group 2020 Annual Sustainability Report, April 2021

[23] Memorandum of Lease, The Boston Consulting Group, November 15, 2015. Document ID 2016012700275001.

SAP America [24]

Company Profile

SAP SE (“SAP”) is organized in the Federal Republic of Germany under German and European Law. Founded in 1972 and headquartered in Waldorf, Germany, SAP is a market leader in enterprise application software as well as in enterprise resource planning, supply chain management, data integration and quality, and master data management. The firm’s software provides support in 24 different industries such as aerospace & defense, banking, chemicals, consumer products, defense and security, healthcare, higher education and research, high tech, life sciences, mining, oil and gas, and professional services, among others.

The company has over 100,000 employees worldwide. In 2020, SAP SE reported total revenues of €27.3 billion. The company is publicly traded on the Frankfurt Stock Exchange under ticker “SAP.” American Depositary Receipts representing SAP SE ordinary shares are listed on the New York Stock Exchange under ticker “SAP.” As of July 2021, SAP has a market capitalization of over $177 billion. SAP is rated investment grade by Moody’s, Fitch, and S&P Global. A summary of the company’s most recent credit ratings are detailed in the chart below.

CREDIT RATINGS

Agency	Issuer Rating	Last Rating Action	Outlook
Moody's	A2	May-21	Stable
Fitch	-	-	-
S&P	A	Dec-20	Stable

Source: Moody's, S&P

Lease Information

SAP leases 144,065 square feet of space on floors 48 through 52. The lease commenced in January 2017 and expires in May 2032. The lease includes two 5-year renewal terms, or one renewal term of 10 years. The lease included expansion options which have expired unexercised.

[24] SAP 2020 Annual Report Form 20-F, Page 25

Current Market Information

10 Hudson Yards is located within the Penn Station office submarket of Midtown Manhattan, which includes all of the newly constructed office towers within the Hudson Yards district. The following table provides a summary of the office portion of 10 Hudson Yards as compared to Class A office space within the Penn Station office submarket and the Midtown Manhattan office market.

TABLE 3: KEY OFFICE METRICS – 1Q 2021 CLASS A

	No. of Buildings	Inventory SF	Avg. Direct Asking Rent / SF	Direct Availability
10 Hudson Yards	1	1,745,000	N/A	0%
Penn Station Submarket [25]	15	16,537,897	$107.59	5.3%
Midtown Manhattan [26]	297	187,528,330	$89.89	11.5%

Investment Highlights

- 10 Hudson Yards is a trophy asset and one of the most desirable Class A office buildings in Manhattan, not only as a result of its above-standard construction quality, but also from a functional and architectural perspective.
- The building's floor plates are well suited to the needs of large office users. In addition, high ceilings and column-free floor plates offer great access to light, air, and views in all directions.
- 10 Hudson Yards is LEED Platinum certified. It is one of New York's most energy efficient Class A office towers with twice the efficiency of standard systems. [27]
- 10 Hudson Yards is also the only Class A office building with a pedestrian connection to the High Line.
- Located in the Eastern Rail Yards, tenants at 10 Hudson Yards benefit from the synergy generated by the seamless connection of retail shops, Culture Shed, and trophy quality office spaces.
- The building is 99 percent leased to 11 tenants and two retail tenants, the vast majority of which are considered to be institutional quality or credit tenants. The five largest office tenants represent 87.4 percent of the total office net rentable area.
- Overall, the average remaining lease term for the office tenants is approximately 11 years, with expiration dates ranging from 2022 through 2036, excluding renewal options. This provides for a stable revenue stream over the long term and the ability to weather the near-term effects of the COVID-19 pandemic.
- The Eastern Rail Yards complex benefits from strong sponsorship by Related Companies and Oxford Properties Group.

[25] Cushman & Wakefield, Inc. – First Quarter 2021

[26] Cushman & Wakefield, Inc. – First Quarter 2021

[27] "Ten Hudson Yards Designated LEED Platinum." *Hudson Yards New York*. January 2, 2018
https://www.hudsonyardsnewyork.com/press-media/press-releases/ten-hudson-yards-designated-leed-platinum

Property Photographs

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

One Manhattan West

Overview

One Manhattan West is a trophy Class A office building located in the Hudson Yards district of Manhattan. The 70-story building is situated on the southwest corner of West 33rd Street and Ninth Avenue, rising nearly 1,000 feet above street level. Designed by Skidmore, Owings & Merrill LLP, construction commenced in the third quarter of 2015 and was completed in December 2019. Construction costs were reported to be approximately $1.369 billion, exclusive of the land and leasing costs. [28]

The building, which achieved U.S. Green Building Council's Leadership in Energy and Environmental Design Gold ("LEED") certification, offers column-free spacing with slab-to-slab ceiling heights of 13.5 feet, floor-to-ceiling glass windows, and 36 passenger elevators and 3 service elevators. The steel-frame building contains approximately 2.1 million square feet of rentable office and retail space. Office floors are located on the 6th through 67th floors, while the grade and second floors contain retail space. There is also a below-grade parking garage. Mechanical space is located on the 1st through 5th floors and the 68th through 70th floors. The property was recently subdivided into two condominium tax lots identified as Block 729: Lot 1001 (retail condominium) and Lot 1002 (office condominium). However, the property remains identified as Lot 60 by the New York City Department of Finance ("DOF").

[28] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 10 | August 13, 2020

Property Information

TABLE 1: BUILDING INFORMATION				
Street Address:	401 Ninth Avenue (One Manhattan West)			
Block / Lots:	729 / part of 60 (1001 & 1002)			
Developer / Owner:	Brookfield Property Partners L.P. and Qatar Investment Authority			
Ownership Interest:	Fee			
Number of Floors:	70 (inclusive of mechanical floors)			
Year Built:	2019			
Gross Building Area [29]:	2,015,156 square feet			
Rentable Area:				
Office Area:	2,081,035 square feet [30]			
Retail Area:	30,382 square feet			
Total Area:	2,111,417 square feet			
Major Tenants: [31]	Tenant Name	Rentable Area (SF)	Expiration Year	Renewal Options
	Skadden, Arps, Slate, Meagher & Flom LLP	638,784	June 2040	4 x 5 yr
	Ernst & Young U.S. LLP	636,416	May 2037	2 x 5 yr
	Accenture LLP	280,192	July 2035	2 x 5 yr
	National Hockey League	176,007	May 2041	2 x 5 yr
	McKool Smith PC	96,704	April 2035	2 x 5 yr

[29] City of New York Department of Finance

[30] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 14 | August 13, 2020

[31] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 14 | August 13, 2020

Real Property Tax / PILOT Information

One Manhattan West, located on the southwest corner of West 33rd and Ninth Avenue, is subject to a Payment-in-Lieu-of-Taxes (“PILOT”) agreement pursuant to New York City’s Industrial Development Agency's (“NYCIDA”) Uniform Tax Exemption Program (“UTEP”) amendment for Hudson Yards. The property is eligible for PILOT payments under the Zone 2 regulations.

One Manhattan West is obligated to make PILOT payments as set by the NYCIDA pursuant to the Hudson Yards UTEP amendment. Under this PILOT structure, PILOT payments are calculated as described below:

- 75% of full taxes in Years 1 through 4,
- 103 percent of the prior year’s PILOT payment in Years 5 through 15,
- the greater of 103 percent of the prior year’s PILOT payment and 80% of full taxes in Year 16,
- the greater of 103 percent of the prior year’s PILOT payment and 85% of full taxes in Year 17,
- the greater of 103 percent of the prior year’s PILOT payment and 90% of full taxes in Year 18,
- the greater of 103 percent of the prior year’s PILOT payment and 95% of full taxes in Year 19, and
- 100% of full taxes in Year 20.
- The annual PILOT payments are not permitted to exceed full taxes over the PILOT program.

One Manhattan West was originally identified as Lot 60 within Block 729. In 2020, the tax lot was subdivided into Lot 1001 (retail condominium) and Lot 1002 (office condominium). However, the assessor has not revised the 2021/22 fiscal year assessments and the property remains identified as Lot 60. As such, historical and current assessments do not reflect the separation of these tax lots. Cushman & Wakefield, Inc., modeled the PILOT and tax payments based on the asset’s current assessment and our projection of future assessments.

The PILOT exemption commenced in the 2019/2020 fiscal year and is scheduled to expire in the 2038/2039 fiscal year. The PILOT payments through 2021/2022 are based on the property’s assessed value as determined by the DOF. Projections for Class 4 office lots assume no assessment growth in fiscal year 2023 followed by fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis.

ONE MANHATTAN WEST
BLOCK 729, PART OF LOT 60
NEW YORK, NEW YORK

ASSESSMENT AND PAYMENT-IN-LIEU-OF-TAXES (PILOT) / UTEP PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	FULL FISCAL YR TAXES	PILOT YEAR	PILOT SCHEDULE	CALCULATED TAX	FIXED ESCALATION PRIOR YEAR	PAYABLE FISCAL YR PILOT/TAXES*
1	2021 / 22	$420,000,000	-	10.755%	$45,171,000	3	75%	-	-	**$33,878,250**
2	2022 / 23	$420,000,000	-	10.755%	$45,171,000	4	75%	-	-	**$33,878,250**
3	2023 / 24	$434,700,000	3.5%	10.755%	$46,751,985	5	103% of prior year	-	-	**$34,894,598**
4	2024 / 25	$449,914,500	3.5%	10.755%	$48,388,304	6	103% of prior year	-	-	**$35,941,435**
5	2025 / 26	$465,661,508	3.5%	10.755%	$50,081,895	7	103% of prior year	-	-	**$37,019,678**
6	2026 / 27	$481,959,660	3.5%	10.755%	$51,834,761	8	103% of prior year	-	-	**$38,130,269**
7	2027 / 28	$498,828,248	3.5%	10.755%	$53,648,978	9	103% of prior year	-	-	**$39,274,177**
8	2028 / 29	$516,287,237	3.5%	10.755%	$55,526,692	10	103% of prior year	-	-	**$40,452,402**
9	2029 / 30	$534,357,290	3.5%	10.755%	$57,470,127	11	103% of prior year	-	-	**$41,665,974**
10	2030 / 31	$553,059,796	3.5%	10.755%	$59,481,581	12	103% of prior year	-	-	**$42,915,954**
11	2031 / 32	$572,416,888	3.5%	10.755%	$61,563,436	13	103% of prior year	-	-	**$44,203,432**
12	2032 / 33	$592,451,479	3.5%	10.755%	$63,718,157	14	103% of prior year	-	-	**$45,529,535**
13	2033 / 34	$613,187,281	3.5%	10.755%	$65,948,292	15	103% of prior year	-	-	**$46,895,421**
14	2034 / 35	$634,648,836	3.5%	10.755%	$68,256,482	16	Greater of 103% prior year PILOT and 80% of full taxes	$54,605,186	$48,302,284	**$54,605,186**
15	2035 / 36	$656,861,545	3.5%	10.755%	$70,645,459	17	Greater of 103% prior year PILOT and 85% of full taxes	$60,048,640	$56,243,341	**$60,048,640**
16	2036 / 37	$679,851,699	3.5%	10.755%	$73,118,050	18	Greater of 103% prior year PILOT and 90% of full taxes	$65,806,245	$61,850,100	**$65,806,245**
17	2037 / 38	$703,646,509	3.5%	10.755%	$75,677,182	19	Greater of 103% prior year PILOT and 95% of full taxes	$71,893,323	$67,780,433	**$71,893,323**
18	2038 / 39	$728,274,137	3.5%	10.755%	$78,325,883	20	100% of full taxes	$78,325,883	-	**$78,325,883**
19	2039 / 40	$753,763,732	3.5%	10.755%	$81,067,289	-	-	-	-	**$81,067,289**
20	2040 / 41	$780,145,462	3.5%	10.755%	$83,904,644	-	-	-	-	**$83,904,644**
21	2041 / 42	$807,450,553	3.5%	10.755%	$86,841,307	-	-	-	-	**$86,841,307**
22	2042 / 43	$835,711,323	3.5%	10.755%	$89,880,753	-	-	-	-	**$89,880,753**
23	2043 / 44	$864,961,219	3.5%	10.755%	$93,026,579	-	-	-	-	**$93,026,579**
24	2044 / 45	$895,234,862	3.5%	10.755%	$96,282,509	-	-	-	-	**$96,282,509**
25	2045 / 46	$926,568,082	3.5%	10.755%	$99,652,397	-	-	-	-	**$99,652,397**
26	2046 / 47	$958,997,965	3.5%	10.755%	$103,140,231	-	-	-	-	**$103,140,231**
							TOTAL PAYABLE PROJECTION YEARS 1-26			**$1,579,154,364**

*During years 5 through 15: 3% increase over previous year's PILOT payment

Property Equity and Debt Overview [32]

Pursuant to the BBCMS Mortgage Trust 2020-C8 preliminary prospectus, dated October 6, 2020, the “As Is” appraised value of One Manhattan West as of October 1, 2020, was $2,250,000,000. [33]

The property was offered as collateral on debt totaling $1.8 billion from DBR Investments Co. Limited, Citi Real Estate Funding Inc., Wells Fargo Bank, N.A., JPMorgan Chase Bank, N.A., and Barclays Capital Real Estate Inc. The 7-year interest only loan is comprised of six senior A notes totaling $1.15 billion, five junior B notes totaling $350 million, a senior mezzanine loan totaling $100 million, and a junior mezzanine loan totaling $200 million. The notes total $1.8 billion, of which $1.5 billion was securitized as a commercial mortgage-backed security.

TABLE 2: DEBT SUMMARY [34]

Tier	Debt Amount
Senior A Notes:	$ 1,150,000,000
Junior B Note:	$ 350,000,000
Senior Mezzanine:	$ 100,000,000
Junior Mezzanine:	$ 200,000,000
Total	**$ 1,800,000,000**

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[32] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 8 | August 13, 2020

[33] “BBCMS Mortgage Trust 2020-C8, Commercial Mortgage Pass-Through Certificates, Series 2020-C8.” *EDGAR*. Securities and Exchange Commission, October 6, 2020, Page 147, https://www.sec.gov/Archives/edgar/data/1541480/000153949720001248/n2321-x5_424h.htm

[34] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 8 | August 13, 2020

Ownership Overview

One Manhattan West is owned by a joint venture of Brookfield Property Partners L.P. and Qatar Investment Authority. In October 2015, Qatar Investment Authority purchased a 44 percent interest in the overall Manhattan West development based on a total valuation of $8.6 billion. [35]

Brookfield Properties

Brookfield Properties invests in, develops, and operates best-in-class properties around the world on behalf of Brookfield Asset Management, one of the largest alternative asset managers in the world. Brookfield Properties is active across all property types, including multifamily, office, retail, hotel, logistics, and development. The firm manages more than 675 properties comprising 320 million square feet across five continents, with over 40 million square feet under active development.

The company has significant experience developing and managing large-scale projects, including Manhattan West, Brookfield Place and MetroTech Center in New York City. Brookfield Properties has numerous Class A buildings in New York including 1100 Avenue of the Americas, 300 Madison Avenue, 660 Fifth Avenue, the Grace Building, the New York Times Building, Tower 46, and prime retail suites along Fifth Avenue, among others. In April 2021, Brookfield Asset Management agreed to buy the outstanding shares of Brookfield Property Partners, the parent of Brookfield Properties. Brookfield Asset Management operates in over 30 countries with more than $600 billion in assets under management.

Qatar Investment Authority

Qatar Investment Authority ("QIA") is the sovereign wealth fund of the State of Qatar. Established in 2005, the QIA was created to invest, diversify, and grow Qatar's sovereign reserves, support the economy, and provide liquidity as needed. The fund invests in a wide range of sectors including real estate, infrastructure, telecommunications, health care, financial institutions, commodities, industrials, funds, and retail and consumer goods industries. The QIA opened an office in New York City in 2015 as part of its global diversification strategy. According to the Sovereign Wealth Fund Institute, the QIA is the world's 11th largest sovereign wealth fund with total assets of approximately $295 billion.

Tenant Overview

The office condominium within One Manhattan West is 93.8 percent leased to ten office tenants. Overall, the average remaining lease term for the office tenants is over 16 years, with expiration dates ranging from 2027 through 2041.

The five largest tenants represent 87.8 percent of the total office net rentable area. These tenants include Skadden, Arps, Slate, Meagher & Flom LLP (638,784 SF); Ernst & Young U.S. LLP (636,416 SF); Accenture LLP (280,192 SF); National Hockey League (176,007 SF); and McKool Smith PC (66,704 SF).[36] In addition, a portion of the retail condominium is leased to the National Hockey League.

Profiles of the five largest office tenants are presented below and on the following pages.

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[35] *EDGAR*. Securities and Exchange Commission, October 28, 2015, https://www.sec.gov/Archives/edgar/data/1545772/000114420415061220/v423099_ex99-1.htm

[36] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 14 | August 13, 2020

Skadden, Arps, Slate, Meagher & Flom LLP [37]

Company Profile

Skadden, Arps, Slate, Meagher & Flom LLP ("Skadden Arps") is a major American law firm, employing 1,700 attorneys in over 50 practice areas. It was founded in 1948 by Marshall Skadden, Les Arps, and John Slate. The firm has 22 offices across four continents. Skadden Arps is best known for its work in mergers and acquisitions, corporate restructuring, and corporate finance. In 2015, the company became the first firm to handle more than $1 trillion in merger and acquisition deals in a single year. The firm was ranked fifth in American Law's 2021 AM Law 200 survey with nearly $2.7 billion in revenue. Although a credit rating is not available, the firm is considered to be institutional quality.

Lease Information

Skadden Arps leases 638,784 square feet of space on floors 28 through 46 at One Manhattan West, paying a base rent of $77.43 per square foot. The lease began in March 2019 and expires in June 2040, with four 5-year renewal options. The firm has two contraction options, on the 10th and 15th anniversaries of the rent commencement date, with the ability to reduce space by up to two full floors. Skadden Arps received a free rent period in accordance with its lease and commenced paying full rent in Third Quarter 2020. [38]

Ernst & Young U.S. LLP [39]

Company Profile

Ernst & Young U.S. LLP, also known as EY, is the American subsidiary of Ernst & Young Global Limited, a global accounting and consultancy firm. It is considered to be one of the Big Four accounting firms in the United States. The main service lines include assurance, tax, advisory, and transaction advisory services. The firm employed nearly 300,000 people around the world and reported global revenues of $37.2 billion in 2020. The company's U.S. headquarters is located at One Manhattan West. Although a credit rating is not available, the firm is considered to be institutional quality.

Lease Information

EY's lease at One Manhattan West began in January 2020 and expires in May 2037, with two 5-year renewal options. The company pays a base rent of $84.77 per square foot for 636,416 square feet of space on floors 6 through 22, and 48. EY has a free rent period in the amount of $4,495,804 per month through May 2022, with full rent commencing in June 2022. [40]

[37] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 14 | August 13, 2020

[38] "BBCMS Mortgage Trust 2020-C8, Commercial Mortgage Pass-Through Certificates, Series 2020-C8." *EDGAR*. Securities and Exchange Commission, October 6, 2020, Page A-3-8, https://www.sec.gov/Archives/edgar/data/1541480/000153949720001248/n2321-x5_424h.htm

[39] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 14 | August 13, 2020

[40] "BBCMS Mortgage Trust 2020-C8, Commercial Mortgage Pass-Through Certificates, Series 2020-C8." *EDGAR*. Securities and Exchange Commission, October 6, 2020, Pages 185 & 186, https://www.sec.gov/Archives/edgar/data/1541480/000153949720001248/n2321-x5_424h.htm

Accenture LLP [41]

Company Profile

Accenture LLP ("Accenture") is a subsidiary of Accenture plc, one of the world's largest consulting firms, offering consulting, technology, and business process outsourcing globally. The company has been recognized as one of Fortune's most admired companies for nearly two decades. Accenture is domiciled in Ireland and serves a broad spectrum of industries, including over 75 percent of Fortune 500 companies. The company has approximately 569,000 employees in more than 120 countries. Accenture is consolidating its more than 3,000 New York City-based employees into space at One Manhattan West. In 2020, the company reported global revenues of $44.3 billion. The company is publicly traded on the New York Stock Exchange under the ticker symbol "ACN." The company's most recent credit ratings are detailed in the chart below.

CREDIT RATINGS

Agency	Rating	Last Review Date	Outlook
Moody's	Aa3	Mar-21	Stable
Fitch	A+	Dec-20	Stable
S&P	AA-	May-21	Stable

Source: Moody's, Fitch, S&P

Lease Information

Accenture leases the top 9 floors of One Manhattan West, comprising 280,192 square feet of space, paying a base rent of $119.67 per square foot. The lease began in June 2019 and expires in July 2035, with two 5-year renewal options. Accenture received a free rent period in accordance with its lease and commenced paying full rent in October 2020. [42]

National Hockey League [43]

Company Profile

The National Hockey League ("NHL") is the premier professional hockey organization in the United States and Canada. Founded in 1917, the NHL is the second oldest of the four major professional team sports leagues in North America. The league consists of 31 teams, 24 of which play in the United States and seven that play in Canada. Gross revenue for the 31 teams surpassed $5 billion in the 2018/2019 season, which was the last full season before the COVID-19 pandemic disrupted play. Although a credit rating is not available, the firm is considered to be institutional quality.

Lease Information

The NHL leases 176,007 square feet of space on floors 23 through 27 of One Manhattan West, paying a base rent of $85.43 per square foot. The space constitutes the global headquarters for the NHL. The lease began in June 2019 and expires in May 2041. The NHL has one contraction option and one termination option. On the 10th anniversary of the rent commencement date, the organization may relinquish one floor; on the 15th anniversary the league may vacate the remaining space. NHL received a free rent period in accordance with its lease and commenced paying full rent in July 2021. [44]

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[41] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 14 | August 13, 2020

[42] "BBCMS Mortgage Trust 2020-C8, Commercial Mortgage Pass-Through Certificates, Series 2020-C8." *EDGAR*. Securities and Exchange Commission, October 6, 2020, Page 186, https://www.sec.gov/Archives/edgar/data/1541480/000153949720001248/n2321-x5_424h.htm

[43] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 14 | August 13, 2020

[44] "BBCMS Mortgage Trust 2020-C8, Commercial Mortgage Pass-Through Certificates, Series 2020-C8." *EDGAR*. Securities and Exchange Commission, October 6, 2020, Page 186, https://www.sec.gov/Archives/edgar/data/1541480/000153949720001248/n2321-x5_424h.htm

McKool Smith PC [45]

Company Profile

McKool Smith PC was founded in 1991 with a group of 13 trial lawyers in Dallas. Today, the firm has over 130 trial lawyers in California, Texas, New York, and Washington, D.C. The law firm specializes in high-risk commercial litigation for both corporations and individuals. In addition to commercial litigation, the firm's other main practice areas include insurance recovery, intellectual property litigation, bankruptcy, and white-collar defense.

Lease Information

McKool Smith PC leases floors 49 through 51 at One Manhattan West, comprising a total footprint of 96,704 square feet. The firm pays a base rent of $108 per square foot. The lease started in April 2019 and expires in April 2035. McKool Smith PC received a free rent period in accordance with its lease and commenced paying full rent in 2020. [46]

Current Market Information

One Manhattan West is located within the Penn Station office submarket of Midtown Manhattan, which includes all of the newly constructed office towers within the Hudson Yards district. The following table provides a summary of the office portion of One Manhattan West as compared to Class A office space within the Penn Station office submarket and the Midtown Manhattan office market.

TABLE 3: KEY OFFICE METRICS – 1Q 2021 CLASS A

	No. of Buildings	Inventory SF	Avg. Direct Asking Rent / SF	Direct Availability
One Manhattan West	1	2,081,035 [47]	$124 - $129 [48]	6.2% [49]
Penn Station Submarket [50]	15	16,537,897	$107.59	5.3%
Midtown Manhattan [51]	297	187,528,330	$89.89	11.5%

[45] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 14 | August 13, 2020

[46] “BBCMS Mortgage Trust 2020-C8, Commercial Mortgage Pass-Through Certificates, Series 2020-C8.” *EDGAR*. Securities and Exchange Commission, October 6, 2020, Page A-3-8, https://www.sec.gov/Archives/edgar/data/1541480/000153949720001248/n2321-x5_424h.htm

[47] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 14 | August 13, 2020

[48] Cushman & Wakefield, Inc. – Second Quarter 2021

[49] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 14 | August 13, 2020

[50] Cushman & Wakefield, Inc. – First Quarter 2021

[51] Cushman & Wakefield, Inc. – First Quarter 2021

Investment Highlights

- One Manhattan West is a trophy asset and one of the most desirable office buildings in Manhattan, not only as a result of its above-standard construction quality, but also from a functional and architectural perspective.
- The property's floor plates are well suited to the needs of large office users. In addition, high ceilings and column-free floor plates offer great access to light, air, and views in all directions.
- One Manhattan West is LEED Gold certified and 2021 WELL Health-Safety rated.
- As part of the Manhattan West complex, tenants at One Manhattan West benefit from the synergy generated by the seamless connection of retail shops, high quality hotel, and trophy quality office spaces.
- One Manhattan West was approximately 90 percent pre-leased when it opened in 2019, with the vast majority of the space leased to institutional quality or credit tenants.
- The office component is 93.8 percent leased to 10 tenants. The five largest tenants represent 87.8 percent of the total office net rentable area. [52]
- According to the DBRS Morningstar Manhattan West 2020 1 MW Mortgage Trust Presale Report, the weighted average contract rent of $93.19 per square foot is below the concluded market rent of $112.50 per square foot. [53] This is largely due to the anchor tenants (Skadden Arps, Ernst & Young, and Accenture) that received incentives in the form of lower base rents, as is typical in new large-scale commercial developments in the New York City market. Over the long term, the below market contract rents present upside potential for future revenue growth as leases expire and roll to market.
- The average remaining lease term for the One Manhattan office tenants is over 16 years, which provides for a stable revenue stream over the long term and the ability to weather the near-term effects of the COVID-19 pandemic.
- The Manhattan West complex benefits from strong sponsorship by Brookfield Property Partners L.P. and Qatar Investment Authority.

[52] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 7 | August 13, 2020

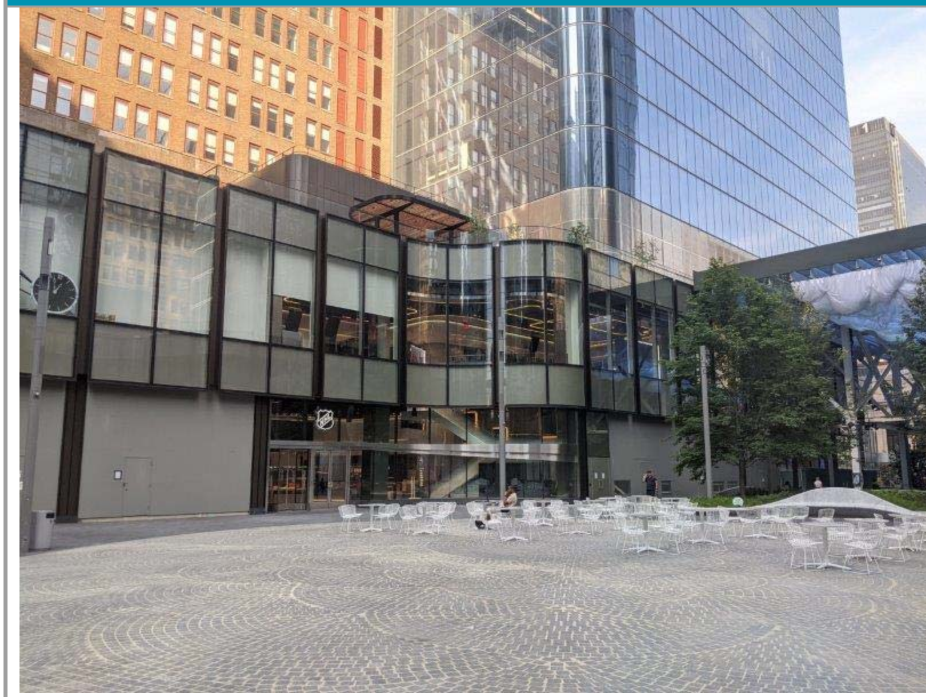
[53] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 7 | August 13, 2020

Property Photographs

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH



30 Hudson Yards

Overview

30 Hudson Yards is a trophy Class A office building located in the Hudson Yards district of Manhattan. Rising 1,296 feet above street level, the 90-story building is situated on the southwest corner of West 33rd Street and Tenth Avenue, on a platform above the Eastern Rail Yards.

Designed by Kohn Pedersen Fox Associates (KPF), construction commenced in October 2014 and was completed in March 2019. [54] The property achieved U.S. Green Building Council's Leadership in Energy and Environmental Design Neighborhood Development Gold ("LEED-ND") certification in September 2019. The LEED-ND certification includes the residential, commercial, and mixed-use buildings, platform infrastructure, and public square and gardens. [55]

30 Hudson Yards is the second tallest office building in New York and offers column-free spacing, 13.5- to 18-foot ceilings slab-to-slab, a triple-height lobby, floor-to-ceiling glass windows, views in all directions, multiple terraces, a pedestrian connection to The Shops & Restaurants at Hudson Yards and an underground connection to the new No. 7 subway station. [56] Four floors are used for amenity space that includes a fitness center, a cafeteria, technology bar and a sky lobby. [57] The building also features a cantilevered open-air platform observation deck at 1,100 feet, known as the Hudson Yards Observation Deck and "The Edge". At the time of construction, it was the highest outdoor observation deck in the Western Hemisphere. [58] The observation deck is connected to a restaurant and multi-use private event space. [59]

The steel-and-glass tower contains approximately 2.6 million square feet of rentable office and retail space within seven condominium units. The tax lots are identified as Block 702, Lots 1302, 1303, 1304, 1305, 1306, 1307, and 1308. [60]

- In June 2019, 30 HY WM Unit Owner L.P. acquired Lot 1302 in connection with a sale-leaseback to WarnerMedia (formerly Time Warner Inc.) through June 30, 2034, plus four 5-year renewal options. [61] WarnerMedia utilizes the space for its primary business divisions, which includes Warner Bros. Entertainment Inc., Turner Broadcasting System, Inc., and Home Box Office, Inc. The condominium unit contains 1,463,234 square feet of rentable office space on floors 16 through 24 and floors 35 through 51. [62]
- Hudson Yards North Tower Tenant LLC c/o The Related Companies, L.P. ("Related Companies") owns Lot 1303 (office space on floors 68 through 73). Lot 1304 (observation deck) is currently owned by KRE HYOD

[54] Cushman & Wakefield, Inc.

[55] "Hudson Yards designated Manhattan's first-ever LEED Gold neighborhood development." *Related Companies*. September 25, 2019. https://www.related.com/press-releases/2019-09-25/hudson-yards-designated-manhattans-first-ever-leedr-gold-neighborhood

[56] B of A Merrill Lynch Commercial Mortgage Pass-Through Certificates Series 2019-BNK19. January 15, 2019 https://www.sec.gov/Archives/edgar/data/850779/000153949719001149/n1700_x3-prets.htm

[57] B of A Merrill Lynch Commercial Mortgage Pass-Through Certificates Series 2019-BNK19. January 15, 2019 https://www.sec.gov/Archives/edgar/data/850779/000153949719001149/n1700_x3-prets.htm

[58] "30 Hudson Yards tops out as final beam is lifted and completes the building's steel crown." July 17, 2018. https://www.hudsonyardsnewyork.com/press-media/press-releases/30-hudson-yards-tops-out-final-beam-lifted-and-completes-buildings-steel

[59] "About Hudson Yards." *Hudson Yards New York.* HY Press Kit March 12, 2019.

[60] Cushman & Wakefield, Inc.

[61] B of A Merrill Lynch Commercial Mortgage Pass-Through Certificates Series 2019-BNK19. January 15, 2019 https://www.sec.gov/Archives/edgar/data/850779/000153949719001149/n1700_x3-prets.htm

[62] DBRS Morningstar Hudson Yards 2019-30HY Mortgage Trust Presale Report, Pages 4 & 9 | June 20, 2019

Owner LLC. [63] The condominium units contain a total of 313,136 square feet of rentable office and retail space. [64] The condominium unit is leased to 50 HY Master Tenant LLC; a significant portion of the office space was subleased to Facebook Inc. ("Facebook") in November 2019.

- HY30-67 Owner LP ("Withers Worldwide") owns Lot 1305, which contains 44,960 square feet of rentable office space on the 67th floor. [65] The condominium unit is leased to 50 HY Master Tenant LLC, which subleased the space to Facebook Inc. in November 2019.
- KKR HY LLC ("KKR") owns Lots 1306 and 1307, which contain a total of 343,327 square feet of rentable area on floors 35 and 74 through 83. [66] KKR relocated its corporate offices to 30 Hudson Yards in 2020. The Related Companies leases a portion of KKR's space.
- Wells Fargo Properties LLC ("Wells Fargo") owns Lot 1308 and utilizes the space as the headquarters for its corporate and investment banking business. The space features trading floors, administrative offices, and a café. The condominium unit contains a total of 432,260 square feet of rentable office space on floors 14, 15, and 60 through 66. [67, 68] A portion of the space was leased to 50 HY Master Tenant and subleased to Facebook Inc. in November 2019.

[63] Memorandum of Lease, Facebook Inc., November 13, 2019. Document ID 2016110100321001.

[64] Cushman & Wakefield, Inc.

[65] Cushman & Wakefield, Inc.

[66] Cushman & Wakefield, Inc.

[67] Cushman & Wakefield, Inc.

[68] "Wells Fargo helps Hudson Yards 'expand the possible'." January 29, 2020 https://stories.wf.com/wells-fargo-helps-hudson-yards-expand-possible/

Property Information

TABLE 1: BUILDING INFORMATION	
Street Address:	30 Hudson Yards (500 West 33rd Street)
Block / Lots:	702 / 1302, 1303, 1304, 1305, 1306, 1307 and 1308
Developer / Owner:	The site was initially owned by The Metropolitan Transportation Authority and ground leased to ERY Tenant LLC for a 99-year term. ERY Tenant LLC was a joint venture of The Related Companies, L.P., and Oxford Properties Group. When the improvements were condominiumized and the IDA documents severed between the office and retail components, Hudson Yards North Tower Tenant LLC was assigned the leasehold interest of the office component. The lessee has the right to acquire the fee title to the development rights for each component of the ERY. 30 Hudson Yards is subdivided into seven condominium units identified as Lots 1302, 1303, 1304, 1305, 1306, 1307, and 1308. The fee interest was acquired for tax lots 1302, 1303, 1305, 1306, 1307 and 1308. However, Lot 1304 remains subject to ground lease between the MTA and the current owner of Lot 1304, KRE HYOD Owner LLC. The ownership entities for each condominium tax lot are summarized below. Lot 1302 - 30 HY WM Unit Owner L.P. Lot 1303 - Hudson Yards North Tower Tenant LLC c/o The Related Companies, L.P. Lot 1304 - KRE HYOD Owner LLC Lot 1305 - HY30-67 Owner LP c/p Withers Worldwide Lot 1306 - KKR HY Owner LLC Lot 1307 - KKR HY Owner LLC Lot 1308 - Wells Fargo Properties LLC
Ownership Interest:	Fee Interest (Lots 1302, 1303, 1305, 1306, 1307, and 1308); Leasehold (Lot 1304)
Number of Floors:	90 (inclusive of mechanical floors)
Year Built:	2019
Gross Building Area [69]:	2,081,193 square feet
Rentable Area [70]:	2,596,917 square feet
Major Tenants/Owners:	A significant portion of the building is owner-occupied by entities affiliated with KKR & Co. Inc., and Wells Fargo Bank, N.A. Major tenants within 30 Hudson Yards include WarnerMedia and Facebook Inc. The acquisition of Lot 1302 was structured as a sale-leaseback to WarnerMedia through June 30, 2034, plus four 5-year renewal options.[71] In November 2019, Facebook Inc. announced its lease of 1.5 million square feet across 30 Hudson Yards, 50 Hudson Yards, and 55 Hudson Yards. Facebook's space was reported to include approximately 265,000 square feet within 30 Hudson Yards for an initial 54-month term. [72, 73]

[69] City of New York Department of Finance

[70] Cushman & Wakefield, Inc.

[71] B of A Merrill Lynch Commercial Mortgage Pass-Through Certificates Series 2019-BNK19. January 15, 2019 https://www.sec.gov/Archives/edgar/data/850779/000153949719001149/n1700_x3-prets.htm

[72] "Facebook completes lease for over 1.5 million square feet at Hudson Yards." *Hudson Yards New York*. November 14, 2019. https://www.hudsonyardsnewyork.com/press-media/press-releases/facebook-completes-lease-over-15-million-square-feet-hudson-yards

[73] Memorandum of Lease, Facebook Inc., November 13, 2019. Document ID 2016110100321001.

Real Property Tax / PILOT Information

30 Hudson Yards, located at the southwest corner of West 33rd Street and Tenth Avenue, is subject to a Payment-in-Lieu-of-Taxes (“PILOT”) agreement pursuant to New York City’s Industrial Development Agency's (“NYCIDA”) Uniform Tax Exemption Program (“UTEP”) amendment for Hudson Yards. The property is located within Zone 3 of the Hudson Yards’ UTEP area and is eligible for PILOT payments under the Category A Developments.

30 Hudson Yards is obligated to make PILOT payments as set by the NYCIDA pursuant to the Hudson Yards UTEP amendment. Under this PILOT structure, PILOT payments are calculated as described below:

- 60% of full taxes in Years 1 through 4,
- 103 percent of the prior year’s PILOT payment in Years 5 through 15,
- the greater of 103 percent of the prior year’s PILOT payment and 68% of full taxes in Year 16,
- the greater of 103 percent of the prior year’s PILOT payment and 76% of full taxes in Year 17,
- the greater of 103 percent of the prior year’s PILOT payment and 84% of full taxes in Year 18,
- the greater of 103 percent of the prior year’s PILOT payment and 92% of full taxes in Year 19, and
- 100% of full taxes in Year 20.
- The annual PILOT payments are not permitted to exceed full taxes over the PILOT program.

Cushman & Wakefield, Inc., modeled the PILOT and tax payments based on the asset’s current assessment and our projection of future assessments. According to the City of New York, a portion of Lot 1303 was determined to contain unqualified space that is not eligible for the PILOT. Therefore, 99.2 percent of Lot 1303 qualified for PILOT benefits and 0.78 percent is subject to full taxation. The balance of the tax lots receive full benefits pursuant to the PILOT program.

The PILOT exemption commenced in the 2019/2020 fiscal year and is scheduled to expire in the 2038/2039 fiscal year. The PILOT payments through 2021/2022 are based on the property’s assessed value as determined by the New York City Department of Finance (“DOF”). Projections for Class 4 office lots assume no assessment growth in fiscal year 2023 followed by fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis.

30 HUDSON YARDS
BLOCK 702, LOTS 1302-1308
NEW YORK, NEW YORK

ASSESSMENT AND PAYMENT-IN-LIEU-OF-TAXES (PILOT) / UTEP PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	FULL FISCAL YR TAXES	99.22% QUALIFIED SF FISCAL YR TAXES	0.78% UNQUALIFIED SF FISCAL YR TAXES	PILOT YEAR	PILOT SCHEDULE	CALCULATED TAX	FIXED ESCALATION PRIOR YEAR	99.22% QUALIFIED SF PAYABLE FISCAL YR PILOT/TAXES *	0.78% UNQUALIFIED SF PAYABLE FISCAL YR TAXES	TOTAL PAYABLE FISCAL YR PILOT/TAXES
1	2021 / 22	$530,119,402	-	10.755%	$57,014,342	$56,972,883	$41,458	3	60.00%	-	-	$34,183,730	$41,458	$34,225,188
2	2022 / 23	$530,119,402	-	10.755%	$57,014,342	$56,972,883	$41,458	4	60.00%	-	-	$34,183,730	$41,458	$34,225,188
3	2023 / 24	$548,673,581	3.5%	10.755%	$59,009,844	$58,966,934	$42,909	5	103% of prior year	-	-	**$35,209,242**	**$42,909**	**$35,252,151**
4	2024 / 25	$567,877,156	3.5%	10.755%	$61,075,188	$61,030,777	$44,411	6	103% of prior year	-	-	**$36,265,519**	**$44,411**	**$36,309,930**
5	2025 / 26	$587,752,857	3.5%	10.755%	$63,212,820	$63,166,854	$45,966	7	103% of prior year	-	-	**$37,353,485**	**$45,966**	**$37,399,450**
6	2026 / 27	$608,324,207	3.5%	10.755%	$65,425,268	$65,377,694	$47,574	8	103% of prior year	-	-	**$38,474,089**	**$47,574**	**$38,521,664**
7	2027 / 28	$629,615,554	3.5%	10.755%	$67,715,153	$67,665,913	$49,240	9	103% of prior year	-	-	**$39,628,312**	**$49,240**	**$39,677,551**
8	2028 / 29	$651,652,099	3.5%	10.755%	$70,085,183	$70,034,220	$50,963	10	103% of prior year	-	-	**$40,817,161**	**$50,963**	**$40,868,124**
9	2029 / 30	$674,459,922	3.5%	10.755%	$72,538,165	$72,485,418	$52,747	11	103% of prior year	-	-	**$42,041,676**	**$52,747**	**$42,094,423**
10	2030 / 31	$698,066,019	3.5%	10.755%	$75,077,000	$75,022,408	$54,593	12	103% of prior year	-	-	**$43,302,926**	**$54,593**	**$43,357,519**
11	2031 / 32	$722,498,330	3.5%	10.755%	$77,704,695	$77,648,192	$56,504	13	103% of prior year	-	-	**$44,602,014**	**$56,504**	**$44,658,518**
12	2032 / 33	$747,785,771	3.5%	10.755%	$80,424,360	$80,365,879	$58,481	14	103% of prior year	-	-	**$45,940,075**	**$58,481**	**$45,998,556**
13	2033 / 34	$773,958,273	3.5%	10.755%	$83,239,212	$83,178,684	$60,528	15	103% of prior year	-	-	**$47,318,277**	**$60,528**	**$47,378,805**
14	2034 / 35	$801,046,813	3.5%	10.755%	$86,152,585	$86,089,938	$62,646	16	Greater of 103% prior year PILOT and 68.00% of full taxes	$58,541,158	$48,737,825	**$58,541,158**	**$62,646**	**$58,603,804**
15	2035 / 36	$829,083,451	3.5%	10.755%	$89,167,925	$89,103,086	$64,839	17	Greater of 103% prior year PILOT and 76.00% of full taxes	$67,718,345	$60,297,393	**$67,718,345**	**$64,839**	**$67,783,185**
16	2036 / 37	$858,101,372	3.5%	10.755%	$92,288,803	$92,221,694	$67,108	18	Greater of 103% prior year PILOT and 84.00% of full taxes	$77,466,223	$69,749,896	**$77,466,223**	**$67,108**	**$77,533,332**
17	2037 / 38	$888,134,920	3.5%	10.755%	$95,518,911	$95,449,453	$69,457	19	Greater of 103% prior year PILOT and 92.00% of full taxes	$87,813,497	$79,790,210	**$87,813,497**	**$69,457**	**$87,882,954**
18	2038 / 39	$919,219,643	3.5%	10.755%	$98,862,073	$98,790,184	$71,888	20	100% of full taxes	$98,790,184	-	**$98,790,184**	**$71,888**	**$98,862,073**
19	2039 / 40	$951,392,330	3.5%	10.755%	$102,322,245	$102,247,841	$74,404	-	-	-	-	**$102,247,841**	**$74,404**	**$102,322,245**
20	2040 / 41	$984,691,062	3.5%	10.755%	$105,903,524	$105,826,515	$77,009	-	-	-	-	**$105,826,515**	**$77,009**	**$105,903,524**
21	2041 / 42	$1,019,155,249	3.5%	10.755%	$109,610,147	$109,530,443	$79,704	-	-	-	-	**$109,530,443**	**$79,704**	**$109,610,147**
22	2042 / 43	$1,054,825,682	3.5%	10.755%	$113,446,502	$113,364,009	$82,493	-	-	-	-	**$113,364,009**	**$82,493**	**$113,446,502**
23	2043 / 44	$1,091,744,581	3.5%	10.755%	$117,417,130	$117,331,749	$85,381	-	-	-	-	**$117,331,749**	**$85,381**	**$117,417,130**
24	2044 / 45	$1,129,955,642	3.5%	10.755%	$121,526,729	$121,438,360	$88,369	-	-	-	-	**$121,438,360**	**$88,369**	**$121,526,729**
25	2045 / 46	$1,169,504,089	3.5%	10.755%	$125,780,165	$125,688,703	$91,462	-	-	-	-	**$125,688,703**	**$91,462**	**$125,780,165**
26	2046 / 47	$1,210,436,732	3.5%	10.755%	$130,182,471	$130,087,807	$94,663	-	-	-	-	**$130,087,807**	**$94,663**	**$130,182,471**
									TOTAL PAYABLE PROJECTION YEARS 1-26			**$1,835,165,072**	**$1,656,257**	**$1,836,821,328**

*During years 5 through 15: 3% increase over previous year's PILOT payment

Property Equity and Debt Overview

Pursuant to the DBRS Morningstar Hudson Yards 2019-30HY Mortgage Trust Presale Report, condominium tax Lot 1302 was offered as collateral on debt totaling $1.43 billion from a consortium of banks including Deutsche Bank AG (DBNY), Goldman Sachs Bank USA, and Wells Fargo Bank N.A. The loan originated in July 2019. The scheduled maturity date is July 6, 2029. The 10-year loan includes 29 pari-passu A notes totaling $1.12 billion and a $310-million subordinate B note. [74] The appraised value reported as of May 23, 2019, was reported to be $2,200,000,000. [75] The property sold for $2,155,000,000 on June 14, 2019. Based on the total debt and the reported purchase price, ownership had approximately $815,000,000 in equity as of the date of financing in 2019.

Pursuant to several filings (CRFN No. 2019000407877, 2019000407878, and 2019000407879) with the New York City Department of Finance Office of the City Registrar, dated November 13, 2019, condominium tax Lot 1303 was offered as collateral on debt totaling $400,000,000 from Bank of America, N.A. In addition, a GAP mortgage was filed in the amount of $40,788,577, resulting in total debt of $440,788,578.

Pursuant to a mortgage filing (CRFN No. 2020000020263) with the New York City Department of Finance Office of the Registrar, dated January 14, 2020, condominium tax Lot 1304 was offered as collateral on debt totaling $375,000,000 from TCG Senior Funding, L.L.C.

Pursuant to the Trepp Loan Detail summary for “30 Hudson Yards 67”, condominium tax Lot 1305 was offered as collateral on debt totaling $71 million from JPMorgan Chase Bank, N.A. The origination date was February 19, 2021, and the scheduled maturity date is March 7, 2031. The loan consists of two senior A notes. [76] In addition, pursuant to a filing (CFRN No. 2021000101842) with the New York City Department of Finance Office of the City Registrar, dated February 19, 2021, condominium tax Lot 1305 was offered as collateral on debt totaling $21,500,000, resulting in a total debt of $92,500,000.

Pursuant to a mortgage filing (CRFN No. 2019000179269) with the New York City Department of Finance Office of the City Registrar, dated May 20, 2019, condominium tax Lots 1306 and 1307 were offered as collateral on debt totaling $490,000,000 from Deutsche Bank AG, New York Branch.

The debt associated with each condominium tax lot is summarized below.

TABLE 2: DEBT SUMMARY

Condominium Tax Lot	Senior A Notes Debt Amount	Junior B Notes Debt Amount	Total Debt Amount
Lot 1302	$ 1,120,000,000	$ 310,000,000	$ 1,430,000,000
Lot 1303	n/a	n/a	$ 440,788,578
Lot 1304	n/a	n/a	$ 375,000,000
Lot 1305	n/a	n/a	$ 92,500,000
Lots 1306 & 1307	n/a	n/a	$ 490,000,000
Lot 1308	n/a	n/a	n/a
Total (Lots 1302-1308)			**$ 2,828,288,578**

[74] DBRS Morningstar Hudson Yards 2019-30HY Mortgage Trust Presale Report, Page 5 | June 20, 2019

[75] CGCMT 2019-GC41. https://www.sec.gov/Archives/edgar/data/1258361/000153949719001207/n1708-x1_teaserts.htm

[76] Trepp Loan Detail 30 Hudson Yards 67

Ownership Overview

The 30 Hudson Yards Property is subject to a condominium declaration for the 20-30 Hudson Yards Condominium, which comprises the office building at 30 Hudson Yards and the retail property at 20 Hudson Yards. The 20-30 Hudson Yards Condominium consists of eight condominium tax lots: the retail unit at 20 Hudson Yards (Lot 1301) that is known as The Shops at Hudson Yards, six office condominium units at 30 Hudson Yards (Lots 1302, 1303, 1305, 1306, 1307 and 1308), and the observation deck condominium unit (Lot 1304) at 30 Hudson Yards.

The ownership entities of the seven condominium units that comprise 30 Hudson Yards are summarized below:

- Lot 1302: 30 HY WM Unit Owner L.P., an entity that consists of a consortium of investors that include The Related Companies, L.P., Arizona State Retirement System and Allianz, SE.
- Lot 1303: Hudson Yards North Tower Tenant LLC c/o The Related Companies, L.P.
- Lot 1304 : KRE HYOD Owner LLC
- Lot 1305: HY30-67 Owner LP, an entity affiliated with Withers Worldwide
- Lot 1306: KKR HY Owner LLC, an entity affiliated with KKR & Co. Inc.
- Lot 1307: KKR HY Owner LLC, an entity affiliated with KKR & Co. Inc.
- Lot 1308: Wells Fargo Properties LLC, an entity affiliated with Wells Fargo & Company

Tenant and Owner Profiles

A significant portion of the building, consisting of all or portions of Lots 1306, 1307 and 1308, is owner-occupied by entities affiliated with KKR & Co. Inc., and Wells Fargo Bank, N.A.

Major tenants within 30 Hudson Yards include WarnerMedia and Facebook Inc. The acquisition of Lot 1302 was structured as a sale-leaseback to WarnerMedia through June 30, 2034, plus four 5-year renewal options.[77]

In November 2019, Facebook Inc. announced its lease of 1.5 million square feet across 30 Hudson Yards, 50 Hudson Yards, and 55 Hudson Yards. Facebook's space was reported to include approximately 265,000 square feet subleased within 30 Hudson Yards for an initial 54-month term. [78, 79]

Profiles of the major tenants (AT&T Inc. and Facebook Inc.) and owner-occupants (KKR & Co. Inc., and Wells Fargo, N.A.) are presented on the following pages.

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[77] B of A Merrill Lynch Commercial Mortgage Pass-Through Certificates Series 2019-BNK19. January 15, 2019 https://www.sec.gov/Archives/edgar/data/850779/000153949719001149/n1700_x3-prets.htm

[78] "Facebook completes lease for over 1.5 million square feet at Hudson Yards." *Hudson Yards New York*. November 14, 2019 https://www.hudsonyardsnewyork.com/press-media/press-releases/facebook-completes-lease-over-15-million-square-feet-hudson-yards

[79] Memorandum of Lease, Facebook Inc., November 13, 2019. Document ID 2016110100321001.

AT&T Inc.

Company Profile

WarnerMedia, formerly Time Warner Inc., is a media and entertainment company headquartered at 30 Hudson Yards. WarnerMedia was acquired by AT&T Inc. (AT&T) in 2018 and AT&T serves as the guarantor on WarnerMedia's lease. [80]

AT&T is an industry-leading provider of wireline voice communications services in the U.S. The company offers services via wireless, wireline, satellite, WiFi, IP network, Virtual Private Network, and fiber optic cable. It is the biggest wireline voice provider and the second biggest wireless provider (behind Verizon Communications) in the U.S. AT&T added to its content capabilities with the acquisition of Time Warner.

AT&T's revenue increased 6.1 percent to $181.2 billion in fiscal 2019, primarily due to the full inclusion of Time Warner's financial results. As of December 31, 2020, AT&T reported 230,760 employees worldwide and total revenues of $171.76 billion. [81] The company is publicly traded on the New York Stock Exchange under the ticker symbol "T." As of July 2021, AT&T Inc. has a market capitalization of approximately $200 billion. AT&T is rated investment grade by Moody's, Fitch, and S&P Global. A summary of the company's most recent credit ratings are detailed in the chart below.

CREDIT RATINGS

Agency	Rating	Last Rating	Outlook
Moody's	Baa2	May-21	Stable
Fitch	BBB+	Mar-21	Stable
S&P	BBB+	Mar-21	Negative

Source: Moody's, Fitch, S&P

In June 2021, Discovery Inc. announced its anticipated merger with WarnerMedia. In connection with the merger, AT&T reported it would spin-off WarnerMedia. The merger is anticipated to be completed in 2022, provided that it received regulatory approval.

Lease Information

WarnerMedia leases 1,463,234 square feet on floors 16 through 24 and floors 35 through 51. WarnerMedia relocated its primary New York-based business segments to 30 Hudson Yards, which includes Turner Broadcasting, Home Box Office Inc. ("HBO"), Warner Bros. Entertainment Inc., and The Cable News Network ("CNN"). The lease is for an initial term of 15-years on a triple net basis with a scheduled expiration in June 2034. The lease includes four, 5-year renewal options (at fair market rent). [82]

The base rent is $75.00 per square foot, triple net, with annual rent escalations of 2.5 percent. WarnerMedia reportedly invested approximately $700 million for its tenant improvements. There are no unrealized or outstanding rent concessions, tenant improvement allowances, or leasing costs. [83]

Effective June 14, 2024, WarnerMedia has the right to contract up to 10 contiguous full floors (display floors 42 through 51; 404,325 square feet; 27.6% of net rentable area), exercisable from the highest contraction floor on down at the 30 Hudson Yards Property. WarnerMedia's contraction option is subject to a fee equal to $24,000,000 per floor contracted and prior written notice no later than (i) 30 months for a contraction of five or more floors, (ii) 24 months for a contraction of three or four floors, and (iii) 18 months for a contraction of one or two floors. [84]

[80] DBRS Morningstar Hudson Yards 2019-30HY Mortgage Trust Presale Report, Pages 5 & 6 | June 20, 2019

[81] AT&T, Inc., Annual Report 2020

Facebook Inc.

Company Profile

Facebook Inc. (“Facebook”), is the owner of the online social media and networking service known as Facebook. Mark Zuckerberg launched Facebook in 2004 as an online version of the Harvard Facebook. In 2012, Facebook began publicly trading on the Nasdaq Exchange under ticker “FB.” Facebook has experienced exponential growth over the past seven years, enabling it to dominate the social networking world as the most trafficked site of its kind in the United States. Its revenue has grown from nearly $8 billion in 2013 to nearly $86 billion in 2020, with digital advertising being its primary source ($84.17 billion) of income. [85] Net income rose from $18.49 billion in 2019 to nearly $29.15 billion in 2020. [86]

The company reported 58,604 employees as of December 31, 2020, an increase of 30 percent year-over-year.[87] As of July 2021, the company has a market capitalization of approximately $1 trillion. Although a credit rating is not available, the firm is considered to be investment grade quality.

Lease Information

In November 2019, Facebook announced its lease of 1.5 million square feet across 30 Hudson Yards, 50 Hudson Yards, and 55 Hudson Yards. Facebook’s space was reported to include approximately 265,000 square feet subleased within 30 Hudson Yards for an initial 54-month term. The sublease includes multiple consecutive renewal options to extend the term for a maximum of approximately 33 years in total. Facebook’s its space on floors 66 through 71 will be interconnected by an internal staircase. Facebook will be responsible for the costs associated with the construction and replacement of the staircase. [88]

[82] DBRS Morningstar Hudson Yards 2019-30HY Mortgage Trust Presale Report, Pages 8 & 9 | June 20, 2019

[83] DBRS Morningstar Hudson Yards 2019-30HY Mortgage Trust Presale Report, Pages 8 & 9 | June 20, 2019

[84] B of A Merrill Lynch Commercial Mortgage Pass-Through Certificates Series 2019-BNK19. January 15, 2019 https://www.sec.gov/Archives/edgar/data/850779/000153949719001149/n1700_x3-prets.htm

[85] Facebook Reports Fourth Quarter and Full Year 2020 Results. January 27, 2021.

[86] Facebook Reports Fourth Quarter and Full Year 2020 Results. January 27, 2021.

[87] Facebook Reports Fourth Quarter and Full Year 2020 Results. January 27, 2021.

[88] Structural and Collateral Term Sheet BMARK 2021-B24 https://www.sec.gov/Archives/edgar/data/0001013611/000153949721000271/n2450-x2_prets.htm

KKR Co. Inc.

Company Profile

Founded in 1976, Kohlberg Kravis Roberts & Co. (“KKR” and “KKR & Co. Inc.”) is a private equity investment firm headquartered in New York City. KKR relocated its corporate offices to 30 Hudson Yards in 2020. The firm’s business segments include private markets, public markets, and capital markets. Its specialties include acquisitions, buyouts (leveraged and managed), special situations, and middle market investments, among others. However, KKR has traditionally specialized in private equity investments in core America, European, and Asian industries.

As of December 31, 2020, KKR reported 1,583 employees worldwide and total revenues of $4.23 billion.[89] The company is publicly traded on the New York Stock Exchange under the ticker symbol "KKR." As of July 2021, KKR has a market capitalization of approximately $57 billion. KKR is rated investment grade by Fitch and S&P Global. A summary of the company’s most recent credit ratings are detailed in the chart below.

CREDIT RATINGS

Agency	Rating	Last Rating Action	Outlook
Moody's	-	-	-
Fitch	A	Nov-20	Stable
S&P	A	Feb-21	Stable

Source: Fitch, S&P

Wells Fargo Bank N.A.

Company Profile

Wells Fargo is one of the largest banks in the world. Through its retail banking operations, the company operates approximately 7,500 bank branches around the country. Its wholesale banking arm handles corporate banking activities that include investment banking and capital markets, securities investment, commercial real estate, and capital finance. Its wealth, brokerage, and retirement segment provides financial advisory services. The company also includes Wells Fargo Home Mortgage and Wells Fargo Insurance Services.

As of December 31, 2020, Wells Fargo reported total assets of over $1.9 trillion and over 268,000 employees worldwide.[90] The company is publicly traded on the New York Stock Exchange under the ticker symbol "WFC." As of July 2021, Wells Fargo has a market capitalization of approximately $180 billion. Wells Fargo is rated investment grade by Moody’s, Fitch and S&P Global. A summary of the company’s most recent credit ratings are detailed in the chart below.

CREDIT RATINGS

Agency	Rating	Last Rating Action	Outlook
Moody's	A1	Jul-21	Negative
Fitch	A+	Jun-21	Negative
S&P	BBB+	May-21	Stable

Source: Moody's, Fitch, S&P

[89] Form 10-K KKR & Co. Inc. February 2, 2021.

[90] Wells Fargo & Company Annual Report 2020.

Current Market Information

30 Hudson Yards is located within the Penn Station office submarket of Midtown Manhattan, which includes all of the newly constructed office towers within the Hudson Yards district. The following table provides a summary of the 30 Hudson Yards as compared to Class A office space within the Penn Station office submarket and the Midtown Manhattan office market.

TABLE 3: KEY OFFICE METRICS – 1Q 2021 CLASS A				
	No. of Buildings	**Inventory SF**	**Avg. Direct Asking Rent / SF**	**Direct Availability**
30 Hudson Yards	1	2,596,917	n/a	n/a
Penn Station Submarket [91]	15	16,537,897	$107.59	5.3%
Midtown Manhattan [92]	297	187,528,330	$89.89	11.5%

Investment Highlights

- 30 Hudson Yards is a trophy asset and one of the most desirable Class A office buildings in Manhattan, not only as a result of its above-standard construction quality, but also from a functional and architectural perspective.
- The building's floor plates are well suited to the needs of large office users. In addition, high ceilings and column-free floor plates offer great access to light, air, and views in all directions.
- 30 Hudson Yards is LEED Neighborhood Development Gold (LEED-ND) certified.
- The building features a cantilevered open-air platform observation deck at 1,100 feet, known as the Hudson Yards Observation Deck or "The Edge". At the time of construction, it was the highest outdoor observation deck in the Western Hemisphere.
- Located in the Eastern Rail Yards, tenants at 30 Hudson Yards benefit from the synergy generated by the seamless connection of retail shops, Culture Shed, and trophy quality office spaces.
- A significant portion of the building is owner-occupied by entities affiliated with KKR & Co. Inc., and Wells Fargo Bank, N.A., both of which are investment grade companies. KKR and Wells Fargo own 29.87 percent of the rentable area at 30 Hudson Yards. In addition, KKR's space on the 80th floor includes a large outdoor area of approximately 6,000 square feet, which is a desirable amenity in the marketplace. Related Companies also owns space in the building and leases some space from KKR.
- WarnerMedia leases 1,463,234 square feet at 30 Hudson Yards. The initial term is scheduled to expire on June 30, 2034, plus four 5-year renewal options. AT&T Inc. acquired WarnerMedia in 2018 and serves as the guarantor on the lease, which accounts for 56.35 percent of the total net rentable area at 30 Hudson Yards. In addition, AT&T is rated investment grade by Moody's, Fitch, and S&P Global.
- The Eastern Rail Yards complex benefits from strong sponsorship by Related Companies and Oxford Properties Group.

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[91] Cushman & Wakefield, Inc. – First Quarter 2021

[92] Cushman & Wakefield, Inc. – First Quarter 2021

Property Photographs

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

55 Hudson Yards

Overview

55 Hudson Yards is a trophy Class A office building located in the Hudson Yards district of Manhattan. Rising 780 feet above street level, the 51-story building is situated along the easterly blockfront of Eleventh Avenue, between West 33rd and West 34th Streets. Designed by Kohn Pedersen Fox Associates (KPF) and architect Kevin Roche, construction commenced in January 2015 and was completed in the fourth quarter of 2018. [93] 55 Hudson Yards was 97.3 percent leased to 21 tenants as of December 2019. [94] Construction costs were reported to be approximately $957 million, exclusive of the land and leasing costs, according to the New York City Industrial Development Agency's ("NYCIDA") Project Cost/Benefit Analysis dated December 5, 2013.

The property achieved U.S. Green Building Council's Leadership in Energy and Environmental Design Neighborhood Development Gold ("LEED-ND") certification in September 2019. The LEED-ND certification includes the residential, commercial, and mixed-use buildings, platform infrastructure, and public square and gardens. [95] 55 Hudson Yards offers column-free spacing, 13.5-foot ceilings slab-to-slab, a triple-height lobby, floor-to-ceiling glass windows, views in all directions, multiple private terraces, and a common terrace that wraps around the 10th floor. Other building features include a dispatch elevator system and fingerprint access entry within the office lobby and common corridors. The steel-and-glass tower contains approximately 1.43 million square feet of rentable office and retail space. [96] The office floors are located on the 2nd through 51st floors, while the grade level contains two retail suites. Mechanical space is located in the basement and on the 9th and 10th floors.

The Eastern Rail Yards consists of a megablock bound by Tenth Avenue, Eleventh Avenue, West 30th Street, and West 33rd Street. 50 and 55 Hudson Yards are not physically located in the Eastern Rail Yards. However, the properties on the Eastern Rail Yards along with 50 and 55 Hudson Yards are being marketed by Related/Oxford as the Hudson Yards Complex.

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[93] Cushman & Wakefield, Inc.

[94] KBRA Kroll Bond Rating Agency 2015-55HY CMBS Pre-Sale Report, Page 10 | December 17, 2019

[95] "Hudson Yards designated Manhattan's first-ever LEED Gold neighborhood development." *Related Companies*. September 25, 2019. https://www.related.com/press-releases/2019-09-25/hudson-yards-designated-manhattans-first-ever-leedr-gold-neighborhood

[96] KBRA Kroll Bond Rating Agency 2015-55HY CMBS Pre-Sale Report, Page 3 | December 17, 2019

Property Information

TABLE 1: BUILDING INFORMATION				
Street Address:	55 Hudson Yards 380 Eleventh Avenue 550 West 34th Street			
Block / Lot:	705 / 1			
Developer / Owner:	One Hudson Yards Owner LLC is a joint venture of The Related Companies, L.P. ("Related Companies"), Oxford Properties Group and Mitsui Fudosan America. In December 2014, Mitsui Fudosan America acquired a 92.09 percent interest from the joint venture.			
Ownership Interest:	Fee			
Number of Floors:	51 (inclusive of mechanical floors)			
Year Built:	2018			
Gross Building Area[97]:	1,178,640 square feet			
Rentable Area[98]:				
Office Area:	1,418,500 square feet			
Retail & Storage Area:	12,712 square feet			
Total Area:	1,431,212 square feet			
Major Tenants:	Tenant Name	Rentable Area (SF) [99]	Expiration Year [100]	Renewal Options
	Point72 Asset Management L.P.	332,283	April 2034	10 yrs [101]
	Milbank, Tweed, Hadley & McCloy LLP	287,333	March 2034	10 yrs [102]
	Cooley LLP	146,227	September 2039	10 yrs [103]
	Boies Schiller Flexner LLP	110,732	June 2035	10 yrs [104]
	Third Point LLC	89,043	July 2029	10 yrs [105]

[97] City of New York Department of Finance

[98] KBRA Kroll Bond Rating Agency 2015-55HY CMBS Pre-Sale Report, Pages 3 & 4 | December 17, 2019

[99] KBRA Kroll Bond Rating Agency 2015-55HY CMBS Pre-Sale Report, Page 10 | December 17, 2019

[100] Trepp Loan Detail 55 Hudson Yards

[101] Memorandum of Lease, Point72 Asset Management, L.P., October 10, 2016. Document ID 2016110100321001.

[102] Memorandum of Lease, Milbank, Tweed, Hadley & McCloy LLP, September 16, 2016. Document ID 2016110300145001.

[103] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

[104] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

[105] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

Real Property Tax / PILOT Information

55 Hudson Yards, located along the easterly blockfront of Eleventh Avenue between West 33rd and West 34th Streets, is subject to a Payment-in-Lieu-of-Taxes (“PILOT”) agreement pursuant to New York City’s Industrial Development Agency's (“NYCIDA”) Uniform Tax Exemption Program (“UTEP”) amendment for Hudson Yards. The property is located within Zone 3 of the Hudson Yards’ UTEP area and is eligible for PILOT payments based on allocations of gross building area for Category A and Category B Developments.

55 Hudson Yards is obligated to make PILOT payments as set by the NYCIDA pursuant to the Hudson Yards UTEP amendment. Under this PILOT structure, PILOT payments are calculated as described below:

- 70.33% of full taxes in Years 1 through 4,
- 103 percent of the prior year’s PILOT payment in Years 5 through 15,
- the greater of 103 percent of the prior year’s PILOT payment and 76.26% of full taxes in Year 16,
- the greater of 103 percent of the prior year’s PILOT payment and 82.20% of full taxes in Year 17,
- the greater of 103 percent of the prior year’s PILOT payment and 88.13% of full taxes in Year 18,
- the greater of 103 percent of the prior year’s PILOT payment and 94.07% of full taxes in Year 19, and
- 100% of full taxes in Year 20.
- The annual PILOT payments are not permitted to exceed full taxes over the PILOT program.

Cushman & Wakefield, Inc., modeled the PILOT and tax payments based on the asset’s current assessment and our projection of future assessments.

The PILOT exemption commenced in the 2019/2020 fiscal year and is scheduled to expire in the 2038/2039 fiscal year. The PILOT payments through 2021/2022 are based on the property’s assessed value as determined by the New York City Department of Finance (“DOF”). Projections for Class 4 office lots assume no assessment growth in fiscal year 2023 followed by fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis.

55 HUDSON YARDS
BLOCK 705, LOT 1
NEW YORK, NEW YORK

ASSESSMENT AND PAYMENT-IN-LIEU-OF-TAXES (PILOT) / UTEP PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	FULL FISCAL YR TAXES	PILOT YEAR	PILOT SCHEDULE	CALCULATED TAX	FIXED ESCALATION PRIOR YEAR	PAYABLE FISCAL YR PILOT/TAXES *
1	2021 / 22	$250,567,650	-	10.755%	$26,948,551	3	70.33%	-	-	$18,952,916
2	2022 / 23	$250,567,650	-	10.755%	$26,948,551	4	70.33%	-	-	$18,952,916
3	2023 / 24	$259,337,518	3.5%	10.755%	$27,891,750	5	103% of prior year	-	-	**$19,521,503**
4	2024 / 25	$268,414,331	3.5%	10.755%	$28,867,961	6	103% of prior year	-	-	**$20,107,148**
5	2025 / 26	$277,808,832	3.5%	10.755%	$29,878,340	7	103% of prior year	-	-	**$20,710,363**
6	2026 / 27	$287,532,142	3.5%	10.755%	$30,924,082	8	103% of prior year	-	-	**$21,331,674**
7	2027 / 28	$297,595,767	3.5%	10.755%	$32,006,425	9	103% of prior year	-	-	**$21,971,624**
8	2028 / 29	$308,011,618	3.5%	10.755%	$33,126,650	10	103% of prior year	-	-	**$22,630,773**
9	2029 / 30	$318,792,025	3.5%	10.755%	$34,286,082	11	103% of prior year	-	-	**$23,309,696**
10	2030 / 31	$329,949,746	3.5%	10.755%	$35,486,095	12	103% of prior year	-	-	**$24,008,987**
11	2031 / 32	$341,497,987	3.5%	10.755%	$36,728,109	13	103% of prior year	-	-	**$24,729,256**
12	2032 / 33	$353,450,417	3.5%	10.755%	$38,013,592	14	103% of prior year	-	-	**$25,471,134**
13	2033 / 34	$365,821,181	3.5%	10.755%	$39,344,068	15	103% of prior year	-	-	**$26,235,268**
14	2034 / 35	$378,624,922	3.5%	10.755%	$40,721,110	16	Greater of 103% prior year PILOT and 76.26% of full taxes	$31,053,919	$27,022,326	**$31,053,919**
15	2035 / 36	$391,876,795	3.5%	10.755%	$42,146,349	17	Greater of 103% prior year PILOT and 82.20% of full taxes	$34,644,299	$31,985,536	**$34,644,299**
16	2036 / 37	$405,592,483	3.5%	10.755%	$43,621,471	18	Greater of 103% prior year PILOT and 88.13% of full taxes	$38,443,603	$35,683,628	**$38,443,603**
17	2037 / 38	$419,788,219	3.5%	10.755%	$45,148,223	19	Greater of 103% prior year PILOT and 94.07% of full taxes	$42,470,933	$39,596,911	**$42,470,933**
18	2038 / 39	$434,480,807	3.5%	10.755%	$46,728,411	20	100% of full taxes	$46,728,411	-	**$46,728,411**
19	2039 / 40	$449,687,635	3.5%	10.755%	$48,363,905	-	-	-	-	**$48,363,905**
20	2040 / 41	$465,426,703	3.5%	10.755%	$50,056,642	-	-	-	-	**$50,056,642**
21	2041 / 42	$481,716,637	3.5%	10.755%	$51,808,624	-	-	-	-	**$51,808,624**
22	2042 / 43	$498,576,720	3.5%	10.755%	$53,621,926	-	-	-	-	**$53,621,926**
23	2043 / 44	$516,026,905	3.5%	10.755%	$55,498,694	-	-	-	-	**$55,498,694**
24	2044 / 45	$534,087,846	3.5%	10.755%	$57,441,148	-	-	-	-	**$57,441,148**
25	2045 / 46	$552,780,921	3.5%	10.755%	$59,451,588	-	-	-	-	**$59,451,588**
26	2046 / 47	$572,128,253	3.5%	10.755%	$61,532,394	-	-	-	-	**$61,532,394**
							TOTAL PAYABLE PROJECTION YEARS 1-26			**$919,049,342**

*During years 5 through 15: 3% increase over previous year's PILOT payment

Property Equity and Debt Overview

Pursuant to the Trepp Loan Detail report for 55 Hudson Yards, the "As Is" appraised value, as of October 15, 2019, was reported to be $2,400,000,000. [106]

The property was offered as collateral on debt totaling $1.245 billion from Wells Fargo, N.A., DBR Investments Co., and Morgan Stanley Bank N.A. The origination date was November 21, 2019, and the scheduled maturity date is December 6, 2029. The 10-year loan includes 33 pari-passu A notes totaling $945 million and three subordinate B notes totaling $300 million. The trust collateral includes 18 of the senior A notes totaling $510.5 million and all the three subordinate B notes. The non-trust collateral includes the remaining pari-passu A notes totaling $434.5 million, which are anticipated to be contributed toward future commercial mortgage backed securities. [107, 108]

TABLE 2: DEBT SUMMARY

Tier	Debt Amount
Senior A Notes:	$ 945,000,000
Junior B Notes:	$ 300,000,000
Total	**$ 1,245,000,000**

Based on the total debt, ownership had approximately $1.155 billion in equity as of the date of financing in 2019.

Ownership Overview

55 Hudson Yards is owned by One Hudson Yards Owner LLC, which is a joint venture of Related Companies, Oxford Properties Group and Mitsui Fudosan America. In December 2014, Mitsui Fudosan America acquired a 92.09 percent equity interest from the joint venture.

Related Companies

Founded in 1972 by Stephen Ross, Related Companies is a privately held global real estate company headquartered in New York City. The company employs more than 4,000 people around the world at offices in Boston, Chicago, Dallas, Los Angeles, San Francisco, Miami, London, and Abu Dhabi. Related Companies' portfolio consists of more than $60 billion in assets across sectors such as residential, office, retail, and hospitality. The company is recognized as a premier developer and manager of luxury projects and large-scale master-planned developments. It is also the largest private owner of affordable housing assets. Notable projects include the Eastern and Western Rail Yards of Hudson Yards, the Time Warner Center (now known as the Deutsche Bank Center), 70 Vestry Street, 520 West 28th Street, the Lantern House, One Madison, the Grand LA, the 78 in Chicago, 400 Lake Shore Drive, MiMA, and Superior Ink.

Oxford Properties Group

Oxford Properties Group is a Toronto-based real estate investment group, developer, and asset manager. The company manages $70 billion in assets on four continents, representing 150 million square feet of commercial

[106] Trepp Loan Detail 55 Hudson Yards.

[107] KBRA Kroll Bond Rating Agency 2015-55HY CMBS Pre-Sale Report, Page 4 | December 17, 2019

[108] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

space, 3,000 hotel rooms, and 10,000 residential units. Oxford Properties Group was formed in 1960 and is backed by OMERS, which is one of Canada's largest pension plans with approximately $105 billion in global assets.

Tenant Overview

55 Hudson Yards was 97.3 percent leased to 21 tenants as of December 2019 and 99 percent lease as of August 2021. [110, 111] Overall, the average remaining lease term for the office tenants is estimated to be over 13 years as of August 2021. [112]

The five largest tenants represent 68.07 percent of the total office net rentable area. These tenants include Point72 Asset Management L.P. (332,283 SF); Milbank, Tweed, Hadley & McCloy LLP (287,333 SF); Cooley LLP (146,227 SF); Boies Schiller Flexner LLP (110,732 SF); and Third Point LLC (89,043 SF).

Profiles of the four largest office tenants are presented on the following pages.

Point72 Asset Management L.P.
Company Profile
Point72 Asset Management L.P. ("Point72") is a hedge fund. Originally founded by Steven A. Cohen as S.A.C. Capital Advisors in 1992 as a family managed office, the firm rebranded itself as Point72 Asset Management L.P. in 2014 and began investing outside capital in 2018. The firm has over 1,650 employees in 12 offices globally, with assets under management totaling approximately $22.1 billion as of April 1, 2021. [113]
Lease Information
Point72 leases 332,283 square feet of space on floors 3 through 14, excluding the mechanical floor areas. The lease commenced in April 2019 and expires in April 2034. [114] The lease includes two initial 5-year renewal options, or one 10-year renewal option. The tenant also has certain expansion rights and rights of first offer to lease additional areas in the building. [115] Effective as of the 10th anniversary of the initial rent commencement date (April 16, 2019), and upon 15 months prior notice, the tenant has a one-time option to terminate either (i) the entirety of its leased premises or (ii) any one or more contiguous floors starting at either the highest or lowest office floor of the largest contiguous block of office floors then-leased by the tenant, such termination subject to a fee of the unamortized portion of allowances, commissions and free rent with respect to the terminated premises. [116]

[110] KBRA Kroll Bond Rating Agency 2015-55HY CMBS Pre-Sale Report, Pages 3, 4, 10, 12 & 24 | December 17, 2019

[111] Cushman & Wakefield, Inc.

[112] KBRA Kroll Bond Rating Agency 2015-55HY CMBS Pre-Sale Report, Page 7 | December 17, 2019

[113] https://www.point72.com/about/

[114] Trepp Loan Detail 55 Hudson Yards

[115] Memorandum of Lease, Point72 Asset Management, L.P., October 10, 2016. Document ID 2016110100321001.

[116] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

Milbank, Tweed, Hadley & McCloy LLP

Company Profile

Milbank, Tweed, Hadley & McCloy LLP ("Milbank") is an international law firm with offices in New York, Washington D.C., Los Angeles, London, Frankfurt, Munich, Tokyo, Hong Kong, São Paulo, Seoul, Singapore and Beijing. [117] Originally founded as "Anderson, Adams & Young" on Wall Street in 1866, Millbank was one of the first large companies to commit to 55 Hudson Yards, which now serves as its U.S. headquarters.

In 2020, the firm employed approximately 801 attorneys and reported gross revenue of $1.235 billion, ranking the 44th highest grossing law firm globally per the 2020 Global 200 survey. [118] Although a credit rating is not available, the firm is considered to be institutional quality.

Lease Information

Milbank leases 287,333 square feet of space on floors 30 through 39. The initial term of the lease is scheduled to expire in March 2034. The lease includes an option to renew for a 5-year or a 10-year term. The tenant also has certain expansion rights and rights of first offer to lease additional areas as set forth in the lease. Milbank also has certain contraction rights to surrender up to one full floor of the leased premises on the 10th anniversary of the rent commencement date. [119]

[117] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

[118] https://www.law.com/law-firm-profile/?id=207&name=Milbank,-Tweed,-Hadley-%26-McCloy-LLP

[119] Memorandum of Lease, Milbank, Tweed, Hadley & McCloy LLP, September 16, 2016. Document ID 2016110300145001.

Cooley LLP

Company Profile

Cooley LLP ("Cooley") is an international law firm that was founded in 1920 by Arthur Cooley and Louis Crowley. Headquartered in Palo Alto, California, Cooley also has 11 additional offices throughout the United States, as well as offices in Beijing, Brussels, Hong Kong, London, Shanghai, and Singapore. [120] The firm is recognized for its transactional abilities, particularly involving life sciences initial public offerings, mergers and acquisitions, and collaboration agreements. [121]

Cooley employed 1,072 attorneys and reported gross revenue of $1.552 billion in 2020, ranking the 29th highest grossing law firm globally per the 2020 Global 200 survey. [122] Although a credit rating is not available, the firm is considered to be institutional quality.

Lease Information

Cooley leases 146,227 square feet of space on floors 42 through 47. The lease commenced in September 2019 and is scheduled to expire in September 2039. The lease includes two 5-year renewal terms, or one renewal term of 10 years. [123]

Effective as of the 10th anniversary of the rent commencement date (September 1, 2019), Cooley has the one-time right to surrender either (i) the highest or lowest floor of any contiguous block or (ii) if the tenant did not exercise its initial expansion option, all of the square footage leased on the lowest floor of the leased premises (if the tenant leases less than all of the square footage on such lowest floor), subject to a fee equal to the sum of the unamortized portion of allowances, commissions and rent concessions applicable to such space. [124]

In addition, effective as of the 15th anniversary of the rent commencement date, Cooley has the one-time right to terminate its lease subject to a fee of the sum of (i) unamortized allowances, commissions, rent concessions, and (ii) four months of fixed rent and recurring additional charges at the rate immediately preceding the termination date. [125]

[120] https://www.cooley.com/about/contact-us

[121] https://www.legal500.com/firms/50229-cooley-llp/53802-new-york-usa/

[122] https://www.law.com/law-firm-profile/?id=65&name=Cooley

[123] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

[124] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

[125] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

Boies Schiller Flexner LLP

Company Profile

Boies Schiller Flexner LLP ("Boies Schiller") is an American law firm with 10 offices in the United States and one office in London, England. [126] The firm was founded by David Boies in 1997 and is headquartered at 55 Hudson Yards. Boies Schiller became known for its involvement in high-profile litigation with clients that include the Department of Justice, Vice President Al Gore, National Football League, Harvey Weinstein, and Theranos.

In 2020, the firm employed 177 attorneys and reported gross revenue of $250 million, ranking the 120th highest grossing law firm globally per the 2020 Global 200 survey. [127]

Lease Information

Boies Schiller leases 110,732 square feet of space on floors 19 through 22. The lease commenced in July 2020 and expires in June 2035. The lease includes two 5-year renewal terms, or one renewal term of 10 years, each at fair market rent. [128]

Effective as of the 10th anniversary of the rent commencement date (July 1, 2020), the tenant has a one-time right to surrender either (i) the highest or lowest floor of any contiguous block or (ii) any partial floor, each subject to a fee of 150% of the applicable per square foot base rent and 150% of the recurring additional charges due with respect to the contracted space for the immediately preceding 12-month period. [129]

[126] https://www.bsfllp.com/locations/

[127] https://www.law.com/law-firm-profile/?id=2598&name=Boies-Schiller-Flexner

[128] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

[129] B of A Securities Commercial Mortgage Pass-Through Certificates Series 2020-BNK 25. January 15, 2020. https://www.sec.gov/Archives/edgar/data/850779/000153949720000059/n1967_fwp-bnk25.htm

Current Market Information

55 Hudson Yards is located within the Penn Station office submarket of Midtown Manhattan, which includes all of the newly constructed office towers within the Hudson Yards district. The following table provides a summary of the office portion of 55 Hudson Yards as compared to Class A office space within the Penn Station office submarket and the Midtown Manhattan office market.

TABLE 3: KEY OFFICE METRICS – 1Q 2021 CLASS A				
	No. of Buildings	Inventory SF	Avg. Direct Asking Rent / SF	Direct Availability
55 Hudson Yards	1	1,418,500	$155.00	1.0%
Penn Station Submarket [130]	15	16,537,897	$107.59	5.3%
Midtown Manhattan [131]	297	187,528,330	$89.89	11.5%

Investment Highlights

- 55 Hudson Yards is a trophy asset and one of the most desirable Class A office buildings in Manhattan, not only as a result of its above-standard construction quality, but also from a functional and architectural perspective.
- The building's floor plates are well suited to the needs of large office users. In addition, high ceilings and column-free floor plates offer great access to light, air, and views in all directions.
- 55 Hudson Yards is LEED Neighborhood Development Gold (LEED-ND) certified.
- Located in Related/Oxford's Hudson Yard Complex, tenants at 55 Hudson Yards benefit from the synergy generated by the seamless connection of retail shops, Culture Shed, and trophy quality office spaces. It is also located adjacent to Hudson Park and the new No. 7 subway station.
- The building is 99 percent leased to 21 tenants, the majority of which are considered to be institutional quality tenants. The five largest office tenants represent 68.07 percent of the total office net rentable area.
- According to the KBRA Kroll Bond Rating Agency 2015-55HY CMBS Pre-Sale Report, the weighted average contract rent of $96.38 per square foot is below the concluded weighted average market rent of $113.40 per square foot. [132] This is largely due to the anchor tenants that received incentives in the form of lower base rents, as is typical in new large-scale commercial developments in the New York City market. Over the long term, the below market contract rents present upside potential for future revenue growth as leases expire and roll to market.
- Overall, the average remaining lease term for the office tenants is estimated to be over 13 years, excluding renewal options. This provides for a stable revenue stream over the long term and the ability to weather the near-term effects of the COVID-19 pandemic.
- The complex benefits from strong sponsorship by Related Companies, Oxford Properties Group and Mitsui Fudosan America.

[130] Cushman & Wakefield, Inc. – First Quarter 2021

[131] Cushman & Wakefield, Inc. – First Quarter 2021

[132] KBRA Kroll Bond Rating Agency 2015-55HY CMBS Pre-Sale Report, Pages 7 & 18 | December 17, 2019

Property Photographs

PROPERTY PHOTOGRAPH

50 Hudson Yards

Overview

50 Hudson Yards is located along the westerly side of Tenth Avenue, between West 33rd and West 34th Streets, in the Hudson Yards district of Manhattan. The building is being developed by a joint venture of The Related Companies, L.P. (“Related Companies”), Oxford Properties Group and Mitsui Fudosan America. Completion of construction is scheduled by July 2022.

Designed by architectural firm Foster + Partners, the 57-story, trophy Class A office building will rise nearly 985 feet above street level, containing approximately 2,950,000 square feet of rentable area. [133] Inclusive of the mechanical floors, the property will feature 57 physical floors. However, due to the above-average ceiling heights, the property is being marketed as a 77-story building. [134] 50 Hudson Yards is approximately 74 percent leased to BlackRock Inc., and Facebook Inc. [135]

Construction costs were reported to be approximately $3.04 billion, exclusive of the land and leasing costs, according to the New York City Industrial Development Agency's (“NYCIDA”) Project Cost/Benefit Analysis, dated January 5, 2017.

The building was designed to achieve U.S. Green Building Council’s Leadership in Energy and Environmental Design Neighborhood Development Gold (“LEED-ND”) certification. The tower will offer column-free spacing with 45 feet of core-to-glass dimension, floor plates ranging from approximately 32,300 to 80,300 square feet, 13.5- to 18-foot ceilings, floor-to-ceiling windows, a white stone and glass-clad façade, multiple dedicated lobbies, large outdoor spaces on the 7th and 51st floors, and views in all directions. The office floors will be located on the 3rd through 77th floors, while the grade level and part of the 2nd floor will contain the retail suites.

The Eastern Rail Yards consists of a megablock bound by Tenth Avenue, Eleventh Avenue, West 30th Street, and West 33rd Street. 50 and 55 Hudson Yards are not physically located in the Eastern Rail Yards. However, the properties on the Eastern Rail Yards along with 50 and 55 Hudson Yards are being marketed by Related/Oxford as the Hudson Yards Complex.

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[133] The Related Companies.
https://www.related.com/our-company/properties/50-hudson- yards
https://www.hudsonyardsnewyork.com/work/50-hudson-yards

[134] Cushman & Wakefield, Inc.

[135] Cushman & Wakefield, Inc.

Property Information

TABLE 1: BUILDING INFORMATION				
Street Address:	50 Hudson Yards 427 Tenth Avenue 515 West 33rd Street			
Block / Lots:	705 / 39			
Developer / Owner:	50 HYMC LLC is a joint venture of The Related Companies, L.P. ("Related Companies"), Oxford Properties Group ("Oxford") and Mitsui Fudosan. In 2017, Mitsui Fudosan entered into a 90/10 joint venture with Related Companies and Oxford. The total construction budget was $3.8 billion.			
Ownership Interest:	Fee			
Number of Floors:	77 (inclusive of mechanical floors)			
Year Built:	Anticipated July 2022			
Gross Building Area[136]:	2,907,315 square feet			
Rentable Area[137]:				
Office Area:	2,865,000 square feet			
Retail & Storage Area:	85,000 square feet			
Total Area:	2,950,000 square feet			
Major Tenants: [138, 139, 140]	Tenant Name	Rentable Area (SF)	Expiration Year	Renewal Options
	Facebook Inc.	1,200,000	2039	20 yrs [141]
	BlackRock Inc.	970,000	April 2043	20 yrs [142]

[136] City of New York Department of Finance

[137] Cushman & Wakefield, Inc.

[138] Cushman & Wakefield, Inc.

[139] https://www.hudsonyardsnewyork.com/work/50-hudson-yards

[140] "50 Hudson Yards Tops Out." *The Related Companies*. February 12, 2021
https://www.related.com/press-releases/2021-02-12/50-hudson-yards-tops-out

[141] Memorandum of Lease, Facebook Inc., November 13, 2019. Document ID: 2020000012174

[142] Memorandum of Lease, Blackrock Inc., August 31, 2017. Document ID: 2017000335196

Real Property Tax / PILOT Information

50 Hudson Yards, located along the westerly side of Tenth Avenue between West 33rd and West 34th Streets, is subject to a Payment-in-Lieu-of-Taxes (“PILOT”) agreement pursuant to New York City’s Industrial Development Agency's (“NYCIDA”) Uniform Tax Exemption Program (“UTEP”) amendment for Hudson Yards. The property is located within Zone 3 of the Hudson Yards’ UTEP area and is eligible for PILOT payments under the Category B Developments.

50 Hudson Yards is obligated to make PILOT payments as set by the NYCIDA pursuant to the Hudson Yards UTEP amendment. Under this PILOT structure, PILOT payments are calculated as described below:

- 75% of full taxes in Years 1 through 4,
- 103 percent of the prior year’s PILOT payment in Years 5 through 15,
- the greater of 103 percent of the prior year’s PILOT payment and 80% of full taxes in Year 16,
- the greater of 103 percent of the prior year’s PILOT payment and 85% of full taxes in Year 17,
- the greater of 103 percent of the prior year’s PILOT payment and 90% of full taxes in Year 18,
- the greater of 103 percent of the prior year’s PILOT payment and 95% of full taxes in Year 19, and
- 100% of full taxes in Year 20.
- The annual PILOT payments are not permitted to exceed full taxes over the PILOT program.

Cushman & Wakefield, Inc. modeled the historic assessments and the projected future payments due for 50 Hudson Yards based on its current assessment and our projections of future assessments.

The property is currently under construction. While completion of construction is scheduled by mid-2022, absorption of the available space and stabilization is anticipated to occur several years thereafter. As such, the real estate tax assessments are expected to increase significantly over the ensuing seven fiscal tax years.

Following completion of construction, the PILOT exemption is modeled to commence in fiscal year 2024, and expire in the fiscal year 2043 fiscal year. As detailed in Chapter 3, the model assumes stabilized real estate taxes of $23.00 per square foot. Based on the current 2021/2022 Class 4 tax rate (10.755 percent) the implied stabilized assessment equates to $213.85 per square foot. Upon completion, the inflated stabilized assessment is phased-in at a rate of 90 percent in Year 1 post completion, 95 percent in Year 2 post completion, and 100 percent in Year 3 post completion. Projections for Class 4 office tax lots assume no assessment growth in fiscal year 2023 followed by fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis.

50 HUDSON YARDS
BLOCK 705, LOT 39
NEW YORK, NEW YORK

ASSESSMENT AND PAYMENT-IN-LIEU-OF-TAXES (PILOT) / UTEP PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	FULL FISCAL YR TAXES	PILOT YEAR	PILOT SCHEDULE	CALCULATED TAX	FIXED ESCALATION PRIOR YEAR	PAYABLE FISCAL YR PILOT/TAXES *
1	2021 / 22	$5,078,250	-	10.755%	$546,166	CCP2	100%	-	-	**$546,166**
2	2022 / 23	$5,078,250	-	10.755%	$546,166	CCP3	100%	-	-	**$546,166**
3	2023 / 24	$579,151,745	$199/sf	10.755%	$62,287,770	1	75%	-	-	**$46,715,828**
4	2024 / 25	$632,723,282	$218/sf	10.755%	$68,049,389	2	75%	-	-	**$51,037,042**
5	2025 / 26	$689,335,365	$237/sf	10.755%	$74,138,019	3	75%	-	-	**$55,603,514**
6	2026 / 27	$713,462,103	3.5%	10.755%	$76,732,849	4	75%	-	-	**$57,549,637**
7	2027 / 28	$738,433,276	3.5%	10.755%	$79,418,499	5	103% of prior year	-	-	**$59,276,126**
8	2028 / 29	$764,278,441	3.5%	10.755%	$82,198,146	6	103% of prior year	-	-	**$61,054,410**
9	2029 / 30	$791,028,186	3.5%	10.755%	$85,075,081	7	103% of prior year	-	-	**$62,886,042**
10	2030 / 31	$818,714,173	3.5%	10.755%	$88,052,709	8	103% of prior year	-	-	**$64,772,623**
11	2031 / 32	$847,369,169	3.5%	10.755%	$91,134,554	9	103% of prior year	-	-	**$66,715,802**
12	2032 / 33	$877,027,090	3.5%	10.755%	$94,324,264	10	103% of prior year	-	-	**$68,717,276**
13	2033 / 34	$907,723,038	3.5%	10.755%	$97,625,613	11	103% of prior year	-	-	**$70,778,794**
14	2034 / 35	$939,493,344	3.5%	10.755%	$101,042,509	12	103% of prior year	-	-	**$72,902,158**
15	2035 / 36	$972,375,611	3.5%	10.755%	$104,578,997	13	103% of prior year	-	-	**$75,089,223**
16	2036 / 37	$1,006,408,758	3.5%	10.755%	$108,239,262	14	103% of prior year	-	-	**$77,341,900**
17	2037 / 38	$1,041,633,064	3.5%	10.755%	$112,027,636	15	103% of prior year	-	-	**$79,662,157**
18	2038 / 39	$1,078,090,222	3.5%	10.755%	$115,948,603	16	Greater of 103% prior year PILOT and 80% of full taxes	$92,758,883	$82,052,021	**$92,758,883**
19	2039 / 40	$1,115,823,379	3.5%	10.755%	$120,006,804	17	Greater of 103% prior year PILOT and 85% of full taxes	$102,005,784	$95,541,649	**$102,005,784**
20	2040 / 41	$1,154,877,198	3.5%	10.755%	$124,207,043	18	Greater of 103% prior year PILOT and 90% of full taxes	$111,786,338	$105,065,957	**$111,786,338**
21	2041 / 42	$1,195,297,900	3.5%	10.755%	$128,554,289	19	Greater of 103% prior year PILOT and 95% of full taxes	$122,126,575	$115,139,928	**$122,126,575**
22	2042 / 43	$1,237,133,326	3.5%	10.755%	$133,053,689	20	100% of full taxes	$133,053,689	-	**$133,053,689**
23	2043 / 44	$1,280,432,992	3.5%	10.755%	$137,710,568	-	-	-	-	**$137,710,568**
24	2044 / 45	$1,325,248,147	3.5%	10.755%	$142,530,438	-	-	-	-	**$142,530,438**
25	2045 / 46	$1,371,631,832	3.5%	10.755%	$147,519,004	-	-	-	-	**$147,519,004**
26	2046 / 47	$1,419,638,947	3.5%	10.755%	$152,682,169	-	-	-	-	**$152,682,169**

*During years 5 through 15: 3% increase over previous year's PILOT payment

TOTAL PAYABLE PROJECTION YEARS 1-26	**$2,113,368,310**

Property Equity and Debt Overview

50 Hudson Yards West was reported to have a $1.6 billion construction loan from lenders that included Wells Fargo Bank, N.A., Deutsche Bank, HSBC, Bank of China, and Sumitomo Mitsui Banking Corporation. The financing originated in the third quarter of 2017 and was announced as part of a $3.8 billion capitalization of 50 Hudson Yards. Related Companies, Oxford, and Mitsui Fudosan America committed the balance of the capital. [143]

In December 2019, additional financing from Wells Fargo of $440 million was recorded with the New York City Department of Finance Office of the City Register (CRFN No. 2019000423496), bringing the total debt to $2.04 billion.

While we are not aware of the terms of these specific financings, construction loans do not typically exceed 65 percent of a lender's conclusion of value. Based on a loan-to-value ratio of 65 percent, 50 Hudson Yards would have been modeled at a minimum value upon completion of approximately $3.14 billion. The project was reported to have a $3.8 billion capitalization

[143] "Mitsui Fudosan America Announces $3.8 billion Capitalization of 50 Hudson Yards in Partnership with Related Companies and Oxford Properties." *Mitsui Fudosan America.* September 5, 2017. https://www.mfamerica.com/node/210

Ownership Overview

50 Hudson Yards is owned by a joint venture of The Related Companies, L.P. ("Related Companies"), Oxford Properties Group and Mitsui Fudosan. In 2017, Mitsui Fudosan entered into a 90/10 joint venture with Related Companies and Oxford. The total construction budget was $3.8 billion.

Related Companies

Founded in 1972 by Stephen Ross, Related Companies is a privately held global real estate company headquartered in New York City. The company employs more than 4,000 people around the world at offices in Boston, Chicago, Dallas, Los Angeles, San Francisco, Miami, London, and Abu Dhabi. Related Companies' portfolio consists of more than $60 billion in assets across sectors such as residential, office, retail, and hospitality. The company is recognized as a premier developer and manager of luxury projects and large-scale master-planned developments. It is also the largest private owner of affordable housing assets. Notable projects include the Eastern and Western Rail Yards of Hudson Yards, the Time Warner Center (now known as the Deutsche Bank Center), 70 Vestry Street, 520 West 28th Street, the Lantern House, One Madison, the Grand LA, the 78 in Chicago, 400 Lake Shore Drive, MiMA, and Superior Ink.

Oxford Properties Group

Oxford Properties Group is a Toronto-based real estate investment group, developer, and asset manager. The company manages $70 billion in assets on four continents, representing 150 million square feet of commercial space, 3,000 hotel rooms, and 10,000 residential units. Oxford Properties Group was formed in 1960 and is backed by OMERS, which is one of Canada's largest pension plans with approximately $105 billion in global assets.

Tenant Overview

50 Hudson Yards is 74 percent leased to BlackRock Inc., and Facebook Inc. The building is currently under construction. The leases have initial terms of 18 to 20 years plus renewal options. Profiles of these two tenants are presented on the following pages.

BlackRock Inc.

Company Profile [144]

BlackRock Inc. (“BlackRock”) is a global investment management firm that provides investment management and technology services to institutional clients and retail investors. The company’s clients consist of pension funds, endowments, official institutions, and financial and other institutions.

Blackrock provides investment management technology systems, risk management services, wealth management and digital distribution tools to institutional investors. For retail investors, the firm provides various wealth management technology tools associated with digital advice, portfolio construction capabilities, and risk analytics. Blackrock also provides securities lending that includes quantitative analysis, proprietary technology, and risk management.

As of December 2020, Blackrock, Inc., reported $8.68 trillion of assets under management with approximately 16,500 employees in more than 30 countries. Assets under management included $845.9 billion (retail clients), $2.7 trillion (iShares ETFs), $4.47 trillion (institutional), $666 billion (cash), and $22 billion (advisory).

The company is publicly traded on the New York Stock Exchange under the ticker symbol "BLK." As of July 2021, BlackRock Inc. has a market capitalization of over $132 billion Although a credit rating is not available, the firm is considered to be investment grade quality.

Lease Information [145]

BlackRock leases 970,000 square feet of space at 50 Hudson Yards. BlackRock’s office space is located on floors 2 through 77. The firm also leases additional area on portions of the cellar, sub-cellar, grade and 6th floors. The lease was announced in August 2017 and is projected to commence in May 2023. Pursuant to the memorandum of lease, the initial term of the lease is scheduled to expire in April 2043. The lease includes renewal options whereby BlackRock may extend its term for all or certain portions of the premises for up to an additional 20 years in the aggregate pursuant to, at the tenant’s election, consecutive periods of five years or ten years.

The tenant also has certain expansion rights and rights of first offer to lease additional areas as set forth in the lease. The lease also includes contraction options, affording BlackRock the right to give back either two full floors or one full floor, on each of the tenth and fifteenth anniversaries of the rent commencement date.

[144] BlackRock, Inc. 2020 Annual Report

[145] Memorandum of Lease, Blackrock Inc., August 31, 2017. Document ID: 2017000335196

Facebook Inc.

Company Profile

Facebook Inc. ("Facebook"), is the owner of the online social media and networking service known as Facebook. Mark Zuckerberg launched Facebook in 2004 as an online version of the Harvard Facebook. In 2012, Facebook began publicly trading on the Nasdaq Exchange under ticker "FB." Facebook has experienced exponential growth over the past seven years, enabling it to dominate the social networking world as the most trafficked site of its kind in the United States. Its revenue has grown from nearly $8 billion in 2013 to nearly $86 billion in 2020, with digital advertising being its primary source ($84.17 billion) of income. [146] Net income rose from $18.49 billion in 2019 to nearly $29.15 billion in 2020. [147]

The company reported 58,604 employees as of December 31, 2020, an increase of 30 percent year-over-year.[148] As of July 2021, the company has a market capitalization of approximately $1 trillion. Although a credit rating is not available, the firm is considered to be investment grade quality.

Lease Information [149]

In November 2019, Facebook announced its lease of 1.5 million square feet across 30 Hudson Yards, 50 Hudson Yards, and 55 Hudson Yards. Facebook's space was reported to include approximately 1,200,000 square feet within 50 Hudson Yards. Facebook's space will be located on floors 2, and 31 through 63. The firm will also lease additional area on portions of the sub-cellar, grade, and mechanical floors.

The lease is projected to commence in 2022 and is scheduled to expire in 2039. In addition, Facebook has multiple consecutive renewal options to extend the lease term for up to an additional 20 years in the aggregate.

[146] Facebook Reports Fourth Quarter and Full Year 2020 Results. January 27, 2021.

[147] Facebook Reports Fourth Quarter and Full Year 2020 Results. January 27, 2021.

[148] Facebook Reports Fourth Quarter and Full Year 2020 Results. January 27, 2021.

[149] Memorandum of Lease, Facebook Inc., November 13, 2019. Document ID: 2020000012174

Current Market Information

50 Hudson Yards is located within the Penn Station office submarket of Midtown Manhattan, which includes all of the newly constructed office towers within the Hudson Yards district. The following table provides a summary of the office portion of 50 Hudson Yards as compared to Class A office space within the Penn Station office submarket and the Midtown Manhattan office market.

TABLE 2: KEY OFFICE METRICS – 1Q 2021 CLASS A

	No. of Buildings	Inventory SF	Avg. Direct Asking Rent / SF	Direct Availability
50 Hudson Yards [150]	1	2,865,000	\$125 - \$200	26%
Penn Station Submarket [151]	15	16,537,897	\$107.59	5.3%
Midtown Manhattan [152]	297	187,528,330	\$89.89	11.5%

Investment Highlights

- Upon completion of construction in 2023, 50 Hudson Yards will be a trophy asset and one of the most desirable office buildings in Manhattan, not only as a result of its above standard construction quality, but also from a functional and architectural perspective.
- The property's floor plates are well suited to the needs of large office users. In addition, high ceilings and column-free floor plates offer great access to light, air, and views in all directions.
- Similar to the balance of the complex, 50 Hudson Yards is expected to achieve LEED-ND Gold certification.
- As part of the Related/Oxford Hudson Yards complex, tenants at 50 Hudson Yards benefit from the synergy generated by the seamless connection of retail shops, Culture Shed, and trophy quality office spaces. It is also located adjacent to Hudson Park and the new No. 7 subway station.
- The building is 74 percent leased to BlackRock Inc. and Facebook Inc., which are considered to be institutional quality tenants.
- Overall, the average lease term for BlackRock and Facebook is estimated to be over 18 years, excluding renewal options. In addition, the Blackrock and Facebook have multiple renewal options to extend their leases for up to an additional 20 years in the aggregate. This provides for stable revenue stream over the long term and the ability to weather the near-term effects of the COVID-19 pandemic.
- The complex benefits from strong sponsorship by Related Companies, Oxford Properties Group and Mitsui Fudosan America.

[150] Cushman & Wakefield, Inc.

[151] Cushman & Wakefield, Inc. – First Quarter 2021

[152] Cushman & Wakefield, Inc. – First Quarter 2021

Property Photographs

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

66 Hudson Boulevard (The Spiral)

Overview

The Spiral is a Class A office tower currently under construction in the Hudson Yards district of Manhattan. The building is located on the entire block bound by Tenth Avenue, Hudson Boulevard, West 34th Street, and West 35th Street. Real estate developer Tishman Speyer Properties, L.P. ("Tishman Speyer") commenced construction in 2018. Completion of construction is scheduled in the third quarter of 2022.

Designed by architectural firm Bjarke Ingels Group, the 67-story, Class A office building will rise a reported 1,005 feet above street level and contain approximately 2,835,000 square feet of rentable area. [153, 154] As of July 2021, the Spiral is approximately 53 percent leased to Pfizer Inc., Debevoise & Plimpton LLP, and AllianceBernstein L.P. [155]

Construction costs were reported to be approximately $2.12 billion, exclusive of the land and leasing costs, according to the New York City Industrial Development Agency's ("NYCIDA") Project Cost/Benefit Analysis, dated July 17, 2014. The development budget included an additional $400 million for marketing and leasing costs, equating to a total hard and soft cost of $2.521 billion with leasing commissions and tenant improvements.

The building was designed to achieve U.S. Green Building Council's Leadership in Energy and Environmental Design Silver ("LEED") certification. The tower offers column-free spacing with floor plates ranging from approximately 37,000 to 75,000 square feet, 13.5- to 18-foot ceilings slab-to-slab, floor-to-ceiling windows, a glass-clad façade, and views in all directions. The tapered form of the building allows for portions of each floor to have double-height amenity areas or outdoor terraces and green space. The building's lobby will feature triple-height ceilings and will be located across from an entrance to the recently extended No. 7 Train and the Hudson Boulevard Park.

The office floors are located on the 2nd through 5th, 7th through 36th, and 40th through 65th floors. The grade and mezzanine levels contain the retail suites. The building also features a below-grade parking garage with approximately 30 spaces. Mechanical space is located on the 6th, 37th through 39th, and 66th and 67th floors.

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[153] Tishman Speyer.
https://tishmanspeyer.com/properties/the-spiral#
https://www.thespiralny.com/

[154] Cushman & Wakefield, Inc.

[155] Cushman & Wakefield, Inc.

Property Information

TABLE 1: BUILDING INFORMATION				
Street Address:	66 Hudson Boulevard (The Spiral) 509 West 34th Street			
Block / Lots:	706 / 17			
Developer / Owner:	509 W 34, L.L.C. c/o Tishman Speyer			
Ownership Interest:	Fee			
Number of Floors:	67 (inclusive of mechanical floors)			
Year Built:	Anticipated in the third quarter of 2022			
Gross Building Area: [156]	2,907,315 square feet			
Rentable Area: [157]				
Office Area:	2,800,000 square feet			
Retail & Storage Area:	35,000 square feet			
Total Area:	2,835,000 square feet			
Major Tenants:	Tenant Name	Rentable Area (SF) [158]	Expiration Year	Renewal Options
	Pfizer Inc.	798,278	December 2043	20 yrs [159]
	Debevoise & Plimpton LLP	530,884	December 2041	10 yrs [160]
	AllianceBernstein L.P.	166,000	December 2044	20 yrs [161]

[156] City of New York Department of Finance

[157] Cushman & Wakefield, Inc.

[158] Cushman & Wakefield, Inc.

[159] Memorandum of Lease, Pfizer Inc., April 9, 2018. Document ID: 2018041200299005

[160] Memorandum of Lease, Debevoise & Plimpton LLP., November 18, 2019. Document ID: 2019122300306001

[161] Memorandum of Lease, AllianceBernstein L.P., April 10, 2019. Document ID: 2019042300857001

Real Property Tax / PILOT Information

66 Hudson Boulevard (The Spiral) is subject to a Payment-in-Lieu-of-Taxes ("PILOT") agreement pursuant to New York City's Industrial Development Agency's ("NYCIDA") Uniform Tax Exemption Program ("UTEP") amendment for Hudson Yards. The property is located within Zone 3 of the Hudson Yards' UTEP area and is eligible for PILOT payments based on allocations of gross building area for Category B and Category C Developments.

66 Hudson Boulevard (The Spiral) will be obligated to make PILOT payments as set by the NYCIDA pursuant to the Hudson Yards UTEP amendment. Under this PILOT structure, PILOT payments are calculated as described below:

- 75.23% of full taxes in Years 1 through 4,
- 103 percent of the prior year's PILOT payment in Years 5 through 15,
- the greater of 103 percent of the prior year's PILOT payment and 80.19% of full taxes in Year 16,
- the greater of 103 percent of the prior year's PILOT payment and 85.14% of full taxes in Year 17,
- the greater of 103 percent of the prior year's PILOT payment and 90.09% of full taxes in Year 18,
- the greater of 103 percent of the prior year's PILOT payment and 95.05% of full taxes in Year 19, and
- 100% of full taxes in Year 20.
- The annual PILOT payments are not permitted to exceed full taxes over the PILOT program.

Cushman & Wakefield, Inc., modeled the PILOT and tax payments based on the asset's current assessment and our projection of future assessments.

The property is currently under construction. While completion of construction is projected to occur in the third quarter of 2022, absorption of the available space and stabilization is anticipated to occur several years thereafter. As such, the real estate tax assessments are expected to increase significantly over the ensuing seven fiscal tax years.

Following completion of construction, the PILOT exemption is modeled to commence in fiscal year 2024, and expire in the fiscal year 2043 fiscal year. As detailed in Chapter 3, the model assumes stabilized real estate taxes of $23.00 per square foot. Based on the current 2021/2022 Class 4 tax rate (10.755 percent) the implied stabilized assessment equates to $213.85 per square foot. Upon completion, the inflated stabilized assessment is phased-in at a rate of 90 percent in Year 1 post completion, 95 percent in Year 2 post completion, and 100 percent in Year 3 post completion. Projections for Class 4 office tax lots assume no assessment growth in fiscal year 2023 followed by fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis.

66 HUDSON BOULEVARD - THE SPIRAL
BLOCK 706, LOT 17
NEW YORK, NEW YORK

ASSESSMENT AND PAYMENT-IN-LIEU-OF-TAXES (PILOT) / UTEP PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	FULL FISCAL YR TAXES	PILOT YEAR	PILOT SCHEDULE	CALCULATED TAX	FIXED ESCALATION PRIOR YEAR	PAYABLE FISCAL YR PILOT/TAXES *
1	2021 / 22	$15,654,419	-	10.755%	$1,683,633	CCP2	100%	-	-	**$1,683,633**
2	2022 / 23	$15,654,419	0.0%	10.755%	$1,683,633	CCP3	100%	-	-	**$1,683,633**
3	2023 / 24	$441,551,276	$199/sf	10.755%	$47,488,840	1	75.23%	-	-	**$35,725,854**
4	2024 / 25	$482,394,769	$218/sf	10.755%	$51,881,557	2	75.23%	-	-	**$39,030,496**
5	2025 / 26	$525,556,406	$237/sf	10.755%	$56,523,591	3	75.23%	-	-	**$42,522,698**
6	2026 / 27	$543,950,880	3.5%	10.755%	$58,501,917	4	75.23%	-	-	**$44,010,992**
7	2027 / 28	$562,989,161	3.5%	10.755%	$60,549,484	5	103% of prior year	-	-	**$45,331,322**
8	2028 / 29	$582,693,781	3.5%	10.755%	$62,668,716	6	103% of prior year	-	-	**$46,691,262**
9	2029 / 30	$603,088,064	3.5%	10.755%	$64,862,121	7	103% of prior year	-	-	**$48,092,000**
10	2030 / 31	$624,196,146	3.5%	10.755%	$67,132,296	8	103% of prior year	-	-	**$49,534,760**
11	2031 / 32	$646,043,011	3.5%	10.755%	$69,481,926	9	103% of prior year	-	-	**$51,020,802**
12	2032 / 33	$668,654,517	3.5%	10.755%	$71,913,793	10	103% of prior year	-	-	**$52,551,426**
13	2033 / 34	$692,057,425	3.5%	10.755%	$74,430,776	11	103% of prior year	-	-	**$54,127,969**
14	2034 / 35	$716,279,434	3.5%	10.755%	$77,035,853	12	103% of prior year	-	-	**$55,751,808**
15	2035 / 36	$741,349,215	3.5%	10.755%	$79,732,108	13	103% of prior year	-	-	**$57,424,363**
16	2036 / 37	$767,296,437	3.5%	10.755%	$82,522,732	14	103% of prior year	-	-	**$59,147,093**
17	2037 / 38	$794,151,812	3.5%	10.755%	$85,411,027	15	103% of prior year	-	-	**$60,921,506**
18	2038 / 39	$821,947,126	3.5%	10.755%	$88,400,413	16	Greater of 103% prior year PILOT and 80.19% of full taxes	$70,888,291	$62,749,151	**$70,888,291**
19	2039 / 40	$850,715,275	3.5%	10.755%	$91,494,428	17	Greater of 103% prior year PILOT and 85.14% of full taxes	$77,898,356	$73,014,940	**$77,898,356**
20	2040 / 41	$880,490,310	3.5%	10.755%	$94,696,733	18	Greater of 103% prior year PILOT and 90.09% of full taxes	$85,312,287	$80,235,307	**$85,312,287**
21	2041 / 42	$911,307,471	3.5%	10.755%	$98,011,118	19	Greater of 103% prior year PILOT and 95.05% of full taxes	$93,159,568	$87,871,655	**$93,159,568**
22	2042 / 43	$943,203,232	3.5%	10.755%	$101,441,508	20	100% of full taxes	$101,441,508	-	**$101,441,508**
23	2043 / 44	$976,215,345	3.5%	10.755%	$104,991,960	-	-	-	-	**$104,991,960**
24	2044 / 45	$1,010,382,882	3.5%	10.755%	$108,666,679	-	-	-	-	**$108,666,679**
25	2045 / 46	$1,045,746,283	3.5%	10.755%	$112,470,013	-	-	-	-	**$112,470,013**
26	2046 / 47	$1,082,347,403	3.5%	10.755%	$116,406,463	-	-	-	-	**$116,406,463**

*During years 5 through 15: 3% increase over previous year's PILOT payment

TOTAL PAYABLE PROJECTION YEARS 1-26 **$1,616,486,741**

Property Equity and Debt Overview

The Spiral was reported to have a $1.8 billion construction loan from Blackstone Mortgage Trust Inc. The financing originated in April 2018. [162] Construction funding also includes approximately $1.9 billion in equity from Tishman and more than a dozen institutional and individual investors and pension funds. [163]

Ownership Overview

66 Hudson Boulevard (The Spiral) is owned by 509 W 34, L.L.C., an entity affiliated with Tishman Speyer Properties, L.P.

Founded in 1978 by Robert Tishman and Jerry Speyer, Tishman Speyer Properties L.P.is a privately held real estate company headquartered in New York City. The company employs more than 1,200 people at offices in the United States, Europe, China, Brazil, and India.

Tishman Speyer has acquired, developed, and operated 463 projects totaling 213 million square feet, with a global portfolio consisting of over $115 billion in assets across sectors such as residential, office, retail, and hospitality. The company is recognized as a premier developer and manager of luxury projects and large-scale master-planned developments. Notable properties in New York City owned by Tishman Speyer include the Spiral, Rockefeller Center, Yankee Stadium, 200 Park Avenue, 520 Madison Avenue, 11 West 42nd Street, Hearst Tower, 300 Park Avenue, Chrysler East, CitySpire, 175 Varick, and 438-444 Eleventh Avenue.

Tenant Overview

As of July 2021, the Spiral is approximately 53 percent leased to Pfizer Inc., Debevoise & Plimpton LLP, and AllianceBernstein L.P. Completion of construction is scheduled in the third quarter of 2022. The three leases have initial terms of 19.5 to 20 years plus free rent periods. Profiles of the tenants are presented on the following pages.

[162] La Guerre, Liam "Tishman Locks Down Pfizer as Anchor, $1.8B in Financing at The Spiral." *Commercial Observer.* April 10, 2018. https://commercialobserver.com/2018/04/pfizer-inks-800k-sf-deal-at-tishman-speyers-hudson-yards-skyscraper/

[163] La Guerre, Liam "Tishman Locks Down Pfizer as Anchor, $1.8B in Financing at The Spiral." *Commercial Observer.* April 10, 2018. https://commercialobserver.com/2018/04/pfizer-inks-800k-sf-deal-at-tishman-speyers-hudson-yards-skyscraper/

Pfizer Inc.

Company Profile

Pfizer Inc. ("Pfizer") is a research-based pharmaceutical and biotechnology corporation that is involved in the discovery, development, manufacturing, marketing, sale and distribution of biopharmaceutical products globally. Originally founded in 1849 in Brooklyn, Pfizer moved its headquarters to Downtown Manhattan in 1868 and to Midtown Manhattan in 1961. In April 2018, Pfizer announced that the firm will relocate its global headquarters to the Sprial at 66 Hudson Boulevard (The Spiral) in late 2022 or early 2023.

As of December 2020, Pfizer Inc., employed approximately 78,500 people globally, with approximately 29,400 based on the United States. In 2020, the company reported total revenues of $41.9 billion. [164] The majority of Pfizer's revenues are generated from the manufacture and sale of its biopharmaceutical products.

The company is publicly traded on the New York Stock Exchange under the ticker symbol "PFE." As of July 2021, Pfizer Inc. has a market capitalization of over $225 billion. Pfizer is rated investment grade by Moody's, Fitch, and S&P Global. A summary of the company's most recent credit ratings are detailed in the chart below.

CREDIT RATINGS

Agency	Rating	Last Review Date	Outlook
Moody's	A2	Dec-20	Stable
Fitch	A	Nov-20	Negative
S&P	A+	Nov-20	Stable

Source: Moody's, Fitch, S&P

Lease Information [165]

Pfizer leases 798,278 square feet of space at the Spiral. Pfizer's office space is located on floors 7 through 21. The company also leases additional area on portions of the cellar, grade and mezzanine levels. The lease was announced in April 2018 and is projected to commence in January 2023. [166] Pursuant to the memorandum of lease, the initial term of the lease is scheduled to expire in December 2043. The lease includes renewal options whereby Pfizer may extend its term for all or certain portions of the premises for (i) two renewal terms of ten years each, or (ii) four renewal terms of five years each, or (iii) one renewal term of ten years and two renewal terms of five years each. Pfizer also has certain expansion rights and contraction rights as set forth in the lease.

[164] Pfizer Inc. 2020 Annual Report

[165] Memorandum of Lease, Pfizer Inc., April 9, 2018. Document ID: 2018041200299005

[166] Cushman & Wakefield, Inc.

Debevoise & Plimpton LLP

Company Profile

Debevoise & Plimpton LLP ("Debevoise") is an international law firm with offices in New York, San Francisco, Washington D.C., London, Luxembourg, Paris, Frankfurt, Moscow, Shanghai, and Hong Kong. Originally founded in 1931, Debevoise currently employees over 800 attorneys. In 2020, the firm reported gross revenue of $1.225 billion, ranking the 45th highest grossing law firm globally per the 2020 Global 200 survey. [167]

Currently located at 919 Third Avenue, Debevoise plans to relocate its headquarters to the Spiral in the second half of 2022. Although a credit rating is not available, the firm is considered to be institutional quality.

Lease Information [168]

Debevoise leases 530,884 square feet of office space on floors 40 through 52. The lease was announced in January 2020 and is projected to commence in July 2022. Pursuant to the memorandum of lease, the initial term of the lease is scheduled to expire in December 2041. The lease includes renewal options whereby Debevoise may extend its term for all or certain portions of the premises for either (i) up to two additional five year terms, or (ii) one additional ten year term. Debevoise also has certain rights of first offer to lease additional space, expansion rights and contraction rights as set forth in the lease.

[167] https://www.law.com/law-firm-profile/?id=80&name=Debevoise-%26-Plimpton

[168] Memorandum of Lease, Debevoise & Plimpton LLP., November 18, 2019. Document ID: 2019122300306001

AllianceBernstein L.P.

Company Profile

AllianceBernstein L.P. ("AB") is a global asset management firm that provides investment management, research and related services globally to a broad range of clients through its buy-side and sell-side distribution channels. AB's buy-side distribution channels include: Institutions, Retail, and Private Wealth Management. Its sell-side business is Bernstein Research Services.

As of December 2020, AB reported 3,929 full-time employees globally, of which 2,955 employees were based in the United States. In 2020, the company reported a total of $685.9 billion of assets under management, with gross revenues of $3.724 billion and net revenues of $3.708 billion. [169]

The company is publicly traded on the New York Stock Exchange under the ticker symbol "AB." As of July 2021, AB has a market capitalization of over $4.5 billion. AllianceBernstein L.P. is rated investment grade by Moody's and S&P Global. A summary of the company's most recent credit ratings are detailed in the chart below.

CREDIT RATINGS			
Agency	Rating	Last Review Date	Outlook
Moody's	A2	Jun-21	Stable
Fitch	-	-	-
S&P	A	Sep-20	Stable

Source: Moody's, Fitch, S&P

Lease Information [170]

In April 2019, AB announced its lease of approximately 189,000 square feet of office space on floors 25 through 28. However, during the fourth quarter of 2020, AB exercised an option to reduce its committed footprint by half a floor, bringing its leased premises down to approximately 166,000 square feet. [171] The lease is projected to commence in January 2025 and expire in December 2044. The lease includes renewal options whereby AB may extend its term for all or certain portions of the premises for two renewal terms of either five years or ten years. AB also has certain rights of first offer to lease additional space, expansion rights and contraction rights as set forth in the lease.

[169] AllianceBernstein L.P. 2020 Annual Report

[170] Memorandum of Lease, Pfizer Inc., April 9, 2018. Document ID: 2018041200299005

[171] AllianceBernstein L.P. 2020 Annual Report

Current Market Information

The Spiral is located within the Penn Station office submarket of Midtown Manhattan, which includes all of the newly constructed office towers within the Hudson Yards district. The following table provides a summary of the Spiral as compared to Class A office space within the Penn Station office submarket and the Midtown Manhattan office market.

TABLE 2: KEY OFFICE METRICS – 1Q 2021 CLASS A

	No. of Buildings	Inventory SF	Avg. Direct Asking Rent / SF	Direct Availability
66 Hudson Boulevard (The Spiral) [172]	1	2,800,000	\$115 - \$200	47%
Penn Station Submarket [173]	15	16,537,897	\$107.59	5.3%
Midtown Manhattan [174]	297	187,528,330	\$89.89	11.5%

Investment Highlights

- Upon completion of construction in 2022, the Spiral will be a Class A asset and one of the most desirable office buildings in Manhattan, not only as a result of its above standard construction quality, but also from a functional and architectural perspective.
- The property's floor plates are well suited to the needs of large office users. In addition, high ceilings and column-free floor plates offer great access to light, air, and views in all directions.
- The tapered form of the building allows for portions of each floor to have double-height amenity areas or outdoor terraces and green space, which is a unique feature in comparison to other large office buildings in Manhattan.
- The building was designed to achieve LEED Silver certification.
- Located in close proximity to the Manhattan West complex and the Eastern Rail Yards, the Spiral will benefit from its proximity to The Shops at Hudson Yards, the Culture Shed, trophy quality office spaces, Hudson Park, and the new No. 7 subway station.
- As of July 2021, the building is 53 percent leased to three tenants: Pfizer Inc., Debevoise & Plimpton LLP, and AllianceBernstein L.P.
- Pfizer and AB are credit tenants and Debevoise is considered to be an institutional quality tenant.
- Overall, the average lease term for Pfizer, Debevoise, and AB is approximately 20 years. In addition, the tenants have multiple renewal options. This provides for stable revenue stream over the long term and the ability to weather the near-term effects of the COVID-19 pandemic.
- The Spiral benefits from strong sponsorship by Tishman Speyer Properties, L.P.

[172] Cushman & Wakefield, Inc.

[173] Cushman & Wakefield, Inc. – First Quarter 2021

[174] Cushman & Wakefield, Inc. – First Quarter 2021

Property Photographs

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

Two Manhattan West

Overview

Two Manhattan West is located on the northwest corner of West 31st Street and Ninth Avenue in the Hudson Yards district of Manhattan. The building is currently under construction. The developer anticipates delivering space to tenants in phases throughout 2022, starting with the lower floors in March 2022 and ending with the upper floors in December 2022. Completion of construction is projected to occur by late 2022/early 2023.

Upon completion, the 61-story, trophy Class A office building will rise nearly 935 feet above street level, containing approximately 1,824,452 square feet of building area. Designed by Skidmore, Owings & Merrill LLP, construction commenced in the fourth quarter of 2019, the approximate time when Brookfield Property Partners L.P. secured anchor tenant Cravath, Swaine & Moore LLP (481,921 square feet) for the 25th through 37th floors. Cravath, Swaine & Moore LLP intends to relocate from One Worldwide Plaza (825 Eighth Avenue) to Two Manhattan West in 2024.[175] Construction costs were reported to be approximately $1.6 billion, exclusive of the land and leasing costs, which were reported to be $483 million and $328 million, respectively. [176]

The building is expected to achieve U.S. Green Building Council's Leadership in Energy and Environmental Design Gold ("LEED") certification. Overall, the building will be similar to One Manhattan West, except for its slightly shorter building height and the orientation of the building footprint. The building will feature 14-foot ceilings, a glass façade, and views in all directions. The retail space will be situated along the public plaza and between the residential tower (The Eugene) and Two Manhattan West.

[175] Baird-Remba, Rebecca. "Cravath Signs on as Anchor Tenant for Two Manhattan West." *Commercial Observer*. October 7, 2019. https://commercialobserver.com/2019/10/cravath-signs-on-as-anchor-tenant-for-two-manhattan-west/

[176] Minutes of the Meeting of the Board of Directors of New York City Industrial Development Agency, June 11, 2019.

Property Information

TABLE 1: BUILDING INFORMATION				
Street Address:	389 Ninth Avenue (Two Manhattan West)			
Block / Lots:	729 / 51 and 8051			
Developer / Owner:	Brookfield Property Partners L.P. and Qatar Investment Authority			
Ownership Interest:	Fee			
Number of Floors:	61 (inclusive of mechanical floors)			
Year Built:	Anticipated 2022/23			
Gross Building Area [177]:	1,824,452 square feet			
Rentable Area:				
Office Area:	1,943,974 square feet [178]			
Retail Area:	Not Available			
Major Tenants: [179]	Tenant Name	Rentable Area (SF)	Expiration Year	Renewal Options
	Cravath, Swaine & Moore LLP	481,921	August 2044 [180]	2 x 5 yrs [181]

[177] City of New York Department of Finance

[178] Cushman & Wakefield, Inc.

[179] Cushman & Wakefield, Inc.

[180] Memorandum of Lease, Cravath, Swaine & Moore LLP, October 3, 2019. Document ID: 2020021000847025

[181] Memorandum of Lease, Cravath, Swaine & Moore LLP, October 3, 2019. Document ID: 2020021000847025

Real Property Tax / PILOT Information

Two Manhattan West, located on the northwest corner of West 31st Street and Ninth Avenue, is subject to a Payment-in-Lieu-of-Taxes (“PILOT”) agreement pursuant to New York City’s Industrial Development Agency's (“NYCIDA”) Uniform Tax Exemption Program (“UTEP”) amendment for Hudson Yards. The property is eligible for PILOT payments under the Zone 2 regulations.

Two Manhattan West is obligated to make PILOT payments as set by the NYCIDA pursuant to the Hudson Yards UTEP amendment. Under this PILOT structure, PILOT payments are calculated as described below:

- 80% of full taxes in Years 1 through 4,
- 103 percent of the prior year’s PILOT payment in Years 5 through 15,
- the greater of 103 percent of the prior year’s PILOT payment and 84% of full taxes in Year 16,
- the greater of 103 percent of the prior year’s PILOT payment and 88% of full taxes in Year 17,
- the greater of 103 percent of the prior year’s PILOT payment and 92% of full taxes in Year 18,
- the greater of 103 percent of the prior year’s PILOT payment and 96% of full taxes in Year 19, and
- 100% of full taxes in Year 20.
- The annual PILOT payments are not permitted to exceed full taxes over the PILOT program.

Two Manhattan West was originally identified as part of Lots 51 and 9060 within Block 729. The tax lot was subdivided in connection with the larger Manhattan West development. While Two Manhattan West is currently identified as Lots 51 and 8051 within Block 729, the property is only assessed as Lot 51. Cushman & Wakefield, Inc., modeled the PILOT and tax payments based on the asset’s current assessment and our projection of future assessments.

The property is currently under construction. While completion of construction is scheduled for late 2022/early 2023, absorption of the available space and stabilization is anticipated to occur several years thereafter. As such, the real estate tax assessments are expected to increase significantly over the ensuing seven fiscal tax years.

Following completion of construction, the PILOT exemption is modeled to commence in fiscal year 2025, and expire in the fiscal year 2044 fiscal year. As detailed in Chapter 3, the model assumes stabilized real estate taxes of $23.00 per square foot. Based on the current 2021/2022 Class 4 tax rate (10.755 percent) the implied stabilized assessment equates to $213.85 per square foot. Upon completion, the inflated stabilized assessment is phased-in at a rate of 90 percent in Year 1 post completion, 95 percent in Year 2 post completion, and 100 percent in Year 3 post completion. Projections for Class 4 office tax lots assume no assessment growth in fiscal year 2023 followed by fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis.

TWO MANHATTAN WEST
BLOCK 729, LOTS 51 & 8051
NEW YORK, NEW YORK

ASSESSMENT AND PAYMENT-IN-LIEU-OF-TAXES (PILOT) / UTEP PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	FULL FISCAL YR TAXES	PILOT YEAR	PILOT SCHEDULE	CALCULATED TAX	FIXED ESCALATION PRIOR YEAR	PAYABLE FISCAL YR PILOT/TAXES*
1	2021 / 22	$32,589,990	-	10.755%	$3,505,053	CCP2	100%	-	-	**$3,505,053**
2	2022 / 23	$32,589,990	-	10.755%	$3,505,053	CCP3	100%	-	-	**$3,505,053**
3	2023 / 24	$33,730,640	3.5%	10.755%	$3,627,730	CCP4	100%	-	-	**$3,627,730**
4	2024 / 25	$376,160,399	$206/sf	10.755%	$40,456,051	1	80%	-	-	**$32,364,841**
5	2025 / 26	$410,955,236	$225/sf	10.755%	$44,198,236	2	80%	-	-	**$35,358,588**
6	2026 / 27	$447,724,915	$245/sf	10.755%	$48,152,815	3	80%	-	-	**$38,522,252**
7	2027 / 28	$463,395,287	3.5%	10.755%	$49,838,163	4	80%	-	-	**$39,870,530**
8	2028 / 29	$479,614,122	3.5%	10.755%	$51,582,499	5	103% of prior year	-	-	**$41,066,646**
9	2029 / 30	$496,400,616	3.5%	10.755%	$53,387,886	6	103% of prior year	-	-	**$42,298,646**
10	2030 / 31	$513,774,638	3.5%	10.755%	$55,256,462	7	103% of prior year	-	-	**$43,567,605**
11	2031 / 32	$531,756,750	3.5%	10.755%	$57,190,438	8	103% of prior year	-	-	**$44,874,633**
12	2032 / 33	$550,368,236	3.5%	10.755%	$59,192,104	9	103% of prior year	-	-	**$46,220,872**
13	2033 / 34	$569,631,124	3.5%	10.755%	$61,263,827	10	103% of prior year	-	-	**$47,607,498**
14	2034 / 35	$589,568,214	3.5%	10.755%	$63,408,061	11	103% of prior year	-	-	**$49,035,723**
15	2035 / 36	$610,203,101	3.5%	10.755%	$65,627,344	12	103% of prior year	-	-	**$50,506,795**
16	2036 / 37	$631,560,210	3.5%	10.755%	$67,924,301	13	103% of prior year	-	-	**$52,021,999**
17	2037 / 38	$653,664,817	3.5%	10.755%	$70,301,651	14	103% of prior year	-	-	**$53,582,659**
18	2038 / 39	$676,543,086	3.5%	10.755%	$72,762,209	15	103% of prior year	-	-	**$55,190,139**
19	2039 / 40	$700,222,094	3.5%	10.755%	$75,308,886	16	Greater of 103% prior year PILOT and 84% of full taxes	$63,259,464	$56,845,843	**$63,259,464**
20	2040 / 41	$724,729,867	3.5%	10.755%	$77,944,697	17	Greater of 103% prior year PILOT and 88% of full taxes	$68,591,334	$65,157,248	**$68,591,334**
21	2041 / 42	$750,095,412	3.5%	10.755%	$80,672,762	18	Greater of 103% prior year PILOT and 92% of full taxes	$74,218,941	$70,649,074	**$74,218,941**
22	2042 / 43	$776,348,752	3.5%	10.755%	$83,496,308	19	Greater of 103% prior year PILOT and 96% of full taxes	$80,156,456	$76,445,509	**$80,156,456**
23	2043 / 44	$803,520,958	3.5%	10.755%	$86,418,679	20	100% of full taxes	$86,418,679	-	**$86,418,679**
24	2044 / 45	$831,644,192	3.5%	10.755%	$89,443,333	-	-	-	-	**$89,443,333**
25	2045 / 46	$860,751,738	3.5%	10.755%	$92,573,849	-	-	-	-	**$92,573,849**
26	2046 / 47	$890,878,049	3.5%	10.755%	$95,813,934	-	-	-	-	**$95,813,934**
							TOTAL PAYABLE PROJECTION YEARS 1-26			**$1,333,203,255**

*During years 5 through 15: 3% increase over previous year's PILOT payment

Property Equity and Debt Overview

Two Manhattan West has a $1.45 billion construction loan from Wells Fargo Bank, N.A. and the New York City Industrial Development Agency. [182] The financing originated in the first quarter of 2020, as reported by Brookfield Properties. [183]

While we are not aware of the terms of this specific financing, construction loans do not typically exceed 65 percent of a lender's conclusion of value. Based on a loan-to-value ratio of 65 percent, Two Manhattan West would have been modeled at a value upon completion of approximately $2.23 billion. This also indicates approximately $780 million of equity at the time the loan was made.

Ownership Overview

Two Manhattan West is owned by a joint venture of Brookfield Property Partners L.P. and Qatar Investment Authority. In October 2015, Qatar Investment Authority purchased a 44 percent interest in the overall Manhattan West development based on a total valuation of $8.6 billion. [184]

Brookfield Properties

Brookfield Properties invests in, develops, and operates best-in-class properties around the world on behalf of Brookfield Asset Management, one of the largest alternative asset managers in the world. Brookfield Properties is active across all property types, including multifamily, office, retail, hotel, logistics, and development. The firm manages more than 675 properties comprising 320 million square feet across five continents, with over 40 million square feet under active development.

The company has significant experience developing and managing large-scale projects, including Manhattan West, Brookfield Place and MetroTech Center in New York City. Brookfield Properties has numerous Class A buildings in New York including 1100 Avenue of the Americas, 300 Madison Avenue, 660 Fifth Avenue, the Grace Building, the New York Times Building, Tower 46, and prime retail suites along Fifth Avenue, among others. In April 2021, Brookfield Asset Management agreed to buy the outstanding shares of Brookfield Property Partners, the parent of Brookfield Properties. Brookfield Asset Management operates in over 30 countries with more than $600 billion in assets under management.

Qatar Investment Authority

Qatar Investment Authority ("QIA") is the sovereign wealth fund of the State of Qatar. Established in 2005, the QIA was created to invest, diversify, and grow Qatar's sovereign reserves, support the economy, and provide liquidity as needed. The fund invests in a wide range of sectors including real estate, infrastructure, telecommunications, health care, financial institutions, commodities, industrials, funds, and retail and consumer goods industries. The QIA opened an office in New York City in 2015 as part of its global diversification strategy. According to the Sovereign Wealth Fund Institute, the QIA is the world's 11th largest sovereign wealth fund with total assets of approximately $295 billion.

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[182] Hanson, Joyce. "Real Estate Group of the Year: Fried Frank." *Portfolio Media, Inc. Law360*.

[183] Brookfield Property Partners, L.P. "Press Release: Brookfield Property Partners Reports First Quarter 2020 Results." https://bpy.brookfield.com/press-releases/2020/05-08-2020-115000080

[184] *EDGAR*. Securities and Exchange Commission, October 28, 2015, https://www.sec.gov/Archives/edgar/data/1545772/000114420415061220/v423099_ex99-1.htm

Tenant Overview

The office portion of Two Manhattan West is 24.8 percent preleased to one tenant, Cravath, Swaine & Moore LLP. The building is currently under construction. The developer anticipates delivering space to tenants in phases throughout 2022, starting with the lower floors in March 2022 and ending with the upper floors in December 2022. Completion of construction is projected to occur in 2023.

A profile of the anchor tenant, Cravath, Swaine & Moore LLP, is presented below.

Cravath, Swaine & Moore LLP
Company Profile
Cravath, Swaine & Moore LLP ("Cravath") is a major American law firm employing approximately 530 attorneys in practice areas that include mergers and acquisitions, antitrust, banking and credit, corporate and tax, corporate governance, securities litigation, trust and estates, executive compensation and benefits, and white collar criminal defense. It was founded in the early 1800s by Richard M. Blatchford and William Seward and went through a series of name changes, partnerships, and mergers over the last 200 years. It is regarded as one of the most prestigious law firms in the country. Over the last five years, the company represented clients in approximately $3 trillion of mergers and acquisitions transactions. The firm was ranked 56th in American Law's 2021 AM Law 200 survey with nearly $825 million in revenue. Although a credit rating is not available, the firm is considered to be institutional quality.
Lease Information [185]
Cravath leases 481,921 square feet of space on floors 25 through 37 at Two Manhattan West. The lease was announced in October 2019 and is projected to commence in late 2022. Pursuant to the memorandum of lease, the initial term of the lease is scheduled to expire in August 2044. The lease includes two 5-year renewal options. The tenant also has certain expansion rights and rights of first offer to lease additional areas as set forth in the lease. The lease also includes contraction options, affording Cravath the right to give back certain portions of the 25th and 26th floors, and to reduce the leased premises by up to two full floors.

[185] Memorandum of Lease, Cravath, Swaine & Moore LLP, October 3, 2019. Document ID: 2020021000847025

Current Market Information

Two Manhattan West is located within the Penn Station office submarket of Midtown Manhattan, which includes all of the newly constructed office towers within the Hudson Yards district. The following table provides a summary of the office portion of Two Manhattan West as compared to Class A office space within the Penn Station office submarket and the Midtown Manhattan office market.

TABLE 2: KEY OFFICE METRICS – 1Q 2021 CLASS A

	No. of Buildings	Inventory SF	Avg. Direct Asking Rent / SF	Direct Availability
Two Manhattan West [186]	1	1,943,974	\$103 - \$160	75.2%
Penn Station Submarket [187]	15	16,537,897	\$107.59	5.3%
Midtown Manhattan [188]	297	187,528,330	\$89.89	11.5%

Investment Highlights

- Upon completion of construction in 2023, Two Manhattan West will be a trophy asset and one of the most desirable office buildings in Manhattan, not only as a result of its above standard construction quality, but also from a functional and architectural perspective.
- The property's floor plates are well suited to the needs of large office users. In addition, high ceilings and column-free floor plates offer great access to light, air, and views in all directions.
- Similar to One Manhattan West, it is anticipated that Two Manhattan West will achieve LEED Gold certification and will be WELL Health-Safety rated.
- As part of the Manhattan West complex, tenants at Two Manhattan West benefit from the synergy generated by the seamless connection of retail shops, high quality hotel, and trophy quality office spaces.
- Two Manhattan West was approximately 25 percent preleased to a single tenant when construction commenced in late 2019. The available office space is professionally marketed for lease by Cushman & Wakefield, Inc. It is anticipated that the vast majority of the available space will be leased to institutional quality or credit tenants similar to One Manhattan West.
- The anchor tenant, Cravath, Swaine & Moore LLP, is regarded as one of the most prestigious law firms in the country. Over the last five years, the company represented clients in approximately \$3 trillion of mergers and acquisitions transactions, and reported total revenue of nearly \$825 million in 2020.
- Cravath, Swaine & Moore LLP intends to relocate its headquarters to Two Manhattan West in 2024. The initial term of the lease to is scheduled to expire in August 2044, excluding renewal, expansion, and contraction options. The long-term nature of the lease and headquarters relocation are indicative of Cravath, Swaine & Moore LLP's commitment to Two Manhattan West and the Hudson Yards district overall.
- The Manhattan West complex benefits from strong sponsorship by Brookfield Property Partners L.P. and Qatar Investment Authority.

[186] Cushman & Wakefield, Inc.

[187] Cushman & Wakefield, Inc. – First Quarter 2021

[188] Cushman & Wakefield, Inc. – First Quarter 2021

Property Photographs

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

330 West 34th Street

Overview

330 West 34th Street is a Class B office building located in the Hudson Yards district of Manhattan. The 18-story building is situated on the north side of West 33rd Street and the south side of West 34th Street, between Eighth and Ninth Avenues. Originally constructed in 1926, Vornado repositioned 330 West 34th Street as a Class B office building in 2014. The renovations included a modernized lobby, storefront entrance, new mechanicals, and a ground floor amenities center and social spaces with an outdoor patio.

The property achieved U.S. Green Building Council's Leadership in Energy and Environmental Design Platinum ("LEED") certification and is Energy Star rated. 330 West 34th Street offers large, efficient floor plates containing approximately 53,000 square feet on the second floor, 37,000 to 45,000 square feet on the third through 14th floors, and 27,000 to 28,000 square feet on the 15th through 18th floors. The building also features ceiling heights of approximately 11 to 12 feet on most floors, good access to light and air, and nine passenger elevators and three freight elevators. [189]

The steel-frame building contains approximately 724,000 square feet of rentable office and retail space. [190] Office floors are located on floors 2 through 18. The retail space is located on the ground floor and basement level.

[189] Vornado Realty Trust - https://www.vno.com/office/property/330-west-34th-street/3311660/landing

[190] Vornado Realty Trust Supplemental Operating and Financial Data for the Quarter Ended June 30, 2021

Property Information

TABLE 1: BUILDING INFORMATION				
Street Address:	330 West 34th Street			
Block / Lots:	757 / 54			
Ownership:	The site is owned by 330 West 34th SPE LLC c/o Haymes Investment Company and 330 W. 34 Mezz LLC, and ground leased to 330 West 34th Street Associates c/o Vornado 330 West 34th Street L.L.C. ("Vornado"). Vornado has a 34.8 percent ownership interest in the land. Vornado reportedly intends to exercise its right to extend the ground lease for a 30-year period based on fair market rent, which is in arbitration and, when finalized, will be retroactively applied to January 1, 2021. The ground lease includes additional extension options through 2149. [191]			
Ownership Interest:	Leasehold			
Number of Floors:	18 (inclusive of mechanical floors)			
Year Built:	1926 (renovated 2014)			
Gross Building Area [192]:	646,464 square feet			
Rentable Area [193]:	724,000 square feet			
Major Tenants [194]:	Tenant Name	Rentable Area (SF)	Expiration Year	Renewal Options
	Foot Locker, Inc.	145,000	April 2031	Not avail.
	HomeAdvisor (5th floor)	46,000	November 2030	Not avail.
	HomeAdvisor (10th floor)	43,000	April 2028	Not avail.
	Yodle Inc.	84,000	July 2024	Not avail.
	Structure Tone, Inc.	82,000	November 2031	Not avail.
	Deutsch Inc.	74,000	June 2025	Not avail.

[191] Vornado Realty Trust Supplemental Operating and Financial Data for the Quarter Ended June 30, 2021

[192] City of New York Department of Finance

[193] Vornado Realty Trust Supplemental Operating and Financial Data for the Quarter Ended June 30, 2021

[194] Cushman & Wakefield, Inc.

Real Property Taxes

330 West 34th Street is situated along West 34th Street between Eighth and Ninth Avenues. The property does not currently benefit from any tax abatement programs and is subject to full taxation. The real estate taxes through 2021/2022 are based on the property's assessed value as determined by the New York City Department of Finance ("DOF"). Projections for Class 4 office lots assume no assessment growth in fiscal year 2023 followed by fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis period.

330 WEST 34TH STREET
BLOCK 757, LOT 54
NEW YORK, NEW YORK

ASSESSMENT AND REAL ESTATE TAX PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	PAYABLE FISCAL YR TAXES
1	2021 / 22	$80,632,558	-	10.755%	**$8,672,032**
2	2022 / 23	$80,632,558	-	10.755%	**$8,672,032**
3	2023 / 24	$83,454,698	3.5%	10.755%	**$8,975,553**
4	2024 / 25	$86,375,612	3.5%	10.755%	**$9,289,697**
5	2025 / 26	$89,398,758	3.5%	10.755%	**$9,614,836**
6	2026 / 27	$92,527,715	3.5%	10.755%	**$9,951,356**
7	2027 / 28	$95,766,185	3.5%	10.755%	**$10,299,653**
8	2028 / 29	$99,118,001	3.5%	10.755%	**$10,660,141**
9	2029 / 30	$102,587,131	3.5%	10.755%	**$11,033,246**
10	2030 / 31	$106,177,681	3.5%	10.755%	**$11,419,410**
11	2031 / 32	$109,893,900	3.5%	10.755%	**$11,819,089**
12	2032 / 33	$113,740,186	3.5%	10.755%	**$12,232,757**
13	2033 / 34	$117,721,093	3.5%	10.755%	**$12,660,904**
14	2034 / 35	$121,841,331	3.5%	10.755%	**$13,104,035**
15	2035 / 36	$126,105,778	3.5%	10.755%	**$13,562,676**
16	2036 / 37	$130,519,480	3.5%	10.755%	**$14,037,370**
17	2037 / 38	$135,087,662	3.5%	10.755%	**$14,528,678**
18	2038 / 39	$139,815,730	3.5%	10.755%	**$15,037,182**
19	2039 / 40	$144,709,280	3.5%	10.755%	**$15,563,483**
20	2040 / 41	$149,774,105	3.5%	10.755%	**$16,108,205**
21	2041 / 42	$155,016,199	3.5%	10.755%	**$16,671,992**
22	2042 / 43	$160,441,766	3.5%	10.755%	**$17,255,512**
23	2043 / 44	$166,057,228	3.5%	10.755%	**$17,859,455**
24	2044 / 45	$171,869,231	3.5%	10.755%	**$18,484,536**
25	2045 / 46	$177,884,654	3.5%	10.755%	**$19,131,495**
26	2046 / 47	$184,110,617	3.5%	10.755%	**$19,801,097**
		TOTAL PAYABLE PROJECTION YEARS 1-26			**$346,446,420**

Property Equity and Debt Overview

330 West 34th Street has existing debt totaling $50.15 million as recorded with the New York City Department of Finance Office of the City Register (CRFN No. 2007000318343). The mortgagor is 330 West 34th SPE LLC c/o Haymes Investment Company. Bear Stearns was the originator in June 2007. Wells Fargo is the loan servicer and Rialto Capital is the special servicer. The interest-only loan has a balloon payment due upon maturity on July 1, 2022. According to Vornado Realty Trust's filings with the Securities and Exchange Commission, the loan amount represents debt on the land, of which Vornado owns a 34.8 percent interest.

Ownership Overview

The site is owned by 330 West 34th SPE LLC c/o Haymes Investment Company and 330 W. 34 Mezz LLC, and ground leased to 330 West 34th Street Associates c/o Vornado 330 West 34th Street L.L.C. ("Vornado"). Vornado has a 34.8 percent ownership interest in the land.

Vornado Realty Trust

Vornado Realty Trust is a fully-integrated real estate investment trust and a major developer, manager and owner of commercial real estate. The company's real estate portfolio is concentrated in New York City and includes office and retail assets in Midtown, Midtown South, Downtown, and Long Island City. Vornado also owns significant assets in Chicago and San Francisco.

As of December 31, 2020, Vornado's holdings in Manhattan included all or portions of 20.6 million square feet of office space in 33 properties, 2.7 million square feet of retail space in 65 properties, 1,989 residential units in 10 properties, the 1,700-room Hotel Pennsylvania, a 32.4 percent interest in Alexander's Inc., and signage in the Penn Station and Times Square submarkets. In addition, Vornado is in the planning and/or construction phases of several major New York City projects, including 220 Central Park South, the Farley Building redevelopment, PENN1, and PENN2.

The company is publicly traded on the New York Stock Exchange under the ticker symbol "VNO." As of July 2021, Vornado has a market capitalization of over $9 billion.

Tenant Overview

330 West 34th Street contains 703,000 square feet of rentable office space, of which 72.7 percent is leased. The majority of the space available for lease was formerly occupied by New York & Co., which was owned by RTW Retailwinds; the company filed for bankruptcy in July 2020.

The five largest tenants represent 67.4 percent of the total office net rentable area. These tenants include Foot Locker, Inc. (145,000 SF), HomeAdvisor (89,000 SF), Yodle Inc. (84,000 SF), Structure Tone, Inc. (82,000 SF), and Deutsche Inc. (74,000 SF). Excluding renewal options, if any, the weighted average remaining term of the five largest office tenants is estimated to be approximately 7 years as of August 2021.

Profiles of several of these tenants are presented on the following pages.

Foot Locker, Inc.

Company Profile

Foot Locker Inc. (“Foot Locker”) is a leading retailer of athletic shoes and apparel, with more than 3,000 specialty stores worldwide through its portfolio of brands that include Foot Locker, Kids Foot Locker, Champs Sports, Eastbay, Footaction, and Sidestep. The company also markets sports gear through its direct-to-customer unit, which consists of Footlocker.com and catalog retailer Eastbay.

In its 2020 annual report, Foot Locker reported revenue of $7.5 billion. Foot Locker’s e-commerce businesses generated over $2 billion, which represents approximately 28 percent of total sales revenue.

The company is publicly traded on the New York Stock Exchange under the ticker symbol "FL." As of July 2021, Foot Locker has a market capitalization of over $6 billion. Foot Locker’s credit ratings from Moody’s and S&P are just below investment grade. A summary of the company’s credit ratings is provided in the table below.

CREDIT RATINGS

Agency	Rating	Last Review Date	Outlook
Moody's	Ba1	Mar-21	Stable
Fitch	-	-	-
S&P	BB+	Apr-21	Stable

Source: Moody's, Fitch, S&P

Lease Information

Foot Locker leases 145,000 square feet of space on floors 2 through 4. The lease commenced in May 2015 and is scheduled to expire in April 2031. Asking office rents were in the low $70s per square foot when the initial lease was announced in 2015.

HomeAdvisor

Company Profile

HomeAdvisor is a digital marketplace that connects homeowners with prescreened professionals for home improvement and maintenance services. In October 2017, HomeAdvisor acquired Angie’s List and rebranded itself as ANGI Homeservices. The company is listed on the Nasdaq Stock Exchange under the ticker symbol “ANGI”. As of July 2021, the company has a market capitalization of over $4 billion.

Lease Information

HomeAdvisor leases 89,000 square feet of office space on floors 5 and 10. The lease of the 5th floor commenced in 2018 and is scheduled to expire in November 2030. The lease of the 10th floor commenced in 2017 and is scheduled to expire in April 2028. Asking rents at the time of the lease signing were approximately $70 per square foot.

Yodle Inc.

Company Profile

Yodle Inc. is a New York-based online advertising and marketing services provider acquired by Web.com in 2016. Web.com is headquartered in Jacksonville, Florida. The company specializes in domain name registration and offers web development services. In 2018, Web.com was acquired by an affiliate of Siris Capital Group LLC.

Lease Information

Yodle Inc. leases approximately 84,000 square feet of office space on floors 16 through 18. The lease commenced in 2014 and is scheduled to expire in July 2024.

Yodle's space includes open plan workstations, private offices, conference rooms, pantries on each floor, and support areas. The 18th floor space features double-height ceilings, a skylight, and a large centrally located staircase. The tenant build-out commenced in August 2014 and was completed in March 2015. [195]

Structure Tone, Inc.

Company Profile

Structure Tone, Inc., was founded in New York City in 1971 as an interior and renovation construction company. The firm is part of the STO Building Group ("STO") family of companies that also includes Structure Tone Southwest, Structure Tone International, Pavarini North East Construction, Pavarini McGovern, LF Driscoll, LF Driscoll Healthcare, Govan Brown, Ajax Building Company, BCCI Construction, Layton Construction and Abbott Construction. The consortium of companies has over 3,600 employees in 45 offices throughout the United States, Canada, UK, and Ireland. STO provides a range of construction oriented services that include site selection analysis, design constructability review, new building construction, major building infrastructure upgrades and modernization, and aesthetic enhancements. [196]

STO reported annual construction volume of $8 billion and $2.5 billion in bonding capacity. Although a credit rating is not available, the firm is considered to be of institutional quality.

Lease Information

Structure Tone Inc. leases 82,000 square feet of office space on floors 11 and 12. The lease commenced in 2016 and is scheduled to expire in November 2031.

[195] STO Building Group
https://stobuildinggroup.com/projects/yodle/

[196] STO Building Group
https://stobuildinggroup.com/about-us/

Current Market Information

330 West 34th Street is located within the Penn Station office submarket of Midtown Manhattan, which includes all of the newly constructed office towers within the Hudson Yards district. The following table summarizes the office portion of 330 West 34th Street as compared to Class B office space within the Penn Station office submarket and the Midtown Manhattan office market.

TABLE 2: KEY OFFICE METRICS – 1Q 2021 CLASS B

	No. of Buildings	Inventory SF	Avg. Direct Asking Rent / SF	Direct Availability
330 West 34th Street	1	703,000	Not Available	27.3%
Penn Station Submarket [197]	16	3,720,802	$65.83	15.7%
Midtown Manhattan [198]	327	46,464,681	$64.56	14.6%

According to Vornado Realty Trust's filings with the Securities and Exchange Commission, the property's weighted average annual rents are $73.77 per square foot for the office space and $140.90 per square foot for the retail space. [199]

[197] Cushman & Wakefield, Inc. – First Quarter 2021

[198] Cushman & Wakefield, Inc. – First Quarter 2021

[199] Vornado Realty Trust Supplemental Operating and Financial Data for the Quarter Ended June 30, 2021

Investment Highlights

- 330 West 34th Street is a renovated Class B office building.
- The property's floor plates are well suited to the needs of large office users.
- The building offers ceiling heights of approximately 11 to 12 feet on most floors, good access to light and air, and 9 passenger elevators and 3 freight elevators. These features are desired by large tenants looking for a presence in Hudson Yards at a lower price point than the newly constructed buildings.
- 330 West 34th Street is LEED Platinum certified and Energy Star rated.
- The property will continue to benefit from its location relative to Penn Station, Madison Square Garden, and the Empire Station Complex, which includes the Moynihan Station redevelopment at the former Farley Post Office.
- The five largest tenants represent 67.4 percent of the total office net rentable area. The average remaining lease term for these five tenants is approximately 7 years, which provides for a stable revenue stream and the ability to weather the near-term effects of the COVID-19 pandemic.
- The majority of space available for lease was formerly occupied by New York & Co., which was owned by RTW Retailwinds; the company filed for bankruptcy in July 2020.
- The property is subject to a ground lease that includes extension options through 2149. Ground rent for extension periods are typically based on a rate of return applied against the market value of the land, pursuant to the terms and procedures defined within the ground lease.
- The property benefits from strong sponsorship by Vornado Realty Trust. In addition, Vornado owns a partial interest in the underlying land.

Property Photographs

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

Hudson Commons

Overview

Hudson Commons is a Class A office building located in the Hudson Yards district of Manhattan. The 26-story building is situated on the westerly blockfront of Ninth Avenue, between West 34th and West 35th Streets.

Originally constructed in 1962 as an 8-story industrial warehouse building, the structure was converted into a Class B office building in 1983. In 2019, ownership redeveloped the building with the addition of 17 new office floors above the preexisting structure. Designed by Kohn Pedersen Fox and constructed by the Pavarini McGovern division of the Structure Tone organization, the renovation and construction costs were reported to be approximately $185 million, excluding land and leasing costs. [200] The property achieved U.S. Green Building Council's Leadership in Energy and Environmental Design Platinum ("LEED") certification for core and shell. [201]

Hudson Commons offers efficient floor plates ranging from approximately 16,000 to 50,000 square feet, slab-to-slab ceiling heights of approximately 14 feet on most floors, a penthouse level with 26-foot ceilings, floor-to-ceiling windows on the 9th through 26th floors, and good access to light and air. Tenant amenities include a wrap-around roof deck on the 9th floor, lounge and conference center, bike room, showers, state-of-the-art technology and concierge services, and 14 private terraces and balconies.

The building contains approximately 650,000 square feet of rentable office space, 25,000 square feet of retail space, and a 160-space parking garage. Office floors are located on floors 2 through 26 and the retail space is located at grade. The parking garage is on the basement level.

[200] City of New York

[201] https://www.hudsoncommons.com/building

Property Information

TABLE 1: BUILDING INFORMATION				
Street Address:	Hudson Commons 441 Ninth Avenue 433-447 Ninth Avenue			
Block / Lots:	732 / 36			
Developer / Owner:	CBP 441 Ninth Avenue Owner, LLC, an entity affiliated with Cove Property Group and Baupost Group			
Ownership Interest:	Fee			
Number of Floors:	26			
Year Built:	1962 (renovated 1983; renovated/expanded 2019)			
Gross Building Area: [202]	515,174 square feet			
Rentable Area: [203]	675,000 square feet			
Major Tenants:	Tenant Name	Rentable Area (SF) [204]	Expiration Year [205]	Renewal Options
	Peloton Interactive, Inc.	335,823	December 2035	2 x 5 yrs [206]
	Lyft Inc.	100,638	November 2029	Not available

[202] City of New York Department of Finance

[203] Trepp Loan Detail - Hudson Commons

[204] Trepp Loan Detail - Hudson Commons

[205] Trepp Loan Detail - Hudson Commons

[206] Peloton Interactive, Inc. Lease https://www.sec.gov/Archives/edgar/data/1639825/000119312519242158/d738839dex1010.htm

Real Property Tax / PILOT Information

Hudson Commons is situated on the westerly blockfront of Ninth Avenue, between West 34th and West 35th Streets. Property ownership applied for a 10-year tax abatement via the Industrial & Commercial Abatement Program ("ICAP"). Approval of the ICAP is anticipated. For the purposes of this analysis, it is assumed that the ICAP will be applied retroactively commencing in the 2020/2021 fiscal year.

The initial ICAP abatement for the renovation and expansion of the building was calculated by taking the difference between the gross real estate taxes for the projected fiscal year when the ICAP is modeled to have begun (2020/2021) and the gross real estate taxes for the fiscal year when construction began (2017/2018), multiplied by a factor of 1.15. The ICAP pertains to the entire building. Based on information provided by the City of New York Department of Finance ("DOF"), the subject's "Benefit Base" totals $3,835,719. The "Benefit Base" remains at 100 percent (abated) for the first 5 years of the abatement program. From Years 6 through 9, the "Benefit Base" phases down 20 percent per annum and remains at 20 percent in Year 10, which is the final year of the abatement period.

Cushman & Wakefield, Inc., modeled the payable fiscal year taxes based on the asset's current assessment and our projection of future assessments. The ICAP abatement is modeled to have commenced in the 2020/2021 fiscal year and is scheduled to expire in the 2029/2030 fiscal year. The payable fiscal year tax amounts through 2021/2022 are based on the property's assessed value as determined by the DOF. Projections for Class 4 office lots assume no assessment growth in fiscal year 2023 followed by fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis period.

HUDSON COMMONS - 441 NINTH AVENUE
BLOCK 732, LOT 36
NEW YORK, NEW YORK

ASSESSMENT AND TAX PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	ICAP YEAR	TAX RATE	FULL TAXES	ICAP BENEFIT BASE	ICAP ABATEMENT PERCENT	PAYABLE FISCAL YR TAXES
1	2021 / 22	$88,198,200	-	2	10.755%	$9,485,716	$3,835,719	100%	**$5,649,997**
2	2022 / 23	$88,198,200	-	3	10.755%	$9,485,716	$3,835,719	100%	**$5,649,997**
3	2023 / 24	$91,285,137	3.5%	4	10.755%	$9,817,716	$3,835,719	100%	**$5,981,997**
4	2024 / 25	$94,480,117	3.5%	5	10.755%	$10,161,337	$3,835,719	100%	**$6,325,618**
5	2025 / 26	$97,786,921	3.5%	6	10.755%	$10,516,983	$3,835,719	80%	**$7,448,408**
6	2026 / 27	$101,209,463	3.5%	7	10.755%	$10,885,078	$3,835,719	60%	**$8,583,646**
7	2027 / 28	$104,751,794	3.5%	8	10.755%	$11,266,055	$3,835,719	40%	**$9,731,768**
8	2028 / 29	$108,418,107	3.5%	9	10.755%	$11,660,367	$3,835,719	20%	**$10,893,224**
9	2029 / 30	$112,212,741	3.5%	10	10.755%	$12,068,480	$3,835,719	20%	**$11,301,336**
10	2030 / 31	$116,140,187	3.5%	-	10.755%	$12,490,877	-	-	**$12,490,877**
11	2031 / 32	$120,205,093	3.5%	-	10.755%	$12,928,058	-	-	**$12,928,058**
12	2032 / 33	$124,412,272	3.5%	-	10.755%	$13,380,540	-	-	**$13,380,540**
13	2033 / 34	$128,766,701	3.5%	-	10.755%	$13,848,859	-	-	**$13,848,859**
14	2034 / 35	$133,273,536	3.5%	-	10.755%	$14,333,569	-	-	**$14,333,569**
15	2035 / 36	$137,938,109	3.5%	-	10.755%	$14,835,244	-	-	**$14,835,244**
16	2036 / 37	$142,765,943	3.5%	-	10.755%	$15,354,477	-	-	**$15,354,477**
17	2037 / 38	$147,762,751	3.5%	-	10.755%	$15,891,884	-	-	**$15,891,884**
18	2038 / 39	$152,934,448	3.5%	-	10.755%	$16,448,100	-	-	**$16,448,100**
19	2039 / 40	$158,287,153	3.5%	-	10.755%	$17,023,783	-	-	**$17,023,783**
20	2040 / 41	$163,827,204	3.5%	-	10.755%	$17,619,616	-	-	**$17,619,616**
21	2041 / 42	$169,561,156	3.5%	-	10.755%	$18,236,302	-	-	**$18,236,302**
22	2042 / 43	$175,495,796	3.5%	-	10.755%	$18,874,573	-	-	**$18,874,573**
23	2043 / 44	$181,638,149	3.5%	-	10.755%	$19,535,183	-	-	**$19,535,183**
24	2044 / 45	$187,995,484	3.5%	-	10.755%	$20,218,914	-	-	**$20,218,914**
25	2045 / 46	$194,575,326	3.5%	-	10.755%	$20,926,576	-	-	**$20,926,576**
26	2046 / 47	$201,385,463	3.5%	-	10.755%	$21,659,007	-	-	**$21,659,007**
				TOTAL PAYABLE PROJECTION YEARS 1-26					**$355,171,553**

Property Equity and Debt Overview

Hudson Commons has existing debt from Parlex 1 Finance, LLC c/o Blackstone Mortgage Trust Inc. The 2-year mortgage originated on November 25, 2019, and is scheduled to mature on December 9, 2021. [207] The original loan balance was $91.5 million as of the origination date. However, the total loan balance was $133 million as of July 2021. The appraised value of Hudson Commons in connection with the loan transaction was reported to be $860 million. [208]

Based on the loan amount reported, ownership had approximately $768.5 million in equity as of the date of financing in 2019.

Ownership Overview

Hudson Commons is owned by CBP 441 Ninth Avenue Owner, LLC, an entity affiliated with Cove Property Group and Baupost Group. [209]

Cove Property Group

Cove Property Group is a privately held owner, operator, and developer of commercial real estate. The firm is headquartered in New York City and focuses on office, retail, and residential assets. Founded in 2015, the Cove Property Group's portfolio consists of Hudson Commons and 101 Greenwich.

Baupost Group

Baupost Group is a Boston-based hedge fund founded in 1982 by William Poorvu and partners Howard Stevenson, Jordan Baruch, and Isaac Auerbach. The fund has offices in Boston and London. In 2020, the firm reported approximately $30 billion in assets under management.

Tenant Overview

Hudson Commons contains approximately 650,000 square feet of rentable office space, of which 72.2 percent is leased. The two largest tenants represent 67.1 percent of the total office net rentable area. These tenants include Peloton Interactive Inc. (335,823 SF) and Lyft Inc. (100,638 SF). Excluding renewal options, if any, the weighted average remaining term of these tenants is approximately 13 years as of August 2021.

The tenant profiles are presented on the following pages.

[207] Trepp Loan Detail - Hudson Commons

[208] Trepp Loan Detail - Hudson Commons

[209] https://www.sec.gov/Archives/edgar/data/1545772/000114420415061220/v423099_ex99-1.htm

Peloton Interactive, Inc.

Company Profile

Peloton Interactive, Inc. ("Peloton") is the largest interactive fitness platform in the world with over 3.1 million members as of June 31, 2020.

Founded in 2012, Peloton is headquartered in New York City. The company developed a first-of-its-kind subscription platform that combines equipment, proprietary network software, and streaming digital fitness and wellness content. The company offers direct-to-consumer multi-channel sales platform, including 95 showrooms across the United States, Canada, the United Kingdom, and Germany. Peloton's instructors teach classes across a wide range of fitness and wellness segments, including but not limited to indoor cycling, indoor and outdoor running and walking, bootcamp, yoga, strength training, stretching and meditation. [210]

The company's primary sources of revenue stem from its Peloton Bike and Peloton Tread, and the associated month-to-month subscription revenue, with 1,091,100 subscriptions in 2020. Revenue grew from $435 million in 2018, to $915 million in 2019, to $1.826 billion in 2020, with adjusted EBITDA of $117.7 million in 2020. [211]

In May 2021, Peloton announced plans to build its first factory in the United States. The company will construct a state-of-the-art factory that will be dedicated to the production of Peloton's Bike, Bike+, and Tread starting in 2023. Groundbreaking for the $400 million Ohio-based factory is scheduled for mid-to-late 2021.

The company is publicly traded on the Nasdaq Stock Exchange under the ticker symbol "PTON." As of July 2021, Peloton has a market capitalization of over $33 billion. Peloton is not rated by Moody's, Fitch, and S&P Global.

Lease Information [212]

Peloton leases 335,823 square feet of space at Hudson Commons. [213] In 2018, the company announced the relocation of its headquarters to Hudson Commons. Peloton relocated to Hudson Commons in 2020 as the property's anchor tenant. The company occupies floors 4 through 10, plus 13,000 square feet on the basement level. The starting rent was reported to be $106.66 per square foot on a modified gross basis. [214] The initial lease term is scheduled to expire in December 2035. [215] The lease includes two five year renewal options. The tenant is responsible for increases in unabated real estate taxes over a base year amount.

From calendar year 2021 through 2027, Peloton is required to pay the landlord tax payments of $243,150 in 2021, $468,300 in 2022, $702,450 in 2023, $936,600 in 2024, $1,170,750 in 2025, $1,404,900 in 2026, $1,639,050 in 2027 (less 50% abatement). For calendar years 2021 and 2022, Peloton is required to pay the landlord operating expense payments of $124,880 in 2021 and $249,760 in 2022. The tenant has future real estate tax and operating expense base years of 2022 and 2026/2027, respectively.

[210] Peloton Interactive, Inc. 2020 Annual Report

[211] Peloton Interactive, Inc. 2020 Annual Report

[212] Peloton Interactive, Inc. Lease
https://www.sec.gov/Archives/edgar/data/1639825/000119312519242158/d738839dex1010.htm

[213] Trepp Loan Detail - Hudson Commons

[214] Bank of America Merrill Lynch Commercial Mortgage Inc. – Commercial Mortgage Pass-Through Certificates, Series 2020-BNK27

[215] Trepp Loan Detail - Hudson Commons

Lyft Inc.

Company Profile

The company was initially incorporated in 2007 as Bounder Web, Inc, and changed its name to Zimride Inc. in 2008. In 2012, Lyft Inc. launched its peer-to-peer marketplace for on-demand ridesharing. Zimride officially changed its name to Lyft Inc., in 2013 prior to the sale of its Zimride related assets and operations to Enterprise Holdings. Lyft began service at the Los Angeles airport in 2015, expanded into Canada in 2017, and launched its IPO in March 2019.

Today, Lyft is one of the largest multimodal transportation networks in North America. In addition to ridesharing, the company has expanded its set of transportation modes in select cities that include access to a network of shared bicycles and scooters, information about nearby public transit routes, and car rentals for personal use.

The number of employees increased from 2,708 as of December 31, 2017, to 4,578 as of December 31, 2020. In 2020, Lyft reported revenues of $2.365 billion and a net loss of $1.75 billion. The impact of COVID-19 was evident on the company's annual revenues and full-time employee headcount. Annual revenue decreased by approximately $1.3 billion due to the reduction in the number of active riders beginning in March 2020. To reduce operating expenses and adjust cash flows to counter the impact of the pandemic, Lyft terminated approximately 17 percent of its employees in the second quarter of 2020.

The company is publicly traded on the Nasdaq Stock Exchange under the ticker symbol "LYFT". As of July 2021, Lyft has a market capitalization of over $17 billion. Peloton is not rated by Moody's, Fitch, and S&P Global.

Lease Information

Lyft Inc. leases 100,638 square feet of office space on floors 2 and 3.[216] The lease was announced in February 2019 and is scheduled to expire in November 2029. Lyft's lease has an initial base rent of $87 per square foot on a modified gross basis.[217] Lyft reportedly moved into its space in February 2020.

[216] Cushman & Wakefield, Inc.

[217] Bank of America Merrill Lynch Commercial Mortgage Inc. – Commercial Mortgage Pass-Through Certificates, Series 2020-BNK27

Current Market Information

Hudson Commons is located within the Penn Station office submarket of Midtown Manhattan, which includes all of the newly constructed office towers within the Hudson Yards district. The following table provides a summary of the office portion Hudson Commons as compared to Class A office space within the Penn Station office submarket and the Midtown Manhattan office market.

TABLE 2: KEY OFFICE METRICS – 1Q 2021 CLASS A

	No. of Buildings	Inventory SF	Avg. Direct Asking Rent / SF	Direct Availability
Hudson Commons	1	650,000	\$105-\$200	27.8%
Penn Station Submarket [218]	15	16,537,897	\$107.59	5.3%
Midtown Manhattan [219]	297	187,528,330	\$89.89	11.5%

Investment Highlights

- Hudson Commons was redeveloped into a Class A office building in 2019. The renovation and construction costs were reported to be approximately $185 million, excluding land and leasing costs. [220]
- The property's floor plates are well suited to the needs of medium to large format office users, offering 16,000 to 50,000 square feet per floor.
- The building offers excellent utility, above-average ceiling heights, very good light and air, private terraces and balconies, and ample tenant amenities. These features are desired by tenants looking for a presence in Hudson Yards at a lower price point than the newly constructed buildings.
- Hudson Commons is LEED Platinum certified.
- The property will continue to benefit from its location relative to Related/Oxford's Hudson Yards complex and Brookfield's Manhattan West complex, which offer retail shops, high quality hotels, and trophy quality office spaces.
- Hudson Commons is currently 72.2 percent leased. The two largest tenants represent 67.1 percent of the total office net rentable area. The average remaining lease term for these two tenants is approximately 13 years, which provides for a stable revenue stream over the long term and the ability to weather the near-term effects of the COVID-19 pandemic.
- Hudson Commons complex benefits from strong sponsorship by Cove Property Group and Baupost Group.

[218] Cushman & Wakefield, Inc. – First Quarter 2021

[219] Cushman & Wakefield, Inc. – First Quarter 2021

[220] City of New York

Property Photographs

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH

Five Manhattan West

Overview

Five Manhattan West is a Class A office building located in the Hudson Yards district of Manhattan. The 16-story building is situated on the easterly blockfront of Tenth Avenue, between West 31st and West 33rd Streets. Originally constructed in 1969 as a warehouse, distribution, and light manufacturing building for fashion industry tenants, Five Manhattan West was converted into an office building in the 1980s.

The building was renovated and repositioned as a Class A office building in 2017. Designed by REX Architecture P.C., the renovation costs were reported to be approximately $350 million, exclusive of leasing costs.[221] The building is Energy Star rated and 2021 WELL Health-Safety rated. [222] Five Manhattan West offers large, efficient floorplates, slab-to-slab ceiling heights of approximately 14 to 16 feet on most floors, floor-to-ceiling windows, 16 passenger elevators and 11 freight elevators. [223]

The steel-frame building contains approximately 1.7 million square feet of rentable office and retail space. Office floors are located on the 3rd through 16th floors and include a portion of the basement. The retail space is located on the ground floor, 2nd floor, and part of the 3rd floor. In 2019, the property was subdivided into two condominium tax lots identified as Block 729: Lot 1301 (retail condominium) and Lot 1302 (office condominium). However, the property remains identified as Lot 9001 by the New York City Department of Finance ("DOF").

[221] Brookfield Properties, Inc.

[222] Brookfield Properties, Inc.

[223] Brookfield Properties, Inc.

Property Information

TABLE 1: BUILDING INFORMATION				
Street Address:	450 West 33rd Street (Five Manhattan West)			
Block / Lots:	729 / 9001 (1301 & 1302)			
Developer / Owner:	Brookfield Property Partners L.P. and Qatar Investment Authority			
Ownership Interest:	Fee			
Number of Floors:	16 (inclusive of mechanical floors)			
Year Built:	1969 (renovated 1980s, 1990, and 2017)			
Gross Building Area [224]:	1,445,092 square feet			
Rentable Area:	1,700,000 square feet			
Major Tenants [225]:	Tenant Name	Rentable Area (SF)	Expiration Year	Renewal Options
	JP Morgan Chase Bank, N.A.	428,365	December 2033	Not available
	Amazon.com, Inc.	359,471	September 2032	Not available
	City of New York	267,699	December 2028	Not available
	R/GA Media Group, Inc.	225,687	August 2029	Not available
	Markit North America, Inc.	139,332	March 2030	1 x 5 yrs

[224] City of New York Department of Finance

[225] Cushman & Wakefield, Inc.

Real Property Tax / PILOT Information

Five Manhattan West is situated on the easterly blockfront of Tenth Avenue, between West 31st and West 33rd Streets. The property received a 10-year tax abatement via the Industrial & Commercial Abatement Program ("ICAP").

The initial ICAP abatement for the renovation of the building was calculated by taking the difference between the gross real estate taxes for the projected fiscal year when the ICAP began (2018/2019) and the gross real estate taxes for the fiscal year when construction began (2015/16), multiplied by a factor of 1.15. The ICAP pertains to the entire building. Based on the tax bills issued by the City of New York Department of Finance ("DOF"), the subject's "Benefit Base" totals $9,052,508. The "Benefit Base" remains at 100 percent (abated) for the first 5 years of the abatement program. From Years 6 through 9, the "Benefit Base" phases down 20 percent per annum and remains at 20 percent in Year 10, which is the final year of the abatement period.

Five Manhattan West was originally identified as Lot 9001 within Block 729. In 2019, the tax lot was subdivided into Lot 1301 (retail condominium) and Lot 1302 (office condominium). However, the assessor has not revised the 2021/22 fiscal year assessments and the property remains identified as Lot 9001. As such, historical and current assessments do not reflect the separation of these tax lots. Cushman & Wakefield, Inc., modeled the payable fiscal year taxes based on the asset's current assessment and our projection of future assessments. The ICAP abatement commenced in the 2018/2019 fiscal year and is scheduled to expire in the 2027/2028 fiscal year. The payable fiscal year tax amounts through 2021/2022 are based on the property's assessed value as determined by the DOF. Projections for Class 4 office lots assume no assessment growth in fiscal year 2023 followed by fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis period.

5 MANHATTAN WEST
BLOCK 729, LOT 9001
NEW YORK, NEW YORK

ASSESSMENT AND TAX PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	ICAP YEAR	TAX RATE	FULL TAXES	ICAP BENEFIT BASE	ICAP ABATEMENT PERCENT	PAYABLE FISCAL YR TAXES
1	2021 / 22	$223,578,716	-	4	10.755%	$24,045,891	$9,052,508	100%	**$14,993,383**
2	2022 / 23	$223,578,716	-	5	10.755%	$24,045,891	$9,052,508	100%	**$14,993,383**
3	2023 / 24	$231,403,971	3.5%	6	10.755%	$24,887,497	$9,052,508	80%	**$17,645,491**
4	2024 / 25	$239,503,110	3.5%	7	10.755%	$25,758,559	$9,052,508	60%	**$20,327,055**
5	2025 / 26	$247,885,719	3.5%	8	10.755%	$26,660,109	$9,052,508	40%	**$23,039,106**
6	2026 / 27	$256,561,719	3.5%	9	10.755%	$27,593,213	$9,052,508	20%	**$25,782,711**
7	2027 / 28	$265,541,379	3.5%	10	10.755%	$28,558,975	$9,052,508	20%	**$26,748,474**
8	2028 / 29	$274,835,328	3.5%	-	10.755%	$29,558,539	-	0%	**$29,558,539**
9	2029 / 30	$284,454,564	3.5%	-	10.755%	$30,593,088	-	0%	**$30,593,088**
10	2030 / 31	$294,410,474	3.5%	-	10.755%	$31,663,846	-	0%	**$31,663,846**
11	2031 / 32	$304,714,840	3.5%	-	10.755%	$32,772,081	-	0%	**$32,772,081**
12	2032 / 33	$315,379,860	3.5%	-	10.755%	$33,919,104	-	0%	**$33,919,104**
13	2033 / 34	$326,418,155	3.5%	-	10.755%	$35,106,273	-	0%	**$35,106,273**
14	2034 / 35	$337,842,790	3.5%	-	10.755%	$36,334,992	-	0%	**$36,334,992**
15	2035 / 36	$349,667,288	3.5%	-	10.755%	$37,606,717	-	0%	**$37,606,717**
16	2036 / 37	$361,905,643	3.5%	-	10.755%	$38,922,952	-	0%	**$38,922,952**
17	2037 / 38	$374,572,340	3.5%	-	10.755%	$40,285,255	-	0%	**$40,285,255**
18	2038 / 39	$387,682,372	3.5%	-	10.755%	$41,695,239	-	0%	**$41,695,239**
19	2039 / 40	$401,251,255	3.5%	-	10.755%	$43,154,573	-	0%	**$43,154,573**
20	2040 / 41	$415,295,049	3.5%	-	10.755%	$44,664,983	-	0%	**$44,664,983**
21	2041 / 42	$429,830,376	3.5%	-	10.755%	$46,228,257	-	0%	**$46,228,257**
22	2042 / 43	$444,874,439	3.5%	-	10.755%	$47,846,246	-	0%	**$47,846,246**
23	2043 / 44	$460,445,045	3.5%	-	10.755%	$49,520,865	-	0%	**$49,520,865**
24	2044 / 45	$476,560,621	3.5%	-	10.755%	$51,254,095	-	0%	**$51,254,095**
25	2045 / 46	$493,240,243	3.5%	-	10.755%	$53,047,988	-	0%	**$53,047,988**
26	2046 / 47	$510,503,651	3.5%	-	10.755%	$54,904,668	-	0%	**$54,904,668**
				TOTAL PAYABLE PROJECTION YEARS 1-26					**$922,609,362**

Property Equity and Debt Overview [226]

Five Manhattan West has existing debt totaling $1.15 billion from a consortium of banks including Landesbank Baden-Württemberg, Bank of China, Bank of Communications, Bank of East Asia, Bayern LB, Deka Bank, ING Group, Natixis, Raymond James Bank, Santander, and Société Générale. The 7-year first mortgage originated on March 28, 2018. [227] The appraised value upon completion of Five Manhattan West in connection with the loan transaction was reported to be $1.8 billion. [228]

Ownership Overview

Five Manhattan West is owned by a joint venture of Brookfield Property Partners L.P. and Qatar Investment Authority. In October 2015, Qatar Investment Authority purchased a 44 percent interest in the overall Manhattan West development based on a total valuation of $8.6 billion. [229]

Brookfield Properties

Brookfield Properties invests in, develops, and operates best-in-class properties around the world on behalf of Brookfield Asset Management, one of the largest alternative asset managers in the world. Brookfield Properties is active across all property types, including multifamily, office, retail, hotel, logistics, and development. The firm manages more than 675 properties comprising 320 million square feet across five continents, with over 40 million square feet under active development.

The company has significant experience developing and managing large-scale projects, including Manhattan West, Brookfield Place and MetroTech Center in New York City. Brookfield Properties has numerous Class A buildings in New York including 1100 Avenue of the Americas, 300 Madison Avenue, 660 Fifth Avenue, the Grace Building, the New York Times Building, Tower 46, and prime retail suites along Fifth Avenue, among others. In April 2021, Brookfield Asset Management agreed to buy the outstanding shares of Brookfield Property Partners, the parent of Brookfield Properties. Brookfield Asset Management operates in over 30 countries with more than $600 billion in assets under management.

Qatar Investment Authority

Qatar Investment Authority ("QIA") is the sovereign wealth fund of the State of Qatar. Established in 2005, the QIA was created to invest, diversify, and grow Qatar's sovereign reserves, support the economy, and provide liquidity as needed. The fund invests in a wide range of sectors including real estate, infrastructure, telecommunications, health care, financial institutions, commodities, industrials, funds, and retail and consumer goods industries. The QIA opened an office in New York City in 2015 as part of its global diversification strategy. According to the Sovereign Wealth Fund Institute, the QIA is the world's 11th largest sovereign wealth fund with total assets of approximately $295 billion.

[226] DBRS Morningstar Manhattan West 2020-1MW Mortgage Trust Presale Report, Page 8 | August 13, 2020

[227] Real Capital Analytics, Five Manhattan West, Property Detail, July 19, 2021

[228] Real Capital Analytics, Five Manhattan West, Property Detail, July 19, 2021

[229] https://www.sec.gov/Archives/edgar/data/1545772/000114420415061220/v423099_ex99-1.htm

Tenant Overview

The office condominium within Five Manhattan West is 100 percent leased. Overall, the average remaining lease term for the five largest office tenants is just over 10 years, with expiration dates ranging from 2028 through 2033, excluding renewal options if available.

The five largest tenants represent 83.6 percent of the total office net rentable area. These tenants include J.P. Morgan Chase Bank, N.A. (428,365 SF); Amazon, Inc. (359,471 SF); the City of New York (267,699 SF); R/GA Media Group, Inc. (225,687 SF); and Markit North America, Inc. (139,332 SF). In addition, the majority of the retail condominium is leased to Whole Foods, which Amazon acquired in 2017. Profiles of the five largest office tenants are presented below and on the following pages.

JPMorgan Chase & Co.

Company Profile

JPMorgan Chase & Co. ("JPMorgan") is a leading global investment bank and financial services firm with $3.4 trillion in assets and $279.4 billion in stockholders' equity as of December 31, 2020. [230] Headquartered in New York City, JP Morgan is the largest bank in the United States and the fourth-largest globally. The firm's subsidiaries include JPMorgan Private Bank and institutional investment manager JPMorgan Asset Management. It serves millions of customers in the United States and many of the most prominent corporate, institutional and government entities.

In its earnings press release for the fourth quarter of fiscal 2020, JPMorgan Chase reported revenue of $30.2 billion for the quarter. Net income for the quarter was $12.1 billion, largely driven by credit reserve releases of $2.9 billion.

The company is publicly traded on the New York Stock Exchange under the ticker symbol "JPM." As of July 2021, JPMorgan has a market capitalization of over $450 billion. JPMorgan is rated investment grade by Moody's, Fitch, and S&P Global. A summary of the company's credit ratings is provided in the table below.

CREDIT RATINGS

Agency	Issuer Rating	Last Rating Action	Outlook
Moody's	A2	Jul-21	Positive
Fitch	AA-	Apr-21	Stable
S&P	A-	May-21	Positive

Source: Moody's, Fitch, S&P

Lease Information

JPMorgan leases 428,365 square feet of space at Five Manhattan West. The lease commenced in January 2019 and is scheduled to expire in December 2033. Asking office rents were in the $80s per square foot when the initial lease of 123,000 square feet was announced in 2014. When JPMorgan announced it was taking additional space in 2017, bringing its total leased area up to 428,365 square feet, office asking rents in the building were reportedly in the $90s per square foot.

[230] JP Morgan Chase & Co., 2020 Annual Report

Amazon, Inc.

Company Profile

Amazon, Inc., (“Amazon”), is a global technology company that encompass a large variety of product types, service offerings, and delivery channels. The main service lines include devices and services, e-commerce retail sales and business partnerships via the amazon.com marketplace, secure cloud services, business development and entertainment, and Kindle digital content and publishing. Amazon is the largest of the big-five technology companies (Amazon, Apple, Google/Alphabet, Microsoft, and Facebook) and is considered to be the world’s largest retailer. The firm employed nearly 1.298 million people around the world and reported global revenues of $386 billion in 2020, with net income of $21.33 billion.

The company's U.S. headquarters is located in Seattle, Washington. Amazon is publicly traded on the Nasdaq Stock Exchange under the ticker symbol "AMZN". As of July 2021, Amazon’s market capitalization was over $1.8 trillion. Amazon is rated investment grade by Moody’s, Fitch, and S&P Global. The company’s most recent credit ratings are detailed in the chart below.

CREDIT RATINGS

Agency	Issuer Rating	Last Rating Action	Outlook
Moody's	A1	May-21	Stable
Fitch	AA-	Jun-21	Stable
S&P	AA	Jun-21	Stable

Source: Moody's, Fitch, S&P

Lease Information

Amazon leases 359,471 square feet at Five Manhattan West. The lease commenced in October 2017 and is scheduled to expire in September 2032. Base rent over the 15-year term totals $428.86 million, which reflects an average rent of approximately $79.64 per square foot.[231] Amazon budgeted an additional $55 million ($153/sf) to build-out its space. This lease brought Five Manhattan West to 99 percent occupancy. [232]

City of New York FISA

Company Profile

New York City Financial Information Services Agency (“FISA”) is an information technology services center to provide city officials with citywide financial, payroll and human resources information.[233] FISA also maintains various financial information systems for New York City, such as its centralized accounting and budgeting system, payroll system, pension system, and personnel system. The agency has a total of 350 employees across all locations. [234]

Lease Information

New York City Financial Information Services Agency leases 267,699 square feet at Five Manhattan West. The current term is scheduled to expire in December 2028.

[231] Bockmann, Rich. “Manhattan’s Priciest Office Leases of 2017”. *The Real Deal*. December 27, 2017. https://therealdeal.com/2017/12/27/manhattans-priciest-office-leases-of-2017/

[232] “Amazon Inks Office Space Deal on Manhattan’s Far West Side.” *The Wall Street Journal*. September 21, 2027. https://www.wsj.com/articles/amazon-inks-office-space-deal-on-manhattans-far-west-side-1506011956

[233] City of New York Green Book. https://a856-gbol.nyc.gov/GBOLWebsite/GreenBook/Details?orgId=2878

[234] Dun & Bradstreet. New York City Financial Information Services Agency, Company Profile.

R/GA Media Group, Inc.

Company Profile

R/GA Media Group, Inc. ("R/GA") is a global creative and design company involved in the creation of new products and digital services, social and mobile campaigns, and broadcast commercials.[235] Founded in 1977, R/GA now has more than 2,000 employees globally with offices in the United States, Europe, South America, and the Asia-Pacific region. Dun & Bradstreet reports annual revenue of $107.90 million for R/GA.

R/GA Media Group is a part of the advertising and marketing services holding company known as the Interpublic Group of Companies ("Interpublic"). Interpublic is one of the world's largest advertising and marketing services conglomerates with approximately 50,200 employees and operates in all major world markets.[236] The conglomerate's companies specialize in consumer advertising, digital marketing, communications planning and media buying, public relations, specialized communications disciplines and data management. [237]

The company is publicly traded on the New York Stock Exchange under the ticker symbol "IPG". As of July 2021, R/GA's market capitalization was over $13 billion. R/GA Media Group is rated investment grade by Moody's, Fitch, and S&P Global. The company's most recent credit ratings are detailed in the chart below.

CREDIT RATINGS

Agency	Issuer Rating	Last Rating Action	Outlook
Moody's	Baa2	Apr-21	Stable
Fitch	BBB+	Mar-21	Stable
S&P	BBB	Apr-21	Stable

Source: Moody's, Fitch, S&P

Lease Information

R/GA leases 225,687 square feet at Five Manhattan West, consisting of the entire 12th floor and part of the 11th floor. The lease was announced in August 2014. Asking rents at the building reportedly were reportedly in the high $70s per square foot as of August 2014, a marked increase from asking rents in the high $60s per square foot in early 2014. [238] The lease is scheduled to expire in August 2029.

In July 2020, R/GA listed approximately 65 percent of its space for sublease. In November 2020, Noom announced its sublease of approximately 113,000 square feet of space from R/GA.

[235] https://www.rga.com/about/leadership/bob-greenberg

[236] Interpublic Group 2020 Annual Report, Part 1, Page 2

[237] Interpublic Group 2020 Annual Report, Part 1, Page 2

[238] Morris, Keiko. "R/GA Media Signs On to Five Manhattan West." *The Wall Street Journal*. August 10, 2014. https://www.wsj.com/articles/r-ga-media-signs-on-to-five-manhattan-west-1407725978

Markit North America, Inc. [239]

Company Profile

IHS Markit Ltd. Is the parent company of Markit North America, Inc.

IHS Markit Ltd. ("IHS Markit") was formed in 2016 through a merger of IHS Inc., which had been in business since 1959 and was publicly traded since 2005, and Markit Ltd., which was founded in 2003 and was publicly traded since 2014. IHS Markit is a data and information services company that serves a variety of industries including but not limited to financial services, automotive and maritime, energy and resources, product design, economics and risk, and technology, media, and telecom.

On November 29, 2020, S&P Global Inc., and Sapphire Subsidiary, Ltd. (a wholly-owned subsidiary of S&P Global), entered into an agreement and plan of merger, which was subsequently amended on January 20, 2021, whereby S&P Global will merge with IHS Markit, with IHS Markit surviving such merger as a wholly-owned direct subsidiary of S&P Global.

As of November 30, 2020, IHS Market had more than 16,000 employees across 38 countries. The company reported total revenue of $4.289 billion, of which $870.7 million was from continuing operations attributable to IHS Markit Ltd.

The company is publicly traded on the New York Stock Exchange under the ticker symbol "INFO". As of July 2021, IHS Markit Ltd.'s market capitalization was over $46 billion. IHS Markit Ltd. is rated investment grade by Moody's and Fitch. The company's most recent credit ratings are detailed in the chart below.

CREDIT RATINGS

Agency	Issuer Rating	Last Rating Action	Outlook
Moody's	Ba1	Mar-21	Under Review
Fitch	BBB	Dec-20	Positive
S&P	-	-	-

Source: Moody's, Fitch, S&P

Lease Information

Markit North America ("Markit") leased 139,332 square feet at Five Manhattan West consisting of the entire 5th floor. The 15-year lease was announced in March 2015 and is scheduled to expire in March 2030. Asking rent for the space leased to Markit was reported to be approximately $70 per square foot. [240] According to the memorandum of lease filed with the City of New York, the tenant has one 5-year renewal option, as well as the right of first refusal to lease space on the 6th floor of the building. [241]

[239] IHS Markit Annual Report 2020

[240] Hughes, C.J. "Rejecting the Cubicle for an Expanse of Space." *New York Times.* May 20, 2015. https://www.nytimes.com/2015/05/20/realestate/commercial/in-search-of-wide-open-office-spaces-in-manhattan.html

[241] Memorandum of Lease. Document ID: 2015041700054001

Current Market Information

Five Manhattan West is located within the Penn Station office submarket of Midtown Manhattan, which includes all of the newly constructed office towers within the Hudson Yards district. The following table provides a summary of the office portion of Five Manhattan West as compared to Class A office space within the Penn Station office submarket and the Midtown Manhattan office market.

TABLE 2: KEY OFFICE METRICS – 1Q 2021 CLASS A

	No. of Buildings	Inventory SF	Avg. Direct Asking Rent / SF	Direct Availability
Five Manhattan West	1	1,700,000	N/A	0%
Penn Station Submarket [242]	15	16,537,897	$107.59	5.3%
Midtown Manhattan [243]	297	187,528,330	$89.89	11.5%

Investment Highlights

- Five Manhattan West was renovated and repositioned as a Class A office building in 2017. The renovation costs were reported to be approximately $350 million, exclusive of leasing costs.[244]
- The property's floor plates are well suited to the needs of large office users.
- The building offers some of the largest floor plates in the marketplace, with excellent utility, above-average ceiling heights, large floor loads, and very good light and air. These features are desired by large tenants looking for a presence in Hudson Yards at a lower price point than the newly constructed buildings.
- Five Manhattan West is Energy Star rated and 2021 WELL Health-Safety rated.
- As part of the Manhattan West complex, tenants at Five Manhattan West benefit from the synergy generated by the seamless connection of retail shops, high quality hotel, and trophy quality office spaces.
- Five Manhattan West is currently 100 percent leased. The vast majority of the space is leased to institutional quality or credit tenants including JPMorgan Chase & Co., Amazon, City of New York, R/GA Media group, and Markit North America (IHS Market / S&P Global).
- The five largest tenants represent 83.6 percent of the total office net rentable area. The average remaining lease term for these five tenants is just over 10 years, which provides for a stable revenue stream over the long term and the ability to weather the near-term effects of the COVID-19 pandemic.
- The Manhattan West complex benefits from strong sponsorship by Brookfield Properties and Qatar Investment Authority.

[242] Cushman & Wakefield, Inc. – First Quarter 2021

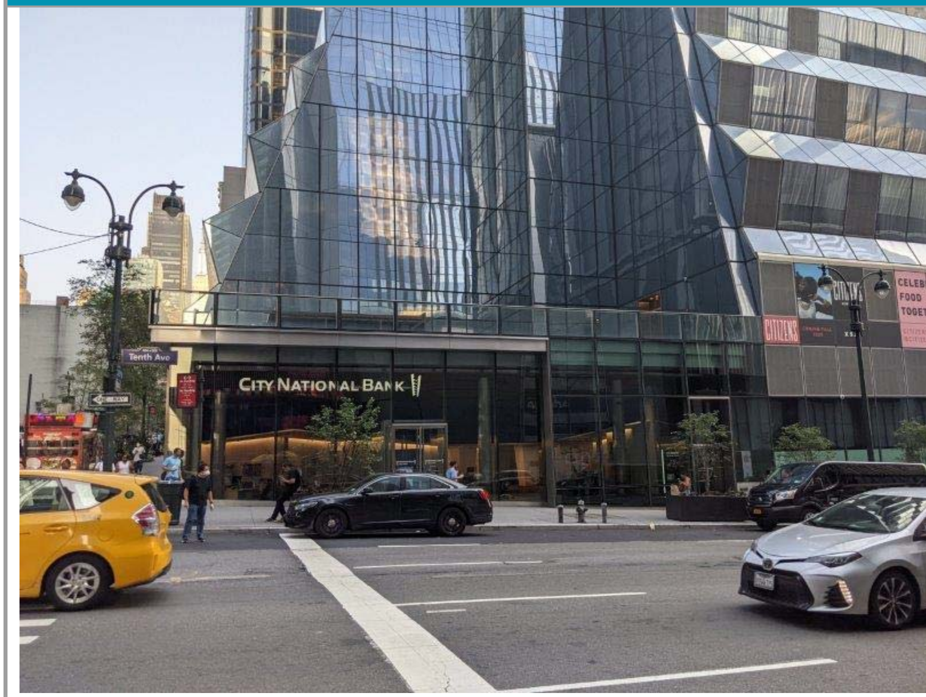
[243] Cushman & Wakefield, Inc. – First Quarter 2021

[244] Brookfield Properties, Inc.

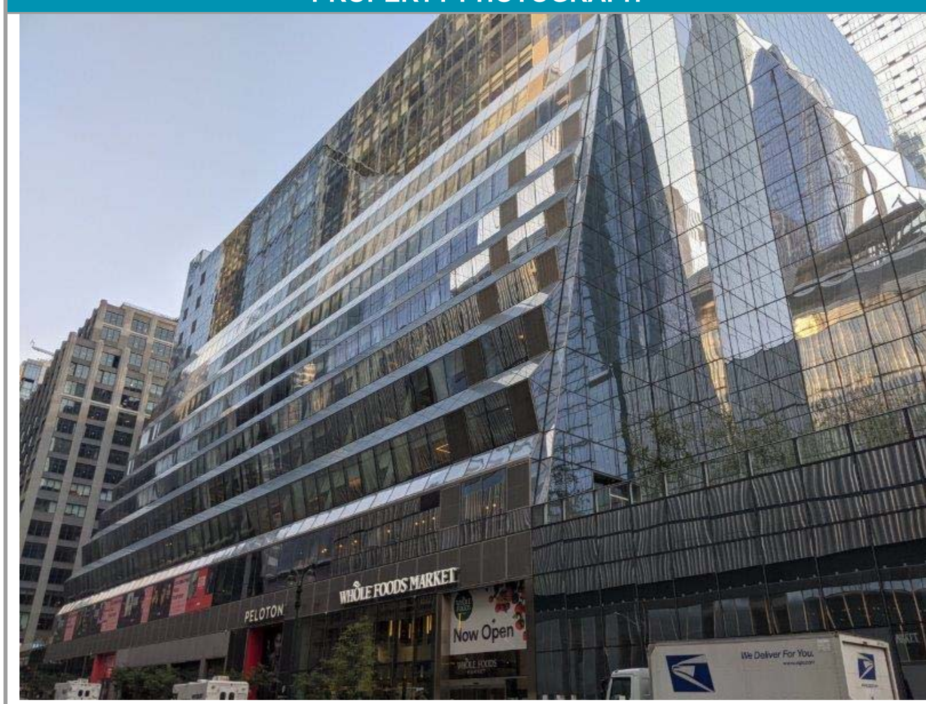
Property Photographs

PROPERTY PHOTOGRAPH

PROPERTY PHOTOGRAPH



PROPERTY PHOTOGRAPH



Residential Completions

Through September 2021, there have been 27 residential buildings constructed in the Hudson Yards district, three substantial renovation projects, and two buildings which were substantially completed at the time of the rezoning and contribute revenue to the HYIC. In total, these projects represent more than 10,000 apartments and nearly 10.7 million square feet of development. These completed projects are detailed in the map and table below. In addition, those residential buildings which contribute significant revenue to the financing district are further detailed on the following pages.

RESIDENTIAL

Completed
10.7 MSF

1. 315 W. 33rd St.
2. 400 W. 37th St.
3. 402 W. 40th St.
4. 552 W. 43rd St.
5. 325 W. 37th St.
6. 521 W. 42nd St.
7. 350 W. 42nd St.
8. 635 W. 42nd St.
9. 502 Ninth Ave.
10. 455 W. 37th St.
11. 320 W. 38th St.
12. 600 W. 42nd St.
13. 534 W. 42nd St.
14. 446 W. 38th St.
15. 505 W. 37th St.
16. 350 W. 37th St.
17. 450 W. 42nd St.
18. 433 W. 37th St.
19. 330 W. 39th St.
20. 515 Ninth Ave
21. 321 W. 37th St.
22. 605 W. 42nd St.
23. 555 Tenth Ave.
24. 435 W. 31St. St.
25. 515 W. 38th St.
26. 411 W. 35th St.
27. 445 W. 35th St.
28. 400 W. 42nd St.
29. 515 W. 36th St.
30. 15 Hudson Yards
31. 401 W. 33rd St.
32. 35 Hudson Yards

Residential Projects Substantially Completed At Time Of Rezoning That Make TEP Payments to HYIC

Name	Address	Residential Use	Total Units	Size (SF)	Completion Year	Tax Exemption
The Olivia	315 West 33rd Street	Rental	333	555,125	2000	None - Expired
Hudson Crossing	400 West 37th Street	Rental	261	214,594	2004	421-a 20-yr
		Total	**594**	**769,719**		

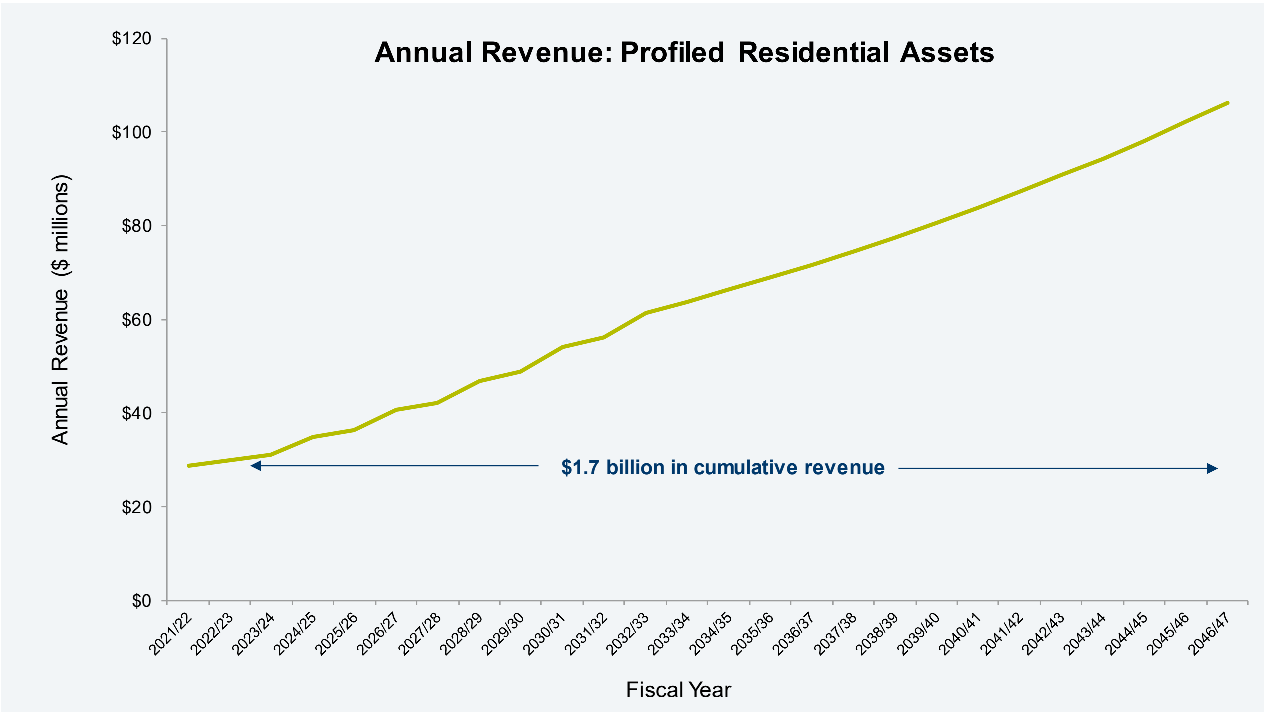
Residential Renovation Projects Completed

Name	Address	Residential Use	Total Units	Size (SF)	Completion Year	Tax Exemption
	402 West 40th Street	Single Family	2	3,240	2006	None
WEST 43	552 West 43rd Street	Condominium	9	12,030	2010	None
	325 West 37th Street	Rental	14	48,843	2014	None
		Total	**25**	**64,113**		

Residential New Construction Projects Completed

Name	Address	Residential Use	Total Units	Size (SF)	Completion Year	Tax Exemption
	521 West 42nd Street	Affordable	73	94,132	2005	420C
The Orion	350 West 42nd Street	Condominium	551	508,695	2006	None - Expired
The Atelier	635 West 42nd Street	Condominium	478	437,018	2007	None - Expired
38Nine	502 Ninth Avenue	Condominium	36	28,007	2008	None - Expired
455W37	455 West 37th Street	Rental	399	440,709	2008	421-a 20-yr
Emerald Green	320 West 38th Street	Rental	572	718,503	2009	421-a 20-yr
Silver Towers	600 West 42nd Street	Rental	1,362	1,049,441	2009	421-a 10-yr & 20-yr
534W42	534 West 42nd Street	Condominium	8	8,923	2009	None - Expired
	446 West 38th Street	Rental	7	12,400	2009	None
505W37	505 West 37th Street	Rental	839	807,316	2010	421-a 20-yr
Townsend	350 West 37th Street	Rental	210	170,978	2010	421-a 20-yr
MiMA	450 West 42nd Street	Rental / Condominium	810	1,003,752	2011	421-a 10-yr & 20-yr
The Mantena	433 West 37th Street	Rental	99	97,646	2012	421-a 10-yr
Crystal Green	330 West 39th Street	Rental	237	218,725	2013	421-a 20-yr
LANA New York	515 Ninth Avenue	Rental	108	144,243	2014	421-a 10-yr
Sienna 37	321 West 37th Street	Rental	78	82,354	2015	None
SKY Rental	605 West 42nd Street	Rental	1,175	888,123	2016	421-a 35-yr enhanced
555TEN	555 Tenth Avenue	Rental	598	562,325	2016	421-a 35-yr enhanced
The Eugene	435 West 31st Street	Rental	844	657,760	2017	421-a 20-yr
Henry Hall	515 West 38th Street	Rental	225	203,794	2017	421-a 20-yr
The Lewis	411 West 35th Street	Rental	186	178,414	2018	421-a 10-yr
	445 West 35th Street	Rental	118	98,576	2018	421-a 10-yr
Pod Pads	400 West 42nd Street	Rental	45	34,260	2018	ICAP 10-yr
Hudson 36	515 West 36th Street	Rental	250	321,693	2019	ANY 35-yr
	15 Hudson Yards	Condominium / Rental	392	638,486	2019	421-a 20-yr
The Eleni	401 West 33rd Street	Rental	12	12,436	2019	None
	35 Hudson Yards	Condominium	143	409,279	2020	421-a 20-yr
		Total	**9,855**	**9,827,988**		

The chart below illustrates the projected revenue from the residential assets which are profiled in this chapter. These assets include the Olivia, the Atelier, the Orion, and the residential component of the MiMA development. In total, these assets are projected to generate approximately $1.7 billion in revenue over the forecast period of fiscal year 2022 through fiscal year 2047.



The Olivia – 315 West 33rd Street

Overview

The Olivia is a 33-story mixed-use apartment building situated on a through-block site between Eighth and Ninth Avenues with frontage along West 33rd and West 34th Streets. The 401 foot tall building[245] was completed by JD Carlisle in 2000, and has sold several times since its completion. Most recently, SL Green Realty Corp. sold the property to Brookfield Properties for $446.5 million in March 2020. The transaction also included an obligation to adhere to terms for $100 million of preferred equity within the joint venture.[246]

The Olivia contains 333 market rate rental units, 265,125 square feet of commercial space, and a below-grade parking garage with 250 spaces. The commercial component consists of two floors of office space, and retail space comprising several small grade-level retail suites and a multi-level space leased to AMC, an owner and operator of movie theaters. The building is serviced by four residential elevators, two commercial freight elevators, two private elevators for the commercial space, and two passenger elevators for the parking garage.

The building contains a mix of studio, one-bedroom, and two-bedroom layouts. There are three levels of finishes for the units, depending on the date of renovation. The “Greenwich Finish” includes quartz countertops, stainless steel GE Profile appliances, and vinyl wood flooring; the “Gramercy Finish” contains white quartz countertops, GE Profile and Summit appliances, and dark wood floors; and the “Empire Finish” includes Caesarstone countertops and integrated Bosch appliances.[247] Select units within the building contain private outdoor space or washer/dryers.

Amenities at the Olivia include a 24-hour attended lobby, resident lounge, fitness center, roof deck, yoga studio, laundry room, bike storage, valet service, and on-site parking.

Property Information

TABLE 1: BUILDING INFORMATION[248]	
Street Address:	315 West 33rd Street
Block / Lot:	757 / 22
Owner:	Brookfield Properties
Ownership Interest:	Leased Fee
Number of Floors:	33
Number of Residential Units:	333
Year Built:	2000
Gross Building Area:	555,125 square feet
Residential Component:	290,000 square feet
Commercial Component:	265,125 square feet

[245] City of New York Department of Buildings

[246] SL Green Realty Corp. First Quarter 2020 Supplemental Data, March 31, 2020

[247] www.theolivianyc.com

[248] City of New York Department of Finance

Real Property Taxes and Assessments

The Olivia is classified as a Class 2 asset. The property previously benefited from a 10-year 421-a tax abatement but is now paying a full level of taxes. Projections for Class 2 tax lots assume assessment growth of 4.0 percent per annum commencing in fiscal year 2023. We assume the tax rate will remain fixed throughout the analysis period.The building's projected tax payments are detailed in the chart below:

THE OLIVIA
BLOCK 757, LOT 22
NEW YORK, NEW YORK

ASSESSMENT AND TAX PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	AGGREGATE CLASS 2 ASSESSMENT	ASSESSMENT GROWTH RATE	CLASS 2 TAX RATE	TOTAL PAYABLE FISCAL YR TAXES
1	2021 / 22	$75,397,500	-	12.235%	**$9,224,884**
2	2022 / 23	$78,413,400	4.0%	12.235%	**$9,593,879**
3	2023 / 24	$81,549,936	4.0%	12.235%	**$9,977,635**
4	2024 / 25	$84,811,933	4.0%	12.235%	**$10,376,740**
5	2025 / 26	$88,204,411	4.0%	12.235%	**$10,791,810**
6	2026 / 27	$91,732,587	4.0%	12.235%	**$11,223,482**
7	2027 / 28	$95,401,891	4.0%	12.235%	**$11,672,421**
8	2028 / 29	$99,217,966	4.0%	12.235%	**$12,139,318**
9	2029 / 30	$103,186,685	4.0%	12.235%	**$12,624,891**
10	2030 / 31	$107,314,152	4.0%	12.235%	**$13,129,887**
11	2031 / 32	$111,606,718	4.0%	12.235%	**$13,655,082**
12	2032 / 33	$116,070,987	4.0%	12.235%	**$14,201,285**
13	2033 / 34	$120,713,827	4.0%	12.235%	**$14,769,337**
14	2034 / 35	$125,542,380	4.0%	12.235%	**$15,360,110**
15	2035 / 36	$130,564,075	4.0%	12.235%	**$15,974,515**
16	2036 / 37	$135,786,638	4.0%	12.235%	**$16,613,495**
17	2037 / 38	$141,218,103	4.0%	12.235%	**$17,278,035**
18	2038 / 39	$146,866,828	4.0%	12.235%	**$17,969,156**
19	2039 / 40	$152,741,501	4.0%	12.235%	**$18,687,923**
20	2040 / 41	$158,851,161	4.0%	12.235%	**$19,435,440**
21	2041 / 42	$165,205,207	4.0%	12.235%	**$20,212,857**
22	2042 / 43	$171,813,415	4.0%	12.235%	**$21,021,371**
23	2043 / 44	$178,685,952	4.0%	12.235%	**$21,862,226**
24	2044 / 45	$185,833,390	4.0%	12.235%	**$22,736,715**
25	2045 / 46	$193,266,726	4.0%	12.235%	**$23,646,184**
26	2046 / 47	$200,997,395	4.0%	12.235%	**$24,592,031**
		TOTAL PAYABLE PROJECTION YEARS 1-26			**$408,770,709**

Property Debt Overview

The property is collateral for a $250 million first mortgage, which was assigned to Rothesay Life plc in February 2017.[249]

Ownership Overview

The Olivia is owned by Brookfield Properties, which invests in, develops, and operates best-in-class properties around the world on behalf of Brookfield Asset Management, one of the largest alternative asset managers in the world. Brookfield Properties is active across all property types, including multifamily, office, retail, hotel, logistics, and development. The firm manages more than 675 properties comprising 320 million square feet across five continents, with over 40 million square feet under active development.

The company has significant experience developing and managing large-scale projects, including Manhattan West, Brookfield Place and MetroTech Center in New York City. Brookfield Properties has numerous Class A buildings in New York including 1100 Avenue of the Americas, 300 Madison Avenue, 660 Fifth Avenue, the Grace Building, the New York Times Building, Tower 46, and prime retail suites along Fifth Avenue, among others. In April 2021, Brookfield Asset Management agreed to buy the outstanding shares of Brookfield Property Partners, the parent of Brookfield Properties. Brookfield Asset Management operates in over 30 countries with more than $600 billion in assets under management.

Current Market Information

The Hudson Yards district is located almost entirely within the Chelsea multifamily submarket, as defined by CoStar. This submarket is generally bound by Sixth Avenue to the east, West 14th Street to the south, and the Hudson River to the west. The northern boundary is situated between West 38th and West 42nd Streets, depending on the location. The following table provides a summary of the residential rents and vacancy rate of the rental component within the Olivia, relative to 4- and 5-star buildings within the Chelsea submarket, as well as the greater New York metropolitan area.

TABLE 2: KEY MULTIFAMILY METRICS – 2Q 2021[250]

	Average Monthly Asking Rent	Average Annual Asking Rent / SF	Vacancy Rate
The Olivia	$3,487	$69.36	6.2%
Chelsea Submarket 4 & 5 Star Buildings	$4,642	$75.24	4.3%
New York	$2,790	$41.40	3.3%

[249] Real Capital Analytics

[250] CoStar

Investment Highlights

- The building is conveniently located near many public transportation options.
- Ownership has been renovating unit interiors over the last several years to remain competitive in the local market.
- The Olivia is owned and managed by Brookfield Properties, an institutional quality operator of real estate.

Property Photographs

PROPERTY PHOTOGRAPH

The Atelier – 635 West 42nd Street

Overview

The Atelier is a 46-story mixed-use condominium building situated on a mid-block site on the north side of West 42nd Street between Eleventh and Twelfth Avenues in Manhattan. The 521-foot [251] tall building was jointly developed by the Moinian Group and MacFarlane Partners. It was designed by Costas Kondylis & Partners LLP. Construction began in 2004 and was completed in 2007.

The building was originally constructed with 478 residential condominium units. As a result of a merger combining four units into a single large-format duplex unit, there are currently 475 apartments in the building. The building also contains three commercial units and a parking garage. The non-residential components of the building are located on the cellar through second floors. The condominium tax lots are identified as Block 1090, Lots 1001 through 1482. The Atelier is serviced by six passenger elevators and two service elevators. The building contains an array of solar panels on the roof which is capable of producing an estimated 26,000 kilowatt hours per year. [252]

The initial offering of units was marketed by The Marketing Directors. The building's original unit mix consisted of studio through two-bedroom layouts. Amenities at the Atelier include a 24-hour attended lobby with concierge and valet service, complimentary breakfast, indoor swimming pool, landscaped roof terrace and lounge, outdoor basketball and tennis court, fitness center, yoga studio, movie screening room, children's play areas, free shuttle service to nearby subway stations, bicycle storage, and on-site parking.

Property Information

TABLE 1: BUILDING INFORMATION [253]	
Street Address:	635 West 42nd Street
Block / Lots:	1090 / 1001-1482
Developer:	The Moinian Group
Number of Floors:	46
Number of Residential Units:	475
Year Built:	2007
Gross Building Area:	519,628 square feet
Residential Units (Lots 1005-1482):	384,734 square feet
Commercial Component (Lots 1001-1003):	29,275 square feet
Parking Component (Lot 1004):	23,009 square feet

[251] Council on Tall Buildings and Urban Habitat

[252] www.theateliercondo.com

[253] City of New York Department of Finance

Real Property Taxes and Assessments

The Atelier's residential condominium units are classified as Class 2 assets, while the remaining lots are taxed as Class 4 assets. The asset previously benefited from a 10-year 421-a tax abatement but is now paying a full level of taxes. Projections for Class 2 tax lots and Class 4 retail tax lots assume assessment growth of 4.0 percent per annum commencing in fiscal year 2023. The building's projected tax payments are detailed in the chart below:

THE ATELIER
BLOCK 1090, LOTS 1001-1482
NEW YORK, NEW YORK

ASSESSMENT AND TAX PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	AGGREGATE CLASS 2 ASSESSMENT	ASSESSMENT GROWTH RATE	CLASS 2 TAX RATE	CLASS 2 FISCAL YR TAXES*	AGGREGATE CLASS 4 ASSESSMENT	ASSESSMENT GROWTH RATE	CLASS 4 TAX RATE	CLASS 4 FISCAL YR TAXES	TOTAL PAYABLE FISCAL YR TAXES
1	2021 / 22	$54,857,666	-	12.235%	$6,384,310	$4,669,636	-	10.755%	$502,219	**$6,886,530**
2	2022 / 23	$57,051,973	4.0%	12.235%	$6,655,765	$4,856,421	4.0%	10.755%	$522,308	**$7,178,073**
3	2023 / 24	$59,334,052	4.0%	12.235%	$6,921,995	$5,050,678	4.0%	10.755%	$543,200	**$7,465,196**
4	2024 / 25	$61,707,414	4.0%	12.235%	$7,198,875	$5,252,705	4.0%	10.755%	$564,928	**$7,763,804**
5	2025 / 26	$64,175,710	4.0%	12.235%	$7,486,830	$5,462,814	4.0%	10.755%	$587,526	**$8,074,356**
6	2026 / 27	$66,742,739	4.0%	12.235%	$7,786,303	$5,681,326	4.0%	10.755%	$611,027	**$8,397,330**
7	2027 / 28	$69,412,448	4.0%	12.235%	$8,097,755	$5,908,579	4.0%	10.755%	$635,468	**$8,733,223**
8	2028 / 29	$72,188,946	4.0%	12.235%	$8,421,666	$6,144,922	4.0%	10.755%	$660,886	**$9,082,552**
9	2029 / 30	$75,076,504	4.0%	12.235%	$8,758,532	$6,390,719	4.0%	10.755%	$687,322	**$9,445,854**
10	2030 / 31	$78,079,564	4.0%	12.235%	$9,108,874	$6,646,348	4.0%	10.755%	$714,815	**$9,823,688**
11	2031 / 32	$81,202,747	4.0%	12.235%	$9,473,229	$6,912,202	4.0%	10.755%	$743,407	**$10,216,636**
12	2032 / 33	$84,450,856	4.0%	12.235%	$9,852,158	$7,188,690	4.0%	10.755%	$773,144	**$10,625,301**
13	2033 / 34	$87,828,891	4.0%	12.235%	$10,246,244	$7,476,238	4.0%	10.755%	$804,069	**$11,050,313**
14	2034 / 35	$91,342,046	4.0%	12.235%	$10,656,094	$7,775,287	4.0%	10.755%	$836,232	**$11,492,326**
15	2035 / 36	$94,995,728	4.0%	12.235%	$11,082,338	$8,086,299	4.0%	10.755%	$869,681	**$11,952,019**
16	2036 / 37	$98,795,557	4.0%	12.235%	$11,525,631	$8,409,751	4.0%	10.755%	$904,469	**$12,430,100**
17	2037 / 38	$102,747,380	4.0%	12.235%	$11,986,656	$8,746,141	4.0%	10.755%	$940,647	**$12,927,304**
18	2038 / 39	$106,857,275	4.0%	12.235%	$12,466,123	$9,095,986	4.0%	10.755%	$978,273	**$13,444,396**
19	2039 / 40	$111,131,566	4.0%	12.235%	$12,964,767	$9,459,826	4.0%	10.755%	$1,017,404	**$13,982,172**
20	2040 / 41	$115,576,828	4.0%	12.235%	$13,483,358	$9,838,219	4.0%	10.755%	$1,058,100	**$14,541,459**
21	2041 / 42	$120,199,902	4.0%	12.235%	$14,022,692	$10,231,748	4.0%	10.755%	$1,100,424	**$15,123,117**
22	2042 / 43	$125,007,898	4.0%	12.235%	$14,583,600	$10,641,017	4.0%	10.755%	$1,144,441	**$15,728,042**
23	2043 / 44	$130,008,214	4.0%	12.235%	$15,166,944	$11,066,658	4.0%	10.755%	$1,190,219	**$16,357,163**
24	2044 / 45	$135,208,542	4.0%	12.235%	$15,773,622	$11,509,324	4.0%	10.755%	$1,237,828	**$17,011,450**
25	2045 / 46	$140,616,884	4.0%	12.235%	$16,404,567	$11,969,697	4.0%	10.755%	$1,287,341	**$17,691,908**
26	2046 / 47	$146,241,559	4.0%	12.235%	$17,060,749	$12,448,485	4.0%	10.755%	$1,338,835	**$18,399,584**
*Includes the assumption the residential units will benefit from the Cooperative and Condominium Partial Tax Abatement							**TOTAL PAYABLE PROJECTION YEARS 1-26**			**$305,823,894**

Developer / Sponsor Overview

The Atelier was developed by the Moinian Group, a large privately held real estate firm that was founded in 1982 by Joseph Moinian. The company develops, owns, and operates over 20 million square feet of real estate throughout the United States, inclusive of commercial, residential, and hospitality assets. These properties are concentrated in major cities like New York, Los Angeles, Chicago, Miami, and Dallas. The Moinian Group's New York City portfolio includes the Sky at 605 West 42nd Street, the Oskar at 572 Eleventh Avenue, 1 West Street, 100 John Street, 90 Washington Street, 3 Columbus Circle, 535 Fifth Avenue, 545 Fifth Avenue, 450-460 Park Avenue South, 245 Fifth Avenue, 7 Battery Park, 90 John Street, 60 Madison Avenue, 72 Madison Avenue, the W Downtown, the Hilton Garden Inn at 237 West 54th Street, and Hotel Mela, among others.

Current Market Information

In the 12-month period through June 2021, there were 11 arm's-length transactions within the Atelier, all of which were resales. These sales ranged in price from $660,000 to $1,700,000, with an average price of $1,062,662. The average size for these sales was 789 square feet while the average price per square foot was $1,347. The following table provides a summary of the recent sales, relative to resale transactions within the Midtown submarket and Manhattan as a whole:

TABLE 2: KEY CONDOMINIUM METRICS – 2Q 2021		
	Average Sale Price	**Average Sale Price / SF**
The Atelier	$1,062,662	$1,347
Midtown Resale Condominiums[254]	$1,185,000	$1,245
Manhattan Resale Condominiums[255]	$2,351,000	$1,742

Investment Highlights

- The building offers an extensive amenity package commensurate with the competitive supply in the luxury for-sale market.
- The property was developed by the Moinian Group, a large privately held real estate firm.
- The Atelier's units are owned by hundreds of individual owners, which limits the downside risk of tax delinquency.

[254] The Corcoran Group

[255] The Corcoran Group

Property Photographs

PROPERTY PHOTOGRAPH

The Orion – 350 West 42nd Street

Overview

The Orion is a 60-story mixed-use condominium building situated on a mid-block site between Eighth and Ninth Avenues in Manhattan. The 604-foot tall building was developed by Extell Development Company and designed by CetraRuddy. It contains a total of 551 residential condominium units and two retail suites. The residential units are located on floors four through 60. The building also has a parking garage located on the cellar through third floors. The Orion is serviced by eight passenger elevators and two service elevators. The condominium tax lots are identified as Block 1032, Lots 1001 through 1555.

Construction began in 2004 and was completed in 2006. The initial offering of units was marketed by the Corcoran Group. Extell Development Company provided three options of finishes and color schemes. Within six months of the project's sales launch in 2005, 80 percent of the units had been placed under contract.[256] The building was completely sold out within the first year of marketing, post completion. [257]

The Orion features an extensive amenity package with most of the physical amenities situated within a 3-story amenity suite located on floors 28 through 30. Amenities at the building include 24-hour doorman and concierge service, valet service, package room with cold storage, resident lounge, game room, media room, children's playroom, fitness facility by La Palestra, a health club which includes a sauna, hot tub, lap pool, yoga room, and sun deck, bike storage, and on-site parking.

Property Information

TABLE 1: BUILDING INFORMATION[258]	
Street Address:	350 West 42nd Street
Block / Lots:	1032 / 1001-1555
Developer:	Extell Development Company
Number of Floors:	60
Number of Residential Units:	551
Year Built:	2006
Gross Building Area:	638,000 square feet[259]
Residential Units (Lots 1003-1553):	463,375 square feet
Commercial Component (Lots 1002, 1554-1555):	7,795 square feet
Parking Component (Lot 1001):	37,525 square feet

[256] Corcoran Group Public Relations, August 17, 2005

[257] www.extell.com

[258] City of New York Department of Finance

[259] www.extell.com

Real Property Taxes and Assessments

The Orion's residential condominium units are classified as Class 2 assets, while the remaining lots are taxed as Class 4 assets. The asset previously benefited from a 10-year 421-a tax abatement but is now paying a full level of taxes. Projections for Class 2 tax lots and Class 4 retail tax lots assume assessment growth of 4.0 percent per annum commencing in fiscal year 2023. The building's projected tax payments are detailed in the chart below:

THE ORION
BLOCK 1032, LOTS 1001-1555
NEW YORK, NEW YORK

ASSESSMENT AND TAX PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	AGGREGATE CLASS 2 ASSESSMENT	ASSESSMENT GROWTH RATE	CLASS 2 TAX RATE	CLASS 2 FISCAL YR TAXES	AGGREGATE CLASS 4 ASSESSMENT	ASSESSMENT GROWTH RATE	CLASS 4 TAX RATE	CLASS 4 FISCAL YR TAXES	TOTAL PAYABLE FISCAL YR TAXES
1	2021 / 22	$87,630,317	-	12.235%	$9,878,941	$4,744,352	-	10.755%	$510,255	**$10,389,196**
2	2022 / 23	$91,135,530	4.0%	12.235%	$10,310,319	$4,934,126	4.0%	10.755%	$530,665	**$10,840,984**
3	2023 / 24	$94,780,951	4.0%	12.235%	$10,722,732	$5,131,491	4.0%	10.755%	$551,892	**$11,274,624**
4	2024 / 25	$98,572,189	4.0%	12.235%	$11,151,641	$5,336,751	4.0%	10.755%	$573,968	**$11,725,609**
5	2025 / 26	$102,515,076	4.0%	12.235%	$11,597,707	$5,550,221	4.0%	10.755%	$596,926	**$12,194,633**
6	2026 / 27	$106,615,680	4.0%	12.235%	$12,061,615	$5,772,230	4.0%	10.755%	$620,803	**$12,682,418**
7	2027 / 28	$110,880,307	4.0%	12.235%	$12,544,080	$6,003,119	4.0%	10.755%	$645,635	**$13,189,715**
8	2028 / 29	$115,315,519	4.0%	12.235%	$13,045,843	$6,243,244	4.0%	10.755%	$671,461	**$13,717,304**
9	2029 / 30	$119,928,140	4.0%	12.235%	$13,567,676	$6,492,973	4.0%	10.755%	$698,319	**$14,265,996**
10	2030 / 31	$124,725,265	4.0%	12.235%	$14,110,384	$6,752,692	4.0%	10.755%	$726,252	**$14,836,636**
11	2031 / 32	$129,714,276	4.0%	12.235%	$14,674,799	$7,022,800	4.0%	10.755%	$755,302	**$15,430,101**
12	2032 / 33	$134,902,847	4.0%	12.235%	$15,261,791	$7,303,712	4.0%	10.755%	$785,514	**$16,047,305**
13	2033 / 34	$140,298,961	4.0%	12.235%	$15,872,262	$7,595,860	4.0%	10.755%	$816,935	**$16,689,197**
14	2034 / 35	$145,910,919	4.0%	12.235%	$16,507,153	$7,899,695	4.0%	10.755%	$849,612	**$17,356,765**
15	2035 / 36	$151,747,356	4.0%	12.235%	$17,167,439	$8,215,683	4.0%	10.755%	$883,597	**$18,051,036**
16	2036 / 37	$157,817,250	4.0%	12.235%	$17,854,137	$8,544,310	4.0%	10.755%	$918,941	**$18,773,077**
17	2037 / 38	$164,129,940	4.0%	12.235%	$18,568,302	$8,886,082	4.0%	10.755%	$955,698	**$19,524,000**
18	2038 / 39	$170,695,138	4.0%	12.235%	$19,311,034	$9,241,526	4.0%	10.755%	$993,926	**$20,304,960**
19	2039 / 40	$177,522,943	4.0%	12.235%	$20,083,476	$9,611,187	4.0%	10.755%	$1,033,683	**$21,117,159**
20	2040 / 41	$184,623,861	4.0%	12.235%	$20,886,815	$9,995,634	4.0%	10.755%	$1,075,030	**$21,961,845**
21	2041 / 42	$192,008,816	4.0%	12.235%	$21,722,287	$10,395,459	4.0%	10.755%	$1,118,032	**$22,840,319**
22	2042 / 43	$199,689,168	4.0%	12.235%	$22,591,179	$10,811,278	4.0%	10.755%	$1,162,753	**$23,753,932**
23	2043 / 44	$207,676,735	4.0%	12.235%	$23,494,826	$11,243,729	4.0%	10.755%	$1,209,263	**$24,704,089**
24	2044 / 45	$215,983,804	4.0%	12.235%	$24,434,619	$11,693,478	4.0%	10.755%	$1,257,634	**$25,692,252**
25	2045 / 46	$224,623,157	4.0%	12.235%	$25,412,004	$12,161,217	4.0%	10.755%	$1,307,939	**$26,719,942**
26	2046 / 47	$233,608,083	4.0%	12.235%	$26,428,484	$12,647,666	4.0%	10.755%	$1,360,256	**$27,788,740**
*Includes the assumption the residential units will benefit from the Coopand Condo Partial Tax Abatement							**TOTAL PAYABLE PROJECTION YEARS 1-26**			**$461,871,833**

Developer / Sponsor Overview

The Orion was developed by Extell Development Company, one of the premier developers of luxury properties in New York City. The company was founded in 1989 by Gary Barnett. Since its inception, the company has developed over 35 properties, including One57, Central Park Tower, Riverside South, One Manhattan Square, Brooklyn Point, the Lucida, 50 West 66th Street, 555 Tenth Avenue, and the International Gem Tower. In total, the company has developed or is planning to develop over 25 million square feet of real estate.

Current Market Information

In the 12-month period through June 2021, there were 17 arm's-length transactions within the Orion, all of which were resales. These sales ranged in price from $640,000 to $1,865,000, with an average price of $1,042,662. The average size for these sales was 755 square feet while the average price per square foot was $1,382. The following table provides a summary of the recent sales, relative to resale transactions within the Midtown submarket and Manhattan as a whole:

TABLE 2: KEY CONDOMINIUM METRICS – 2Q 2021		
	Average Sale Price	**Average Sale Price / SF**
The Orion	$1,042,662	$1,382
Midtown Resale Condominiums[260]	$1,185,000	$1,245
Manhattan Resale Condominiums[261]	$2,351,000	$1,742

Investment Highlights

- The Orion was well received by the market during its initial sales period and sold out at a rapid pace.
- The building offers an extensive amenity package commensurate with the competitive supply in the luxury for-sale market.
- The property was developed by Extell Development Company, a top-tier developer of luxury projects in New York City.
- The Times Square - 42nd Street subway complex is located in close proximity to the Orion. This is the busiest subway station in the system and provides convenient access to the rest of the city.
- The Orion's units are owned by hundreds of individual owners, which limits the downside risk of tax delinquency.

[260] The Corcoran Group

[261] The Corcoran Group

Property Photographs

PROPERTY PHOTOGRAPH

MiMA & YOTEL – 450 West 42nd Street & 570 Tenth Avenue

Overview

The MiMA and YOTEL New York are contained within a mixed-use development situated on the southeast corner of West 42nd Street and Tenth Avenue in Manhattan. The development consists of a 60-story tower on the eastern portion of the site and a 23-story tower on the western portion. Related Companies developed the property, which was completed in 2011. The building was designed by Arquitectonica and Ismael Leyva Architects; interiors were designed by the Rockwell Group. The project was awarded LEED Gold certification. The development's components are subdivided into the condominium tax lots identified as Block 1051, Lots 1101 through 1151, and 1303 through 1449.

The 60-story tower houses the residential component of the asset, which consists of a 630-unit 80/20 residential rental component, 33 housing units which satisfied the developer's inclusionary housing requirement, and 147 for-sale luxury condominiums. The 80/20 rental component is known as the MiMA, while the condominiums are marketed as the Manhattan View at MiMA. The condominium component is located on the top 13 floors of the building and has a separate entrance on West 42nd Street. Kuafu Properties and SCG America purchased these top-floor units from Related Companies in December 2015 for $260.8 million.[262] The group then renovated the units to a luxury condominium level of finish and launched sales in May 2016.

The residential component of the development features an extensive 44,000 square foot amenity package. These amenities include 24-hour doorman and concierge service, outdoor terraces, a basketball court, yoga studio, dog grooming and day care center, tenant storage, bicycle storage, and on-site parking. In addition, residents may pay an annual membership fee to access the M Club located on the third floor. This club contains a resident lounge, two club rooms, a game room, technology center, business lounge, screening and golf simulator room, and an 18,000 square foot Equinox health club with exercise equipment, swimming pool, steam and sauna rooms, locker rooms, and a private screening room.

The hotel component, which contains the YOTEL New York, is located within the 23-story western tower of the development. The upscale hotel has 713 guestrooms with standard rooms ranging in size from 114 square feet to 170 square feet, along with Junior suites ranging in size from 275 square feet to 330 square feet, and a Penthouse suite measuring 763 square feet.[263] Additional amenities include approximately 20,000 square feet of flexible indoor entertainment space as well as a large outdoor terrace.[264]

In addition to the residential and hotel components, there is a theater located on the first and second floors, three retail units, and a multi-level parking garage. The theater component is owned and occupied by the Signature Theatre Company, which manages the Pershing Square Signature Center. This off-Broadway complex was designed by Frank Gehry and features three stages, with capacities ranging from 191 to 294 seats.[265]

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[262] Bargain and Sale Deed, December 21, 2015. Document ID 2015122800149002.

[263] Smith Travel Research and www.yotel.com

[264] "Related Companies Introduces MiMa - the Luxury of Related comes to the middle of Manhattan." *Related Companies*. March 7, 2011. https://www.related.com/press-releases/2011-03-07/related-companies-introduces-mima-luxury-related-comes-middle-manhattan

[265] https://www.newyorktheatreguide.com

Property Information

TABLE 1: BUILDING INFORMATION[266]	
Street Address:	450 West 42nd Street & 570 Tenth Avenue
Block / Lots:	1051 / 1101-1151, 1303-1449
Developer:	Related Companies
Major Owners:	Related Companies, Teachers Insurance and Annuity Association of America, SCG America, YOTEL
Ownership Interest:	Fee
Number of Floors:	60 & 23
Number of Residential Units:	810
Number of Hotel Rooms:	713
Year Built:	2011
Gross Building Area:	1,229,385 square feet[267]
80/20 Rental Component (Lots 1109, 1112-1151):	426,932 square feet
Inclusionary Housing Component (Lot 1108):	23,235 square feet
For-Sale Component (Lots 1303-1449):	175,467 square feet
Hotel Component (Lot 1107):	207,007 square feet
Retail Component (Lot 1105):	12,664 square feet
Parking Component (Lots 1101-1103):	66,328 square feet
Theater Component (Lot 1106):	75,579 square feet
Amenity Spaces (Lots 1110-1111):	1,677 square feet
MTA Unit (Lot 1104):	14,863 square feet

[266] City of New York Department of Finance

[267] City of New York Department of Buildings

Real Property Taxes and Assessments

The MiMA's residential units are classified as Class 2 assets, while the remaining lots are taxed as Class 4 assets. With the exception of the hotel and theater component, a majority of the asset currently benefits from a 20-year 421-a tax abatement that commenced in 2013. However, a portion of the for-sale component benefits from a 10-year 421-a tax abatement, which expires in 2022. Projections for Class 2 tax lots and Class 4 retail tax lots assume assessment growth of 4.0 percent per annum commencing in fiscal year 2023. Projections for Class 4 hotel tax lots assume a decline of 7.5 percent for the assessment in fiscal year 2023 followed by fixed long term assessment growth of 2.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis period.

The building's projected tax payments are detailed in the chart on the following page:

MiMA & YOTEL
BLOCK 1051, LOTS 1101-1151 & 1303-1449
NEW YORK, NEW YORK

ASSESSMENT AND TAX PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	AGGREGATE CLASS 2 ASSESSMENT	AGGREGATE CLASS 2 TAXABLE ASSESSMENT	ASSESS. GROWTH RATE	CLASS 2 TAX RATE	CLASS 2 FISCAL YR TAXES*	AGGREGATE CLASS 4 ASSESSMENT	AGGREGATE CLASS 4 - RETAIL ASSESSMENT	ASSESS. GROWTH RATE	AGGREGATE CLASS 4 - HOTEL ASSESSMENT	ASSESS, GROWTH RATE	AGGREGATE CLASS 4 TAXABLE ASSESSMENT	CLASS 4 TAX RATE	CLASS 4 FISCAL YR TAXES*	TOTAL PAYABLE FISCAL YR TAXES
1	2021 / 22	$115,802,823	$17,690,502	-	12.235%	$2,164,433	$54,088,328	$11,794,747	-	$32,063,400	-	$32,210,427	10.755%	$3,464,231	**$5,628,664**
2	2022 / 23	$120,434,936	$18,685,878	4.0%	12.235%	$2,286,217	$52,564,570	$12,266,537	4.0%	$29,658,645	-7.5%	$29,805,672	10.755%	$3,205,600	**$5,491,817**
3	2023 / 24	$125,252,333	$19,324,626	4.0%	12.235%	$2,364,368	$54,222,273	$12,757,198	4.0%	$30,400,111	2.5%	$30,547,138	10.755%	$3,285,345	**$5,649,713**
4	2024 / 25	$130,262,427	$41,310,884	4.0%	12.235%	$5,054,387	$55,935,163	$13,267,486	4.0%	$31,160,114	2.5%	$33,931,233	10.755%	$3,649,304	**$8,703,691**
5	2025 / 26	$135,472,924	$42,876,369	4.0%	12.235%	$5,245,924	$57,705,167	$13,798,186	4.0%	$31,939,117	2.5%	$34,816,375	10.755%	$3,744,501	**$8,990,425**
6	2026 / 27	$140,891,841	$67,610,651	4.0%	12.235%	$8,272,163	$59,534,287	$14,350,113	4.0%	$32,737,595	2.5%	$38,565,856	10.755%	$4,147,758	**$12,419,921**
7	2027 / 28	$146,527,514	$70,249,864	4.0%	12.235%	$8,595,071	$61,424,595	$14,924,118	4.0%	$33,556,035	2.5%	$39,613,898	10.755%	$4,260,475	**$12,855,546**
8	2028 / 29	$152,388,615	$98,030,632	4.0%	12.235%	$11,994,048	$63,378,238	$15,521,082	4.0%	$34,394,935	2.5%	$43,766,396	10.755%	$4,707,076	**$16,701,124**
9	2029 / 30	$158,484,160	$101,908,382	4.0%	12.235%	$12,468,491	$65,397,444	$16,141,926	4.0%	$35,254,809	2.5%	$44,998,775	10.755%	$4,839,618	**$17,308,109**
10	2030 / 31	$164,823,526	$133,064,509	4.0%	12.235%	$16,280,443	$67,484,519	$16,787,603	4.0%	$36,136,179	2.5%	$49,595,667	10.755%	$5,334,014	**$21,614,457**
11	2031 / 32	$171,416,467	$138,365,351	4.0%	12.235%	$16,929,001	$69,641,857	$17,459,107	4.0%	$37,039,583	2.5%	$51,036,274	10.755%	$5,488,951	**$22,417,952**
12	2032 / 33	$178,273,126	$166,541,673	4.0%	12.235%	$20,376,374	$71,871,938	$18,157,471	4.0%	$37,965,573	2.5%	$56,123,044	10.755%	$6,036,033	**$26,412,407**
13	2033 / 34	$185,404,051	$173,203,340	4.0%	12.235%	$21,191,429	$74,177,332	$18,883,770	4.0%	$38,914,712	2.5%	$57,798,482	10.755%	$6,216,227	**$27,407,655**
14	2034 / 35	$192,820,213	$180,131,474	4.0%	12.235%	$22,039,086	$76,560,704	$19,639,121	4.0%	$39,887,580	2.5%	$59,526,701	10.755%	$6,402,097	**$28,441,183**
15	2035 / 36	$200,533,021	$187,336,733	4.0%	12.235%	$22,920,649	$79,024,819	$20,424,686	4.0%	$40,884,770	2.5%	$61,309,455	10.755%	$6,593,832	**$29,514,481**
16	2036 / 37	$208,554,342	$194,830,202	4.0%	12.235%	$23,837,475	$81,572,540	$21,241,673	4.0%	$41,906,889	2.5%	$63,148,562	10.755%	$6,791,628	**$30,629,103**
17	2037 / 38	$216,896,516	$202,623,410	4.0%	12.235%	$24,790,974	$84,206,838	$22,091,340	4.0%	$42,954,561	2.5%	$65,045,901	10.755%	$6,995,687	**$31,786,661**
18	2038 / 39	$225,572,376	$210,728,346	4.0%	12.235%	$25,782,613	$86,930,793	$22,974,994	4.0%	$44,028,425	2.5%	$67,003,419	10.755%	$7,206,218	**$32,988,831**
19	2039 / 40	$234,595,271	$219,157,480	4.0%	12.235%	$26,813,918	$89,747,599	$23,893,993	4.0%	$45,129,136	2.5%	$69,023,129	10.755%	$7,423,438	**$34,237,355**
20	2040 / 41	$243,979,082	$227,923,780	4.0%	12.235%	$27,886,474	$92,660,566	$24,849,753	4.0%	$46,257,364	2.5%	$71,107,117	10.755%	$7,647,570	**$35,534,045**
21	2041 / 42	$253,738,246	$237,040,731	4.0%	12.235%	$29,001,933	$95,673,128	$25,843,743	4.0%	$47,413,798	2.5%	$73,257,541	10.755%	$7,878,849	**$36,880,782**
22	2042 / 43	$263,887,775	$246,522,360	4.0%	12.235%	$30,162,011	$98,788,846	$26,877,493	4.0%	$48,599,143	2.5%	$75,476,636	10.755%	$8,117,512	**$38,279,523**
23	2043 / 44	$274,443,286	$256,383,254	4.0%	12.235%	$31,368,491	$102,011,413	$27,952,593	4.0%	$49,814,122	2.5%	$77,766,714	10.755%	$8,363,810	**$39,732,301**
24	2044 / 45	$285,421,018	$266,638,585	4.0%	12.235%	$32,623,231	$105,344,657	$29,070,696	4.0%	$51,059,475	2.5%	$80,130,171	10.755%	$8,618,000	**$41,241,231**
25	2045 / 46	$296,837,859	$277,304,128	4.0%	12.235%	$33,928,160	$108,792,551	$30,233,524	4.0%	$52,335,962	2.5%	$82,569,486	10.755%	$8,880,348	**$42,808,508**
26	2046 / 47	$308,711,373	$288,396,293	4.0%	12.235%	$35,285,286	$112,359,214	$31,442,865	4.0%	$53,644,361	2.5%	$85,087,226	10.755%	$9,151,131	**$44,436,418**
*Includes the 421a Tax Abatement and the assumption the for-sale residential condominium units will benefit from the Cooperative and Condominium Partial Tax Abatement												**TOTAL PAYABLE PROJECTION YEARS 1-26**			**$658,111,902**

Property Debt Overview

The residential rental component of the asset is encumbered by a $320 million first mortgage from Freddie Mac that was originated in November 2012. In August 2013, the hotel facility secured a $145.5 million mezzanine loan from Goldman Sachs. [268]

Ownership Overview

The residential rental component is owned by 42nd and 10th Associates, L.L.C., an entity controlled by Related Companies, and Teachers Insurance and Annuity Association of America, which purchased a 70 percent interest in the "Base" and "Tower" residential units in November 2012 for a total consideration of $542.5 million. [269]

Related Companies

Founded in 1972 by Stephen Ross, Related Companies is a privately held global real estate company headquartered in New York City. The company employs more than 4,000 people around the world at offices in Boston, Chicago, Dallas, Los Angeles, San Francisco, Miami, London, and Abu Dhabi. Related Companies' portfolio consists of more than $60 billion in assets across sectors such as residential, office, retail, and hospitality. The company is recognized as a premier developer and manager of luxury projects and large-scale master-planned developments. It is also the largest private owner of affordable housing assets. Notable projects include the Eastern and Western Rail Yards of Hudson Yards, the Time Warner Center (now known as the Deutsche Bank Center), 70 Vestry Street, 520 West 28th Street, the Lantern House, One Madison, the Grand LA, the 78 in Chicago, 400 Lake Shore Drive, and Superior Ink.

Teachers Insurance and Annuity Association of America

Teachers Insurance and Annuity Association of America ("TIAA") was founded in 1918 to manage the retirement funds of teachers. The organization has grown to offer a broad range of financial services to the academic, research, medical, cultural, and government fields. TIAA has approximately $1.3 trillion[270] in assets under management across its TIAA investment management teams and Nuveen affiliates.

YOTEL

The hotel component is owned by 42nd and 10th Hotel, LLC, an entity controlled by YOTEL, which purchased the asset from Related Companies in 2011 for $263 million. YOTEL is a privately held hospitality company headquartered in London. Its major shareholders include Starwood Capital Group, the Al-Bahar Group, United Investment Portugal, and Kuwait Real Estate Company. The company operates tech-focused hotels in New York, Boston, San Francisco, Washington D.C., Singapore, Istanbul, London, Edinburgh, Glasgow, Amsterdam, and Porto. YOTEL plans to open hotels in Miami, Atlanta, Long Island City, Melbourne, and Geneva.

SCG America

The remaining sponsor-owned units within the residential for-sale component are owned by SCG MiMA Towers LLC, an entity controlled by SCG America. Headquartered in New York City, SCG America is the American subsidiary of Shanghai Construction Group, which is one of the leading construction companies in China. SCG America's scope of services in the United States encompasses general contracting, construction management, real estate development, and real estate fund management. In addition to the Manhattan View at MiMA, SCG America's

[268] Real Capital Analytics

[269] RPTT and RETT Document, November 13, 2012. Document ID 2012112000441004.

[270] www.tiaa.org

portfolio includes the Tangram in Flushing, four hotels in California, and a redevelopment project in Washington D.C.

Current Market Information

In the 12-month period through June 2021, there were two arm's-length transactions within Manhattan View at MiMA, the residential condominium component of the property. One of these transactions was a sponsor sale and the other was a resale. These sales ranged in price from $1,180,000 to $2,668,000, with an average price of $1,924,000. The average size for these sales was 803 square feet while the average price per square foot was $2,398. The following table provides a summary of the recent sales, relative to resale transactions within the Midtown submarket and Manhattan as a whole:

TABLE 2: KEY CONDOMINIUM METRICS – 2Q 2021

	Average Sale Price	Average Sale Price / SF
Manhattan View at MiMA	$1,924,000	$2,398
Midtown Resale Condominiums[271]	$1,185,000	$1,245
Manhattan Resale Condominiums[272]	$2,351,000	$1,742

The Hudson Yards district is located almost entirely within the Chelsea multifamily submarket, as defined by CoStar. This submarket is generally bound by Sixth Avenue to the east, West 14th Street to the south, and the Hudson River to the west. The northern boundary is situated between West 38th and West 42nd Streets, depending on the location. The following table provides a summary of the residential rents and vacancy rate of the rental component within MiMA, relative to other 4- and 5-star buildings within the Chelsea submarket, as well as the greater New York metropolitan area.

TABLE 3: KEY MULTIFAMILY METRICS – 2Q 2021[273]

	Average Monthly Asking Rent	Average Annual Asking Rent / SF	Vacancy Rate
MiMA	$4,739	$73.68	3.6%
Chelsea Submarket 4 & 5 Star Buildings	$4,642	$75.24	4.3%
New York	$2,790	$41.40	3.3%

[271] The Corcoran Group

[272] The Corcoran Group

[273] CoStar

The YOTEL New York is located in the Midtown South hotel district of Manhattan. The following chart illustrates the Midtown South hotel market with regards to historical rooms, demand, occupancy, ADR, and RevPAR. [274]

Midtown South Supply, Demand, Occupancy, ADR and RevPAR										
Year	Rooms	% Change	Demand	% Change	Occ %	% Change	ADR	% Change	RevPAR	% Change
2018	24,860	6.0%	8,065,391	7.6%	88.9%	1.6%	$ 238.19	3.0%	$ 211.72	4.6%
2019	26,526	6.7%	8,542,188	5.9%	88.2%	-0.7%	$ 234.42	-1.6%	$ 206.82	-2.3%
2020	21,533	-18.8%	3,542,888	-58.5%	45.1%	-48.9%	$ 133.97	-42.9%	$ 60.39	-70.8%
Avg Annual % Change		-6.9%		-33.7%		-28.8%		-25.0%		-46.6%
YTD 2020	23,078	----	2,282,044	----	54.6%	----	$ 144.21	----	$ 78.78	----
YTD 2021	20,919	-9.4%	1,848,147	-19.0%	48.8%	-10.7%	$ 128.83	-10.7%	$ 62.88	-20.2%
Jan-21	19,911	-29.2%	215,192	-67.1%	34.9%	-53.5%	$ 105.09	-2.0%	$ 36.64	-68.0%
Feb-21	19,911	-30.3%	219,439	-66.1%	39.4%	-51.3%	$ 109.84	-1.2%	$ 43.23	-66.0%
Mar-21	20,006	-30.0%	280,849	-5.9%	45.3%	34.5%	$ 109.99	-19.5%	$ 49.81	-7.3%
Apr-21	20,532	4.2%	320,284	38.2%	52.0%	32.7%	$ 119.99	-53.5%	$ 62.39	39.4%
May-21	22,526	8.9%	374,269	29.6%	53.6%	19.0%	$ 139.19	-55.8%	$ 74.60	44.3%
Jun-21	22,572	8.1%	438,114	68.0%	64.7%	55.3%	$ 159.68	-51.5%	$ 103.31	104.8%
1Q 2020	28,642	----	1,607,552	----	62.4%	----	$ 155.71	----	$ 97.10	----
1Q 2021	19,725	-31.1%	715,480	-55.5%	39.9%	-36.1%	$ 108.47	-30.3%	$ 43.24	-55.5%
2Q 2020	8,835	----	674,492	----	42.2%	----	$ 116.79	----	$ 49.26	----
2Q 2021	10,942	23.8%	1,132,667	67.9%	56.9%	34.9%	$ 141.69	21.3%	$ 80.59	63.6%

Source: STR

Investment Highlights

- The property was developed by Related Companies, a top-tier developer of luxury projects throughout the United States.
- The residential and hotel components offer an extensive amenity package commensurate with the competitive supply in the luxury residential and upscale hotel markets.
- The Times Square - 42nd Street subway complex is located in close proximity to the building. This is the busiest subway station in the system and provides convenient access to the rest of the city.
- The hotel component benefits from the luxury residential condominium component on its upper floors, which indirectly fosters hotel demand.

[274] Smith Travel Research

Property Photographs

PROPERTY PHOTOGRAPH

HOTEL ENTRANCE

HOTEL LOBBY

Hotel Completions

Since the 2005 rezoning, Hudson Yards has witnessed significant hotel development activity, generally concentrated in the eastern portion of the district. In total, nearly 8,500 new rooms have been built, representing more than 3.6 million square feet of development. These completed projects are detailed in the map and table below. In addition, those hotels which contribute significant revenue to the financing district are further detailed on the following pages. It should be noted that these assets include the YOTEL New York, which was profiled in the residential section as a component of the MiMA development.

HOTEL

Completed
3.6 MSF

1. 449 W. 36th St.
2. 309 W. 39th St.
3. 305 W. 39th St.
4. 341 W. 36th St.
5. 341 W. 39th St.
6. 337 W. 39th St.
7. 343 W. 39th St.
8. 326 W. 40th St.
9. 330 W. 40th St.
10. 334 W. 40th St.
11. 342 W. 40th St.
12. 570 10th Ave
13. 345 W. 35th St.
14. 510 W. 42nd St.
15. 325 W. 33rd St.
16. 307 W. 37th St.
17. 312 W. 37th St.
18. 515 9th Ave
19. 321 W. 35th St.
20. 444 10th Ave
21. 350 W. 40th St.
22. 320 W. 36th St.
23. 326 W. 37th St.
24. 400 W. 42nd St.
25. 310 W. 40th St.
26. 337 W. 36th St.
27. 333 W. 38th St.
28. 338 W. 36th St.
29. 461 W. 34th St.
30. 351 W. 38th St.
31. 35 Hudson Yards
32. 338 W. 39th St.
33. 438 W. 33rd St.

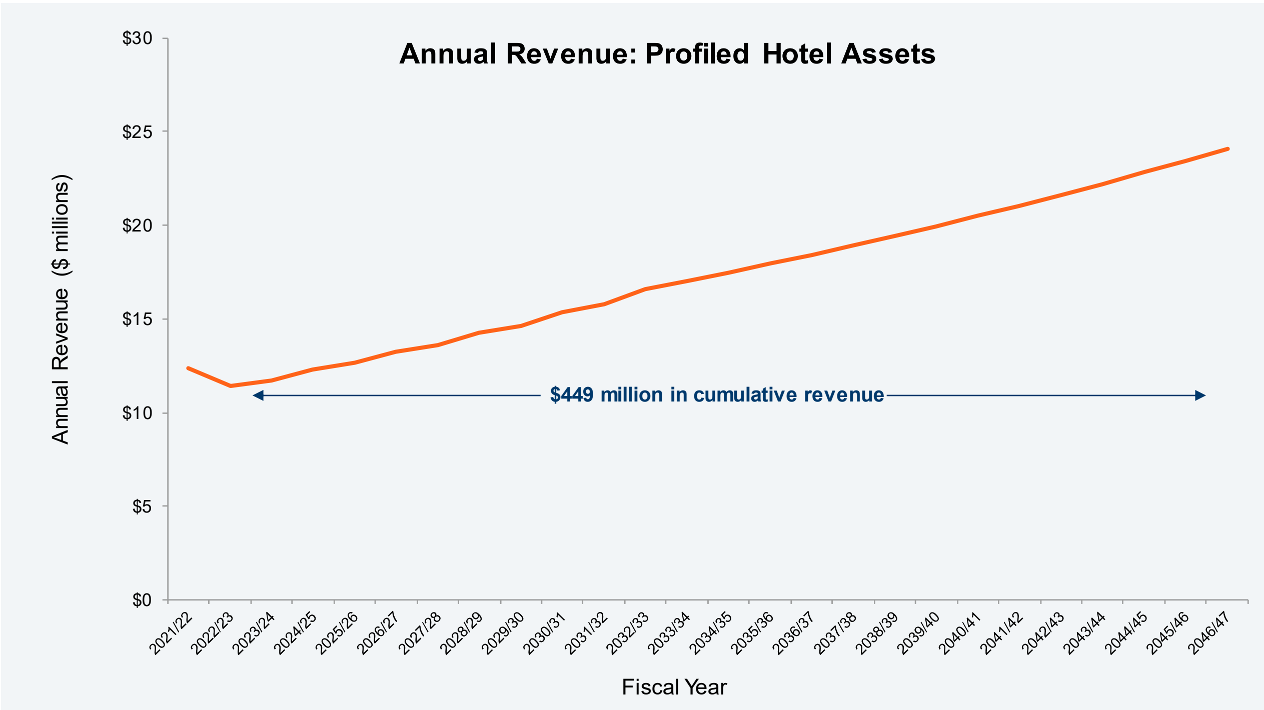
Hotels Opened 2006 through 2021

Site #	Name	Address	Size (SF)	No. Rooms	Completion Date (1)
1	GEM Hotel	449 West 36th Street	16,667	40	2006
2	Element NY Times Square South	309 West 39th Street	138,440	346	2006
3	Comfort Inn	305 West 39th Street	30,000	79	2007
4	Wyndham Garden Hotel	341 West 36th Street	81,000	224	2008
5	Candlewood Suites	341 West 39th Street	85,706	188	2009
6	Hampton Inn	337 West 39th Street	71,072	184	2009
7	Holiday Inn Express	343 West 39th Street	74,128	210	2009
8	Four Points by Sheraton	326 West 40th Street	98,738	248	2009
9	Fairfield Inn	330 West 40th Street	97,942	244	2009
10	Staybridge Suites	334 West 40th Street	131,921	310	2010
11	Distrikt Hotel	342 West 40th Street	66,705	155	2010
12	Yotel New York @ Times Square	570 Tenth Avenue (2)	235,000	713	2011
13	Tryp by Wyndham	345 West 35th Street	93,090	173	2012
14	The OUT NYC	510 West 42nd Street	78,333	105	2012
15	Fairfield Inn & Suites	325 West 33rd Street	120,639	239	2013
16	Courtyard by Marriott	307 West 37th Street	102,824	224	2013
17	Homewood Suites	312 West 37th Street	119,685	293	2014
18	Cassa Times Square Hotel & Residences	515 Ninth Avenue (2)	45,000	87	2014
19	EVEN Hotels Times Square South	321 West 35th Street	63,363	150	2015
20	Four Points by Sheraton Manhattan Midtown West	444 Tenth Avenue	48,264	148	2017
21	DoubleTree by Hilton Hotel New York Times Square West	350 West 40th Street	200,590	612	2017
22	Crowne Plaza HY36 Midtown Manhattan	320 West 36th Street	119,347	251	2017
23	Hilton Garden Inn New York Times Square South	326 West 37th Street	94,374	252	2017
24	The Pod Hotel Times Square	400 West 42nd Street	184,955	665	2018
25	Hotel Aliz	310 West 40th Street	114,917	271	2018
26	Staypineapple New York	337 West 36th Street	39,291	89	2019
27	La Quinta Inns & Suites Manhattan Midtown	333 West 38th Street	35,219	81	2019
28	Springhill Suites New York	338 West 36th Street	98,168	284	2019
29	Fairfield Inn Midtown Manhattan	338 West 36th Street	98,859	286	2019
30	Courtyard New York Manhattan/Midtown West	461 West 34th Street	218,640	399	2019
31	Hyatt Place New York City/Times Square	351 West 38th Street	148,178	374	2019
32	Equinox Hotel New York Hudson Yards	35 Hudson Yards	198,784	212	2019
33	Pestana CR7 New York	338 West 39th Street	77,999	177	2021
34	Pendry Manhattan West	438 West 33rd Street	202,527	164	2021
		Total	**3,630,365**	**8,477**	

(1) Refers to substantial construction completion.

(2) Hotel rooms noted for information purposes. Due to configuration of the buildings, revenue is accounted for under Residential revenue.

The chart below illustrates the projected revenue from the hotel assets which are profiled in this chapter. These assets include the YOTEL New York component at the MiMA development, the Equinox Hotel, and the Marriott Fairfield Inn & Suites. In total, these assets are projected to generate approximately $449 million in revenue over the forecast period of fiscal year 2022 through fiscal year 2047.



Fairfield Inn & Suites and SpringHill Suites 338-344 West 36th Street

Overview

The dual Marriott branded Fairfield Inn & Suites and SpringHill Suites hotel is a 26-story lodging facility located at 338-344 West 36th Street in the Hudson Yards district of Manhattan. The upper midscale (Fairfield Inn & Suites) and upscale (Suites and SpringHill Suites) hotel is situated on the south side of West 36th Street between Eighth and Ninth Avenues. It contains 286 upper midscale (Fairfield Inn & Suites) hotel rooms and 284 upscale (SpringHill Suites) hotel rooms, for a total of 570 guestrooms.

The project was designed by Gene Kaufman, Architect, P.C.. The hotel offers a variety of guestrooms ranging in size from 225 square feet to 275 square feet, inline with many of its peers. The building features amenities typical of modern upper midscale and upscale class hotels including a fitness center, a business center, a bar and lounge area, a breakfast area, as well as roughly 2,000 square feet of meeting and event space. The lodging facility was completed and opened as a transient hotel in April 2019.[275]

Marriott International, Inc. Profile

Marriott International is one of the world's leading hoteliers. The company operates or franchises some 7,600 hotel, residential, and timeshare properties worldwide. Its hotel portfolio, which comprises nearly 1.4 million guest rooms, includes the premium Delta Hotels and Renaissance Hotels brands and its flagship Marriott Hotels & Resorts as well as the Ritz-Carlton, W Hotels, The Luxury Collection, and JW Marriott luxury brands. Additionally, the company operates the select-service and extended-stay brands Courtyard and Fairfield Inn. North America accounts for about 80% of Marriott International's revenue.

Marriott International’s system grew from 7,349 properties (1,380,921 rooms) at year-end 2019 to 7,642 properties (1,423,044 rooms) at year-end 2020, reflecting the addition of 399 properties (62,776 rooms) and the exit of 106 properties (20,416 rooms). Approximately 45% of added rooms are located outside the U.S. and Canada, and 13% are conversions from competitor brands. At the end of fiscal 2020, the company had more than 498,000 rooms the development pipeline, which includes hotel rooms under construction, hotel rooms under signed contracts, and roughly 20,000 hotel rooms approved for development but not yet under signed contracts. Over 229,000 rooms in its development pipeline were under construction at the end of 2020. Over half of the rooms in the development pipeline are outside the U.S. and Canada. In 2020, the company signed management and franchise agreements for 1,575 properties (248,660 rooms). In 2021, Marriott expects the number of rooms to grow by approximately 6% (3-3.5%, net of deletions). In New York City, Marriott is represented by approximately 65 hotels with over 21,750 rooms.

[275] CoStar, STR, and www.marriott.com

Credit Ratings

Marriott International is rated investment grade by Moody's and S&P Global.

CREDIT RATINGS			
Agency	Issuer/ Long-Term Rating	Last Rating Change Date	Outlook
Moody's	Baa3	Jul-21	Negative
Fitch	-	-	-
S&P	BBB-	Jul-21	Negative

Source: Moody's, Fitch, S&P

Annual Filing Data

In fiscal 2020, Marriott's revenue fell 49.6 percent to $10.6 billion primarily due to the global impact of COVID-19, which caused the majority of its properties to temporarily shut down. The decline in revenue was reported across all fee segments: base management fees were down 62 percent; franchise fees were down 43 percent; incentive management fees were down 86 percent; and net fee revenues were down 59 percent. The company reported a net loss of $267 million for the year, compared to net income of nearly $1.3 billion in 2019, primarily driven by lower revenue for the year.

A summary of the company's annual financial performance is provided in the table below:

MARRIOTT INTERNATIONAL, INC. FINANCIAL OVERVIEW					
	FY 2020	FY 2019	FY 2018	FY 2017	FY 2016
Revenues (in millions)	$10,571	$20,972	$20,758	$20,452	$15,407
Revenues Growth	(49.6%)	1.0%	1.5%	32.7%	6.4%
Net Income (in millions)	($267)	$1,273	$1,907	$1,459	$808
Number of Employees (Year End)	121,000	174,000	176,000	177,000	226,500

Source: Company filings

Property Information

TABLE 1: BUILDING INFORMATION[276]	
Street Address:	338-344 West 36th Street
Block / Lots:	759 / 61
Owner:	Magna Hospitality
Ownership Interest:	Fee
Number of Floors:	26 floors
Year Built:	2019
Gross Building Area:	197,027 square feet

[276] CoStar

Real Property Tax

The Fairfield Inn & Suites and SpringHill Suites is located on the south side of West 36th Street between Eighth and Ninth Avenues. The hotels are identified as Lot 61 within Block 759.

Cushman & Wakefield, Inc. modeled the projected future payments due based on its current assessment and our projections of future assessments. Projections for Class 4 hotel tax lots assume a decline of 7.5 percent for the assessment in fiscal year 2023 followed by fixed long term assessment growth of 2.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis.

MARRIOTT FAIRFIELD INN & SUITES
338-334 WEST 36TH STREET
BLOCK 759, LOT 61
NEW YORK, NEW YORK

ASSESSMENT AND TAX PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	PAYABLE FISCAL YR TAXES
1	2021 / 22	$38,706,300	-	10.755%	**$4,162,863**
2	2022 / 23	$35,803,328	-7.5%	10.755%	**$3,850,648**
3	2023 / 24	$36,698,411	2.5%	10.755%	**$3,946,914**
4	2024 / 25	$37,615,871	2.5%	10.755%	**$4,045,587**
5	2025 / 26	$38,556,268	2.5%	10.755%	**$4,146,727**
6	2026 / 27	$39,520,174	2.5%	10.755%	**$4,250,395**
7	2027 / 28	$40,508,179	2.5%	10.755%	**$4,356,655**
8	2028 / 29	$41,520,883	2.5%	10.755%	**$4,465,571**
9	2029 / 30	$42,558,905	2.5%	10.755%	**$4,577,210**
10	2030 / 31	$43,622,878	2.5%	10.755%	**$4,691,641**
11	2031 / 32	$44,713,450	2.5%	10.755%	**$4,808,932**
12	2032 / 33	$45,831,286	2.5%	10.755%	**$4,929,155**
13	2033 / 34	$46,977,068	2.5%	10.755%	**$5,052,384**
14	2034 / 35	$48,151,495	2.5%	10.755%	**$5,178,693**
15	2035 / 36	$49,355,282	2.5%	10.755%	**$5,308,161**
16	2036 / 37	$50,589,164	2.5%	10.755%	**$5,440,865**
17	2037 / 38	$51,853,894	2.5%	10.755%	**$5,576,886**
18	2038 / 39	$53,150,241	2.5%	10.755%	**$5,716,308**
19	2039 / 40	$54,478,997	2.5%	10.755%	**$5,859,216**
20	2040 / 41	$55,840,972	2.5%	10.755%	**$6,005,697**
21	2041 / 42	$57,236,996	2.5%	10.755%	**$6,155,839**
22	2042 / 43	$58,667,921	2.5%	10.755%	**$6,309,735**
23	2043 / 44	$60,134,619	2.5%	10.755%	**$6,467,478**
24	2044 / 45	$61,637,985	2.5%	10.755%	**$6,629,165**
25	2045 / 46	$63,178,934	2.5%	10.755%	**$6,794,894**
26	2046 / 47	$64,758,408	2.5%	10.755%	**$6,964,767**
		TOTAL PAYABLE PROJECTION YEARS 1-26			**$135,692,384**

Property Equity and Debt Overview

On March 19, 2019, the hotel facility secured a $185,000,000 1st mortgage loan from Deutsche Bank AG New York Branch. [277]

Ownership Overview

The Fairfield Inn & Suites and SpringHill Suites is owned by Magna Hospitality. In March 2019, Magna Hospitality purchased the hotel from the developer, McSam Hotel Group, for $274,300,000 or $481,228 per room.[278]

Current Market Information

The Fairfield Inn & Suites and SpringHill Suites is located in the Midtown South hotel district of Manhattan. The following chart illustrates the Midtown South hotel market with regards to historical rooms, demand, occupancy, ADR, and RevPAR. [279]

Midtown South Supply, Demand, Occupancy, ADR and RevPAR

Year	Rooms	% Change	Demand	% Change	Occ %	% Change	ADR	% Change	RevPAR	% Change
2018	24,860	6.0%	8,065,391	7.6%	88.9%	1.6%	$ 238.19	3.0%	$ 211.72	4.6%
2019	26,526	6.7%	8,542,188	5.9%	88.2%	-0.7%	$ 234.42	-1.6%	$ 206.82	-2.3%
2020	21,533	-18.8%	3,542,888	-58.5%	45.1%	-48.9%	$ 133.97	-42.9%	$ 60.39	-70.8%
Avg Annual % Change		-6.9%		-33.7%		-28.8%		-25.0%		-46.6%
YTD 2020	23,078	----	2,282,044	----	54.6%	----	$ 144.21	----	$ 78.78	----
YTD 2021	20,919	-9.4%	1,848,147	-19.0%	48.8%	-10.7%	$ 128.83	-10.7%	$ 62.88	-20.2%
Jan-21	19,911	-29.2%	215,192	-67.1%	34.9%	-53.5%	$ 105.09	-2.0%	$ 36.64	-68.0%
Feb-21	19,911	-30.3%	219,439	-66.1%	39.4%	-51.3%	$ 109.84	-1.2%	$ 43.23	-66.0%
Mar-21	20,006	-30.0%	280,849	-5.9%	45.3%	34.5%	$ 109.99	-19.5%	$ 49.81	-7.3%
Apr-21	20,532	4.2%	320,284	38.2%	52.0%	32.7%	$ 119.99	-53.5%	$ 62.39	39.4%
May-21	22,526	8.9%	374,269	29.6%	53.6%	19.0%	$ 139.19	-55.8%	$ 74.60	44.3%
Jun-21	22,572	8.1%	438,114	68.0%	64.7%	55.3%	$ 159.68	-51.5%	$ 103.31	104.8%
1Q 2020	28,642	----	1,607,552	----	62.4%	----	$ 155.71	----	$ 97.10	----
1Q 2021	19,725	-31.1%	715,480	-55.5%	39.9%	-36.1%	$ 108.47	-30.3%	$ 43.24	-55.5%
2Q 2020	8,835	----	674,492	----	42.2%	----	$ 116.79	----	$ 49.26	----
2Q 2021	10,942	23.8%	1,132,667	67.9%	56.9%	34.9%	$ 141.69	21.3%	$ 80.59	63.6%

Source: STR

[277] City of New York Department of Finance

[278] City of New York Department of Finance

[279] STR (formerly known as Smith Travel Research)

Investment Highlights

- The hotel was designed by Gene Kaufman, Architect, P.C. and was developed by McSam Hotel Group.[280]
- The dual branded Marriott hotel benefits from a strong owner (Magna Hospitality) and operator (Bridge Hotel Group). Magna Hospitality also owns and operates more than 40 hotels with over 10,000 rooms across the United States. [281]
- The dual branded nature of the property benefits from the ability to market to a wider audience as well as the synergy generated by the seamless connection of amenity spaces. The hotel offers a consistent, upper midscale and upscale class product, with a variety of guestrooms ranging in size from 225 square feet to 275 square feet, in line with many of its peers.[282]
- The Midtown South hotel submarket recorded an impressive occupancy level of 88.2 percent and an average daily rate (ADR) of $234.42 in 2019. The COVID-19 virus began to negatively impact the New York City hotel market in late February 2020. As a result, the Midtown South hotel market occupancy fell sharply by 48.9 percent to 45.1 percent in 2020.[283]
- Climbing occupancies in 2021 and beyond are expected to result in stable revenues over the long term, enhancing the ability to weather the near-term effects of the COVID-19 pandemic.

[280] CoStar

[281] www.magnahospitality.com

[282] www.marriott.com

[283] STR (formerly known as Smith Travel Research)

Property Photographs

PROPERTY PHOTOGRAPH

EXTERIOR FAÇADE - PROPERTY PHOTOGRAPH

Equinox Hotel
35 Hudson Yards

Overview

The Equinox Hotel New York is part of a 92-story mixed-use skyscraper located at 35 Hudson Yards, in the Hudson Yards district of Manhattan. The property is situated on the southeast corner of West 33rd Street and Eleventh Avenue. The building has a glass and limestone façade, contains approximately 1,055,000 square feet, and rises 1,000 feet above street level. Designed by David Childs and Skidmore, Owings & Merrill, construction commenced in the first quarter of 2015 and the hotel opened in August 2019. [284] The hotel component consists of approximately 198,784 square feet and is located primarily on portions of the ground floor, portions of floors 5 through 6, floor 17M, and floors 24 through 38. The main entrance is located along the Hudson Yards Plaza. The luxury hotel has 212 guestrooms with standard rooms ranging in size from 400 square feet to 468 square feet, along with larger suites ranging in size from 555 square feet to 2,000 square feet. Additional amenities are typical of modern luxury class hotels including a spa and fitness center, a signature restaurant, a dedicated bar and lounge area, an indoor lap pool, as well as a rooftop pool and terrace. [285]

The tower also contains a luxury residential condominium component on its upper floors. The residential component contains 143 condominium units. According to the condominium offering plan, the average asking price for the apartments is approximately $4,000 per square foot, exclusive of the three penthouse units.

The building achieved U.S. Green Building Council's Leadership in Energy and Environmental Design Neighborhood Development Gold ("LEED-ND") certification in September 2019. The LEED-ND certification includes the residential, commercial, and mixed-use buildings, platform infrastructure, and public square and gardens, all of which are located within the Eastern Rail Yards. [286]

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[284] www.som.com and STR (formerly known as Smith Travel Research)

[285] City of New York Department of Finance and www.equinox-hotels.com

[286] "Hudson Yards designated Manhattan's first-ever LEED Gold neighborhood development." *Related Companies*. September 25, 2019. https://www.related.com/press-releases/2019-09-25/hudson-yards-designated-manhattans-first-ever-leedr-gold-neighborhood

Related Hospitality/Equinox Profile

Related owns approximately 10 operating full-service hotels with over 5,950 rooms across the United States. In 2015, The Related Companies, a well-known national developer of commercial real estate, acquired the Equinox Group, an operator of upscale fitness centers. The Equinox Hotel New York represents the first hotel under the Equinox brand.

Property Information

TABLE 1: BUILDING INFORMATION[287]	
Street Address:	35 Hudson Yards
Block / Lots:	702 / 1404
Owner:	ERY North Tower RHC Tenant LLC is a joint venture of Related Companies and Oxford Properties Group.
Ownership Interest:	Fee
Number of Floors:	19 floors (excluding mechanical levels)
Year Built:	2019
Gross Building Area:	198,784 square feet

[287] City of New York Department of Finance and Real Capital Analytics (RCA)

Real Property Tax

The Equinox Hotel Hudson Yards is located on the southeast corner of West 33rd Street and Eleventh Avenue. The hotel is identified as Lot 702 within Block 1404.

Cushman & Wakefield, Inc. modeled the projected future payments based on its current assessment and our projections of future assessments. Projections for Class 4 hotel tax lots assume a decline of 7.5 percent for the assessment in fiscal year 2023 followed by fixed long term assessment growth of 2.5 percent per annum commencing in fiscal year 2024. We assume the tax rate will remain fixed throughout the analysis.

35 HUDSON YARDS
BLOCK 702, LOT 1404
NEW YORK, NEW YORK

ASSESSMENT AND TAX PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	PAYABLE FISCAL YR TAXES
1	2021 / 22	$44,129,973	-	10.755%	**$4,746,179**
2	2022 / 23	$40,820,225	-7.5%	10.755%	**$4,390,215**
3	2023 / 24	$41,840,731	2.5%	10.755%	**$4,499,971**
4	2024 / 25	$42,886,749	2.5%	10.755%	**$4,612,470**
5	2025 / 26	$43,958,918	2.5%	10.755%	**$4,727,782**
6	2026 / 27	$45,057,891	2.5%	10.755%	**$4,845,976**
7	2027 / 28	$46,184,338	2.5%	10.755%	**$4,967,126**
8	2028 / 29	$47,338,946	2.5%	10.755%	**$5,091,304**
9	2029 / 30	$48,522,420	2.5%	10.755%	**$5,218,586**
10	2030 / 31	$49,735,480	2.5%	10.755%	**$5,349,051**
11	2031 / 32	$50,978,867	2.5%	10.755%	**$5,482,777**
12	2032 / 33	$52,253,339	2.5%	10.755%	**$5,619,847**
13	2033 / 34	$53,559,673	2.5%	10.755%	**$5,760,343**
14	2034 / 35	$54,898,664	2.5%	10.755%	**$5,904,351**
15	2035 / 36	$56,271,131	2.5%	10.755%	**$6,051,960**
16	2036 / 37	$57,677,909	2.5%	10.755%	**$6,203,259**
17	2037 / 38	$59,119,857	2.5%	10.755%	**$6,358,341**
18	2038 / 39	$60,597,853	2.5%	10.755%	**$6,517,299**
19	2039 / 40	$62,112,800	2.5%	10.755%	**$6,680,232**
20	2040 / 41	$63,665,620	2.5%	10.755%	**$6,847,237**
21	2041 / 42	$65,257,260	2.5%	10.755%	**$7,018,418**
22	2042 / 43	$66,888,692	2.5%	10.755%	**$7,193,879**
23	2043 / 44	$68,560,909	2.5%	10.755%	**$7,373,726**
24	2044 / 45	$70,274,932	2.5%	10.755%	**$7,558,069**
25	2045 / 46	$72,031,805	2.5%	10.755%	**$7,747,021**
26	2046 / 47	$73,832,600	2.5%	10.755%	**$7,940,696**
		TOTAL PAYABLE PROJECTION YEARS 1-26			**$154,706,113**

Property Debt Overview

On July 29, 2016, the hotel facility secured a $274,300,000 first mortgage loan from Children's Investment Fund.[288]

Ownership Overview

ERY North Tower RHC Tennant LLC is a joint venture of Related Companies and Oxford Properties Group.[289]

Related Companies

Founded in 1972 by Stephen Ross, Related Companies is a privately held global real estate company headquartered in New York City. The company employs more than 4,000 people around the world at offices in Boston, Chicago, Dallas, Los Angeles, San Francisco, Miami, London, and Abu Dhabi. Related Companies' portfolio consists of more than $60 billion in assets across sectors such as residential, office, retail, and hospitality. The company is recognized as a premier developer and manager of luxury projects and large-scale master-planned developments. It is also the largest private owner of affordable housing assets. Notable projects include the Eastern and Western Rail Yards of Hudson Yards, the Time Warner Center (now known as the Deutsche Bank Center), 70 Vestry Street, 520 West 28th Street, the Lantern House, One Madison, the Grand LA, the 78 in Chicago, 400 Lake Shore Drive, MiMA, and Superior Ink.

Oxford Properties Group

Oxford Properties Group is a Toronto-based real estate investment group, developer, and asset manager. The company manages $70 billion in assets on four continents, representing 150 million square feet of commercial space, 3,000 hotel rooms, and 10,000 residential units. Oxford Properties Group was formed in 1960 and is backed by OMERS, which is one of Canada's largest pension plans with approximately $105 billion in global assets.

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[288] Real Capital Analytics (RCA)

[289] Real Capital Analytics (RCA)

Current Market Information

The Equinox Hotel is located in the Midtown South hotel district of Manhattan. The following chart illustrates the Midtown South hotel market with regards to historical rooms, demand, occupancy, ADR, and RevPAR. [290]

Midtown South Supply, Demand, Occupancy, ADR and RevPAR										
Year	Rooms	% Change	Demand	% Change	Occ %	% Change	ADR	% Change	RevPAR	% Change
2018	24,860	6.0%	8,065,391	7.6%	88.9%	1.6%	$ 238.19	3.0%	$ 211.72	4.6%
2019	26,526	6.7%	8,542,188	5.9%	88.2%	-0.7%	$ 234.42	-1.6%	$ 206.82	-2.3%
2020	21,533	-18.8%	3,542,888	-58.5%	45.1%	-48.9%	$ 133.97	-42.9%	$ 60.39	-70.8%
Avg Annual % Change		-6.9%		-33.7%		-28.8%		-25.0%		-46.6%
YTD 2020	23,078	----	2,282,044	----	54.6%	----	$ 144.21	----	$ 78.78	----
YTD 2021	20,919	-9.4%	1,848,147	-19.0%	48.8%	-10.7%	$ 128.83	-10.7%	$ 62.88	-20.2%
Jan-21	19,911	-29.2%	215,192	-67.1%	34.9%	-53.5%	$ 105.09	-2.0%	$ 36.64	-68.0%
Feb-21	19,911	-30.3%	219,439	-66.1%	39.4%	-51.3%	$ 109.84	-1.2%	$ 43.23	-66.0%
Mar-21	20,006	-30.0%	280,849	-5.9%	45.3%	34.5%	$ 109.99	-19.5%	$ 49.81	-7.3%
Apr-21	20,532	4.2%	320,284	38.2%	52.0%	32.7%	$ 119.99	-53.5%	$ 62.39	39.4%
May-21	22,526	8.9%	374,269	29.6%	53.6%	19.0%	$ 139.19	-55.8%	$ 74.60	44.3%
Jun-21	22,572	8.1%	438,114	68.0%	64.7%	55.3%	$ 159.68	-51.5%	$ 103.31	104.8%
1Q 2020	28,642	----	1,607,552	----	62.4%	----	$ 155.71	----	$ 97.10	----
1Q 2021	19,725	-31.1%	715,480	-55.5%	39.9%	-36.1%	$ 108.47	-30.3%	$ 43.24	-55.5%
2Q 2020	8,835	----	674,492	----	42.2%	----	$ 116.79	----	$ 49.26	----
2Q 2021	10,942	23.8%	1,132,667	67.9%	56.9%	34.9%	$ 141.69	21.3%	$ 80.59	63.6%

Source: STR

Investment Highlights

- The hotel is part of 35 Hudson Yards, a 1,000 foot tall skyscraper designed by David Childs and Skidmore, Owings & Merrill, and was developed by The Related Companies, L.P. Interior spaces were designed by David Rockwell/Rockwell Group, and exterior spaces by Ken Smith Workshop and Rockwell Group. Related owns approximately 10 operating full-service hotels with over 5,950 rooms across the United States. [291]
- The Equinox Hotel New York benefits from a strong owner (Related) and operator (Equinox). The Equinox Group is primarily an operator of upscale fitness centers, with the Equinox Hotel New York representing the first hotel for the brand.
- The Equinox Hotel New York benefits from its location within a mixed-use skyscraper. The hotel offers a consistent, luxury class product, with a variety of guestrooms ranging in size from 400 square feet to 468 square feet, along with larger suites ranging in size from 555 square feet to 2,000 square feet.
- Located in the Eastern Rail Yards, 35 Hudson Yards benefits from the synergy generated by the seamless connectivity to retail shops as well as trophy quality office buildings.
- 35 Hudson Yards also contains a luxury residential condominium component on its upper floors. Unit owners are anticipated to indirectly foster hotel demand.
- 35 Hudson Yards is LEED Neighborhood Development Gold (LEED-ND) certified.
- The Eastern Rail Yards complex benefits from strong sponsorship by Related Properties and Oxford Properties Group.

[290] STR (formerly known as Smith Travel Research)

[291] www.related.com/hospitality

- The Midtown South hotel submarket recorded an impressive occupancy level of 88.2 percent and an average daily rate (ADR) of $234.42 in 2019. The COVID-19 virus began to negatively impact the New York City hotel market in late February 2020. As a result, the Midtown South hotel market occupancy fell sharply by 48.9 percent to 45.1 percent in 2020.[292]
- Climbing occupancies in 2021 and beyond are expected to result in stable revenues over the long term, enhancing the ability to weather the near-term effects of the COVID-19 pandemic.

Property Photographs

PROPERTY PHOTOGRAPH

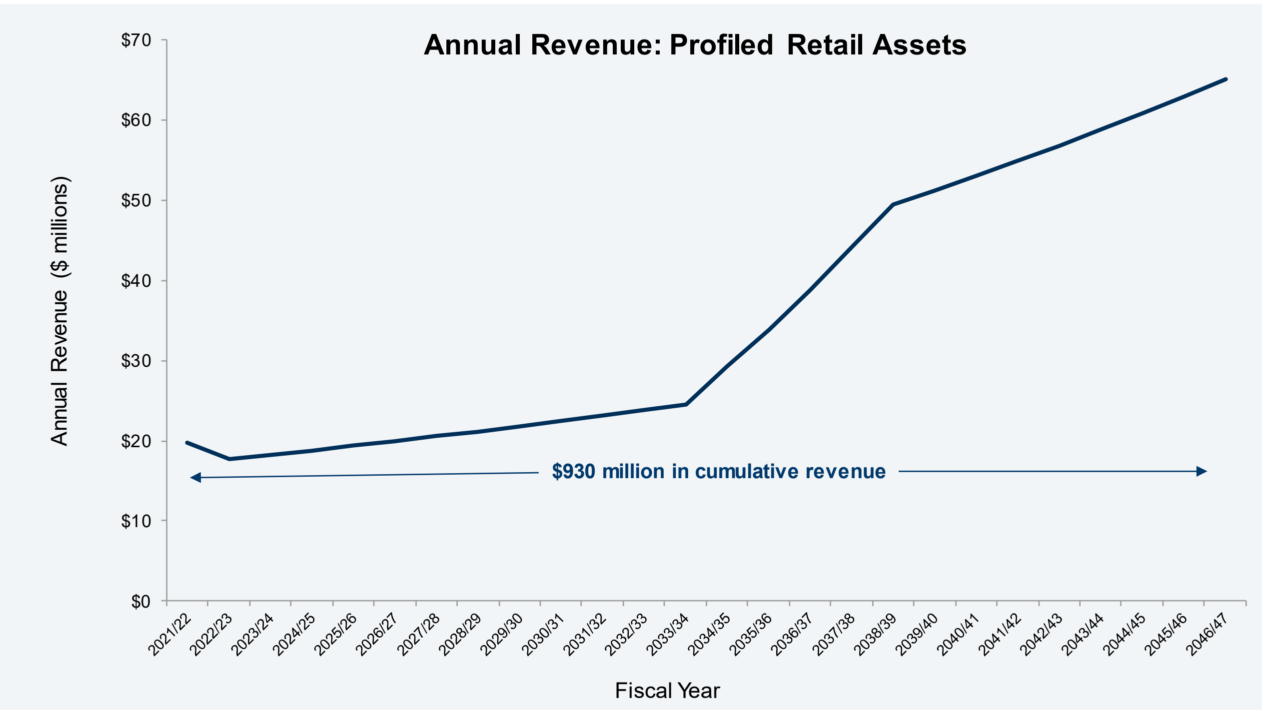
[292] STR (formerly known as Smith Travel Research)

EXTERIOR FAÇADE - PROPERTY PHOTOGRAPH

Retail Completions

Consistent with predominant development patterns throughout Manhattan, most new retail completions in Hudson Yards have generally occurred within the ground floors of new residential or office buildings. The notable exception to this trend is the large retail component within Related Companies' Hudson Yards development. This 7-story retail component contains 720,000 square feet of rentable space and opened to the public in 2019. The project is discussed in more detail on the following pages.

The chart below illustrates the projected revenue from 20 Hudson Yards, the sole retail asset profiled in this chapter. In total, 20 Hudson Yards is projected to generate approximately $930 million in revenue over the forecast period of fiscal year 2022 through fiscal year 2047.



20 Hudson Yards

Overview

20 Hudson Yards is the retail component of a Class A retail and office building, of which the office component's address is 30 Hudson Yards. Known as "The Shops and Restaurants at Hudson Yards", the 7-story building is situated along the westerly blockfront of Tenth Avenue, between West 30th and 33rd Streets, on a platform above the Eastern Rail Yards within the Hudson Yards district of Manhattan.

Designed by Kohn Pedersen Fox Associates (KPF) and Elkus Manfredi Architects, construction commenced in June 2015 and was completed in March 2019. [293, 294] The property achieved U.S. Green Building Council's Leadership in Energy and Environmental Design Neighborhood Development Gold ("LEED-ND") certification in September 2019. The LEED-ND certification includes the residential, commercial, and mixed-use buildings, platform infrastructure, and public square and gardens. [295]

The Shops & Restaurants at Hudson Yards contains approximately 720,000 square feet of gross leasable area ("GLA") and includes tenants such as Zara, Muji, H&M, Lululemon Athletica, Banana Republic, Tiffany, Cartier, Chanel, Dior, Tory Burch, Kiehl's, Sephora, and Watches of Switzerland. [296] 20 Hudson Yards features triple-height circulation areas with pedestrian connections to the lobbies of 10 Hudson Yards and 30 Hudson Yards. In addition, a glass wall in the 85-foot atrium faces the Vessel sculpture in the outdoor plaza, creating a visual connection to the larger complex.

The building was initially designed and developed as an upscale indoor shopping mall anchored by Neiman Marcus ("Neiman"). The upscale retailer announced its 50-year lease in September 2014, making it the first anchor tenant at 20 Hudson Yards. The developers, The Related Companies, L.P. ("Related Companies"), and Oxford Properties Group ("Oxford Properties"), reportedly spent approximately $80 million to build out the store for Neiman Marcus, which was intended to attract other retailers to the mall. [297] However, Neiman Marcus filed for bankruptcy in May 2020 and closed its 20 Hudson Yards store in August 2020. [298] Neiman Marcus' former space included the top three levels of the property, consists of approximately 200,000 square feet (27.8 percent of total GLA). Some of the leases at 20 Hudson Yards reportedly include co-tenancy clauses pertaining to Neiman Marcus' occupancy and operation.[299]

Despite its reported 90 percent occupancy in March 2019, significant headwinds from the impact of COVID-19 and Neiman's departure from the property led the developer to enact a change in strategy and reposition a large portion

[293] Bendix, Aria. "Hudson Yards Rundown Major Buildings". *Business Insider.* March 15, 2019
https://www.businessinsider.com/hudson-yards-rundown-major-buildings-finished-2018-10

[294] "20 Hudson Yards The Shops and Restaurants at Hudson Yards." *KPF.*
https://www.kpf.com/projects/20-hudson-yards

[295] "Hudson Yards designated Manhattan's first-ever LEED Gold neighborhood development." *Related Companies*. September 25, 2019.
https://www.related.com/press-releases/2019-09-25/hudson-yards-designated-manhattans-first-ever-leedr-gold-neighborhood

[296] Lisicky, Michael. "Manhattan's Massive Hudson Yards Reaches Its 2nd Birthday." *Forbes.*
https://www.forbes.com/sites/michaellisicky/2021/03/14/manhattans-massive-hudson-yards-reaches-its-2nd-birthday/

[297] "Related Pitches Neiman Marcus' Hudson Yards Store As Office." *The Real Deal.* June 5, 2020.
https://therealdeal.com/2020/06/05/related-marketing-neimans-hudson-yards-store-as-office/

[298] Jones, Sasha & O'Regan, Sylvia Varnham. "Neiman Marcus Quits 50-Year Hudson Yards Lease as Other Major Stores Flounder." *The Real Deal.* August 16, 2020.
https://therealdeal.com/2020/08/13/neiman-marcus-committed-to-50-years-at-hudson-yards-it-lasted-16-months/

[299] Lisicky, Michael. "Manhattan's Massive Hudson Yards Reaches Its 2nd Birthday." *Forbes.*
https://www.forbes.com/sites/michaellisicky/2021/03/14/manhattans-massive-hudson-yards-reaches-its-2nd-birthday/

of the mall for office use. [300] In June 2020, the developers began marketing Neiman's retail space as office space, the approximate time when Facebook Inc. indicated interest in expanding its footprint into 20 Hudson Yards. No further details have been made publicly available regarding the vacant Neiman space.

As of August 2021, a total of approximately 300,000 square feet is available for lease (41.7 percent of total GLA), which includes Neiman's former anchor store as well as other vacant suites at the mall. [301]

Property Information

TABLE 1: BUILDING INFORMATION	
Street Address:	20 Hudson Yards 500 West 33rd Street
Block / Lot:	702 / 1301
Developer / Owner:	The site is owned by The Metropolitan Transportation Authority ("MTA") and ground leased to ERY Tenant LLC for a 99-year term. ERY Tenant LLC is a joint venture of The Related Companies, L.P., and Oxford Properties Group. The lessee has the right to acquire the fee title to the development rights for each component of the Eastern Rail Yards. 20 Hudson Yards consists of a condominium tax lot identified as Lot 1301 within Block 702, which is owned by ERY Retail Podium LLC, an entity affiliated with The Related Companies, L.P.
Ownership Interest:	Leasehold
Number of Floors:	7
Year Built:	2019
Gross Building Area [302]:	1,140,044 square feet
Gross Leasable Area [303]:	720,000 square feet
Large Tenants:	Some of the larger tenants at 20 Hudson Yards include Mercado food hall, H&M, Zara, Muji, and Uniqlo.

[300] Gouraire, Chava. "The Shops at Hudson Yards Isn't Just a Mall … It's a Supermall." *Commercial Observer.* March 19, 2019 https://commercialobserver.com/2019/03/the-shops-at-hudson-yards-isnt-just-a-mall-its-a-supermall/

[301] Fickenscher, Lisa. "Neiman Marcus store at Hudson Yards is being shopped as office space." *New York Post*. June 9, 2020. https://nypost.com/2020/06/09/neiman-marcus-store-at-hudson-yards-is-being-shopped-as-office-space/

[302] City of New York Department of Finance

[303] Lisicky, Michael. "Manhattan's Massive Hudson Yards Reaches Its 2nd Birthday." *Forbes.* https://www.forbes.com/sites/michaellisicky/2021/03/14/manhattans-massive-hudson-yards-reaches-its-2nd-birthday/

Real Property Tax / PILOT Information

20 Hudson Yards, located along the westerly blockfront of Tenth Avenue between West 30th and 33rd Streets, is subject to a Payment-in-Lieu-of-Taxes ("PILOT") agreement pursuant to New York City's Industrial Development Agency's ("NYCIDA") Uniform Tax Exemption Program ("UTEP") amendment for Hudson Yards. The property is located within Zone 3 of the Hudson Yards' UTEP area and is eligible for PILOT payments under the Category A Developments.

20 Hudson Yards is obligated to make PILOT payments as set by the NYCIDA pursuant to the Hudson Yards UTEP amendment. Under this PILOT structure, PILOT payments are calculated as described below:

- 60% of full taxes in Years 1 through 4,
- 103 percent of the prior year's PILOT payment in Years 5 through 15,
- the greater of 103 percent of the prior year's PILOT payment and 68% of full taxes in Year 16,
- the greater of 103 percent of the prior year's PILOT payment and 76% of full taxes in Year 17,
- the greater of 103 percent of the prior year's PILOT payment and 84% of full taxes in Year 18,
- the greater of 103 percent of the prior year's PILOT payment and 92% of full taxes in Year 19, and
- 100% of full taxes in Year 20.
- The annual PILOT payments are not permitted to exceed full taxes over the PILOT program.

Cushman & Wakefield, Inc., modeled the PILOT and tax payments based on the asset's current assessment and our projection of future assessments.

The PILOT exemption commenced in the 2019/2020 fiscal year and is scheduled to expire in the 2038/2039 fiscal year. The PILOT payments through 2021/2022 are based on the property's assessed value as determined by the New York City Department of Finance ("DOF"). Projections for 20 Hudson Yards assume a decline of 10.0 percent for the assessment in fiscal year 2023 followed by a flat assessment in fiscal year 2024, and fixed long term assessment growth of 3.5 percent per annum commencing in fiscal year 2025.

Projections for the entire analysis period are based on long term average assessment growth of 3.5 percent per annum commencing in fiscal year 2025, and a fixed tax rate. We modeled for a 10 percent reduction in the taxable assessment for fiscal year 2023.

20 HUDSON YARDS
BLOCK 702, LOT 1301
NEW YORK, NEW YORK

ASSESSMENT AND PAYMENT-IN-LIEU-OF-TAXES (PILOT) / UTEP PROJECTIONS

PROJECTION YEAR	TAX FISCAL YEAR	ENTIRE BLDG TOTAL AV BASE	ASSESSMENT GROWTH RATE	TAX RATE	FULL FISCAL YR TAXES	PILOT YEAR	PILOT SCHEDULE	CALCULATED TAX	FIXED ESCALATION PRIOR YEAR	PAYABLE FISCAL YR PILOT/TAXES *
1	2021 / 22	$305,000,000	-	10.755%	$32,802,750	3	60.00%	-	-	$19,681,650
2	2022 / 23	$274,500,000	-10.0%	10.755%	$29,522,475	4	60.00%	-	-	$17,713,485
3	2023 / 24	$274,500,000	-	10.755%	$29,522,475	5	103% of prior year	-	-	**$18,244,890**
4	2024 / 25	$284,107,500	3.5%	10.755%	$30,555,762	6	103% of prior year	-	-	**$18,792,236**
5	2025 / 26	$294,051,263	3.5%	10.755%	$31,625,213	7	103% of prior year	-	-	**$19,356,003**
6	2026 / 27	$304,343,057	3.5%	10.755%	$32,732,096	8	103% of prior year	-	-	**$19,936,683**
7	2027 / 28	$314,995,064	3.5%	10.755%	$33,877,719	9	103% of prior year	-	-	**$20,534,784**
8	2028 / 29	$326,019,891	3.5%	10.755%	$35,063,439	10	103% of prior year	-	-	**$21,150,827**
9	2029 / 30	$337,430,587	3.5%	10.755%	$36,290,660	11	103% of prior year	-	-	**$21,785,352**
10	2030 / 31	$349,240,658	3.5%	10.755%	$37,560,833	12	103% of prior year	-	-	**$22,438,913**
11	2031 / 32	$361,464,081	3.5%	10.755%	$38,875,462	13	103% of prior year	-	-	**$23,112,080**
12	2032 / 33	$374,115,323	3.5%	10.755%	$40,236,103	14	103% of prior year	-	-	**$23,805,443**
13	2033 / 34	$387,209,360	3.5%	10.755%	$41,644,367	15	103% of prior year	-	-	**$24,519,606**
14	2034 / 35	$400,761,687	3.5%	10.755%	$43,101,919	16	Greater of 103% prior year PILOT and 68.00% of full taxes	$29,309,305	$25,255,194	**$29,309,305**
15	2035 / 36	$414,788,346	3.5%	10.755%	$44,610,487	17	Greater of 103% prior year PILOT and 76.00% of full taxes	$33,903,970	$30,188,584	**$33,903,970**
16	2036 / 37	$429,305,939	3.5%	10.755%	$46,171,854	18	Greater of 103% prior year PILOT and 84.00% of full taxes	$38,784,357	$34,921,089	**$38,784,357**
17	2037 / 38	$444,331,646	3.5%	10.755%	$47,787,869	19	Greater of 103% prior year PILOT and 92.00% of full taxes	$43,964,839	$39,947,888	**$43,964,839**
18	2038 / 39	$459,883,254	3.5%	10.755%	$49,460,444	20	100% of full taxes	$49,460,444	-	**$49,460,444**
19	2039 / 40	$475,979,168	3.5%	10.755%	$51,191,560	-	-	-	-	**$51,191,560**
20	2040 / 41	$492,638,439	3.5%	10.755%	$52,983,264	-	-	-	-	**$52,983,264**
21	2041 / 42	$509,880,784	3.5%	10.755%	$54,837,678	-	-	-	-	**$54,837,678**
22	2042 / 43	$527,726,612	3.5%	10.755%	$56,756,997	-	-	-	-	**$56,756,997**
23	2043 / 44	$546,197,043	3.5%	10.755%	$58,743,492	-	-	-	-	**$58,743,492**
24	2044 / 45	$565,313,940	3.5%	10.755%	$60,799,514	-	-	-	-	**$60,799,514**
25	2045 / 46	$585,099,927	3.5%	10.755%	$62,927,497	-	-	-	-	**$62,927,497**
26	2046 / 47	$605,578,425	3.5%	10.755%	$65,129,960	-	-	-	-	**$65,129,960**
							TOTAL PAYABLE PROJECTION YEARS 1-26			**$929,864,830**

*During years 5 through 15: 3% increase over previous year's PILOT payment

Property Equity and Debt Overview

Pursuant to two filings (CRFN No. 2017000199756 and 2017000199757) with the New York City Department of Finance Office of the City Registrar, dated December 11, 2015, condominium tax Lot 1301 was offered as collateral on debt totaling $450,000,000 from Deutsche Bank AG New York Branch.

Ownership Overview

The 20 Hudson Yards property is subject to a condominium declaration for the 20-30 Hudson Yards Condominium, which comprises the office building at 30 Hudson Yards and the retail property at 20 Hudson Yards. The 20-30 Hudson Yards Condominium consists of eight condominium tax lots: the retail unit at 20 Hudson Yards (Lot 1301) that is known as The Shops at Hudson Yards, six office condominium units at 30 Hudson Yards (Lots 1302, 1303, 1305, 1306, and 1308), and the observation deck condominium unit (Lot 1304) at 30 Hudson Yards.

20 Hudson Yards consists of a condominium tax lot identified as Lot 1301 within Block 702, which is owned by ERY Retail Podium LLC, an entity affiliated with The Related Companies, L.P.

Tenant Overview

20 Hudson Yards is approximately 58 percent leased to a variety of retail and restaurant tenants ranging from approximately 800 to 40,000 square feet. Some of the larger tenants include Mercado food hall, H&M, Zara, Muji, and Uniqlo.

As of August 2021, a total of approximately 300,000 square feet is available for lease, including Neiman's former anchor department store and vacant suites at the property. The asking rent for the vacant retail space is reported to be $150 to $300 per square foot. In addition, the former Neiman department store is being marketed as office space at a reported asking rent of $125 per square foot.

Profiles of H&M and Zara are presented on the following pages.

H&M Hennes & Mauritz

Company Profile

H&M Hennes & Mauritz ("H&M") is a major global retailer that offers affordable, fashion-oriented apparel for men, women, and children. The company was incorporated in 1947 and remains under the control of the family of founder Erling Persson. H&M Group is headquartered in Stockholm, Sweden, and is comprised of nine independent brands: H&M, COS, Cheap Monday, Monki, Weekday, & Other Stories, H&M Home, ARKET, and Afound.

As of November 30, 2020, H&M operated over 5,000 stores across 70 markets worldwide, employed an average of 110,325 people, and reported net sales of 187 million SEK (Swedish Krona), which is roughly equivalent to approximately $21.6 billion USD. [304]

The company is publicly traded on the Stockholm Exchange under the ticker symbol "HMB." Although a credit rating is not available, the firm is considered to be a good quality tenant.

Lease Information [305]

H&M is considered a large tenant within The Shops and Restaurants at Hudson Yards. Pursuant to the memorandum of lease (CRFN No. 2018000201412), dated July 19, 2016, H&M leased approximately 33,821 square feet of gross leasable area for an initial term of 10 years. H&M also has the option to renew its lease for two additional renewal terms of five years each.

Zara / Inditex

Company Profile

Zara is an international fashion company founded in Spain in 1975 and operates nearly 2,300 stores across 93 countries. Its parent company, Inditex, is one of the world's largest distribution groups. Inditex designs, manufactures, and distributes garments through Zara, Pull&Bear, Massimo Dutti, Bershka, Stradivarius, Oysho, Zara Home and Uterqüe.

As of January 2021, Inditex reported 6,829 stores worldwide, including 2,025 Zara stores. Net sales for all Zara brands totaled €14.1 billion for fiscal year 2020. Inditex reported net sales of €20.4 billion ($24 billion USD) and net income of €1.106 billion ($1.3 billion USD) for the same period. Although a credit rating is not available for Zara or Inditex, the firm is considered to be a good quality tenant.

Lease Information

Not available.

[304] H&M Group 2020 Annual Report

[305] Memorandum of Lease, H&M, July 19, 2016. Document ID: 2018000201412

Current Market Information

20 Hudson Yards is located within the Penn Station office submarket of Midtown Manhattan. However, the Hudson Yards area is not tracked as an established retail submarket. Therefore, we have referenced the Herald Square/ West 34th Street retail submarket, which is closest to 20 Hudson Yards. The following table provides a summary of 20 Hudson Yards as compared to Class A office space within the Penn Station office submarket and the Herald Square/ West 34th Street retail submarket.

TABLE 5: KEY METRICS – 1Q 2021 CLASS A [306]

	No. of Buildings	Inventory SF	Avg. Direct Asking Rent / SF	Direct Availability
20 Hudson Yards	1	720,000	$150-$300 (retail) $125 (office)	41.7%
Retail - Herald Square/ West 34th St.	N/A	N/A	$401	25.0%
Office - Class A Penn Station Submarket	15	16,537,897	$107.59	5.3%
Office - Class A Midtown Manhattan	297	187,528,330	$89.89	11.5%

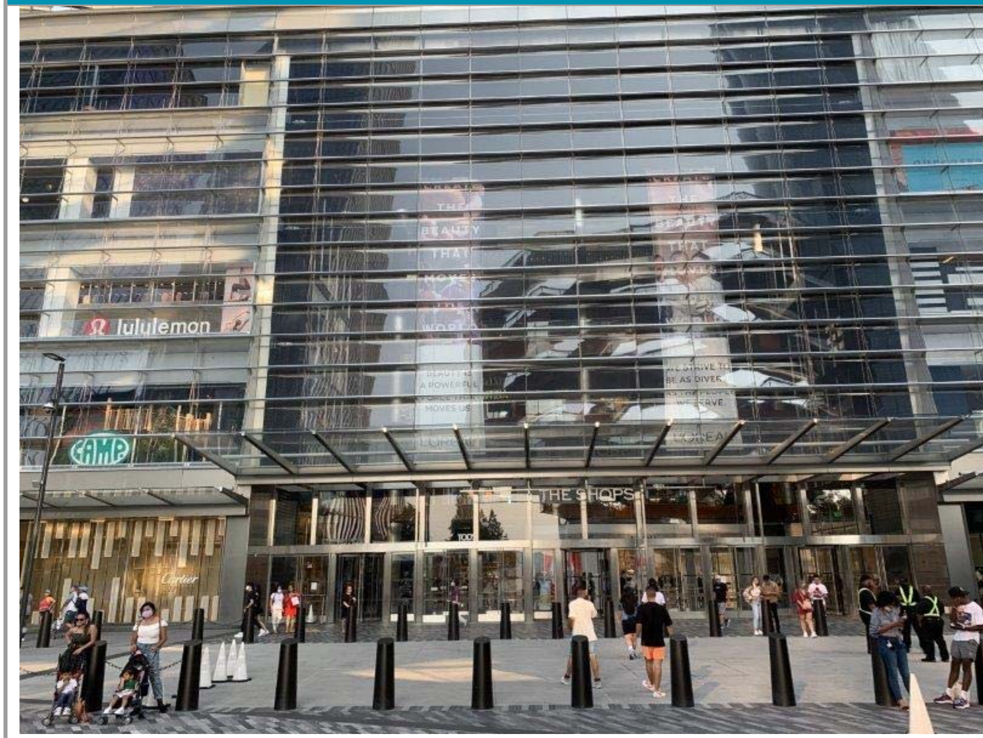
Investment Highlights

- 20 Hudson Yards is a Class A retail and office asset based on its location, condition, layout, quality and tenant mix. Furthermore, the property is one of the few Class A multi-level retail centers in Manhattan.
- 20 Hudson Yards is LEED Neighborhood Development Gold (LEED-ND) certified.
- Located in the Eastern Rail Yards, tenants at 20 Hudson Yards benefit from the synergy generated by the seamless connection of the trophy quality office space, Culture Shed, and the Vessel. The surrounding residential and commercial uses will also generate demand for the property's retail and restaurant space.
- The former anchor tenant, Neiman Marcus filed for bankruptcy in May 2020, and closed its 20 Hudson Yards store in August 2020. Neiman Marcus' former space included the top three levels of the retail center, consisting of approximately 200,000 square feet (27.8 percent of total GLA). Some of the leases at 20 Hudson Yards reportedly include co-tenancy clauses pertaining to Neiman Marcus' occupancy and operation. As a result, the lack of an anchor tenant may have a negative impact on the asset in the short term.
- As of August 2021, a total of approximately 300,000 square feet is available for lease, including Neiman's former anchor store and other vacant suites at the property. Significant headwinds from the impact of COVID-19 and Neiman's departure from the property led the developer to enact a change in strategy and reposition a large portion of the retail center for office use.
- Due to the design and location of 20 Hudson Yards, the property will benefit from visitor/tourism spending over the long term. Furthermore, the property is well-positioned geographically to benefit from transportation and accessibility, and is able to capture the large amount of visitor/tourist retail expenditures from outside the region once COVID-pandemic dissipates.
- The Eastern Rail Yards complex benefits from strong sponsorship by Related Companies and Oxford Properties Group.

[306] Cushman & Wakefield, Inc. – First Quarter 2021

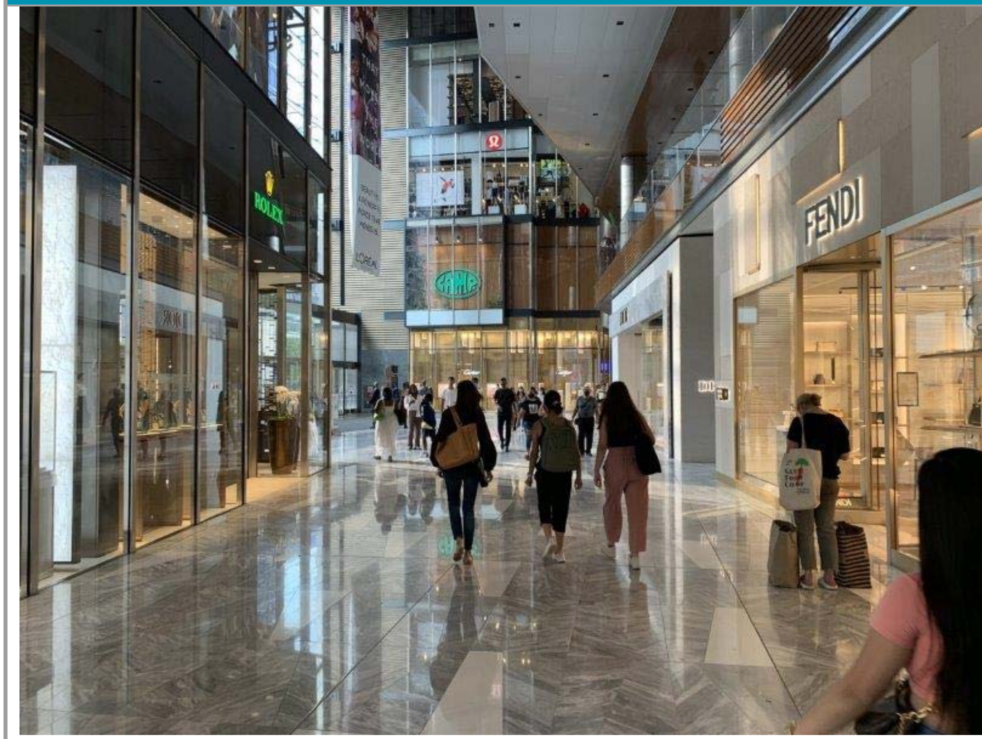
Property Photographs

PROPERTY PHOTOGRAPH



PROPERTY PHOTOGRAPH

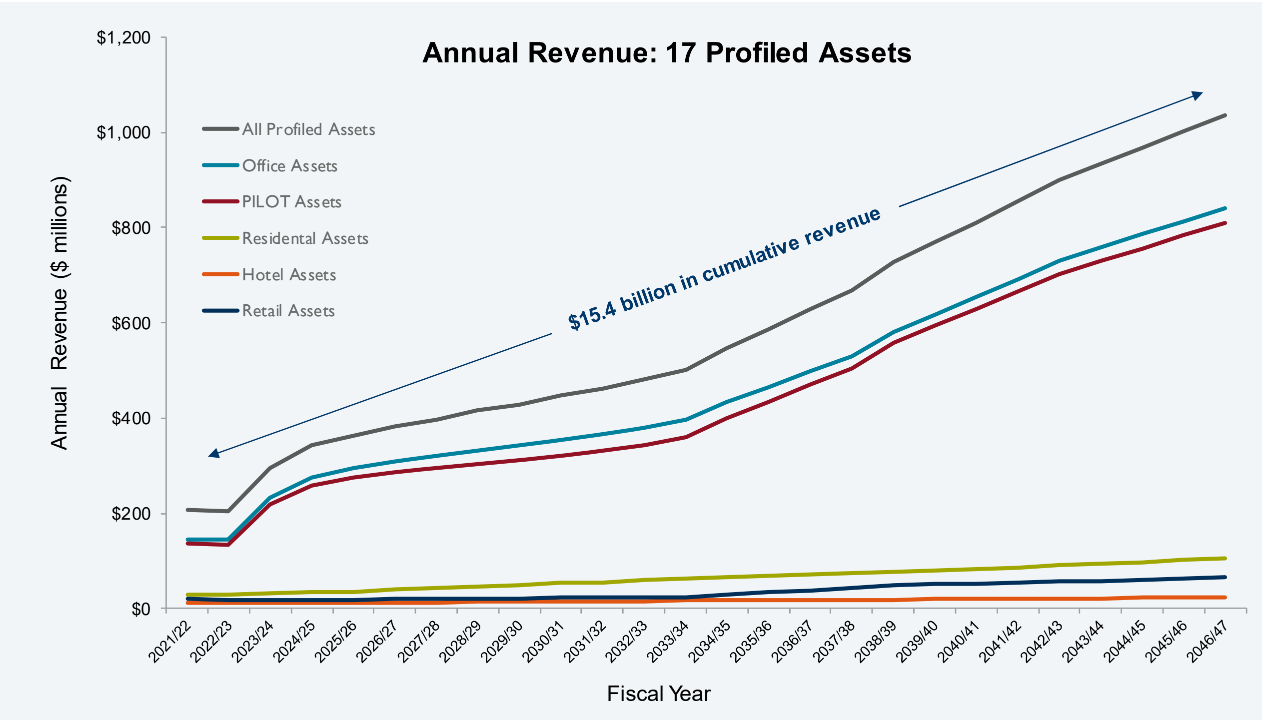
PROPERTY PHOTOGRAPH



PROPERTY PHOTOGRAPH

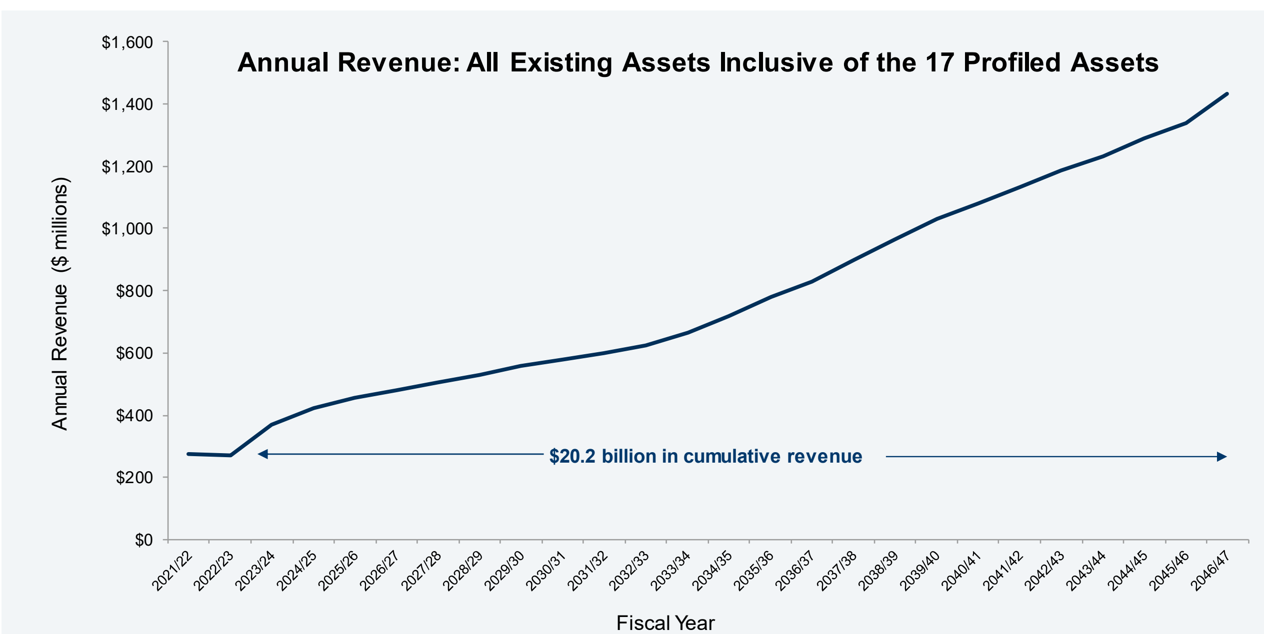
Summary

In total, the assets profiled in this chapter are projected to generate $15.4 billion in revenue over the forecast period from fiscal year 2022 through fiscal year 2047. Of this total, $11.6 billion will emanate from assets subject to PILOT agreements. For all of the existing assets within Hudson Yards, inclusive of the profiled assets, the total revenue is projected to be $20.2 billion. These projections are summarized in the charts below.



HYIC Revenue Summary
Existing Revenue Inclusive of the 17 Profiled Assets

	PILOT	TEP Residential	TEP Hotel & Other	Total
FY 2022	136,212,312	45,711,199	91,624,855	273,548,366
FY 2023	134,956,331	50,295,424	87,158,340	272,410,095
FY 2024	219,167,742	60,028,215	92,024,407	371,220,365
FY 2025	259,523,873	65,020,546	97,574,987	422,119,406
FY 2026	274,689,262	76,067,236	104,100,642	454,857,140
FY 2027	285,523,706	83,539,623	110,782,871	479,846,200
FY 2028	294,282,267	96,110,893	115,024,742	505,417,902
FY 2029	303,110,981	104,804,831	121,910,954	529,826,765
FY 2030	312,204,565	119,072,254	125,596,014	556,872,832
FY 2031	321,570,966	126,328,783	130,099,151	577,998,900
FY 2032	331,218,368	132,520,997	134,007,857	597,747,222
FY 2033	344,261,799	141,549,380	137,974,475	623,785,653
FY 2034	359,149,362	164,822,933	142,061,832	666,034,127
FY 2035	398,856,979	172,072,209	146,273,703	717,202,891
FY 2036	433,352,891	198,086,104	150,613,982	782,052,977
FY 2037	469,774,997	205,870,536	155,086,689	830,732,222
FY 2038	503,199,217	234,876,968	159,695,970	897,772,154
FY 2039	557,233,698	244,154,872	164,446,108	965,834,678
FY 2040	593,403,863	266,712,614	169,341,520	1,029,457,997
FY 2041	628,188,626	277,284,777	174,386,766	1,079,860,169
FY 2042	664,691,205	288,279,826	179,586,553	1,132,557,584
FY 2043	702,969,288	299,714,677	184,945,740	1,187,629,705
FY 2044	731,029,961	311,606,922	190,469,339	1,233,106,221
FY 2045	756,616,009	335,019,384	196,162,526	1,287,797,919
FY 2046	783,097,569	353,482,409	202,030,644	1,338,610,622
FY 2047	810,505,984	413,372,789	208,079,207	1,431,957,981
Total from FY 2022 to FY 2047	**11,608,791,821**	**4,866,406,399**	**3,771,059,873**	**20,246,258,092**

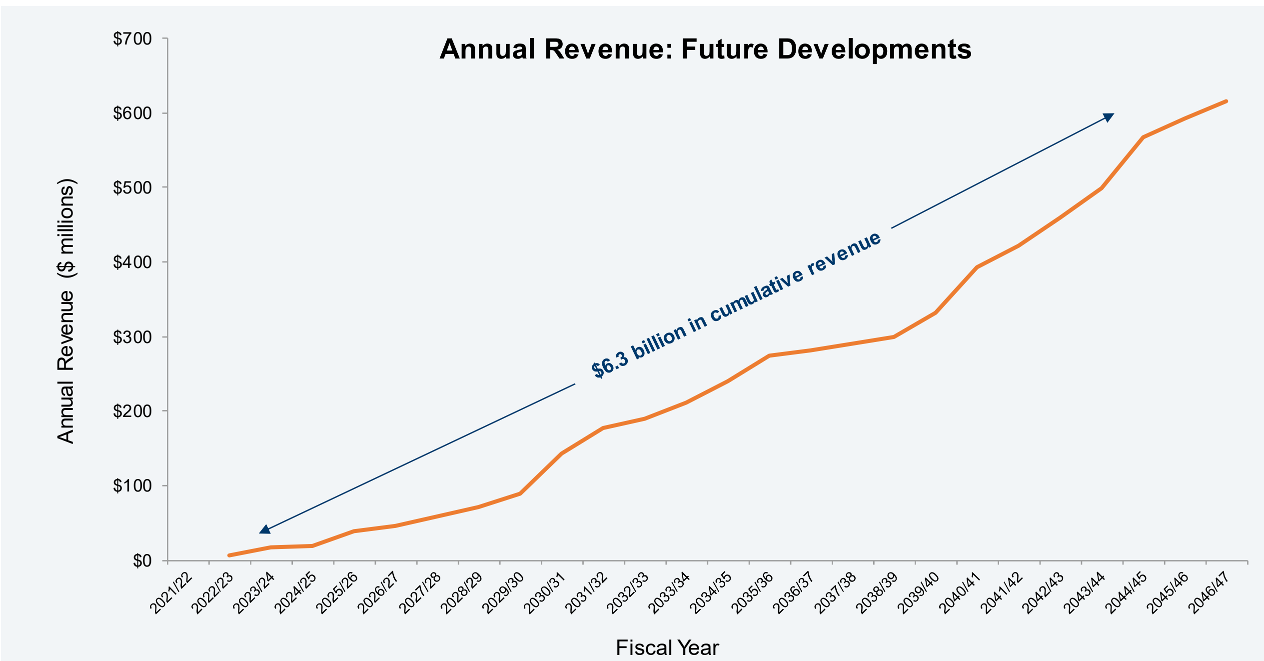


Chapter 6 - Under Construction and Future Developments

Introduction

In addition to the completed projects detailed in Chapter 5, there are numerous developments which are in various stages of construction or planning within Hudson Yards. This chapter will detail those developments which are currently under construction or in the advanced planning stage. Additionally, this analysis will include projections of new supply which is projected to be built to meet future demand.

In total, the projects currently under construction in HYPD (exclusive of 50 Hudson Yards, 66 Hudson Yards, and Two Manhattan West, which were accounted for in Chapter 5) and those which are projected to be completed in the future will generate total revenue of approximately $6.3 billion over the forecast period from fiscal year 2022 through fiscal year 2047. This revenue projection is detailed in the following chart:

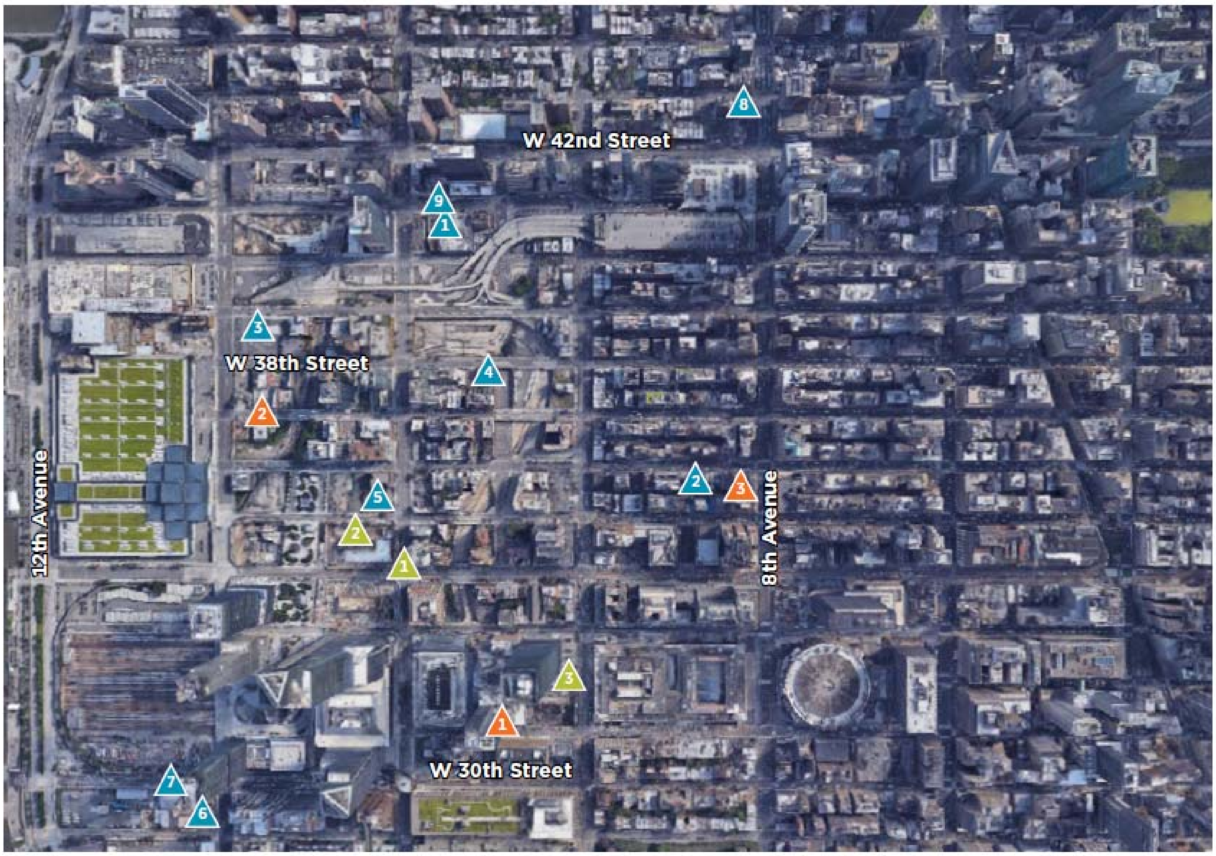


The map below illustrates projects which are currently under construction:

HUDSON YARDS AREA MAP

All Property Types—Under Construction

CUSHMAN & WAKEFIELD



OFFICE

▲ *Under Construction*
6.9 MSF

1. 50 Hudson Yards
2. 66 Hudson Boulevard
3. 2 Manhattan West

RESIDENTIAL

▲ *Under Construction*
3.2 MSF

1. 460 W. 41st St.
2. 335 W. 35th St.
3. 555 W. 38th St.
4. 441 W. 37th St.
5. 451 Tenth Ave.
6. 601 W. 29th St.
7. 606 W. 30th St.
8. 308 W. 43rd St.
9. 550 Tenth Ave.

HOTEL

▲ *Under Construction*
450K SF

1. 432 W. 31st St.
2. 450 11th Ave.
3. 319 W. 35th St.

Office Projects – Under Construction or Advanced Planning

There are currently three office buildings under construction within Hudson Yards: 50 Hudson Yards, 66 Hudson Boulevard, and Two Manhattan West. These buildings were profiled in the previous chapter as they are all nearing completion and have generated significant pre-leasing activity. In total, these buildings represent approximately 6.9 million square feet of gross building area. The map below illustrates their location within Hudson Yards:

In addition to the three buildings under construction, there are several sites which are planned for large-scale office developments. These include:

Site 706A - 3 Hudson Boulevard

This site is situated on the northeast corner of West 34th Street and Eleventh Avenue. The site is owned by the Moinian Group and Boston Properties, which plan to build a 56-story, 1.9 million-square-foot office tower known as 3 Hudson Boulevard. The project is designed by FXCollaborative. The foundation is complete. The site sits across from the entrance to the new No. 7 subway station. Upon completion, the building will be set back to allow for an acre of parkland. The proposed 56-story tower will have excellent views of the Hudson River. The current timeline for vertical development is not publicly available. No anchor tenant has been announced by ownership.

Site 707B – Related Companies/Spitzer Enterprises Site

Related Companies and Spitzer Enterprises jointly own this site situated on the northwest corner of West 35th Street and Tenth Avenue. The eastern portion of the site is currently being developed as 451 Tenth Avenue, a residential and luxury senior living property that is detailed in the residential section of this chapter. The western portion of the site, which is currently being used as a construction staging area for 451 Tenth Avenue, can be developed with an approximately 948,000-square-foot office and retail development. No construction timeline is publicly available, and no anchor tenant has been announced by ownership.

Western Rail Yard (WRY)

The Western Rail Yard site's maximum FAR is 10.0, of which a maximum of 8.0 FAR may be used for residential development, a maximum of 8.0 FAR may be used for commercial development, and a maximum of 2.0 FAR may be used for a community facility. Analysis assumes Related's development program will include one office tower of approximately 1,600,000 square feet of zoning floor area (ZFA), with the balance of the site proposed for retail, residential and community facility uses (approximately 100,000 square feet of retail ZFA, 4,000,000 square feet of residential ZFA and approximately 120,000 square feet of ZFA designated as a school that does not count against the maximum site FAR.). A formal construction timeline is not publicly available. AMTRAK is constructing a concrete casing beneath ERY and part of the WRY to preserve the underground right-of-way for a future Hudson River Tunnel.

Site 708A – Tishman Speyer Site

Tishman Speyer owns this site located at the northeast corner of Eleventh Avenue and West 36th Street with additional frontage along West 37th Street and the full blockfront along the proposed Hudson Park and Boulevard (Phase II). The site was originally targeted to include the parcel located at the southeast corner of Eleventh Avenue and West 37th Street, however, the site is currently being developed with a 269,979 square foot hotel (450 Eleventh Avenue) detailed in the hotel section of this Chapter. Tishman plans for the construction of a 1.3 million square foot mixed-use development that will consist primarily of office space. A construction timeline is not publicly available, and no anchor tenant has been announced by ownership.

Site 710A – Rockrose Development Site

Rockrose Development owns this site located on the east side of Eleventh Avenue between West 38th and West 39th Streets. The company is currently developing a residential building, 555 West 38th Street, on a 15,138 square foot portion of the site, situated on the full blockfront of Eleventh Avenue. The residential development is detailed in the residential section of this chapter. The balance of the site is reserved for future office development. This portion of the site extends east to the proposed Hudson Park and Boulevard (Phase II), and has a maximum massing of 983,689 square feet of zoning floor area. If all potential development rights are incorporated, an office tower of approximately 1.2 million square feet of gross building is possible. A construction timeline for the office component is not publicly available.

Site 1069A – Silverstein Properties Site – 520 West 41st Street

This site is located on the east side of Eleventh Avenue between West 40th and West 41st Streets. Silverstein Properties purchased the parcel from Mercedes-Benz USA and has demolished the former auto dealership building. Given the site's location, it is unlikely that a large office development would be built until the end of the forecast period. Instead, Silverstein Properties has expressed an interest in building a mixed-use residential development.

Residential Projects – Under Construction or Advanced Planning

There are nine residential projects currently under construction in Hudson Yards. These properties represent approximately 3.2 million square feet of development and will deliver 3,248 units to the market through 2024. All of the projects are ground up construction, with the exception of 335 West 35th Street, which is the condominium conversion of an existing commercial loft building. These projects are detailed in the table and map below:

Residential New Construction Projects Under Construction

Name	Address	Residential Use	Total Units	Size (SF)	Est. Completion Year	Tax Exemption*
Covenant House	460 West 41st Street	Affordable	60	80,496	2021	ANY 35-yr
Society House	335 West 35th Street	Condominium	66	73,106	2022	None
	555 West 38th Street	Rental	598	467,131	2022	ANY 35-yr
The Westerley	441 West 37th Street	Condominium	9	19,150	2022	None
The Set	451 Tenth Avenue	Rental / Senior Living	526	511,325	2022	ANY 35-yr
	601 West 29th Street	Rental	938	940,914	2022	ANY 35-yr
	606 West 30th Street	Rental	277	316,939	2023	ANY 35-yr
	308 West 43rd Street	Rental	321	373,133	2024	ANY 35-yr
Covenant House - Phase 2	550 Tenth Avenue	Condominium / Rental	453	436,188	2024	ANY 35-yr
		Total	**3,248**	**3,218,382**		

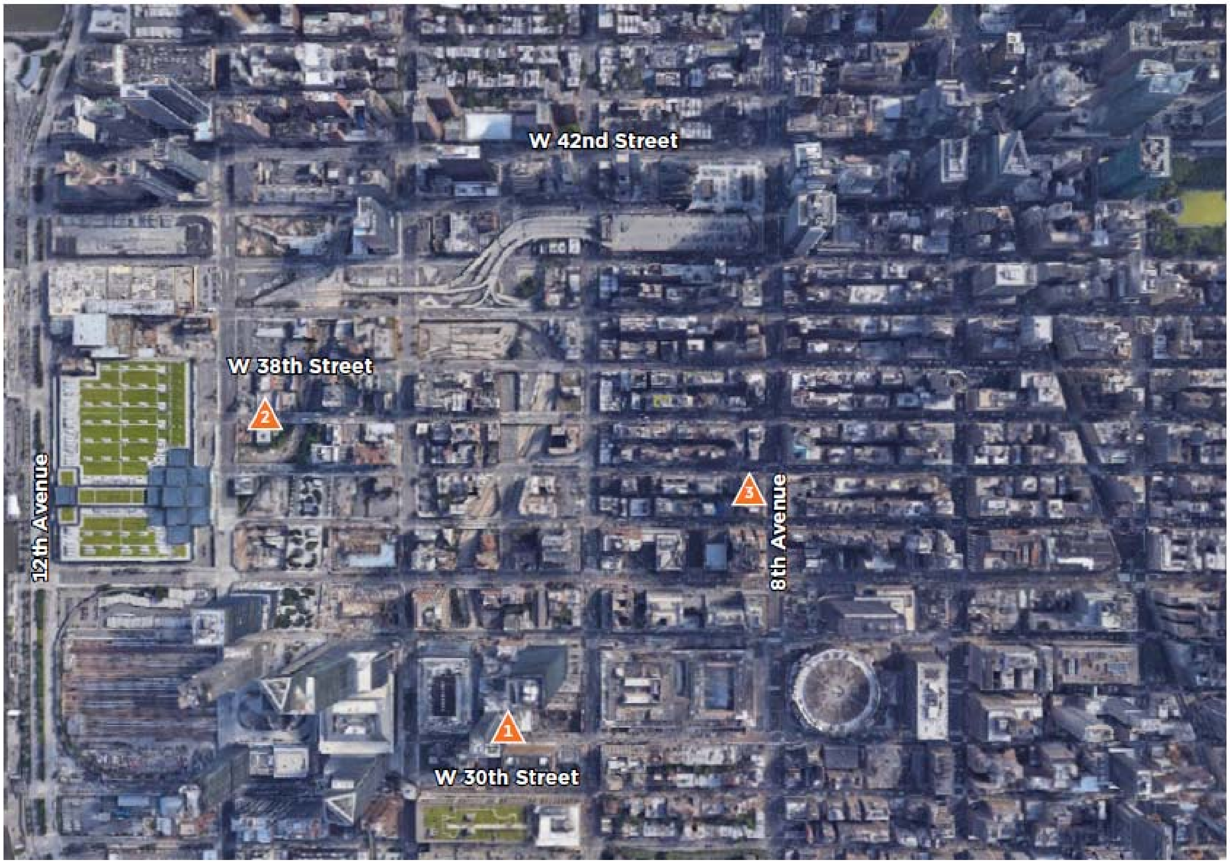
*ANY - Affordable New York

Hotel Projects – Under Construction or Advanced Planning

There are three hotels currently under construction in Hudson Yards, representing approximately 450,000 square feet of development. In total, the three properties will add 765 new rooms to the area by 2024. These projects are detailed in the table and map below:

Hotels Under Construction					
Site #	Name	Address	Size (SF)	No. Rooms	Est. Completion Date
1	Unnamed Hotel New York	319 West 35th Street	59,250	166	2022
2	A Tribute Portfolio Hotel	450 Eleventh Avenue	269,979	379	2023
3	Autograph Collection Manhattan Midtown South	432 West 31st Street	120,309	220	2024
		Subtotal	**449,538**	**765**	

HUDSON YARDS AREA MAP
Hotel Properties—Under Construction



HOTEL

▲ *Under Construction*
450K SF

1. 432 W. 31st St.
2. 450 11th Ave.
3. 319 W. 35th St.

Future Projects

In addition to the specific projects detailed above, future demand for space will result in additional developments over the forecast period. In the 2017 report, Cushman & Wakefield modeled this demand and projected the amount of development that would be built to satisfy it. This analysis adopts the modeled completions from the 2017 report, however the timeline and schedule of completions has been extended out by two years to account for the recession caused by the COVID-19 pandemic. Over the period from fiscal year 2022 through fiscal year 2047, development in Hudson Yards will yield an additional:

- 16.7 million square feet of office space (inclusive of 50 Hudson Yards, 66 Hudson Boulevard, and Two Manhattan West)

- 10.0 million square feet of residential space
- 741,000 square feet of hotel space
- 534,000 square feet of retail space

These estimated completions are detailed in the table below:

	Current Forecast			
FY	Office	Residential	Hotel	Retail
2022	-	2,011,626	-	-
2023	2,907,315	316,939	59,250	-
2024	4,041,019	1,414,142	269,979	19,959
2025	-	538,512	120,309	17,771
2026	-	1,007,010	-	33,231
2027	-	1,091,113	21,083	36,007
2028	-	1,317,594	21,293	43,481
2029	1,449,337	1,273,631	21,506	89,858
2030	707,326	990,319	21,721	40,607
2031	322,097	-	21,939	10,629
2032	537,823	-	22,158	17,748
2033	776,072	-	22,380	25,610
2034	944,651	-	-	31,173
2035	-	-	-	-
2036	-	-	22,603	-
2037	-	-	22,829	-
2038	639,628	-	23,058	23,063
2039	1,405,892	-	23,288	46,394
2040	426,392	-	23,521	14,071
2041	638,362	-	23,756	21,066
2042	639,184	-	-	21,093
2043	1,292,668	-	-	42,658
2044	-	-	-	-
2045	-	-	-	-
2046	-	-	-	-
2047	-	-	-	-
Total	**16,727,765**	**9,960,886**	**740,673**	**534,420**

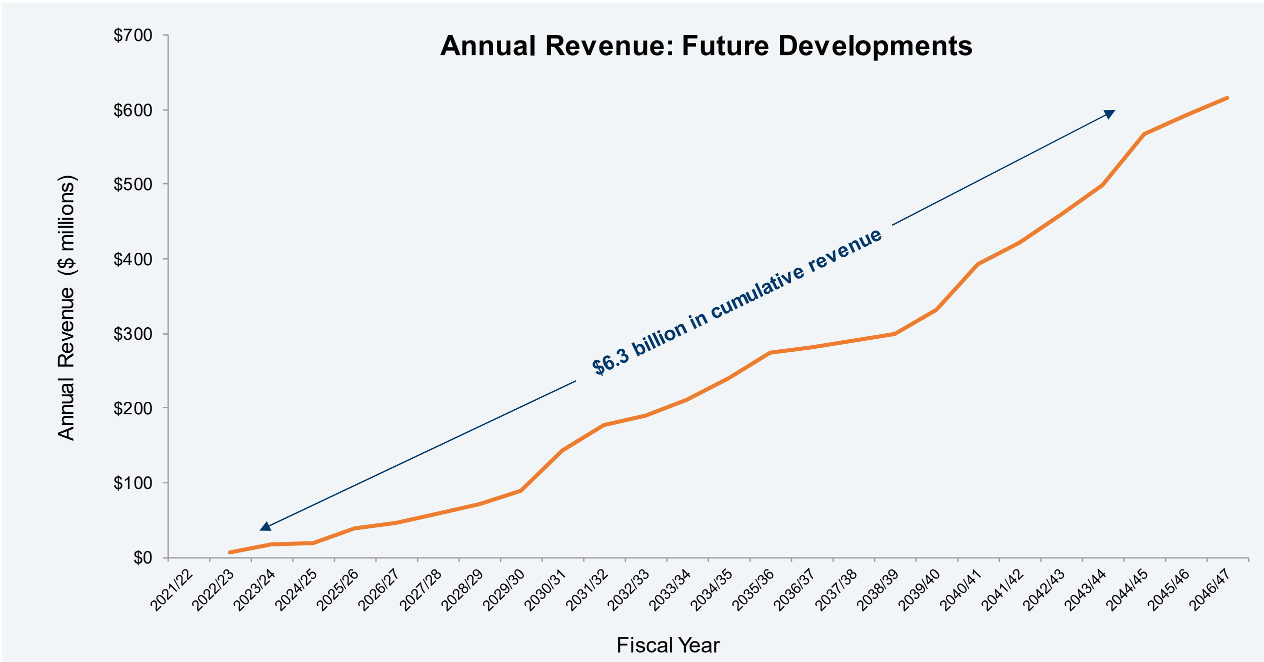
Shaded bars represent recessionary years. The timing of the recessions modeled are based on results of Cushman & Wakefield's 2017 report, indicating recessions every seven years. However, due to the severity and rapidity of the recession in 2020 combined with the shape of the recovery, federal stimulus monies provided to New York City and State, and general resiliency of New York City, the recessions modeled have been delayed two years.

Revenue Summary

In total, the projects currently under construction (exclusive of the three office projects detailed at the beginning of this chapter and accounted for in Chapter 5) and those which are projected to be completed in the future will generate total revenue of approximately $6.3 billion over the forecast period from fiscal year 2022 through fiscal year 2047. This revenue projection is detailed in the following table and chart:

HYIC Revenue Summary
Future Revenue

	PILOT	TEP Residential	TEP Hotel & Other	Total
FY 2022	-	-	-	-
FY 2023	-	2,412,540	4,670,758	7,083,298
FY 2024	-	11,964,116	4,787,527	16,751,643
FY 2025	-	13,447,237	5,943,670	19,390,907
FY 2026	-	27,151,977	10,933,047	38,085,023
FY 2027	-	33,083,528	13,417,470	46,500,998
FY 2028	-	44,384,021	13,752,907	58,136,928
FY 2029	-	57,378,514	14,503,819	71,882,333
FY 2030	-	73,845,440	15,287,837	89,133,277
FY 2031	35,116,397	90,890,875	16,106,313	142,113,585
FY 2032	54,083,296	105,548,824	16,960,628	176,592,748
FY 2033	64,336,257	108,372,170	17,852,238	190,560,665
FY 2034	81,035,798	111,308,450	18,782,613	211,126,861
FY 2035	105,255,025	114,362,180	19,753,320	239,370,526
FY 2036	135,824,143	117,538,060	20,247,153	273,609,357
FY 2037	140,223,836	120,840,976	20,753,332	281,818,144
FY 2038	144,686,801	124,276,008	21,817,218	290,780,026
FY 2039	149,173,006	127,848,441	22,926,913	299,948,360
FY 2040	175,760,729	131,563,771	24,084,259	331,408,759
FY 2041	232,197,541	135,427,715	25,232,090	392,857,345
FY 2042	255,559,059	139,446,216	25,862,892	420,868,167
FY 2043	288,521,118	143,625,458	26,509,464	458,656,040
FY 2044	323,392,034	147,971,869	27,172,201	498,536,104
FY 2045	387,303,645	152,492,137	27,851,506	567,647,287
FY 2046	405,721,270	157,193,215	28,547,794	591,462,279
FY 2047	424,826,479	162,082,336	29,261,489	616,170,304
Total from FY 2022 to FY 2047	**3,403,016,431**	**2,454,456,073**	**473,018,458**	**6,330,490,962**


Annual Revenue: Future Developments
$6.3 billion in cumulative revenue
Annual Revenue ($ millions)
$0
$100
$200
$300
$400
$500
$600
$700
2021/22
2022/23
2023/24
2024/25
2025/26
2026/27
2027/28
2028/29
2029/30
2030/31
2031/32
2032/33
2033/34
2034/35
2035/36
2036/37
2037/38
2038/39
2039/40
2040/41
2041/42
2042/43
2043/44
2044/45
2045/46
2046/47
Fiscal Year

Chapter 7 - Nonrecurring Revenues

Introduction

As detailed in the 2017 report, additional revenues associated with the construction phase of development are expected to continue to flow to Hudson Yards Infrastructure Corporation (HYIC). The sources of these revenues are one-time payments from developers to increase the maximum square footage allowed on qualified sites, and a Payment In-Lieu of Mortgage-Recording Tax (PILOMRT) associated with the financing of construction. As HY continues to be developed, it is expected that these mechanisms would generate additional non-recurring revenues to HYIC.

This chapter relied on information provided by the Hudson Yards Development Corporation (HYDC) and the New York City Office of Management & Budget (OMB) regarding all revenue forecasts, the available District Improvement Bonus (DIB), and overall development site densities.

Transfer Mechanisms

Two mechanisms were established in the 2005 rezoning to enable developers to achieve the maximum development envelope on certain sites within the district, including most of the large sites originally considered for office development.

- DIB – is a floor area ratio (FAR) bonus that can be obtained, up to a predetermined limit for each site, through payments to HYIC[1].
- ERY TDRs - can be purchased after the maximum DIB has been obtained on designated receiving sites (the eight blocks north of West 33rd Street between Tenth and Eleventh Avenues within the Large Scale Plan Area[2]) to achieve the maximum FAR on these sites[3].

The maximum density for each development site is defined in the Special Hudson Yards District zoning text, which establishes a base FAR for each site and the mechanisms for increasing FAR sequentially through the DIB and purchase of ERY TDRs[4].

DIB

Large areas of the district, including areas zoned for both commercial and residential uses, are eligible for the DIB. The extent of the areas where the DIB applies is illustrated in Exhibit 7-1. The area is roughly bound by West 41st Street to the north, Eighth Avenue to the east, West 30th Street to the south, and Eleventh Avenue to the west. The DIB has been utilized to increase the FAR of developments such as One Manhattan West (office), and 555 Tenth Avenue (residential), among other buildings as shown in Exhibit 7-3.

ERY Transfers

As detailed in Exhibit 7-1, ERY TDRs were available in the area bound by West 41st Street to the north, Hudson Boulevard Park and Tenth Avenue to the east, West 33rd Street to the south, and Eleventh Avenue to the west. However, as of February 2017, all of the ERY TDRs dedicated to the HYIC had been purchased.

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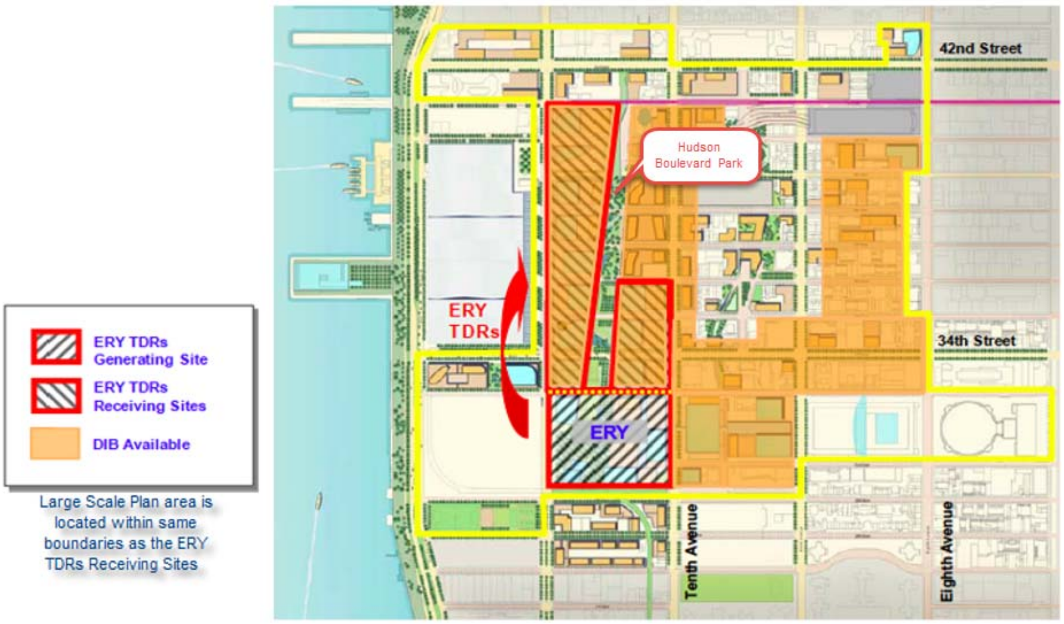
[1] NYC Zoning Resolution section 93-31

[2] As defined in the New York City Zoning Resolution (Zoning Resolution), Section 93-03, Sub-Area A of the Special Hudson Yards District - generally the area is bound by West 30th Street, Eleventh Avenue, West 41st Street, Hudson Boulevard Park, and West 36th Street and Tenth Avenue

[3] NYC Zoning Resolution section 93-21 Floor Area Regulations in the Large-Scale Plan Sub-district A

[4] Refer to the New York City Zoning Resolution, Article IX - Special Purpose Districts, Chapter 3. Special Hudson Yards District, for a detailed discussion of zoning and air rights transfer mechanisms.

Exhibit 7-1. DIB and ERY TDRs Generating and Receiving Areas in the Hudson Yards



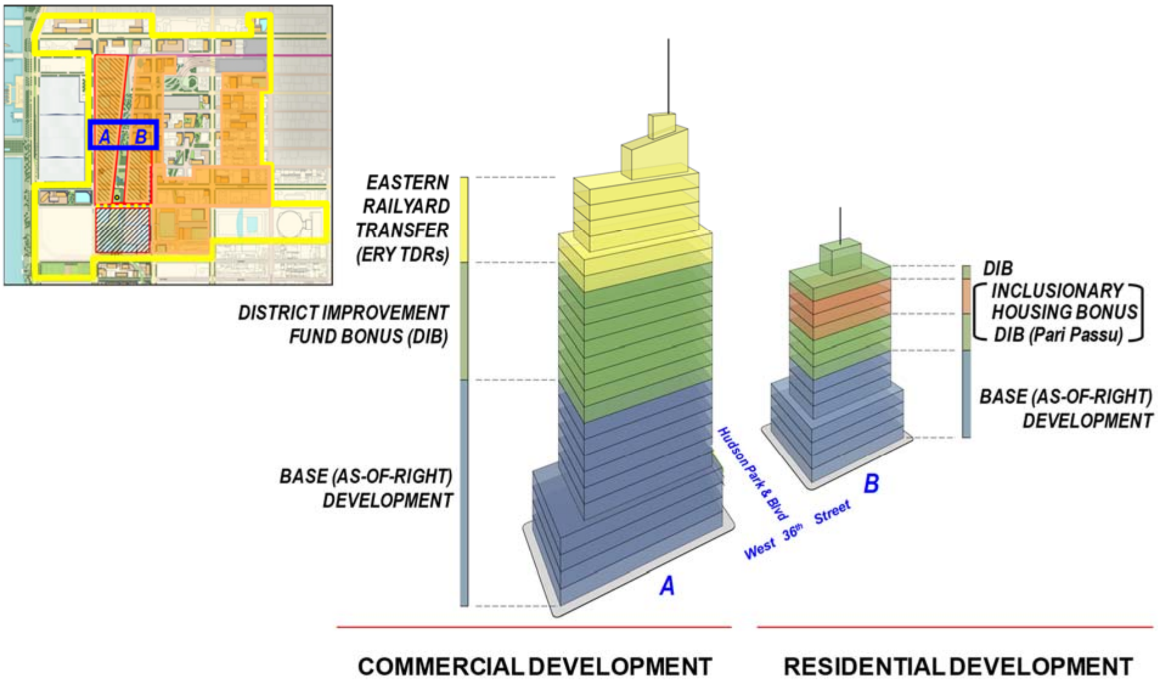
Source: Hudson Yards Development Corporation

Each site within the Large Scale Plan area and the adjacent medium density area along Tenth Avenue from West 33rd to West 41st Streets is governed by a zoning control regime that provides for a "stack" of development rights that must be obtained in a prescribed order. The "stack" is illustrated in Exhibit 7-2. On the sites that are predominantly zoned for commercial use (site A in Exhibit 7-2), the owner/developer may build as-of-right to a base FAR of 10.0, then may obtain additional development rights through payments pursuant to the DIB up to 18.0 FAR, and finally may reach the maximum of 20.0 to 33.0 FAR, depending on the site, through purchase of ERY TDRs.

On the sites that are zoned predominantly for residential use (site B in Exhibit 7-2), the owner/developer may build as-of-right to a predetermined base FAR (generally 6.5 FAR), then may increase the site's density through payments pursuant to the DIB, and must also acquire an equivalent amount of square footage through the City's Inclusionary Housing Bonus (IHB) program[5]. No revenue is generated by developers in satisfying IHB requirements to increase a site's FAR. On certain sites, additional square footage may be acquired through the DIB alone, to achieve a maximum FAR of 13.0 to 15.0 depending on the site.

[5] Per Hudson Yards Development Corporation, the Inclusionary Housing Bonus (IHB) is available on selected sites and provides developers with additional FAR in exchange for the creation of affordable housing - the Hudson Yards IHB program allows additional FAR through a combination of the DIB and IHB Program; maximum allowable FAR through the IHB Program on each site is established by the zoning resolution.

Exhibit 7-2. Illustration of Mechanisms to Increase Density (ERY TDRs, DIB, and IHB) in HY



Source: Hudson Yards Development Corporation

Owners within the Large Scale Plan and along Tenth Avenue may alternatively obtain the density increase otherwise achievable through the DIB by purchase of development rights from private property owners within the Phase 2 Hudson Boulevard Park[6]. The area is estimated to account for approximately 850,000 square feet that would otherwise be required to be obtained from the DIB. For the purpose of estimating the likely DIB revenues to HYIC, it is conservatively assumed that all development rights associated with the Phase 2 Area will be utilized, thus reducing by an equivalent amount required DIB square footage, and thus revenues flowing to HYIC.

DIB Utilization

In the 2011 report, it was estimated that developers would require approximately 6.6 million square feet of additional development rights pursuant to the DIB to complete the projected development in HY by 2047. During the subsequent years, HY was developed consistent with this analysis, as developers have generally utilized the full DIB available to their sites.

As exhibited in Exhibit 7-3, developers have purchased 4.9 million square feet of DIB rights as of September 2021, validating the market acceptance of the DIB mechanism.

[6] See Sections 93-32 and 93-33 in the New York City Zoning Resolution, Article IX. Special Purpose Districts, Chapter 3 - Special Hudson Yards District for the zoning text defining the Phase 2 Hudson Park and Boulevard (now known as Hudson Boulevard Park) development rights transfer process

Exhibit 7-3. Hudson Yards DIB Amounts and Payments, 2005 -2021

Applicant	Address	DIB Sqft	DIB Rate	Contribution	Month/Year
Unigroup Hotel LLC	326-332 W 40th	39,500	$100.00	$3,950,000	Sep-05
M & R Hotel Times Sq LLC	305 W 39th	2,576	100.00	257,600	Dec-05
Midtown West A LLC	455 W 37th	69,125	100.00	6,912,500	Jun-06
Metro Eleven Hotel LLC	337 W. 39th	27,982	106.48	2,979,502	Apr-07
Metro Eleven Hotel LLC	339 W. 39th	32,058	106.48	3,413,557	Apr-07
M & R Hotel 343 West LLC	343 W. 39th	30,060	106.48	3,200,789	Apr-07
West 38th Street LLC	310-328 38th (in SGCD)	123,438	106.48	13,143,625	Jun-07
Midtown West B LLC	505 W. 37th St.	168,054	106.48	17,894,390	Jun-07
Brisam Times Sq. LLC	309-13 W. 39th	59,250	106.48	6,308,940	Jun-07
RS 308 West 40 LLC	308 W. 40th	19,750	106.48	2,102,980	Jun-07
34-10 Development LLC	461-469 W. 34th	30,859	106.48	3,285,907	Jun-07
Mehta Family LLC	334 W. 40th	52,669	106.48	5,608,225	Jun-07
342 Property LLC	342 W. 40th St.	26,333	109.36	2,879,816	Dec-07
325 West 33rd Street Partners, LLC	325 W. 33rd St.	22,219	109.36	2,429,843	Mar-08
SBCO - NYC Nominee, LLC	307-311 W. 37th	14,813	109.36	1,619,895	Jun-08
Tower 37 LLC	350 W. 37th	39,088	114.83	4,488,418	Jul-08
Glenwood	330 W. 39th Street	89,076	114.47	4,634,807	Dec-10
Albanese Org.	312-318 W. 37th	19,948	118.59	2,365,574	Nov-11
Optima Real Estate	333 W. 38th St.	4,938	118.59	585,538	Mar-12
Landmark Realty LLC	321-325 W. 35th	10,579	120.61	1,275,885	Feb-13
Landmark Realty LLC	320-328 W. 36th	16,458	120.61	1,984,961	Feb-13
310 Group, LLC	310-312 W. 40th St.	39,500	120.61	4,764,095	Jul-13
37-11 Development, LLC	440-442 10th Ave.	14,802	122.78	1,817,390	Feb-14
H 8th Ave. Assoc.	585 8th Ave.	4,938	122.78	606,226	Mar-14
SNRP 37 West LLC	326-330 W. 37th	14,813	122.78	1,818,679	May-14
10th Ave. YYY, LLC	444 10th Ave.	14,826	122.78	1,820,336	Jun-14
HKONY West 36 LLC	337 W. 36th St	4,938	122.78	606,226	Jul-14
One Hudson Yards Owner LLC	380 11th Ave.	320,127	125.36	40,131,164	Dec-14
338 West LLC	338 W. 36th St.	24,688	125.36	3,094,825	Nov-14
HY 38 Owner LLC	509 W. 38th St.	79,920	125.36	10,018,740	Mar-15
BOP West 31st St. LLC	371 9th Ave./401-409 9th Ave.	740,348	125.36	92,810,025	Feb-15
NYHK West 40 LLC	346-354 W. 40th Street	79,000	125.36	9,903,440	Mar-15
Extell 4100 LLC	555 Tenth Ave.	243,446	125.36	30,518,391	Apr-15
Hudson 36 LLC	521, 517 and 513 W. 36th & 518 W. 37th	52,398	125.36	6,568,662	Jun-15
37-11 Development, LLC	450 11th Ave.	79,000	125.36	9,903,440	Jul-15
Panoramic Hudson LLC	537-545 W. 37th St.	138,250	125.36	17,331,020	Jul-15
451 10th Ave. LLC	451 10th Ave.	138,236	125.36	17,329,265	Jul-15
Due Milla Realty Group LLC	338 and 346 West 36 Street	4,938	125.49	619,607	Aug-16
H 317-319 LLC	317-319 West 35th St. (HY DIB)	9,875	126.75	1,251,656	Aug & Oct-16
338 West 39th Street LLC	338 West 39th Street	9,875	126.75	1,251,656	Feb-17
LOPM 38-39 LLC	350 West 39th Street	24,688	126.75	3,129,141	Feb-17
CBP 441 Ninth Avenue Owner, LLC	441 9th Avenue	118,921	126.75	15,073,194	Mar-17
50 HYMC Owner LLC	50 HY (501-523 West 33rd St)	553,000	128.78	71,215,340	Aug-17
509 W 34, LLC	66 Hudson Boulevard	5,475	128.78	705,104	Sep-17
Quadrum 38, LLC	351 West 38th Street	24,688	128.78	3,179,256	Nov-17
Site C L.L.C.	555 West 38th Street	278,187	128.78	35,824,875	Jul-18
Central Properties, LLC and ELK West 38th LLC	339-341 W. 38th Street	46,705	132.51	6,188,858	May-19
Arisa Realty Co., X LLC	432-434 West 31st Street	35,342	132.51	4,683,227	Jul-19
BOP Residential Market LLC et al	371 9th Ave. & 401-409 9th Ave.	845,784	134.63	113,867,837	Oct-19
Gould 40th Street, LLC	314-324 W 40th Street	17,500	134.63	2,356,025	Nov-19
Total		**4,862,975**		**$599,710,451**	

Source: Hudson Yards Infrastructure Corporation

DIB Availability

Based on the utilization of the DIB mechanism from 2005 through 2021 as detailed in Exhibit 7-3, it is anticipated that developers will continue to maximize use of the DIB. Consistent with the 2011 and 2017 forecasts, it is assumed that each development site will be built to the maximum allowed FAR. This assumption has been borne out by the office, residential, and hotel projects that have been constructed in HY since 2005, which have generally been built to the maximum allowed FAR.

In estimating the quantity of the DIB that will be demanded annually to facilitate development in HY, the same methodology was employed as in the 2011 and 2017 reports. The estimated total DIB of 8.3 million square feet[7] has been reduced by the utilized DIB of 4.9 million square feet, and the estimated Phase 2 Hudson Park and Boulevard rights of 850,000 square feet have been removed to show an estimated available DIB of 2.6 million square feet, rounded, as illustrated below.

Exhibit 7-4. Estimated DIB Square Feet Available

Estimated Total DIB SF Available 2006	8,291,481
DIB SF Used 2006-2021	(4,862,975)
SF from Phase 2 Hudson Park & Blvd. Area	(850,000)
Estimated Remaining DIB Available	2,578,506

Source: Hudson Yards Development Corporation, Hudson Yards Infrastructure Corporation, Cushman & Wakefield, Inc.

In estimating the annual demand for DIB square footage, a pro-rata share, based on the annual completions by building use (i.e., office, residential, hotel, and retail), is applied annually to the estimated remaining DIB. Further, as the DIB is required to be purchased prior to issuance of a building permit, the forecast assumes that the DIB is acquired at the onset of construction, or three years prior to projected office completion and two years earlier than forecasted residential and hotel completion. Exhibit 7-5 lists the DIB square footage throughout the forecast period.

[7] Source for initial DIB square footage for the district provided by Hudson Yards Development Corporation, illustrated by Cushman & Wakefield, Inc., in Exhibit 7-4 in the 2011 Report

Exhibit 7-5. Estimated DIB Utilization

Year	Estimated DIB Utilization (ZSF)*
2022	205,863
2023	78,394
2024	146,595
2025	161,908
2026	405,895
2027	291,508
2028	194,217
2029	81,487
2030	116,202
2031	140,775
2032	0
2033	0
2034	3,290
2035	105,062
2036	208,019
2037	65,131
2038	92,929
2039	93,049
2040	188,180
2041	0
2042	0
2043	0
2044	0
2045	0
2046	0
2047	0
Total	2,578,506

*ZSF= Zoning Square Feet

Shaded bars represent recessionary years

Source: Office of Management and Budget; Cushman & Wakefield, Inc.

Pricing

The zoning resolution established an initial DIB price of $100.00 per square foot for both residential and commercial development in January 2005. This is adjusted by action of the City Planning Commission each year at a rate equal to the percent change in the Consumer Price Index (CPI) for all urban consumers determined by the U.S. Bureau of Labor Statistics. As of September 2021, the DIB price reached $142.75 per square foot, as illustrated in Exhibit 7-6.

Exhibit 7-6. Hudson Yards Annual District Improvement Bonus (DIB) Pricing

Effective Date	Price	% Change
8/1/2005	$100.00	
8/1/2006	$106.48	6.48%
8/1/2007	$109.36	2.70%
8/1/2008	$114.83	5.00%
8/1/2009	$113.22	-1.40%
8/1/2010	$114.47	1.10%
8/1/2011	$118.59	3.60%
8/1/2012	$120.61	1.70%
8/1/2013	$122.78	1.80%
8/1/2014	$125.36	2.10%
8/1/2015	$125.49	0.10%
8/1/2016	$126.75	1.00%
8/1/2017	$128.78	1.60%
8/1/2018	$132.51	2.90%
8/1/2019	$134.63	1.60%
8/1/2020	$135.44	0.60%
8/1/2021	$142.75	5.40%

Source: NYC Department of City Planning

The DIB rate is estimated to increase by 2.0 percent annually through 2047. OMB calculated the resulting estimated revenues by multiplying the estimated annual DIB square footage by the inflated DIB payment amount in that year, as presented in Exhibit 7-7. In total, DIB revenues are forecast to be $430,665,626 through 2047, or 1.6 percent of the overall $27.1 billion of recurring and nonrecurring revenues.

Mortgage Recording Tax

In addition to the revenues from the sale of DIB, a payment in-lieu of mortgage-recording tax (PILOMRT) applied to certain commercial properties in the Hudson Yards district provides additional revenue to HYIC. The mortgage recording tax is imposed on the recording of real estate mortgages throughout New York City. For mortgages on commercial properties exceeding $500,000, the City levies a tax of 1.75 percent and an additional 1.05 percent is levied by the State. Pursuant to the New York City Industrial Development Agency (NYCIDA) Hudson Yards Uniform Tax Exemption Policy (UTEP) Amendment[8], HYIC receives the revenues otherwise payable under this tax[9] on projects that obtain benefits under that program, as a payments-in-lieu-of-taxes on the mortgage-recording tax (PILOMRT).

In order to estimate the PILOMRT due from future commercial projects, OMB calculated the estimated mortgage-recording tax by multiplying the projected square footage of commercial office and retail development for eligible projects by the assessor's estimated market value on a per square foot basis ($475.23 per square foot) and the 2.8 percent tax rate. The assessor's market value was estimated dividing the inflated stabilized taxes on a per square

[8] Amendment to Uniform Tax Exemption Policy (UTEP) for Hudson Yards Commercial Construction Projects, as adopted by the New York City Industrial Development Agency, August 8, 2006

[9] Per the New York City Office of Management and Budget, a change in NYS law eliminated the ability of the IDA to exempt the portion of the Mortgage Recording tax dedicated to the Metropolitan Commuter Transportation District. As a result HYIC receives 2.5% of the non-MTA properties. For properties belonging to the MTA, HYIC's share of the PILOMRT is 75%.

foot basis ($23.00 per square foot in fiscal year 2022), by the current Class 4 tax rate (10.755 percent), by the assessor equalization ratio (45 percent).

Eligible projects are those that can apply to the NYCIDA to take advantage of its UTEP program to obtain a PILOT agreement. The mortgage-recording tax is levied upon financing and not construction completions, and therefore recognized in the year construction starts. In estimating the portion of development projects that will be subject to mortgage financing, 50 percent of the assessor's estimated market value is assumed to be financed, which reflects current lending practices. This percentage also reflects the fact that some developers of the largest projects have access to alternative sources of funds other than traditional mortgage debt, such as the public equity markets and real estate and foreign investment funds.

Cumulative Nonrecurring Revenues

The cumulative revenues over the forecast period beginning in 2022 are $518 million. A summary of the nonrecurring revenues is shown on an annual basis in Exhibit 7-7.

Exhibit 7-7. Expected Revenues from DIB Payments and PILOMRT, 2022-2047

Nonrecurring Revenue	DIB	PILOMRT	Total
FY 2022	29,386,997	-	29,386,997
FY 2023	11,414,528	-	11,414,528
FY 2024	21,771,906	-	21,771,906
FY 2025	24,526,977	-	24,526,977
FY 2026	62,717,765	-	62,717,765
FY 2027	45,943,868	9,879,743	55,823,611
FY 2028	31,222,226	4,990,408	36,212,635
FY 2029	13,361,854	2,352,038	15,713,892
FY 2030	19,435,319	4,064,776	23,500,095
FY 2031	24,016,204	6,070,713	30,086,917
FY 2032	-	7,648,031	7,648,031
FY 2033	-	-	-
FY 2034	595,704	-	595,704
FY 2035	19,401,068	-	19,401,068
FY 2036	39,181,547	6,492,935	45,674,483
FY 2037	12,513,171	13,518,598	26,031,770
FY 2038	18,210,926	4,243,547	22,454,473
FY 2039	18,599,053	6,575,481	25,174,534
FY 2040	38,366,512	6,814,383	45,180,895
FY 2041	-	14,263,568	14,263,568
FY 2042	-	-	-
FY 2043	-	-	-
FY 2044	-	-	-
FY 2045	-	-	-
FY 2046	-	-	-
FY 2047	-	-	-
Total from FY 2022 to FY 2047	**430,665,626**	**86,914,221**	**517,579,847**

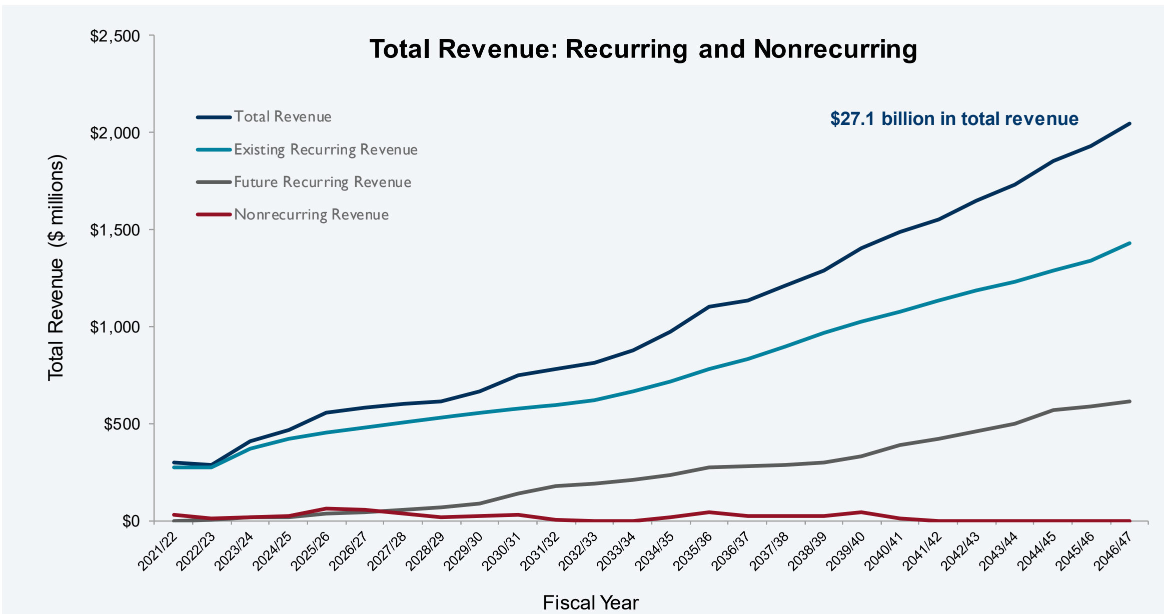
Source: New York City Office of Management and Budget, New York City Department of Finance, Hudson Yards Development Corporation, Cushman & Wakefield, Inc.

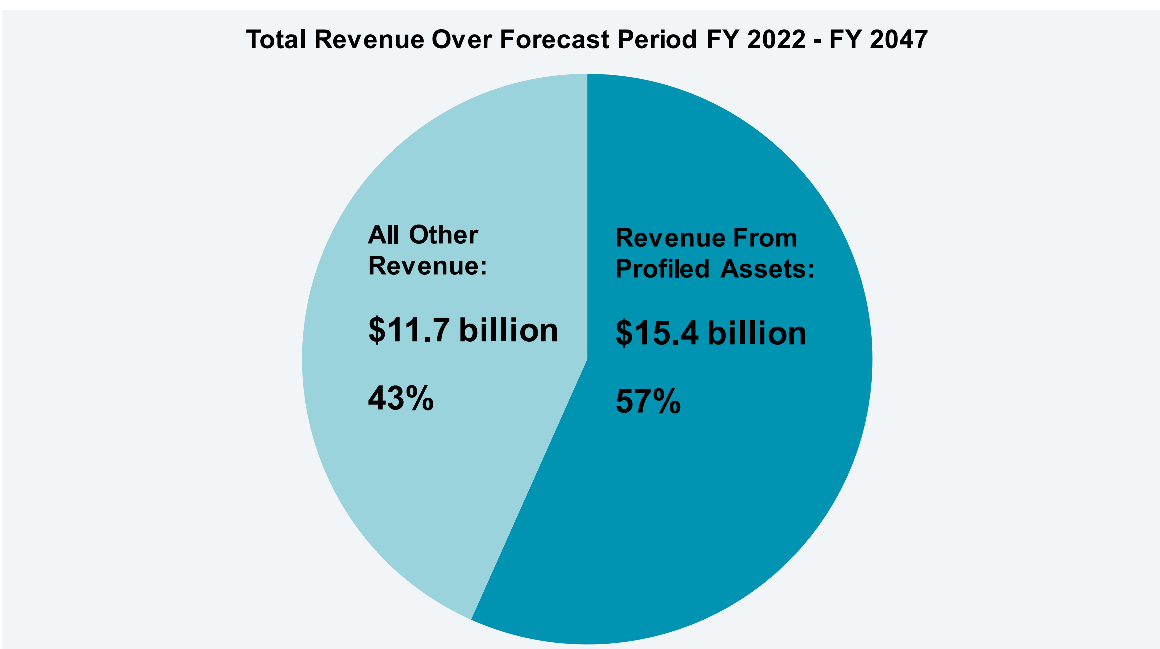
Cushman & Wakefield prepared a real estate analysis based upon data provided by third parties (which are relied upon and assumed to be reasonable and accurate) including tax methodology and calculations provided by New York City's Department of Finance, New York City's Office of Management and Budget, and the Hudson Yards Development Corporation. Cushman & Wakefield considers the revenue projections prepared by New York City's Office of Management and Budget to be reasonable, as shown in Exhibit 7-7.

The revenues are contingent on the realization of all the economic and real estate assumptions, analyses, existing zoning, and completion of key infrastructure, and are subject to limiting conditions that are sourced or detailed herein and in Chapter 1B Limiting Conditions.

Chapter 8 - Conclusion

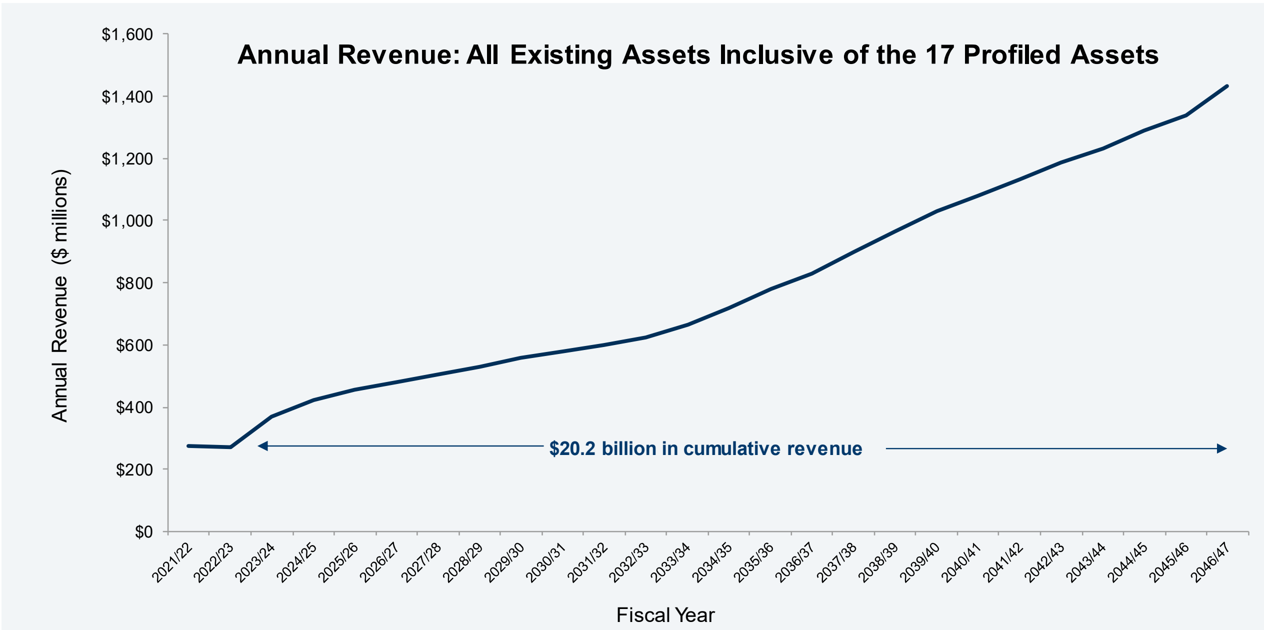
In total, the Hudson Yards Infrastructure District is projected to generate total recurring and nonrecurring revenue of approximately $27.1 billion over the forecast period from fiscal year 2022 through fiscal year 2047. The total revenue projection includes existing and future recurring revenues as well as nonrecurring revenue. Approximately 57 percent of the total revenue will be generated by the 17 assets that were profiled in Chapter 5. These profiled assets represent Class A or trophy quality office buildings, and top-tier residential, hotel, and retail developments. The office buildings feature a stable tenancy of high-quality companies with long-term leases. The total revenues projected are illustrated in the table and charts on the following pages:





	Total Revenue	Annual Chg.
FY 2022	302,935,363	-
FY 2023	290,907,921	-4.0%
FY 2024	409,743,913	40.9%
FY 2025	466,037,289	13.7%
FY 2026	555,659,928	19.2%
FY 2027	582,170,808	4.8%
FY 2028	599,767,464	3.0%
FY 2029	617,422,990	2.9%
FY 2030	669,506,204	8.4%
FY 2031	750,199,401	12.1%
FY 2032	781,988,000	4.2%
FY 2033	814,346,318	4.1%
FY 2034	877,756,692	7.8%
FY 2035	975,974,485	11.2%
FY 2036	1,101,336,817	12.8%
FY 2037	1,138,582,135	3.4%
FY 2038	1,211,006,653	6.4%
FY 2039	1,290,957,572	6.6%
FY 2040	1,406,047,651	8.9%
FY 2041	1,486,981,083	5.8%
FY 2042	1,553,425,751	4.5%
FY 2043	1,646,285,745	6.0%
FY 2044	1,731,642,325	5.2%
FY 2045	1,855,445,206	7.1%
FY 2046	1,930,072,901	4.0%
FY 2047	2,048,128,285	6.1%
Total from FY 2022 to FY 2047	**27,094,328,900**	

For all of the existing assets within Hudson Yards, inclusive of the assets profiled in Chapter 5, the total revenue is projected to be approximately $20.2 billion. This revenue projection is detailed in the following chart and table:

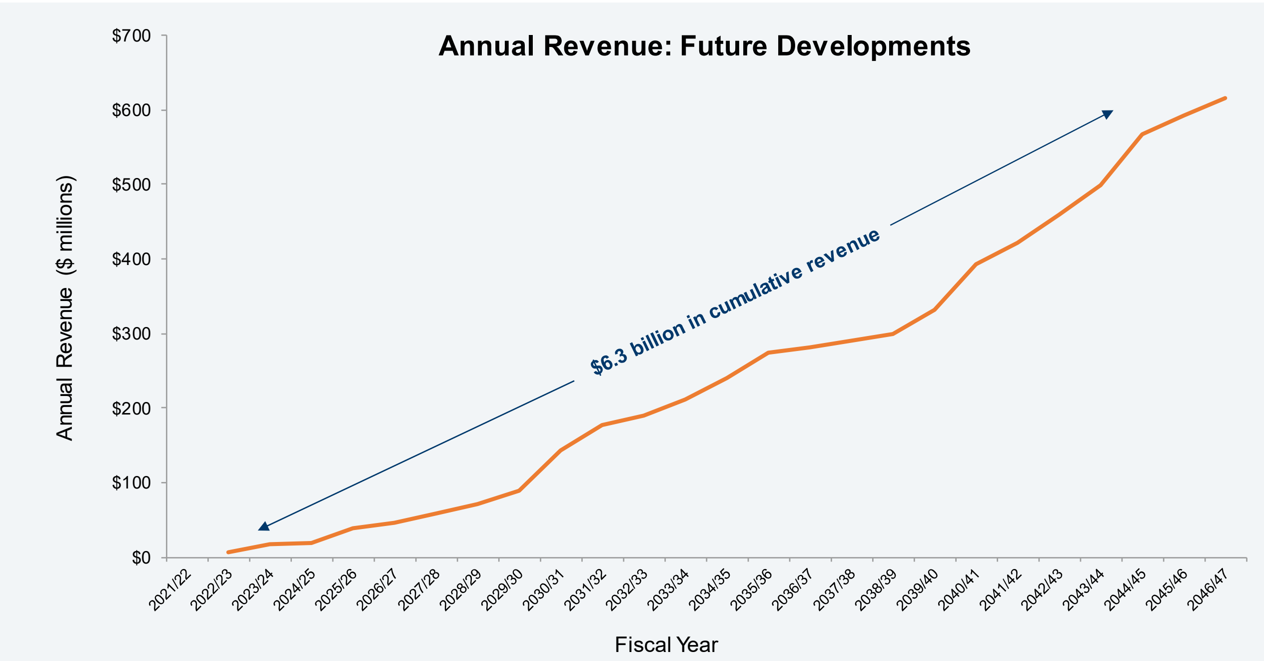


HYIC Revenue Summary

Existing Revenue Inclusive of the 17 Profiled Assets

	PILOT	TEP Residential	TEP Hotel & Other	Total
FY 2022	136,212,312	45,711,199	91,624,855	273,548,366
FY 2023	134,956,331	50,295,424	87,158,340	272,410,095
FY 2024	219,167,742	60,028,215	92,024,407	371,220,365
FY 2025	259,523,873	65,020,546	97,574,987	422,119,406
FY 2026	274,689,262	76,067,236	104,100,642	454,857,140
FY 2027	285,523,706	83,539,623	110,782,871	479,846,200
FY 2028	294,282,267	96,110,893	115,024,742	505,417,902
FY 2029	303,110,981	104,804,831	121,910,954	529,826,765
FY 2030	312,204,565	119,072,254	125,596,014	556,872,832
FY 2031	321,570,966	126,328,783	130,099,151	577,998,900
FY 2032	331,218,368	132,520,997	134,007,857	597,747,222
FY 2033	344,261,799	141,549,380	137,974,475	623,785,653
FY 2034	359,149,362	164,822,933	142,061,832	666,034,127
FY 2035	398,856,979	172,072,209	146,273,703	717,202,891
FY 2036	433,352,891	198,086,104	150,613,982	782,052,977
FY 2037	469,774,997	205,870,536	155,086,689	830,732,222
FY 2038	503,199,217	234,876,968	159,695,970	897,772,154
FY 2039	557,233,698	244,154,872	164,446,108	965,834,678
FY 2040	593,403,863	266,712,614	169,341,520	1,029,457,997
FY 2041	628,188,626	277,284,777	174,386,766	1,079,860,169
FY 2042	664,691,205	288,279,826	179,586,553	1,132,557,584
FY 2043	702,969,288	299,714,677	184,945,740	1,187,629,705
FY 2044	731,029,961	311,606,922	190,469,339	1,233,106,221
FY 2045	756,616,009	335,019,384	196,162,526	1,287,797,919
FY 2046	783,097,569	353,482,409	202,030,644	1,338,610,622
FY 2047	810,505,984	413,372,789	208,079,207	1,431,957,981
Total from FY 2022 to FY 2047	**11,608,791,821**	**4,866,406,399**	**3,771,059,873**	**20,246,258,092**

In total, the projects currently under construction (exclusive of the three office projects identified in Chapter 5) and those which are projected to be completed in the future will generate total revenue of approximately $6.3 billion over the forecast period from fiscal year 2022 through fiscal year 2047. This revenue projection is detailed in the following chart and table:



HYIC Revenue Summary
Future Revenue

	PILOT	TEP Residential	TEP Hotel & Other	Total
FY 2022	-	-	-	-
FY 2023	-	2,412,540	4,670,758	7,083,298
FY 2024	-	11,964,116	4,787,527	16,751,643
FY 2025	-	13,447,237	5,943,670	19,390,907
FY 2026	-	27,151,977	10,933,047	38,085,023
FY 2027	-	33,083,528	13,417,470	46,500,998
FY 2028	-	44,384,021	13,752,907	58,136,928
FY 2029	-	57,378,514	14,503,819	71,882,333
FY 2030	-	73,845,440	15,287,837	89,133,277
FY 2031	35,116,397	90,890,875	16,106,313	142,113,585
FY 2032	54,083,296	105,548,824	16,960,628	176,592,748
FY 2033	64,336,257	108,372,170	17,852,238	190,560,665
FY 2034	81,035,798	111,308,450	18,782,613	211,126,861
FY 2035	105,255,025	114,362,180	19,753,320	239,370,526
FY 2036	135,824,143	117,538,060	20,247,153	273,609,357
FY 2037	140,223,836	120,840,976	20,753,332	281,818,144
FY 2038	144,686,801	124,276,008	21,817,218	290,780,026
FY 2039	149,173,006	127,848,441	22,926,913	299,948,360
FY 2040	175,760,729	131,563,771	24,084,259	331,408,759
FY 2041	232,197,541	135,427,715	25,232,090	392,857,345
FY 2042	255,559,059	139,446,216	25,862,892	420,868,167
FY 2043	288,521,118	143,625,458	26,509,464	458,656,040
FY 2044	323,392,034	147,971,869	27,172,201	498,536,104
FY 2045	387,303,645	152,492,137	27,851,506	567,647,287
FY 2046	405,721,270	157,193,215	28,547,794	591,462,279
FY 2047	424,826,479	162,082,336	29,261,489	616,170,304
Total from FY 2022 to FY 2047	**3,403,016,431**	**2,454,456,073**	**473,018,458**	**6,330,490,962**

The total recurring revenue is projected to be approximately $26.6 billion over the forecast period from fiscal year 2022 through fiscal year 2047. This revenue projection is detailed in the following table:

Total Recurring Revenues

	PILOT	TEP Residential	TEP Hotel & Other	Total
FY 2022	136,212,312	45,711,199	91,624,855	273,548,366
FY 2023	134,956,331	52,707,964	91,829,098	279,493,393
FY 2024	219,167,742	71,992,330	96,811,934	387,972,007
FY 2025	259,523,873	78,467,783	103,518,657	441,510,312
FY 2026	274,689,262	103,219,212	115,033,689	492,942,163
FY 2027	285,523,706	116,623,151	124,200,341	526,347,198
FY 2028	294,282,267	140,494,915	128,777,648	563,554,829
FY 2029	303,110,981	162,183,345	136,414,772	601,709,098
FY 2030	312,204,565	192,917,693	140,883,851	646,006,109
FY 2031	356,687,362	217,219,658	146,205,464	720,112,484
FY 2032	385,301,663	238,069,821	150,968,485	774,339,969
FY 2033	408,598,056	249,921,550	155,826,713	814,346,318
FY 2034	440,185,160	276,131,383	160,844,445	877,160,988
FY 2035	504,112,003	286,434,390	166,027,023	956,573,416
FY 2036	569,177,034	315,624,165	170,861,135	1,055,662,334
FY 2037	609,998,833	326,711,512	175,840,021	1,112,550,365
FY 2038	647,886,017	359,152,975	181,513,188	1,188,552,181
FY 2039	706,406,704	372,003,313	187,373,021	1,265,783,038
FY 2040	769,164,592	398,276,385	193,425,779	1,360,866,756
FY 2041	860,386,167	412,712,492	199,618,856	1,472,717,515
FY 2042	920,250,263	427,726,042	205,449,446	1,553,425,751
FY 2043	991,490,406	443,340,135	211,455,204	1,646,285,745
FY 2044	1,054,421,995	459,578,791	217,641,540	1,731,642,325
FY 2045	1,143,919,654	487,511,520	224,014,032	1,855,445,206
FY 2046	1,188,818,839	510,675,624	230,578,438	1,930,072,901
FY 2047	1,235,332,464	575,455,125	237,340,696	2,048,128,285
Total from FY 2022 to FY 2047	**15,011,808,252**	**7,320,862,472**	**4,244,078,330**	**26,576,749,054**

The total nonrecurring revenue is projected to be approximately $518 million over the forecast period from fiscal year 2022 through fiscal year 2047. This revenue projection is detailed in the following table:

Nonrecurring Revenue

	DIB	PILOMRT	Total
FY 2022	29,386,997	-	29,386,997
FY 2023	11,414,528	-	11,414,528
FY 2024	21,771,906	-	21,771,906
FY 2025	24,526,977	-	24,526,977
FY 2026	62,717,765	-	62,717,765
FY 2027	45,943,868	9,879,743	55,823,611
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FY 2031	24,016,204	6,070,713	30,086,917
FY 2032	-	7,648,031	7,648,031
FY 2033	-	-	-
FY 2034	595,704	-	595,704
FY 2035	19,401,068	-	19,401,068
FY 2036	39,181,547	6,492,935	45,674,483
FY 2037	12,513,171	13,518,598	26,031,770
FY 2038	18,210,926	4,243,547	22,454,473
FY 2039	18,599,053	6,575,481	25,174,534
FY 2040	38,366,512	6,814,383	45,180,895
FY 2041	-	14,263,568	14,263,568
FY 2042	-	-	-
FY 2043	-	-	-
FY 2044	-	-	-
FY 2045	-	-	-
FY 2046	-	-	-
FY 2047	-	-	-
Total from FY 2022 to FY 2047	**430,665,626**	**86,914,221**	**517,579,847**

Cushman & Wakefield prepared this development and revenue analysis based upon data provided by New York City's Department of Finance, New York City's Office of Management and Budget, and the Hudson Yards Development Corporation. Cushman & Wakefield considers the revenue projections prepared by New York City's Office of Management and Budget to be reasonable.

The revenues are contingent on the realization of all the economic and real estate assumptions, analyses, existing zoning, and completion of key infrastructure, and are subject to limiting conditions that are sourced or detailed herein and in Chapter 1B Limiting Conditions.

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APPENDIX F

FINANCIAL STATEMENTS OF THE CORPORATION

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Hudson Yards Infrastructure Corporation

Hudson Yards
Infrastructure Corporation

(A Component Unit of The City of New York)

Financial Statements
(Together with Independent Auditors' Report)

June 30, 2021 and 2020

MARKS PANETH

ACCOUNTANTS & ADVISORS

HUDSON YARDS INFRASTRUCTURE CORPORATION
(A Component Unit of The City of New York)

FINANCIAL STATEMENTS
(Together with Independent Auditors' Report)

JUNE 30, 2021 AND 2020

CONTENTS

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MARKS PANETH
ACCOUNTANTS & ADVISORS

INDEPENDENT AUDITORS' REPORT

To the Members of the Board of Directors of
Hudson Yards Infrastructure Corporation

We have audited the accompanying financial statements of the governmental activities of Hudson Yards Infrastructure Corporation ("HYIC"), a component unit of The City of New York, as of and for the years ended June 30, 2021 and 2020, which collectively comprise HYIC's basic financial statements as listed in the table of contents, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities of Hudson Yards Infrastructure Corporation as of June 30, 2021 and 2020, and the respective changes in financial position thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matter – Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 through 12 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Marks Paneth LLP

New York, NY
September 20, 2021

OVERVIEW OF THE FINANCIAL STATEMENTS

The following is a narrative overview and analysis of the financial activities of the Hudson Yards Infrastructure Corporation ("HYIC") as of June 30, 2021 and 2020, and for the years then ended. It should be read in conjunction with HYIC's government-wide financial statements, governmental funds financial statements and the notes to the financial statements. The financial statements consist of four parts: (1) management's discussion and analysis (this section); (2) the government-wide financial statements; (3) the governmental funds financial statements; and (4) the notes to the financial statements.

The government-wide financial statements, which include the statements of net position (deficit) and the statements of activities, are presented to display information about HYIC as a whole, in accordance with Governmental Accounting Standards Board ("GASB") standards. This is to provide the reader with a broad overview of HYIC's finances. The government-wide financial statements are prepared using the economic resources measurement focus and the accrual basis of accounting. Accordingly, revenue is recognized when earned and expenses are recorded when a liability is incurred, regardless of the timing of cash flows.

HYIC's governmental funds financial statements are presented using the current financial resources measurement focus and the modified accrual basis of accounting, in which revenue is recognized when it becomes susceptible to accrual; that is, when it becomes both measurable and available to finance expenditures in the current fiscal period. Expenditures are recognized when the related liability is incurred, except for principal and interest on bonds payable.

The reconciliations of the governmental funds balance sheets to the statements of net position (deficit) and reconciliations of the governmental funds statements of revenues, expenditures and changes in fund balances to the statements of activities are presented to assist the reader in understanding the differences between government-wide and governmental funds financial statements.

ORGANIZATIONAL OVERVIEW

HYIC's purpose is the financing of certain infrastructure improvements in the Hudson Yards area on the West Side of Manhattan (the "Project"). HYIC does not engage in the development directly, but finances the development which is spearheaded by the Hudson Yards Development Corporation ("HYDC") and carried out by existing public entities. The Project is in an area generally bounded by Seventh and Eighth Avenues on the east, West 43rd Street on the north, Twelfth Avenue on the west and West 29th and 30th Streets on the south (the "Project Area"). The Project consists of: (1) design and construction of an extension of the No. 7 Subway from Seventh Avenue and 41st Street to Eleventh Avenue and West 34th Street (the "Subway Extension"), (2) acquisition from the Metropolitan Transportation Authority ("MTA") of certain transferable development rights ("TDRs") over its rail yards between Tenth and Eleventh Avenues and between West 30th and West 33rd Streets ("Eastern Rail Yards" or "ERY"), (3) construction of a system of parks, public open spaces, and streets in the Project Area ("Public Amenities") and (4) property acquisition for the Project. The Subway Extension began service in September 2015 and the construction of a portion of Hudson Park and Boulevard was completed and opened to the public in August 2015.

ORGANIZATIONAL OVERVIEW (continued)

HYIC fulfills its purpose through borrowing to finance the Project and the collection of revenues to support its operations and service its debt. HYIC revenues include: (1) Interest Support Payments ("ISP") made by The City of New York (the "City") under the terms of the Amended and Restated Support and Development Agreement and the Additional Borrowing Hudson Yards Support Agreement, (together the "Agreement") that obligates the City to pay to HYIC, subject to annual appropriation, ISPs on up to $3.4 billion of HYIC debt in an amount equal to the difference between the amount of funds available to HYIC to pay interest on such debt and the amount of interest due on such debt; (2) payments in lieu of real estate taxes ("PILOT") that have been assigned to HYIC under agreements with the New York City Industrial Development Agency ("IDA"), the City, and the MTA, and that are to be made in accordance with agreements between developers and the IDA and others ("PILOT Agreements"); (3) Tax Equivalency Payments ("TEP") made by the City under the terms of the Agreement, which obligates the City to pay to HYIC, subject to annual appropriation, the amount of real property taxes collected by the City on new development (including substantial rehabilitation of existing buildings) in the Project Area; (4) District Improvement Bonuses ("DIB") paid by private developers in exchange for the right to create additional density in the Project Area; and (5) payments in lieu of the mortgage recording tax ("PILOMRT") required to be made by private developers entering into PILOT Agreements. PILOT Agreements that are entered into by developers are done so because PILOT payments during the first 19 years are substantially lower than the real estate taxes that would otherwise be due. Application of revenues, transfers of funds and payments are done in accordance with the terms of the Trust Indenture between HYIC and US Bank dated December 1, 2006, as amended (the "First Indenture"), the Second Trust Indenture dated May 1, 2017, (the "Second Indenture") and Third Supplemental Trust Indenture dated February 1, 2019 (the "Third Indenture"), collectively, the ("Indentures").

On December 21, 2006, HYIC issued its Fiscal 2007 Series A Senior Revenue Bonds ("FY07 Bonds") in the amount of $2 billion, to partially finance the Project. On October 26, 2011, HYIC issued its Fiscal 2012 Series A Senior Revenue Bonds ("FY12 Bonds") in the amount of $1 billion, to finance the Project. The FY12 Bonds are term bonds with semiannual interest payments beginning on February 15, 2012 and maturing on February 15, 2047.

On May 30, 2017, HYIC issued $2.1 billion Fiscal Year 2017 Series A Subordinate Bonds and $33.3 million Series B Subordinate Bonds (together known as "FY17 Bonds") under the Second Indenture. Proceeds of the FY17 Bonds were applied, with other available funds, to refund all of the FY07 Bonds and $391 million of the FY12 Bonds. This refinancing caused the remaining First Indenture Bonds to be amortized on a substantially level debt service basis to maturity in 2047 through annual sinking fund installments. Additionally, the refunding enabled HYIC to make a payment to the New York City Transitional Finance Authority ("NYC TFA") to defease a portion of its debt.

On February 1, 2019, HYIC entered into a Term Loan Agreement ("Loan") which presently provides for up to $200 million to finance additional infrastructure projects in the Project Area. As of June 30, 2021 and 2020, the Loan had an outstanding balance of $2.3 million and $545 thousand, respectively.

FINANCIAL HIGHLIGHTS AND OVERALL ANALYSIS—GOVERNMENT-WIDE FINANCIAL STATEMENTS (amounts in thousands, except as noted)

The following summarizes the activities of HYIC for the years ended June 30, 2021, 2020 and 2019:

	2021	2020	2019	Change 2021 vs 2020	Change 2020 vs 2019
Revenues:					
Program revenue	$ 288,180	$ 428,638	$ 253,525	$ (140,458)	$ 175,113
Gain on defeasance	967	-	-	967	-
Other revenue	(787)	11,382	11,410	(12,169)	(28)
Total revenues	288,360	440,020	264,935	(151,660)	175,085
Expenses:					
Project	8,403	(2,136)	34,371	10,539	(36,507)
Interest expenses	115,242	115,392	115,390	(150)	2
Payments to The City of New York	100,000	350,000	100,000	(250,000)	250,000
General and administrative	1,202	1,752	981	(550)	771
Total expenses	224,847	465,008	250,742	(240,161)	214,266
Change in net position	63,513	(24,988)	14,193	88,501	(39,181)
Net position (deficit) - beginning of year	(2,700,656)	(2,675,668)	(2,689,861)	(24,988)	14,193
Net position (deficit) - end of year	$ (2,637,143)	$ (2,700,656)	$ (2,675,668)	$ 63,513	$ (24,988)

Program revenue consists of recurring revenues of PILOT and TEP payments and non-recurring revenues of DIB and PILOMRT. These amounts fluctuate each year as the payments are mainly based on developers entering into new agreements, property assessments, and construction completion. Other revenue is primarily composed of: 1) IDA fees that fluctuate based on IDA agreements entered into by developers, and 2) investment income which fluctuates based on the balance of cash holdings and interest rates. The negative amount for the year ended June 30, 2021 resulted from payment of accrued interest and premium on investments which exceeded all other revenue for the year. HYIC will offset the investment costs in the subsequent year upon maturity of the investment.

Due to a defeasance of FY12 Bonds in fiscal year 2021, an accounting gain on defeasance of $967 thousand, which represents the difference between the carrying value of the defeased bonds and the amount paid (using current resources) to defease the bonds, was reported as revenue (see Note 5).

Project expenses fluctuate each year based on the timing, progress of construction, and final close out of project expenses. In addition, settlements with condemnation claimants resulted in an $18 million reduction of accrued condemnation expenses, which gave rise to negative overall project expenses in fiscal year 2020 (see Note 5).

Payments to the City fluctuate each year depending on surplus funds available to transfer to the City in accordance with the Indentures.

FINANCIAL HIGHLIGHTS AND OVERALL ANALYSIS—GOVERNMENT-WIDE FINANCIAL STATEMENTS (amounts in thousands, except as noted) (continued)

The following summarizes HYIC's assets, liabilities and net position (deficit) as of June 30, 2021, 2020 and 2019:

	2021	2020	2019	Change 2021 vs 2020	Change 2020 vs 2019
Assets:					
Non-capital	$ 423,809	$ 418,543	$ 475,987	$ 5,266	$ (57,444)
Total assets	423,809	418,543	475,987	5,266	(57,444)
Liabilities:					
Current liabilities	96,302	66,656	52,974	29,646	13,682
Long-term liabilities	2,877,492	2,974,000	3,017,506	(96,508)	(43,506)
Total liabilities	2,973,794	3,040,656	3,070,480	(66,862)	(29,824)
Deferred inflows of resources:					
Prepaid PILOT	67,787	58,397	60,254	9,390	(1,857)
Unamortized deferred bond refunding costs	19,371	20,146	20,921	(775)	(775)
Total deferred inflows of resources	87,158	78,543	81,175	8,615	(2,632)
Net position (deficit):					
Restricted	-	29,379	26,211	(29,379)	3,168
Unrestricted	(2,637,143)	(2,730,035)	(2,701,879)	92,892	(28,156)
Total net position (deficit)	$ (2,637,143)	$ (2,700,656)	$ (2,675,668)	$ 63,513	$ (24,988)

Assets fluctuate each year depending on revenue collections retained by HYIC. The capital assets financed by HYIC are not owned by HYIC; therefore, they do not appear on the financial statements of HYIC (see Note 2).

The decrease in long-term liabilities in fiscal year 2021 was primarily due to the defeasance of $38.6 million FY12 Bonds and the shift of approximately $30 million of bonds previously reported as a long-term liability and now reported as a current liability in accordance with HYIC's maturity schedule. The decrease in long-term liabilities in fiscal years 2020 and 2019 was primarily due to the amortization of bond premium and a reduction of contingent liabilities.

PILOT payments received for assessments owed in the following fiscal years are treated as prepaid amounts and reported as deferred inflows of resources. The deferred bond refunding costs resulted from the bond refunding transaction and represents the difference between removing the carrying amount of the refunded FY07 Bonds and FY12 Bonds and recording the FY17 Bonds. Such amount declines each year as the amount is amortized over the life of the bonds.

The large negative unrestricted net position (deficit) balances at June 30, 2021, 2020 and 2019 were primarily due to the issuance of bonds that will be repaid from future revenues.

FINANCIAL HIGHLIGHTS AND OVERALL ANALYSIS—GOVERNMENTAL FUNDS FINANCIAL STATEMENTS (amounts in thousands, except as noted)

HYIC reports governmental activity using three funds: (1) a general fund ("GF"), (2) a debt service fund ("DSF"), and (3) a capital projects fund ("CPF").

The following summarizes the changes in the GF balances for the years ended June 30, 2021, 2020, and 2019:

	2021	2020	2019	Change 2021 vs 2020	Change 2020 vs 2019
Revenues:					
Program revenue	$ 779	$ -	$ 1,240	$ 779	$ (1,240)
Other revenue	(73)	6,617	13,816	(6,690)	(7,199)
Total revenues	706	6,617	15,056	(5,911)	(8,439)
Expenditures	101,202	351,752	100,981	(250,550)	250,771
Other financing sources	66,915	289,331	79,631	(222,416)	209,700
Net change in fund balances	(33,581)	(55,804)	(6,294)	22,223	(49,510)
Fund balance - beginning of year	148,577	204,381	210,675	(55,804)	(6,294)
Fund balance - end of year	$ 114,996	$ 148,577	$ 204,381	$ (33,581)	$ (55,804)

The amount of program revenue deposited in the GF was based on the difference between projected administrative expenditures and cash on hand needed to fund those expenditures. Other revenue is comprised of non-recurring application fees associated with IDA agreements entered into by developers and investment income. The negative amount for the year ended June 30, 2021 resulted from payment of accrued interest and premium on investments which exceeded all other revenue for the year. HYIC will offset the investment costs in the subsequent year upon maturity of the investment.

Operating expenditures in fiscal years 2021, 2020, and 2019 included payments of surplus revenues to the City of $100 million, $350 million, and $100 million, respectively. These amounts fluctuate, as previously discussed.

Other financing sources primarily consists of transfers of Second Indenture surplus funds from the DSF to the GF. These amounts fluctuate, as previously discussed.

FINANCIAL HIGHLIGHTS AND OVERALL ANALYSIS—GOVERNMENTAL FUNDS FINANCIAL STATEMENTS (amounts in thousands, except as noted) (continued)

The following summarizes the changes in the DSF balances for the years ended June 30, 2021, 2020 and 2019:

	2021	2020	2019	Change 2021 vs 2020	Change 2020 vs 2019
Revenues:					
Program revenue	$ 287,401	$ 428,638	$ 252,285	$ (141,237)	$ 176,353
Other revenue	(753)	3,925	4,388	(4,678)	(463)
Total revenues	286,648	432,563	256,673	(145,915)	175,890
Expenditures:					
Bond principal and interest	181,567	132,252	132,250	49,315	2
Other financing sources (uses)	(39,653)	(288,977)	(78,396)	249,324	(210,581)
Net change in fund balances	65,428	11,334	46,027	54,094	(34,693)
Fund balance - beginning of year	175,451	164,117	118,090	11,334	46,027
Fund balance - end of year	$ 240,879	$ 175,451	$ 164,117	$ 65,428	$ 11,334

Program revenue was greater in fiscal year 2020 when compared to fiscal years 2021 and 2019 due to increased collections, as previously discussed. The negative amount reported as other revenue for the year ended June 30, 2021, resulted from payment of accrued interest and premium on investments which exceeded all other revenue for the year. HYIC will offset the investment costs in the subsequent year upon maturity of the investment.

Expenditures during fiscal year 2021, 2020 and 2019 are comprised of bond principal and interest payments and the increase in fiscal year 2021 when compared to fiscal year 2020 and 2019 was due to a cash defeasance of $38.6 million.

Other financing sources (uses) mainly consist of transfers of Second Indenture surplus funds from the DSF to the GF, as previously discussed.

FINANCIAL HIGHLIGHTS AND OVERALL ANALYSIS—GOVERNMENTAL FUNDS FINANCIAL STATEMENTS (amounts in thousands, except as noted) (continued)

The following summarizes the changes in the CPF balances for the years ended June 30, 2021, 2020 and 2019:

	2021	2020	2019	Change 2021 vs 2020	Change 2020 vs 2019
Revenues	$ 39	$ 840	$ 2,030	$ (801)	$ (1,190)
Expenditures:					
Project costs	8,403	15,874	44,696	(7,471)	(28,822)
Other financing sources (uses)	(25,548)	191	(1,235)	(25,739)	1,426
Net change in fund balances	(33,912)	(14,843)	(43,901)	(19,069)	29,058
Fund balance - beginning of year	29,379	44,222	88,123	(14,843)	(43,901)
Fund balance - end of year	$ (4,533)	$ 29,379	$ 44,222	$ (33,912)	$ (14,843)

The CPF revenues are comprised of interest earnings.

Project expenditures fluctuate each year based on the timing and progress of construction.

The large decrease of other financing sources (uses) in fiscal year 2021 was due to the transfer of $28.1 million to the DSF for the defeasance of FY12 Bonds, as previously discussed, which was offset by $1.7 million of construction loan proceeds. Other financing sources (uses) during fiscal years 2020 and 2019 mainly reflect the transfer of interest collected on unspent bond proceeds from the CPF to the DSF, to be used to pay debt service, in accordance with the terms of the applicable Indentures.

The negative fund balance at fiscal year-end 2021 represents estimated project expenditures incurred that have not been paid. Upon receipt and verification of the invoice, the expenditures will be paid from loan proceeds when drawn.

The following summarizes the GF assets, liabilities, and fund balances as of June 30, 2021, 2020 and 2019:

	2021	2020	2019	Change 2021 vs 2020	Change 2020 vs 2019
Assets:					
Unrestricted cash equivalents	$ 115,107	$ 148,817	$ 204,509	$ (33,710)	$ (55,692)
Other receivables	36	36	-	-	36
Total assets	$ 115,143	$ 148,853	$ 204,509	$ (33,710)	$ (55,656)
Liabilities:	$ 147	$ 276	$ 128	$ (129)	$ 148
Fund Balances:					
Unassigned	114,996	148,577	204,381	(33,581)	(55,804)
Total fund balances	114,996	148,577	204,381	(33,581)	(55,804)
Total liabilities and fund balances	$ 115,143	$ 148,853	$ 204,509	$ (33,710)	$ (55,656)

FINANCIAL HIGHLIGHTS AND OVERALL ANALYSIS—GOVERNMENTAL FUNDS FINANCIAL STATEMENTS (amounts in thousands, except as noted) (continued)

The GF assets are mainly comprised of transfers of Second Indenture surplus funds from the DSF to the GF, which fluctuates each year, as previously discussed.

The following summarizes the DSF assets, liabilities, and fund balances as of June 30, 2021, 2020 and 2019:

	2021	2020	2019	Change 2021 vs 2020	Change 2020 vs 2019
Assets:					
Restricted cash equivalents and investments	$ 308,666	$ 233,594	$ 224,341	$ 75,072	$ 9,253
Due from capital projects fund	-	254	30	(254)	224
Total assets	$ 308,666	$ 233,848	$ 224,371	$ 74,818	$ 9,477
Deferred inflows of resources:					
Prepaid PILOT	$ 67,787	$ 58,397	$ 60,254	$ 9,390	$ (1,857)
Fund balances:					
Restricted	240,879	175,451	164,117	65,428	11,334
Total fund balances	240,879	175,451	164,117	65,428	11,334
Total deferred inflows of resources and fund balances	$ 308,666	$ 233,848	$ 224,371	$ 74,818	$ 9,477

The change in total assets between fiscal years is generally based on the difference between the collections of revenue and amounts retained for the following year's debt service during the fiscal year.

HYIC received PILOT payments for assessments attributable to the next fiscal year; the prepaid amount is reported as deferred inflows of resources.

FINANCIAL HIGHLIGHTS AND OVERALL ANALYSIS—GOVERNMENTAL FUNDS FINANCIAL STATEMENTS (amounts in thousands, except as noted) (continued)

The following summarizes the CPF assets, liabilities, and fund balances as of June 30, 2021, 2020 and 2019:

	2021	2020	2019	Change 2021 vs 2020	Change 2020 vs 2019
Assets:					
Restricted cash equivalents and investments	$ -	$ 36,096	$ 47,137	$ (36,096)	$ (11,041)
Total assets	$ -	$ 36,096	$ 47,137	$ (36,096)	$ (11,041)
Liabilities:					
Project costs payable	$ 4,533	$ 6,463	$ 2,885	$ (1,930)	$ 3,578
Due to debt service fund	-	254	30	(254)	224
Total liabilities	4,533	6,717	2,915	(2,184)	3,802
Fund balances:					
Restricted	-	29,379	44,222	(29,379)	(14,843)
Unassigned	(4,533)	-	-	(4,533)	-
Total fund balances	(4,533)	29,379	44,222	(33,912)	(14,843)
Total liabilities and fund balances	$ -	$ 36,096	$ 47,137	$ (36,096)	$ (11,041)

CPF assets on hand at June 30, 2020 and 2019 represented unspent bond proceeds. The negative fund balance at fiscal year-end 2021 reflects estimated Project expenditures incurred but not paid, as previously discussed. The decrease in fund balances in fiscal years 2020 and 2019 reflected Project expenditures made during that year.

FINANCIAL HIGHLIGHTS AND OVERALL ANALYSIS—GOVERNMENTAL FUNDS FINANCIAL STATEMENTS (amounts in thousands, except as noted) (continued)

ECONOMIC OUTLOOK

In March 2020, the World Health Organization declared the outbreak of a novel coronavirus ("COVID-19") as a pandemic, which continues to spread throughout the United States. HYIC could be materially and adversely affected by the risks, or the public perception of the risks, related to an epidemic, pandemic, outbreak, or other public health crisis, such as the recent outbreak of COVID-19. The ultimate extent of the impact of any epidemic, pandemic or other health crisis on HYIC will depend on future developments, which are highly uncertain and cannot be predicted, including new information that may emerge concerning the severity of such epidemic, pandemic or other health crisis and actions taken to contain or prevent their further spread, among others. Accordingly, HYIC cannot predict the extent to which it will be affected.

In April 2020, HYIC received a negative outlook by Moody's and by Fitch. In October 2020, Moody's downgraded HYIC debt to Aa3 and maintained a negative outlook. In December 2020, Fitch downgraded the FY12 Bonds to A+ and the FY17 Bonds to A and maintained the negative outlook. Additionally, S&P Global assigned a negative outlook at that time. Subsequently, in May 2021, S&P Global and Moody's revised their outlook to stable. In August 2021, Fitch revised their outlook to stable on HYIC debt.

This financial report is designed to provide a general overview of HYIC's finances. Questions concerning any of the information in this report or requests for additional financial information should be directed to Investor Relations, Hudson Yards Infrastructure Corporation, 255 Greenwich Street, New York, NY 10007.

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HUDSON YARDS INFRASTRUCTURE CORPORATION
(A Component Unit of The City of New York)

STATEMENTS OF NET POSITION (DEFICIT)
AS OF JUNE 30, 2021 AND 2020 (amounts in thousands)

	2021	2020
ASSETS:		
Unrestricted cash equivalents	$ 28,006	$ 122,708
Restricted cash equivalents	97,433	103,515
Unrestricted investments	87,100	26,106
Restricted investments	211,231	166,175
Interest receivable	3	3
Other receivables	36	36
Total assets	423,809	418,543
LIABILITIES:		
Project costs payable	4,235	6,086
Accounts payable	147	276
Payable to The City of New York	298	255
Payable to Hudson Yards Development Corporation	-	122
Accrued bond interest payable	48,932	49,962
Long-term debt:		
Portion due within one year	42,690	9,955
Portion due after one year	2,877,492	2,974,000
Total liabilities	2,973,794	3,040,656
DEFERRED INFLOWS OF RESOURCES:		
Prepaid PILOT	67,787	58,397
Unamortized deferred bond refunding costs	19,371	20,146
Total deferred inflows of resources	87,158	78,543
NET POSITION (DEFICIT):		
Restricted for capital projects	-	29,379
Unrestricted (deficit)	(2,637,143)	(2,730,035)
Total net position (deficit)	$ (2,637,143)	$ (2,700,656)

See notes to financial statements.

HUDSON YARDS INFRASTRUCTURE CORPORATION

(A Component Unit of The City of New York)

STATEMENTS OF ACTIVITIES
FOR THE YEARS ENDED JUNE 30, 2021 AND 2020 (amounts in thousands)

	2021	2020
REVENUES:		
District improvement bonus revenue	$ -	$ 120,907
Tax equivalency payment revenue	154,361	129,847
PILOMRT revenue	6,423	57,130
PILOT revenue	127,396	120,754
Other revenue	-	1,776
Gain on defeasance	967	-
Investment (loss) income	(787)	9,606
Total revenues	288,360	440,020
EXPENSES:		
Project - subway extension	5,166	4,423
Project - land acquisition and public amenities	2,488	(7,914)
Project - transfer to Hudson Yards Development	749	1,355
Interest expenses	115,242	115,392
Payments to The City of New York	100,000	350,000
General and administrative	1,202	1,752
Total expenses	224,847	465,008
CHANGE IN NET POSITION (DEFICIT)	63,513	(24,988)
NET POSITION (DEFICIT) - beginning of year	(2,700,656)	(2,675,668)
NET POSITION (DEFICIT) - end of year	$ (2,637,143)	$ (2,700,656)

See notes to financial statements.

HUDSON YARDS INFRASTRUCTURE CORPORATION

(A Component Unit of The City of New York)

GOVERNMENTAL FUNDS BALANCE SHEET
AS OF JUNE 30, 2021 (amounts in thousands)

	General Fund	Debt Service Fund	Capital Projects Fund	Total Governmental Funds
ASSETS:				
Unrestricted cash equivalents	$ 28,006	$ -	$ -	$ 28,006
Restricted cash equivalents	-	97,433	-	97,433
Unrestricted investments	87,100	-	-	87,100
Restricted investments	-	211,231	-	211,231
Interest receivable	1	2	-	3
Other receivables	36	-	-	36
Total assets	$ 115,143	$ 308,666	$ -	$ 423,809
LIABILITIES:				
Project costs payable	$ -	$ -	$ 4,235	$ 4,235
Accounts payable	147	-	-	147
Payable to The City of New York	-	-	298	298
Total liabilities	147	-	4,533	4,680
DEFERRED INFLOWS OF RESOURCES:				
Prepaid PILOT	-	67,787	-	67,787
Total deferred inflows of resources	-	67,787	-	67,787
FUND BALANCES:				
Restricted for:				
Debt service	-	240,879	-	240,879
Unassigned	114,996	-	(4,533)	110,463
Total fund balances	114,996	240,879	(4,533)	351,342
Total liabilities, deferred inflows of resources and fund balances	$ 115,143	$ 308,666	$ -	$ 423,809

See notes to financial statements.

HUDSON YARDS INFRASTRUCTURE CORPORATION
(A Component Unit of The City of New York)

GOVERNMENTAL FUNDS BALANCE SHEET
AS OF JUNE 30, 2020 (amounts in thousands)

	General Fund	Debt Service Fund	Capital Projects Fund	Total Governmental Funds
ASSETS:				
Unrestricted cash equivalents	$ 122,708	$ -	$ -	$ 122,708
Restricted cash equivalents	-	101,107	2,408	103,515
Unrestricted investments	26,106	-	-	26,106
Restricted investments	-	132,487	33,688	166,175
Interest receivable	3	-	-	3
Due from capital projects fund	-	254	-	254
Other receivables	36	-	-	36
Total assets	$ 148,853	$ 233,848	$ 36,096	$ 418,797
LIABILITIES:				
Project costs payable	$ -	$ -	$ 6,086	$ 6,086
Accounts payable	276	-	-	276
Due to debt service fund	-	-	254	254
Payable to The City of New York	-	-	255	255
Payable to Hudson Yards Development Corporation	-	-	122	122
Total liabilities	276	-	6,717	6,993
DEFERRED INFLOWS OF RESOURCES:				
Prepaid PILOT	-	58,397	-	58,397
Total deferred inflows of resources	-	58,397	-	58,397
FUND BALANCES:				
Restricted for:				
Debt service	-	175,451	-	175,451
Capital projects	-	-	29,379	29,379
Unassigned	148,577	-	-	148,577
Total fund balances	148,577	175,451	29,379	353,407
Total liabilities, deferred inflows of resources and fund balances	$ 148,853	$ 233,848	$ 36,096	$ 418,797

See notes to financial statements.

HUDSON YARDS INFRASTRUCTURE CORPORATION
(A Component Unit of The City of New York)

RECONCILIATIONS OF THE GOVERNMENTAL FUNDS BALANCE SHEETS TO THE STATEMENTS OF NET POSITION (DEFICIT)
AS OF JUNE 30, 2021 AND 2020 (amounts in thousands)

	2021	2020
Total fund balances - governmental funds	$ 351,342	$ 353,407
Amounts reported for governmental activities in the statements of net position (deficit) are different because:		
Bond premiums are reported as other financing sources in the governmental funds financial statements when received. However, in the statements of net position (deficit), bond premiums are reported as a component of bonds payable and amortized over the life of the bonds.	(242,598)	(259,540)
Costs of bond refundings are reported as expenditures in the governmental funds financial statements. However, in the statements of net position (deficit), those costs and the related gain or loss are deferred and amortized over the shorter of the remaining life of the old debt or the life of the new debt.	(19,371)	(20,146)
Some liabilities are not due and payable in the current period from currently available financial resources and are therefore not reported in the governmental funds financial statements, but are reported in the statements of net position (deficit). Those liabilities are:		
Bonds payable	(2,675,325)	(2,723,870)
Accrued bond interest payable	(48,932)	(49,962)
Construction loan	(2,259)	(545)
Net position (deficit) - governmental activities	$ (2,637,143)	$ (2,700,656)

See notes to financial statements.

HUDSON YARDS INFRASTRUCTURE CORPORATION
(A Component Unit of The City of New York)

GOVERNMENTAL FUNDS STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES
FOR THE YEAR ENDED JUNE 30, 2021 (amounts in thousands)

	General Fund	Debt Service Fund	Capital Projects Fund	Total Governmental Funds
REVENUES:				
Tax equivalency payment revenue	$ 779	$ 153,582	$ -	$ 154,361
PILOMRT revenue	-	6,423	-	6,423
PILOT revenue	-	127,396	-	127,396
Investment income	(73)	(753)	39	(787)
Total revenues	706	286,648	39	287,393
EXPENDITURES:				
Project - subway extension	-	-	5,166	5,166
Project - land acquisition and public amenities	-	-	2,488	2,488
Project - transfers to Hudson Yards Development Corporation	-	-	749	749
Interest expenses	-	133,022	-	133,022
Principal amount of bonds retired	-	48,545	-	48,545
Payment to The City of New York	100,000	-	-	100,000
General and administrative	1,202	-	-	1,202
Total expenditures	101,202	181,567	8,403	291,172
OTHER FINANCING SOURCES (USES):				
Construction loan	-	-	1,714	1,714
Transfers in (out)	66,915	(39,653)	(27,262)	-
Total other financing sources (uses)	66,915	(39,653)	(25,548)	1,714
NET CHANGE IN FUND BALANCES	(33,581)	65,428	(33,912)	(2,065)
FUND BALANCES - beginning of year	148,577	175,451	29,379	353,407
FUND BALANCES - end of year	$ 114,996	$ 240,879	$ (4,533)	$ 351,342

See notes to financial statements.

HUDSON YARDS INFRASTRUCTURE CORPORATION
(A Component Unit of The City of New York)

GOVERNMENTAL FUNDS STATEMENT OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES
FOR THE YEAR ENDED JUNE 30, 2020 (amounts in thousands)

	General Fund	Debt Service Fund	Capital Projects Fund	Total Governmental Funds
REVENUES:				
District improvement bonus revenue	$ -	$ 120,907	$ -	$ 120,907
Tax equivalency payment revenue	-	129,847	-	129,847
PILOMRT revenue	-	57,130	-	57,130
PILOT revenue	-	120,754	-	120,754
Other revenue	1,776	-	-	1,776
Investment income	4,841	3,925	840	9,606
Total revenues	6,617	432,563	840	440,020
EXPENDITURES:				
Project - subway extension	-	-	4,423	4,423
Project - land acquisition and public amenities	-	-	10,096	10,096
Project - transfers to Hudson Yards Development Corporation	-	-	1,355	1,355
Interest expenses	-	132,252	-	132,252
Payment to The City of New York	350,000	-	-	350,000
General and administrative	1,752	-	-	1,752
Total expenditures	351,752	132,252	15,874	499,878
OTHER FINANCING SOURCES (USES):				
Construction loan	-	-	545	545
Transfers in (out)	289,331	(288,977)	(354)	-
Total other financing sources (uses)	289,331	(288,977)	191	545
NET CHANGE IN FUND BALANCES	(55,804)	11,334	(14,843)	(59,313)
FUND BALANCES - beginning of year	204,381	164,117	44,222	412,720
FUND BALANCES - end of year	$ 148,577	$ 175,451	$ 29,379	$ 353,407

See notes to financial statements.

HUDSON YARDS INFRASTRUCTURE CORPORATION
(A Component Unit of The City of New York)

RECONCILIATIONS OF THE GOVERNMENTAL FUNDS STATEMENTS OF REVENUES, EXPENDITURES AND CHANGES IN FUND BALANCES TO THE STATEMENTS OF ACTIVITIES FOR THE YEARS ENDED JUNE 30, 2021 AND 2020 (amounts in thousands)

	2021	2020
Net change in fund balances - total governmental funds	$ (2,065)	$ (59,313)
Amount reported in the statements of activities are different because:		
Governmental funds financial statements report bond premiums as other financing source upon issuance. However, on the statements of activities, premiums are recognized as an offset of interest expense over the life of the bonds.	15,975	16,085
Payment (including defeasance) of bond principal is an expenditure in the governmental funds financial statements, but the payment reduces long-term liabilities in the statements of net position (deficit).	48,545	-
Loan proceeds provide current financial resources to the governmental funds, but debt issued increased long-term liabilities on the statements of net position (deficit).	(1,714)	(545)
Payments to defease bonds prior to maturity are reported as expenditures in the governmental funds financial statements. However, in the statements of net position (deficit), only the difference between the carrying value of the defeased bonds and the amount paid to defease the bonds are reported as period revenues and expenses.	967	-
The governmental funds financial statements report costs of bond refundings as expenditures. However, in the statements of activities, the costs of bond refundings are amortized over the shorter of the life of the bonds refunded or the life of the bonds issued to refund the bonds.	775	775
Contingent liabilities are reported on the statements of activities on the accrual basis. However, contingent expenditures are reported in the governmental funds financial statements when they are incurred or paid.	-	18,010
Interest expense is reported in the statements of activities on the accrual basis. However, interest is reported as an expenditure in governmental funds financial statements when the payment is due.	1,030	-
Change in net position (deficit) - governmental activities	$ 63,513	$ (24,988)

See notes to financial statements.

1. ORGANIZATION

Hudson Yards Infrastructure Corporation ("HYIC") is a local development corporation established by The City of New York (the "City") under Article 14 of the Not-for-Profit Corporation Law of the State of New York. HYIC's purpose is the financing of certain infrastructure improvements in the Hudson Yards area on the West Side of Manhattan (the "Project"). HYIC does not engage in development directly, but finances development spearheaded by Hudson Yards Development Corporation ("HYDC") and carried out by existing public entities. The Project is in an area generally bounded by Seventh and Eighth Avenues on the east, West 43rd Street on the north, Twelfth Avenue on the west and West 29th and 30th Streets on the south (the "Project Area"). The Project consists of: (1) design and construction of an extension of the No. 7 Subway from Seventh Avenue and 41st Street to Eleventh Avenue and West 34th Street (the "Subway Extension"), (2) acquisition from the Metropolitan Transportation Authority ("MTA") of certain transferable development rights over its rail yards between Tenth and Eleventh Avenues and between West 30th and West 33rd Streets ("Eastern Rail Yards" or "ERY"), (3) construction of a system of parks, public open spaces, and streets in the Project Area ("Public Amenities") and (4) property acquisition for the Project. The Subway Extension began service in September 2015 and the construction of a portion of Hudson Park and Boulevard was completed and opened to the public in August 2015.

HYIC fulfills its purpose through borrowing to finance the Project and the collection of revenues, including payments in lieu of taxes and district improvement bonuses from private developers and appropriations from the City to support its operations and pay principal and interest on its outstanding debt. HYIC is governed by the Board of Directors elected by its five members, all of whom are officials of the City. HYIC's Certificate of Incorporation requires the vote of an independent director as a condition to taking certain actions; the independent director would be appointed by the Mayor prior to any such actions. HYIC does not have any employees; its affairs are administered by employees of the City and of another component unit of the City, for which HYIC pays a management fee and overhead based on its allocated share of personnel and overhead costs.

Although legally separate from the City, HYIC is an instrumentality of the City and, accordingly, is included in the City's financial statements as a blended component unit, in accordance with the Governmental Accounting Standards Board ("GASB") standards.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Measurement Focus and Basis of Accounting

The government-wide financial statements of HYIC, which include the statements of net position (deficit) and the statements of activities, are presented to display information about the reporting entity as a whole, in accordance with GASB standards. The statements of net position (deficit) and the statements of activities are prepared using the economic resources measurement focus and the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded when incurred, regardless of the timing of cash flows.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

HYIC's governmental funds financial statements are presented using the current financial resources measurement focus and the modified accrual basis of accounting. Revenue is recognized when it becomes susceptible to accrual, which is when it becomes both measurable and available to finance expenditures in the current fiscal period. Revenue is generally considered available if expected to be received within sixty-days after period end. Expenditures are recognized when the related liability is incurred, except for principal and interest on bonds payable and estimated arbitrage rebate liability, which are recognized when due.

HYIC uses three governmental funds for reporting its activities: a General Fund ("GF"), a Debt Service Fund ("DSF") and a Capital Projects Fund ("CPF"). The DSF is used to account for the receipt and disbursement of resources used to pay interest on and principal of long-term debt. The CPF is used to account for the bond issuances and proceeds and for project expenditures. The GF is used to account for all financial resources not accounted for in the DSF or the CPF, generally those used or held for use for administrative expenditures and arbitrage rebate expenditures. HYIC accounts for its activities in accordance with the Trust Indenture between HYIC and US Bank dated December 1, 2006, as amended (the "First Indenture"), Second Trust Indenture dated May 1, 2017 (the "Second Indenture") and Third Supplemental Trust Indenture dated February 1, 2019 (the "Third Indenture"), collectively, the ("Indentures").

Fund Balance

Fund balances are classified as either: 1) nonspendable, 2) restricted, 3) committed, 4) assigned, or 5) unassigned in accordance with GASB standards.

Fund balance that cannot be spent because it is not in spendable form is defined as nonspendable. Resources constrained for debt service or redemption in accordance with HYIC's Indentures are classified as restricted on the statements of net position (deficit) and the governmental funds balance sheets.

The Board of Directors of HYIC ("Board") constitutes HYIC's highest level of decision-making authority. If and when resolutions are adopted by the Board that constrain fund balances for a specific purpose, such resources are accounted for and reported as committed for such purpose unless, and until, a subsequent resolution altering the commitment is adopted by the Board.

Fund balances, if and when constrained for use for a specific purpose based on the direction of any officer of HYIC duly authorized under its bond Indentures to direct the movement of such funds, are accounted for and reported as assigned for such purpose. This assignment will remain, unless and until a subsequent authorized action by the same or another duly authorized officer, or by the Board, is taken which removes or changes the assignment.

When both restricted and unrestricted resources are available for use for a specific purpose, it is HYIC's policy to use restricted resources first then unrestricted resources as they are needed. When committed, assigned, or unassigned resources are available for use for a specific purpose, it is HYIC's policy to use committed resources first, then assigned resources, and then unassigned resources as they are needed.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Resources constrained for debt service or redemption in accordance with HYIC's Indentures are classified as restricted on the statements of net position (deficit) and the governmental funds balance sheets.

Cash Equivalents

Cash equivalents consist of money market funds and investments maturing within 90 days from the purchase date.

Capital Assets

HYIC is not the owner of the Project assets that are constructed or acquired with the proceeds of its borrowing. Assets related to the parks and boulevard are property of the City. Assets related to the Subway Extension are owned by the City and leased to the New York City Transit Authority pursuant to a long-term lease, and are treated as assets of the New York City Transit Authority on its financial statements. Therefore, HYIC reports no infrastructure assets or construction work in progress.

For fixed assets used in the operations of HYIC, HYIC's policy is to capitalize the purchase of assets having a minimum useful life of five years and having a cost of more than $35 thousand. No such assets have been acquired.

Revenues

HYIC revenues include:

(1) Interest Support Payments ("ISP") are made by the City under the terms of the Amended and Restated Support and Development Agreement and the Additional Borrowing Hudson Yards Support Agreement (together the "Agreement") that obligates the City to pay to HYIC, subject to annual appropriation, ISP on up to $3.4 billion of HYIC debt, for so long as such debt is outstanding, in an amount equal to the difference between the amount of funds available to HYIC to pay interest on debt and the amount of interest due on such debt;

(2) Payments in lieu of real estate taxes ("PILOT") which have been assigned to HYIC under agreements with the New York City Industrial Development Agency ("IDA"), the City, and the MTA, and that are to be made in accordance with agreements between developers and the IDA and others ("PILOT Agreements");

(3) Tax Equivalency Payments ("TEP") are made by the City under the terms of the Agreement that obligates the City to pay to HYIC, subject to annual appropriation, the amount of real property taxes collected by the City on new development (including substantial rehabilitation of existing buildings) in the Project Area;

(4) District Improvement Bonuses ("DIB") paid by private developers in exchange for the right to create additional density in the Project Area;

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

(5) Payments in lieu of the mortgage recording tax ("PILOMRT") required to be made by private developers entering into PILOT Agreements; and

(6) Interest earned on unspent bond proceeds is generally used for debt service.

Arbitrage Rebate

To maintain the exemption from Federal income tax of interest on HYIC tax exempt debt, HYIC will fund amounts required to be rebated to the Federal Government pursuant to Section 148 of the Internal Revenue Code of 1986, as amended (the "Code"). The Code requires the payment to the United States Treasury of the excess of the amount earned on all obligations over the amount that would have been earned if the gross proceeds of the issue were invested at a rate equal to the yield on the issue, together with any earnings attributable to such excess. Construction funds, debt service funds or any other funds or accounts funded with proceeds of such bonds, including earnings, or pledged to or expected to be used to pay interest on such bonds are subject to this requirement. Payment is to be made after the end of the fifth bond year and after every fifth bond year thereafter, or within 60 days after retirement of the bonds.

Bond Premium and Issuance Costs

Bond premiums and discounts are capitalized and amortized over the life of the related debt using the interest method in the government-wide financial statements. The governmental funds financial statements recognize the premiums and discounts during the current period. Bond premiums and discounts are presented as additions or reductions to the face amount of the bonds payable. Bond issuance costs, except for prepaid bond insurance, are recognized as an expense/expenditure in the period incurred in the government-wide and governmental funds financial statements, respectively.

Deferred Bond Refunding Costs

Deferred bond refunding costs represent the accounting gain or loss incurred on a refunding of outstanding bonds and are reported as deferred outflows of resources or deferred inflows of resources in the government-wide financial statements. The deferred bond refunding costs are amortized over the shorter of the remaining life of the old debt or the life of the new debt. In the DSF, costs of the bond issuance/refunding are reported as expenditures when incurred.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Use of Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires HYIC's management to make estimates and assumptions in determining the reported amounts of assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenditures during the reporting period. Actual results could differ from those estimates.

Recent Accounting Pronouncements

As a component unit of the City, HYIC implements new GASB standards in the same fiscal year as they are implemented by the City. The following are discussions of the standards requiring implementation in the current year and standards which may impact HYIC in future years.

- In June 2017, GASB issued Statement No. 87, *Leases*, ("GASB 87"). The objective of GASB 87 is to improve accounting and financial reporting for leases by governments. This statement increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are a financing of the right to use an underlying asset. Under this statement, a lessee is required to recognize a lease liability and an intangible right-to-use a lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. The requirements of GASB 87 are effective for fiscal years beginning after December 15, 2019 (Postponed to fiscal years beginning after June 15, 2021. See GASB 95 below). HYIC has not completed the process of evaluating GASB 87 but does not expect it to have an impact on HYIC's financial statements, as it does not enter into lease agreements.
- In January 2020, GASB issued Statement No. 92, *Omnibus 2020*, ("GASB 92"). GASB 92 enhances the comparability in accounting and financial reporting as well as improves the consistency of authoritative literature by addressing practice issues that have been identified during implementation and application of certain GASB Statements. The requirements for GASB 92 are effective for reporting periods beginning after June 15, 2020 (Postponed to fiscal years beginning after June 15, 2021. See GASB 95 below). HYIC has not completed the process of evaluating GASB 92 but does not expect it to have an impact on HYIC's financial statements.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

- In March 2020, GASB issued Statement No. 93, *Replacement of Interbank Offered Rates*, ("GASB 93"). GASB 93 addresses those and other accounting and financial reporting implications that result from the replacement of an interbank offered rate ("IBOR") – most notably, the London Interbank Offered Rate ("LIBOR") resulting from global reference rate reform. LIBOR is expected to cease to exist in its current form at the end of 2021, prompting governments to amend or replace financial instruments for the purpose of replacing LIBOR with other reference rates, by either changing the reference rate or adding or changing fallback provisions related to the reference rate. The removal of LIBOR as an appropriate benchmark interest rate is effective for reporting periods ending after December 31, 2021. All other requirements for GASB 93 are effective for reporting periods beginning after June 15, 2020. (Postponed paragraphs 13 and 14 to fiscal years beginning after June 15, 2021. See GASB 95 below). HYIC has not completed the process of evaluating GASB 93 but does not expect it to have an impact on HYIC's financial statements.
- In March 2020, GASB issued Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements,* ("GASB 94"). GASB 94 improves financial reporting by addressing issues related to public-private and public-public partnership arrangements ("PPPs"). The requirements for GASB 94 are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter. HYIC has not completed the process of evaluating GASB 94 but does not expect it to have an impact on HYIC's financial statements as it does not enter into PPPs.
- In May 2020, GASB issued Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*, ("GASB 95"). GASB 95 provides temporary relief to governments and other stakeholders in light of the COVID-19 pandemic by postponing the effective dates of certain provisions in Statements and Implementation Guides that first became effective or are scheduled to become effective for periods beginning after June 15, 2018, and later.
- In May 2020, GASB issued Statement No. 96, *Subscription-Based Information Technology Arrangements,* ("GASB 96"). GASB 96 provides guidance on the accounting and financial reporting for subscription-based information technology arrangements ("SBITAs") for government end users (governments). The requirements of GASB 96 are effective for fiscal years beginning after June 15, 2022, and all reporting periods thereafter. HYIC's has not completed the process of evaluating GASB 96 but does not expect it to have an impact on HYIC's financial statements as it does not enter into SBITAs.

AS OF AND FOR THE YEARS ENDED JUNE 30, 2021 AND 2020 (continued) (amounts in thousands, except as noted)

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

- In June 2020, GASB issued Statement No. 97, *Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans,* ("GASB 97"). The objectives of GASB 97 are to 1) increase consistency and comparability related to the reporting of fiduciary component units in circumstances in which a potential component unit does not have a governing board and the primary government performs the duties that a governing board typically would perform; (2) mitigate costs associated with the reporting of certain defined contribution pension plans, defined contribution other postemployment benefit (OPEB) plans, and employee benefit plans other than pension plans or OPEB plans (other employee benefit plans) as fiduciary component units in fiduciary fund financial statements; and (3) enhance the relevance, consistency, and comparability of the accounting and financial reporting for Internal Revenue Code (IRC) Section 457 deferred compensation plans (Section 457 plans) that meet the definition of a pension plan and for benefits provided through those plans. The requirements of GASB 97 are effective for fiscal years beginning after June 15, 2021. HYIC has not completed the process of evaluating GASB 97 but does not expect it to have an impact on HYIC's financial statements, as HYIC does not have such plans.

3. CASH AND CASH EQUIVALENTS

As of June 30, 2021 and 2020, HYIC did not have any cash deposits on hand.

HYIC's cash and cash equivalents consisted of the following at June 30:

	2021	2020
Unrestricted :		
Cash Equivalents	$ 28,006	$ 122,708
Total unrestricted	28,006	122,708
Restricted:		
Cash Equivalents	97,433	103,515
Total restricted	97,433	103,515
Total Cash Equivalents	$ 125,439	$ 226,223

AS OF AND FOR THE YEARS ENDED JUNE 30, 2021 AND 2020 (continued) (amounts in thousands, except as noted)

4. INVESTMENTS

HYIC's investments consisted of the following at June 30:

	2021	2020
Unrestricted:		
Money Market Funds	$ 28,006	$ 122,708
U.S. Treasury Note (maturing within one year)	69,235	26,106
U.S. Treasury Note (maturing after one year)	17,865	-
Total Unrestricted	115,106	148,814
Restricted for Debt Service:		
Money Market Funds	29,437	60,105
U.S. Treasury Bill (maturing within one year)	67,996	173,489
U.S. Treasury Notes (maturing within one year)	211,231	-
Total Restricted for Debt Service	308,664	233,594
Restricted for Capital Projects:		
Money Market Funds	-	2,408
U.S. Treasury Bill (maturing within one year)	-	33,688
Total Restricted for Capital Projects	-	36,096
Total Investments including cash equivalents	423,770	418,504
Less amounts reported as cash equivalents (see Note 3)	(125,439)	(226,223)
Total Investments	$ 298,331	$ 192,281

HYIC's management invests funds which are not immediately required for operations, debt service or capital project expenses. Each account of HYIC is held pursuant to the Indentures and may be invested in securities or categories of investments that are specifically enumerated as permitted investments for such account pursuant to the Indentures. Investments are reported at fair value using market prices in an active market as of the financial statement date.

4. INVESTMENTS (continued)

Fair Value Hierarchy

HYIC categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure fair value of the assets. Level 1 inputs are quoted prices in an active market for identical assets; Level 2 inputs are significant other observable inputs; and Level 3 inputs are significant unobservable inputs.

HYIC has the following recurring fair value measurements as of June 30, 2021 and 2020:

- Money Market Funds are valued based on various market and industry inputs (Level 2 inputs).

- U.S. Treasury securities of $366 million and $233 million, respectively, are valued based on various market and industry inputs (Level 2 inputs).

Custodial Credit Risk

Custodial credit risk is the risk that, in the event of the failure of the custodian, HYIC may not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. All investments are registered and are held by HYIC's agent in HYIC's name.

Credit Risk

All investments held by HYIC at June 30, 2021 and 2020 are obligations of, or guaranteed by, the United States of America, which are rated by S&P Global AA+, Moody's Aaa, and Fitch AAA; and money market funds invested in eligible government obligations, which are rated by S&P AAAm and Moody's Aaa-mf.

Interest Rate Risk

HYIC's short-term investments are subject to minimal risk of fair value declines due to changes in market interest rates because such investments have very short maturities. Investments with longer terms are expected to be held until maturity thereby limiting the exposure from rising interest rates.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of HYIC's investments in a single issuer (5% or more). HYIC's investment policy places no limits on the amount HYIC may invest in any one issuer of eligible investments as defined in the Indentures. As of June 30, 2021 and 2020, 100% of HYIC's investments are in eligible government obligations or in money market funds invested in eligible government obligations.

5. LONG-TERM LIABILITIES

Changes in Long-term Liabilities

On December 21, 2006, HYIC issued the Series 2007A Bonds in the amount of $2 billion to partially finance the Project. The Series 2007A bonds were term bonds with semiannual interest payment dates beginning on August 15, 2007 and maturing on February 15, 2047. On October 26, 2011, HYIC issued its Fiscal 2012 Series A Senior Revenue Bonds in the amount of $1 billion. HYIC has pledged all revenues and its proceeds from sales of TDRs to secure the bonds to finance the remaining portion of the Project. The Series 2012A Bonds are term bonds with semiannual interest payments beginning on February 15, 2012, and maturing on February 15, 2047. Debt service payments the Series 2007A Bonds and the Series 2012A Bonds were made from revenues and TDRs sale proceeds received as a result of development in the Hudson Yards Financing District.

On May 30, 2017, HYIC issued $2.1 billion in Fiscal Year 2017 Series A Subordinate Bonds and $33.3 million in Series B Subordinate Bonds (together known as “FY17 Bonds”) under the Second Indenture. Interest on FY17 Bonds is paid semi-annually on February 15 and August 15. Proceeds of the FY17 Bonds were applied, with other available funds, to refund all of the FY07 Bonds and $391 million of the FY12 Bonds. The refinancing required that the unrefunded $609 million of FY12 Bonds be amortized on a substantially level debt service basis to maturity in 2047 through annual sinking fund installments. Additionally, the refunding enabled HYIC to make a payment to the New York City Transitional Finance Authority (“NYC TFA”) to defease a portion of its debt.

On June 21, 2021, HYIC defeased $38.6 million of Fiscal 2012 A Senior Bonds using its existing resources, which resulted in an accounting gain of $967 thousand, which represents the difference between the carrying value of the bonds and the amount paid to remove the bonds.

On February 1, 2019, HYIC entered into a Term Loan Agreement (“Loan”) which presently provides for up to $200 million to finance additional infrastructure projects in the Project Area. As of June 30, 2021 and 2020, the Loan had an outstanding balance of $2.3 million and $545 thousand, respectively.

AS OF AND FOR THE YEARS ENDED JUNE 30, 2021 AND 2020 (continued) (amounts in thousands, except as noted)

5. LONG-TERM LIABILITIES (continued)

Outstanding debt: 1) is secured by the revenues (as defined in the Indentures) and with pledged collateral consisting of all money and securities deposited in funds, accounts, and subaccounts as provided pursuant to the applicable Indentures, and 2) bears interest at fixed rates ranging from 3% to 5.75%.

A summary of changes in outstanding bonds and other long-term debt during the year ended June 30, 2021 follows:

	Balance June 30, 2020	Additions	Deletions	Balance June 30, 2021
Bonds:				
Fiscal 2012 Series A	$ 582,110	$ -	$ (48,545)	$ 533,565
Fiscal 2017 Series A	2,108,465	-	-	2,108,465
Fiscal 2017 Series B	33,295	-	-	33,295
Total before premium	2,723,870	-	(48,545)	2,675,325
Premium	259,540	-	(16,942)	242,598
Total Bonds	2,983,410	-	(65,487)	2,917,923
Loan:				
Construction loan	545	1,714	-	2,259
Total Debt	$ 2,983,955	$ 1,714	$ (65,487)	$ 2,920,182
Due Within One Year				$ 42,690

HYIC's Indentures contain provisions that in the event of a payment default, the outstanding debt shall be subject to mandatory redemption and payment in accordance with the Indentures.

AS OF AND FOR THE YEARS ENDED JUNE 30, 2020 AND 2019 (continued) (amounts in thousands, except as noted)

5. LONG-TERM LIABILITIES (continued)

A summary of changes in outstanding bonds and other long-term debt during the year ended June 30, 2020 follows:

	Balance June 30, 2019	Additions	Deletions	Balance June 30, 2020
Bonds:				
Fiscal 2012 Series A	$ 582,110	$ -	$ -	$ 582,110
Fiscal 2017 Series A	2,108,465	-	-	2,108,465
Fiscal 2017 Series B	33,295	-	-	33,295
Total before premium	2,723,870	-	-	2,723,870
Premium	275,625	-	(16,085)	259,540
Total Bonds	2,999,495	-	(16,085)	2,983,410
Loan:				
Construction loan	-	545	-	545
Total Debt	$ 2,999,495	$ 545	$ (16,085)	$ 2,983,955
Due Within One Year				$ 9,955

Debt service requirements on bonds, including principal and interest, at June 30, 2021, are as follows:

	First Indenture Bonds		Second Indenture Bonds		Total		
Years Ended June 30,	Principal	Interest	Principal	Interest	Principal	Interest	Debt Service
2022	$ -	$ 28,951	$ 42,690	$ 100,571	$ 42,690	$ 129,522	$ 172,212
2023	6,360	28,951	44,675	98,585	51,035	127,536	178,571
2024	6,710	28,619	46,825	96,433	53,535	125,052	178,587
2025	7,070	28,269	49,090	94,169	56,160	122,438	178,598
2026	7,460	27,901	51,505	91,756	58,965	119,657	178,622
2027 to 2031	68,600	131,354	298,725	417,576	367,325	548,930	916,255
2032 to 2036	99,415	108,762	380,940	335,363	480,355	444,125	924,480
2037 to 2041	129,580	78,601	482,145	234,157	611,725	312,758	924,483
2042 to 2046	168,885	39,289	607,515	108,671	776,400	147,960	924,360
2047	39,485	2,148	137,650	5,506	177,135	7,654	184,789
Totals	$ 533,565	$ 502,845	$ 2,141,760	$ 1,582,787	$ 2,675,325	$ 2,085,632	$ 4,760,957

Claims and Litigation

During fiscal year 2010, the City began receiving appraisals from claimants with pending claims for additional compensation for the City's acquisitions of their interests within the Project Area. Although the City is the condemnor of property interest for the Project, HYIC is responsible for funding any payments ultimately determined to be payable on such claims.

5. LONG-TERM LIABILITIES (continued)

In September 2011 (fiscal year 2012), the New York State Supreme Court (the “Court”) issued a determination that the Claimants’ appraisals had relied upon an erroneous zoning assumption. The Claimants appealed the Court's determination to the Appellate Division, First Department, which, in May 2013, affirmed the lower court’s decision. As of the fiscal years ended June 30, 2013 and 2012, the Claimants did not submit amended appraisals. In view of the aforesaid determination by the Courts rejecting the Claimants' appraisals, the Corporation's potential liability as of June 30, 2013 and 2012, if any, with respect to these claims was not estimable and therefore any accrued estimated liabilities were removed from HYIC’s financial statements for those years.

In June 2014, the Claimants submitted amended appraisals to the City based on the appropriate zoning assumptions for the majority of the properties and the City was informed that the balance of amended appraisals for the remaining properties would be submitted in fiscal year 2015. In view of these events and based on a range of typical outcomes of prior City condemnation cases, it may be reasonable to assume that certain of the Project condemnation claims may result in awards greater or less than 150 percent of the City’s appraised values. Therefore, the contingent liability was estimated at the lesser of the new appraised value or 50 percent of the City’s appraised value, plus 6 percent simple interest from the date of the condemnation. As of June 30, 2014, the estimated contingent liability was approximately $73.9 million. In addition, as of June 30, 2014, other claimants, who were not a party to the above proceedings, filed suit related to valuations as part of condemnation proceedings.

In fiscal year 2015, the balance of amended appraisals for the properties was submitted. Therefore, the contingent liability was recalculated based on 50% of the City’s Appraised Value and the interest calculated at 6% simple interest from the date the property was condemned plus 18% for potential legal fees under NY EDPL §701. However, in some cases, the difference between the City and Claimant’s Vesting Appraisal Amount was less than the 50% of the aggregate amount of the City’s appraised value so the difference was used as the contingent liability. Therefore, as of June 30, 2015, the estimated contingent liability was approximately $47.1 million.

Since the recalculation of the contingent liability in fiscal year 2015, the contingent liability has been adjusted for settled cases and accrued interest and as of June 30, 2020, all cases have been settled. As a result, an $18 million reduction of remaining accrued condemnation expenses was reduced from long-term liabilities.

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APPENDIX G

FORM OF SERIES 2022 BONDS APPROVING OPINION

October 27, 2021

Hudson Yards Infrastructure Corporation
255 Greenwich Street, 6th Floor
New York, New York 10007

Ladies and Gentlemen:

We have examined a record of proceedings relating to the issuance of $454,140,000 aggregate principal amount of Hudson Yards Revenue Bonds, Fiscal 2022 Series A (Green Bonds) (the "Series 2022 Bonds"), by the Hudson Yards Infrastructure Corporation (the "Corporation"), a local development corporation organized by The City of New York (the "City") under the Not-for-Profit Corporation Law of the State of New York.

The Series 2022 Bonds are issued under and pursuant to a Second Trust Indenture, by and between the Corporation and U.S. Bank National Association, as trustee (the "Trustee"), dated as of May 1, 2017 (the "Master Indenture"), as amended and supplemented by a Fourth Supplemental Trust Indenture, dated as of October 1, 2021, by and between the Corporation and the Trustee, authorizing the issuance of the Series 2022 Bonds (the "Fourth Supplemental Trust Indenture", which, together with the Master Indenture, are collectively referred to herein as the "Indenture"). Unless otherwise defined herein, capitalized terms used herein have the respective meanings given to them in the Indenture.

The Series 2022 Bonds are part of an issue of bonds of the Corporation (the "Bonds"), which the Corporation has established and created under the terms of the Master Indenture and is authorized to issue from time to time for the purposes authorized by the Master Indenture, as then in effect, and without limitation as to amount, except as provided in the Indenture or as may be limited by law. The Corporation has previously issued two Series of Bonds under the Master Indenture (the "Outstanding Bonds").

The Corporation is authorized to issue Bonds, in addition to the Outstanding Bonds and the Series 2022 Bonds, only upon the terms and conditions set forth in the Master Indenture and such Bonds, when issued, will, with the Outstanding Bonds and the Series 2022 Bonds, be entitled to the equal benefit, protection and security of the provisions, covenants and agreements of the Master Indenture.

The Series 2022 Bonds are dated the date hereof. Interest on the Series 2022 Bonds is payable semiannually on February 15 and August 15 of each year beginning on February 15, 2022. The Series 2022 Bonds will mature on the respective dates and in the respective principal amounts and bear interest at the respective rates per annum set forth below:

Maturity (February 15)	Principal Amount	Interest Rate
2026	$ 7,050,000	5.00%
2027	7,420,000	5.00
2028	12,085,000	5.00
2029	14,655,000	5.00
2030	15,390,000	5.00
2031	16,160,000	5.00
2032	16,965,000	5.00
2033	17,815,000	5.00
2034	18,700,000	5.00
2035	8,945,000	4.00
2035	10,695,000	5.00
2036	14,000,000	4.00
2036	6,530,000	5.00
2037	21,420,000	4.00
2038	22,275,000	4.00
2039	23,170,000	4.00
2040	24,095,000	4.00
2041	25,055,000	4.00
2042	26,060,000	4.00
2043	27,100,000	4.00
2044	28,180,000	4.00
2047	90,375,000	2.75

The Series 2022 Bonds are to be issued in the form of fully registered Bonds in denominations of $5,000 or integral multiples thereof. The Series 2022 Bonds are numbered from one upward in order of issuance.

The Series 2022 Bonds are subject to redemption prior to maturity as provided in the Fourth Supplemental Trust Indenture.

The Series 2022 Bonds are being issued for the purposes authorized and permitted by the Indenture, including to refund certain outstanding obligations of the Corporation and to pay certain costs in connection with the issuance of the Series 2022 Bonds. The Corporation has entered into: (i) a DIB Assignment and Agreement, dated as of December 1, 2006, and amended and restated as of May 1, 2017, by and between the City and the Corporation (the "DIB Assignment Agreement"), pursuant to which the City has assigned to the Corporation its rights in and to the payments of contributions to the Hudson Yards District Improvement Fund established pursuant to Section 93-31 of the City's zoning resolution (the "DIB Payments"); (ii) a PILOT Assignment and Agreement, dated as of December 1, 2006, and amended and restated as of May 1, 2017, by and among the City, the New York City Industrial Development Agency (the "IDA") and the Corporation (the "PILOT Assignment Agreement"), pursuant to which the City and the IDA have assigned to the Corporation their rights in and to certain payments in lieu of ad valorem real property taxes (the "PILOT Payments") and payments made in lieu of any mortgage recording taxes; and (iii) an Amended and Restated Hudson Yards Support and Development Agreement, dated as of December 1, 2006, and amended and restated as of May 1, 2017, by and among the City, the Hudson Yards Development Corporation and the Corporation (the "Support and Development Agreement"), pursuant to which the City has agreed to make certain Tax Equivalency Payments and Interest Support Payments (each as defined in the Support and Development Agreement) to the Corporation. The DIB Assignment Agreement, the PILOT Assignment Agreement and the Support and Development Agreement are each, individually, hereinafter referred to as an "Agreement" and are, collectively, referred to as the "Agreements." The Corporation, in consideration for such assignments and agreements, has agreed to issue its Bonds and apply the net proceeds for the purposes permitted by the Master Indenture. In rendering the opinions expressed herein, we have assumed that the parties will perform their respective covenants, agreements and obligations in and under the Indenture and the Agreements in all material respects.

We are of the opinion that:

1. The Corporation has been duly formed and is validly existing as a local development corporation under the Not-For-Profit Corporation Law of the State of New York, with the right and lawful authority and power to enter into the Indenture and to issue its Bonds thereunder, including the Series 2022 Bonds.

2. The Indenture has been duly authorized, executed and delivered by the Corporation and is a legal, valid and binding obligation of the Corporation enforceable against the Corporation in accordance with its terms.

3. The Series 2022 Bonds have been duly and validly authorized and issued in accordance with the laws of the State, and in accordance with the Indenture. The Series 2022 Bonds are legal, valid and binding special obligations of the Corporation payable as provided in the Indenture, are enforceable in accordance with their terms and the terms of the Indenture and are entitled to the equal benefits of the Master Indenture.

4. The Corporation has the right and lawful authority and power to enter into the Agreements and each Agreement has been duly authorized, executed and delivered by the Corporation and constitutes a legal, valid and binding obligation of the Corporation enforceable against the Corporation in accordance with its terms.

5. The Internal Revenue Code of 1986 (the "Code") sets forth certain requirements which must be met subsequent to the issuance and delivery of the Series 2022 Bonds for interest thereon to be and remain excluded from gross income for federal income tax purposes. Noncompliance with such requirements could cause the interest on the Series 2022 Bonds to be included in gross income for federal income tax purposes retroactive to the date of issue of the Series 2022 Bonds. Pursuant to the Indenture and the Tax Certificate as to Arbitrage and the Provisions of Sections 103 and 141-150 of the Internal Revenue Code of 1986 (the "Tax Certificate"), the Corporation has covenanted to comply with the applicable requirements of the Code in order to maintain the exclusion of the interest on the Series 2022 Bonds from gross income for federal income tax purposes pursuant to Section 103 of the Code. In addition, the Corporation has made certain representations and certifications in the Indenture and the Tax Certificate. We have not independently verified the accuracy of those certifications and representations.

Under existing law and assuming compliance with the tax covenants described herein and the accuracy of the aforementioned representations and certifications, interest on the Series 2022 Bonds is excluded from gross income for federal income tax purposes under Section 103 of the Code. We are also of the opinion that such interest is not treated as a preference item in calculating the alternative minimum tax imposed under the Code.

6. Under existing law, interest on the Series 2022 Bonds is exempt from personal income taxes imposed by the State of New York or any political subdivision of the State of New York (including The City of New York), assuming compliance with the tax covenants and the accuracy of the representations and certifications described in paragraph 5 herein.

The opinions contained in paragraphs 2, 3 and 4 above are qualified to the extent that the enforceability of the Indenture, the Series 2022 Bonds, and the Agreements may be limited by bankruptcy, insolvency, moratorium, reorganization or other laws affecting creditors' rights generally or as to the availability of any particular remedy.

Except as stated in paragraphs 5 and 6 above, we express no opinion as to any other federal, state or local tax consequences of the ownership or disposition of the Series 2022 Bonds. Furthermore, we express no opinion as to any federal, state or local tax law consequences with respect to the Series 2022 Bonds, or the interest thereon, if any action is taken with respect to Series 2022 Bonds or the proceeds thereof upon the advice or approval of other counsel.

In connection with the delivery of this opinion, we are not passing upon the authorization, execution and delivery of any document or agreement by any party other than the Corporation. We have assumed the due authorization, execution and delivery of the Indenture and the Agreements by each of the other parties thereto.

This opinion letter is rendered solely with regard to the matters expressly opined on above and does not consider or extend to any documents, agreements, representations or other material of any kind not specifically opined on above. No other opinions are intended nor should they be inferred. This opinion letter is issued as of the date hereof, and we assume no obligation to update, revise or supplement this opinion letter to reflect any future actions, facts or circumstances that may hereafter come to our attention, or any changes in law, or in interpretations thereof, that may hereafter occur, or for any reason whatsoever.

Very truly yours,

APPENDIX H

Green Bonds Designation

Per the International Capital Market Association (ICMA), "green bonds" are any type of bond instrument where the proceeds will be exclusively applied to finance or refinance, in part or in full, new and/or existing eligible "green projects" and which are aligned with the four core components of the Green Bond Principles. The four core components are: 1. Use of Proceeds; 2. Process for Project Evaluation and Selection; 3. Management of Proceeds; and 4. Reporting.

Kestrel Verifiers has determined that the Series 2022 Bonds are in conformance with the four core components of the ICMA Green Bond Principles, as described in Kestrel Verifiers' "Second Party Opinion," in this Appendix H.

Independent Second Party Opinion on Green Bond Designation and Disclaimer

For over 20 years, Kestrel Verifiers has been consulting in sustainable finance. Kestrel Verifiers, a division of Kestrel 360, Inc. is an Approved Verifier accredited by the Climate Bonds Initiative (CBI) and an Observer for the ICMA Green Bond Principles and Social Bond Principles. Kestrel Verifiers reviews transactions in all asset classes worldwide for alignment with ICMA Green Bond Principles, Social Bond Principles, Sustainability Bond Guidelines and the Climate Bonds Initiative Standards and criteria.

The Second Party Opinion issued by Kestrel Verifiers does not and is not intended to make any representation or give any assurance with respect to any other matter relating to the Series 2022 Bonds. Designations by Kestrel Verifiers are not a recommendation to any person to purchase, hold, or sell the Series 2022 Bonds and such labeling does not address the market price or suitability of these Series 2022 Bonds for a particular investor and does not and is not in any way intended to address the likelihood of timely payment of interest or principal when due.

In issuing the Second Party Opinion, Kestrel Verifiers has assumed and relied upon the accuracy and completeness of the information made publicly available by the City, the Corporation, or that was otherwise made available to Kestrel Verifiers.

Second Party Opinion

EXECUTIVE SUMMARY

ISSUER
Hudson Yards Infrastructure Corporation

OPINION ON
Hudson Yards Revenue Bonds Fiscal 2022 Series A (Green Bonds)

GREEN STANDARD AND CATEGORY
The Green Bond Principles

- Clean Transportation

EVALUATION DATE
October 8, 2021

SUMMARY
Kestrel Verifiers is of the opinion that the Hudson Yards Revenue Bonds Fiscal 2022 Series A (Green Bonds) ("Series 2022 Bonds") conform with the four core components of the Green Bond Principles 2021 as follows:

- **Use of Proceeds**
  Proceeds of the Series 2022 Bonds will refund outstanding bonds that financed an extension of a public transit rail line in The City of New York ("City") and connected the Hudson Yards development to the rest of the City through its subway system. Construction of the extension is complete and was first operational in September 2015. The subway extension and associated station support zero-direct emissions transport. The Series 2022 Bonds align with one eligible project category under the Green Bond Principles: *Clean Transportation*.
- **Process for Project Evaluation and Selection**
  Early in the Hudson Yards development process, the area was recognized as "underutilized" and the Department of City Planning identified key actions to catalyze further development in the area. One of these key actions included extension of the subway to support transit-oriented development.
- **Management of Proceeds**
  Series 2022 Bond proceeds will solely be used to refund the outstanding bonds and to pay costs of issuance.
- **Reporting**
  The Corporation commits to posting continuing disclosures to the Municipal Securities Rulemaking Board ("MSRB") annually through the Electronic Municipal Market Access ("EMMA") system. The Corporation and the City have not committed to providing additional use of proceeds reporting because all Series 2022 Bond proceeds will be applied promptly following the closing to redeem the outstanding 2012A Bonds that financed the Subway Extension project, which has been operational since September 2015.
- **Impact and Alignment with United Nation Sustainable Development Goals**
  By financing projects that expand options for zero-direct emission public transportation, the Series 2022 Bonds advance UN Sustainable Development Goals 9: *Industry, Innovation and Infrastructure* and 11: *Sustainable Cities and Communities.*

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Second Party Opinion

Issuer:	**Hudson Yards Infrastructure Corporation**
Issue Description:	Hudson Yards Revenue Bonds Fiscal 2022 Series A (Green Bonds)
Project:	Subway Extension
Green Standard:	Green Bond Principles
Green Category:	Clean Transportation
Par:	$454,140,000
Evaluation Date:	October 8, 2021

GREEN BONDS DESIGNATION

Kestrel Verifiers, an Approved Verifier accredited by the Climate Bonds Initiative, conducted an independent external review of this bond issue to evaluate conformance with the Green Bond Principles (June 2021) established by the International Capital Market Association.

This Second Party Opinion reflects our review of the uses and allocation of proceeds and oversight and conformance of the bonds with the Green Bond Principles. In our opinion, the Series 2022 Bonds are aligned with the four core components of the Green Bond Principles and qualify for green bonds designation.

ABOUT THE ISSUER

Hudson Yards Infrastructure Corporation ("Corporation") was created in 2005 by The City of New York ("City") for the purpose of financing the expansion of the subway and creation of a public park to encourage development in the Hudson Yards area. The Corporation is an instrumentality of the City but is distinct from City operations. The Corporation works closely with the Hudson Yards Development Corporation ("HYDC") that is responsible for managing and implementing the activities financed through the Corporation.

The Corporation's mission is to: *promote economic development and growth on the west side of mid-town Manhattan and conduct its activities in a cost-effective and efficient manner.* The Corporation works diligently and cooperatively with HYDC, the Metropolitan Transportation Authority ("MTA"), and the City to facilitate and implement Hudson Yards development.

Individuals from the New York City Office of Management & Budget ("OMB") manage the Corporation's operations. HYDC receives funding from the Corporation and implements development activities.

Hudson Yards is the largest private real estate development in the City since Rockefeller Center in 1939. The development includes transportation systems, public green space, and multiple large buildings with office, residential, retail, and hotel spaces. Private projects within Hudson Yards have incorporated certain aspects of sustainability and resilience into design, including maximized use of space, infrastructure for waste management, integrated stormwater management and collection, on-site power generation to minimize disruptions from grid-wide failure, and energy submetering. Construction of many components of Hudson Yards remains in progress.

ALIGNMENT TO GREEN STANDARDS

Green Bonds are any type of bond instrument where the proceeds will be exclusively applied to finance or refinance, in part or in full, new and/or existing eligible Green Projects and which are aligned with the four core components of the Green Bond Principles (International Capital Market Association definition).

Use of Proceeds

Green Standard
The Green Bond Principles
Eligible Project Category:
▪ Clean Transportation

The Series 2022 Bonds will be used to refund the Corporation's outstanding Hudson Yards Senior Revenue Bonds Fiscal 2012 Series A ("Series 2012A Bonds") and to finance costs of issuance. Of the total original $1,000,000,000 Series 2012A Bond proceeds, $887.64 million was used to finance design and construction of the extension of the No. 7 Subway ("Subway Extension") from Times Square to Hudson Yards. The eligible project for Green Bonds designation is the $887.64 million Subway Extension, which is less than the total amount of the Series 2022 Bonds. All proceeds of the Series 2022 Bonds will refinance this project and pay costs of issuance. The Subway Extension is an eligible public transportation project as defined by the Green Bond Principles in the project category of *Clean Transportation*.

The Subway Extension opened to the public in September 2015 and is designed to accommodate future growth in ridership. Construction of the 1.5-mile extension began in 2007 and, while financed through the Corporation, conforms with MTA design criteria and system standards. The project is a cross-city electric-powered line and includes space for train storage and a new station, the 34 Street Hudson Yards station. The station building has three floors, two entrances, 16 escalators, eight sets of stairs, and is ADA accessible. Construction included use of Tunnel Boring Machine ("TBM") technology to bore through bedrock.

<u>Environmental Impact</u>

Transportation accounts for 29% of greenhouse gas emissions in the US and efficient, accessible public transportation systems are critical to transportation sector emission reductions.[1] The Subway Extension is integral to the sustainable urban design of Hudson Yards. The Subway Extension only operates fully electrified passenger subway lines and has zero direct greenhouse gas emissions.

Process for Project Evaluation and Selection

Prioritization of the Subway Extension was identified in early stages of Hudson Yards revitalization planning. Development of Hudson Yards was initiated based on demand for office space and residential housing in the City. The area was recognized as "underutilized" by the City and the Department of City Planning identified key actions to catalyze further development. One of these actions included extension of the subway to support transit-oriented development. In September 2006, MTA and the City agreed upon an arrangement for financing and construction of the extension.

Management of Proceeds

Proceeds from the Series 2022 Bonds will solely be used to refund the outstanding Series 2012A Bonds and to pay costs of issuance. Proceeds will not be invested prior to the refunding. Upon closing, the Series 2022 Bonds will be promptly applied to redeem the outstanding Series 2012A Bonds.

Reporting

The Corporation will submit annual continuing disclosures to the Municipal Securities Rulemaking Board ("MSRB") through the Electronic Municipal Market Access ("EMMA") system so long as the Series 2022 Bonds are outstanding. The Corporation and the City have not committed to providing additional use of proceeds reporting because all Series 2022 Bond proceeds applied promptly after closing to redeem the Series 2012A Bonds that financed the Subway Extension project, which has been operational since September 2015.

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[1] "Sources of Greenhouse Gas Emissions, 2019," US Environmental Protection Agency, accessed September 21, 2021, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions.

IMPACT AND ALIGNMENT WITH UN SDGS

By financing a project that expands options for zero-direct emission public transportation, the Series 2022 Bonds are helping to address UN Sustainable Development Goals 9 and 11. Construction of the subway line extension supports Targets 9.1 and 11.2 through expanding the network of sustainable transport systems. The Series 2022 Bonds also support Target 11.6 by reducing transportation emissions and integrating clean transportation into the Hudson Yards development.

Full text of the Targets for Goals 9 and 11 is available in Appendix A, with additional information available on the United Nations website: www.un.org/sustainabledevelopment

Industry, Innovation and Infrastructure (Target 9.1)

Possible Indicators

- Number of miles traveled on sustainable transport systems
- Reduction in fossil fuel use as a result of bond-financed projects

Sustainable Cities and Communities (Targets 11.2, 11.6)

Possible Indicators

- Number of individuals with access to public transportation
- Avoided greenhouse gas emissions (tons CO2eq)
- Avoided air pollutant emissions (other than greenhouse gases)
- Number of avoided hospitalizations as a result of improved air quality

CONCLUSION

Based on our independent external review, the Series 2022 Bonds conform, in all material respects, with the Green Bond Principles (2021) and the Subway Extension is in complete alignment with one eligible project category: *Clean Transportation*. The Subway Extension to be refinanced with the Series 2022 Bonds is integral to sustainable urban development in the City.

ABOUT KESTREL VERIFIERS

For 20 years Kestrel has been a trusted consultant in sustainable finance. Kestrel Verifiers, a division of Kestrel 360, Inc. is a Climate Bonds Initiative Approved Verifier qualified to verify transactions in all asset classes worldwide. Kestrel is a US-based certified Women's Business Enterprise.

For more information, visit www.kestrelverifiers.com

DISCLAIMER

This Opinion aims to explain how and why the discussed financing meets the ICMA Green Bond Principles based on the information which was available to us during the time of this engagement (October 2021) only. By providing this Opinion, Kestrel Verifiers is not certifying the materiality of the projects financed by the Green Bonds. It was beyond Kestrel Verifiers' scope of work to review for regulatory compliance and no surveys or site visits were conducted. Furthermore, we are not responsible for surveillance on the project or use of proceeds. Kestrel Verifiers relied on information provided by the Corporation and publicly available information. The Opinion delivered by Kestrel Verifiers does not address financial performance of the Green

Bonds or the effectiveness of allocation of its proceeds. This Opinion does not make any assessment of the creditworthiness of the Corporation, or its ability to pay principal and interest when due. This is not a recommendation to buy, sell or hold the Bonds. Kestrel Verifiers is not liable for consequences when third parties use this Opinion either to make investment decisions or to undertake any other business transactions. This Opinion may not be altered without the written consent of Kestrel Verifiers. Kestrel Verifiers reserves the right to revoke or withdraw this Opinion at any time. Kestrel Verifiers certifies that there is no affiliation, involvement, financial or non-financial interest in the Corporation or the projects discussed. Language in the offering disclosure supersedes any language included in this Second Party Opinion.

Use of the United Nations Sustainable Development Goal (SDG) logo and icons does not imply United Nations endorsement of the products, services or bond-financed activities. The logo and icons are not being used for promotion or financial gain. Rather, use of the logo and icons is primarily illustrative, to communicate SDG-related activities.

Appendix A.
UN SDG TARGET DEFINITIONS

Target 9.1
Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

Target 11.2
By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

Target 11.6
By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

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HYIC

Hudson Yards Infrastructure Corporation

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